Coastal Rail Trail Segments 10 and 11

Draft Environmental Impact Report

State Clearinghouse #2021110080



County of Santa Cruz

October 2023

Coastal Rail Trail Segments 10 and 11
Draft Environmental Impact Report

Prepared by

701 Ocean Street, Room 410

Santa Cruz, California 95060

Contact: Rob Tidmore

With technical assistance from

Harris & Associates

Salinas, California

Rincon Consultants

Monterey, California

EcoSystems West Consulting

Santa Cruz, California

October 2023

This report prepared on 50% recycled paper with 50% post-consumer content

County of Santa Cruz. 2023. *Draft Environmental Impact Report for the Coastal Rail Trail Segments 10 and 11*. October 2023.

This page intentionally left blank.

Table of Contents

Acronyms and Abbreviations xiii
Executive Summary ES-1
Project Synopsis ES-1
Project Purpose and Objectives ES-4
Project Alternatives ES-4
Areas of Known Controversy and Key Issues ES-5
Issues to be Resolved ES-5
Summary of Impacts and Mitigation Measures ES-5
1 Introduction 1-1
1.1 EIR Purpose and County Legal Authority 1-3
1.2 Project Background 1-3
1.2.1 Project Inception and Rail Purchase 1-3
1.2.2 Rail Operation and Maintenance 1-4
1.2.3 MBSST Network Master Plan and EIR 1-4
1.2.4 Subsequent Actions and Considerations 1-6
1.3 CEQA Environmental Review Process 1-9
1.3.1 Lead, Responsible, and Trustee Agencies 1-10
1.3.2 Notice of Preparation 1-12
1.3.3 Scoping Process 1-12
1.4 EIR Scope and Content 1-15
1.5 EIR Organization 1-15
1.6 Public Outreach 1-16
2 Project Description 2-1
2.1 Overview 2-1
2.2 Project Location 2-4
2.3 Project Purpose and Objectives 2-4
2.4 Project Characteristics 2-5
2.4.1 Ultimate Trail Configuration (Trail next to Rail Line) 2-5
2.4.2 Optional Interim Trail (Trail on the Rail Line) 2-17

2.5 Project Operation and Maintenance 2-23
2.6 Project Construction 2-25
2.6.1 Ultimate Trail Configuration (Trail next to Rail Line) 2-25
2.6.2 Optional Interim Trail (Trail on the Rail Line) 2-32
2.7 Required Permits and Approvals 2-38
3 Environmental Impact Analysis 3-1
Approach to Project Analysis 3-1
Existing Conditions and Regulatory Setting 3-2
Impacts and Mitigation Measures 3-2
Approach to Cumulative Impacts 3-4
Summary of Impacts and Mitigation Measures 3-4
3.1 Aesthetics 3.1-1
3.1.1 Existing Conditions 3.1-1
3.1.2 Regulatory Setting 3.1-3
3.1.3 Methodology and Significance Thresholds 3.1-6
3.1.4 Project Impact Analysis 3.1-8
3.1.5 Summary Comparison 3.1-24
3.2 Air Quality 3.2-1
3.2.1 Existing Conditions 3.2-1
3.2.2 Regulatory Setting 3.2-6
3.2.3 Methodology and Significance Thresholds 3.2-10
3.2.4 Project Impact Analysis 3.2-12
3.2.5 Summary Comparison 3.2-25
3.3 Biological Resources 3.3-1
3.3.1 Existing Conditions 3.3-2
3.3.2 Regulatory Setting 3.3-28
3.3.3 Methodology and Significance Thresholds 3.3-41
3.3.4 Project Impact Analysis 3.3-42
3.3.5 Summary Comparison 3.3-114
3.4 Cultural Resources 3.4-1
3.4.1 Existing Conditions 3.4-1
3.4.2 Regulatory Setting 3.4-5
3.4.3 Methodology and Significance Thresholds 3.4-11

3.4.4 Project Impact Analysis 3.4-12
3.4.5 Summary Comparison 3.4-27
3.5 Geology and Soils 3.5-1
3.5.1 Existing Conditions 3.5-1
3.5.2 Regulatory Setting 3.5-6
3.5.3 Methodology and Significance Thresholds 3.5-10
3.5.4 Project Impact Analysis 3.5-12
3.5.5 Summary Comparison 3.5-30
3.6 Greenhouse Gas Emissions/Climate Change 3.6-1
3.6.1 Existing Conditions 3.6-1
3.6.2 Regulatory Setting 3.6-7
3.6.3 Methodology and Significance Thresholds 3.6-12
3.6.4 Project Impact Analysis 3.6-15
3.6.5 Summary Comparison 3.6-23
3.7 Hazards and Hazardous Materials 3.7-1
3.7.1 Existing Conditions 3.7-1
3.7.2 Regulatory Setting 3.7-10
3.7.3 Methodology and Significance Thresholds 3.7-16
3.7.4 Project Impact Analysis 3.7-17
3.7.5 Summary Comparison 3.7-26
3.8 Hydrology and Water Quality 3.8-1
3.8.1 Existing Conditions 3.8-1
3.8.2 Regulatory Setting 3.8-9
3.8.3 Methodology and Significance Thresholds 3.8-15
3.8.4 Project Impact Analysis 3.8-16
3.8.5 Summary Comparison 3.8-34
3.9 Land Use and Planning 3.9-1
3.9.1 Existing Conditions 3.9-1
3.9.2 Regulatory Setting 3.9-2
3.9.3 Methodology and Significance Thresholds 3.9-7
3.9.4 Project Impact Analysis 3.9-8
3.9.5 Summary Comparison 3.9-24

3.10 Noise 3.10-1
3.10.1 Existing Conditions 3.10-1
3.10.2 Regulatory Setting 3.10-4
3.10.3 Methodology and Significance Thresholds 3.10-6
3.10.4 Project Impact Analysis 3.10-7
3.10.5 Summary Comparison 3.10-16
3.11 Public Safety and Services 3.11-1
3.11.1 Existing Conditions 3.11-1
3.11.2 Regulatory Setting 3.11-7
3.11.3 Methodology and Significance Thresholds 3.11-10
3.11.4 Project Impact Analysis 3.11-11
3.11.5 Summary Comparison 3.11-27
3.12 Transportation 3.12-1
3.12.1 Existing Conditions 3.12-1
3.12.2 Regulatory Setting 3.12-6
3.12.3 Methodology and Significance Thresholds 3.12-12
3.12.4 Project Impact Analysis 3.12-15
3.12.5 Summary Comparison 3.12-27
3.13 Tribal Cultural Resources 3.13-1
3.13.1 Existing Conditions 3.13-1
3.13.2 Regulatory Setting 3.13-2
3.13.3 Methodology and Significance Thresholds 3.13-4
3.13.4 Project Impact Analysis 3.13-5
3.13.5 Summary Comparison 3.13-9
3.14 Utilities and Service Systems 3.14-1
3.14.1 Existing Conditions 3.14-1
3.14.2 Regulatory Setting 3.14-5
3.14.3 Methodology and Significance Thresholds 3.14-10
3.14.4 Project Impact Analysis 3.14-11
3.14.5 Summary Comparison 3.14-30
3.15 Effects Found to be Less than Significant 3.15-1
3.15.1 Aesthetics 3.15-1
3.15.2 Agriculture and Forestry Resources 3.15-1

3.15.3 Energy 3.15-2
3.15.4 Geology and Soils 3.15-3
3.15.5 Hazards and Hazardous Materials 3.15-4
3.15.6 Land Use and Planning 3.15-6
3.15.7 Mineral Resources 3.15-7
3.15.8 Noise 3.15-7
3.15.9 Population and Housing 3.15-8
3.15.10 Public Safety and Services 3.15-9
3.15.11 Recreation 3.15-9
3.15.12 Transportation 3.15-10
3.15.13 Wildfire 3.15-11
4 Other CEQA-Required Discussions 4-1
4.1 Cumulative Impact Analysis 4-1
4.1.1 Methodology 4-1
4.1.2 Aesthetics 4-10
4.1.3 Air Quality 4-10
4.1.4 Biological Resources 4-11
4.1.5 Cultural Resources 4-14
4.1.6 Energy 4-16
4.1.7 Geology and Soils 4-16
4.1.8 Greenhouse Gas Emissions/Climate Change 4-17
4.1.9 Hazards and Hazardous Materials 4-18
4.1.10 Hydrology and Water Quality 4-19
4.1.11 Land Use and Planning 4-20
4.1.12 Noise 4-21
4.1.13 Public Safety and Services 4-22
4.1.14 Recreation 4-23
4.1.15 Transportation 4-24
4.1.16 Tribal Cultural Resources 4-24
4.1.17 Utilities and Service Systems 4-25
4.1.18 Wildfire 4-27

4.2 Growth Inducement 4-29
4.2.1 Employment, Household, and Population Growth 4-29
4.2.2 Removal of Obstacles to Growth 4-29
4.3 Irreversible Environmental Effects 4-30
4.4 Significant and Unavoidable Effects 4-31
5 Project Alternatives 5-1
5.1 Development of Alternatives 5-1
5.1.1 Project Objectives 5-1
5.1.2 Significant Impacts of Proposed Project 5-2
5.1.3 Alternatives Suggested during the Scoping Process 5-10
5.1.4 Alternatives Considered during the Design Process 5-14
5.1.5 Summary of Alternatives Considered 5-17
5.2 Alternatives Evaluated in EIR 5-21
5.2.1 Alternative 1 (Trail Only) 5-21
5.2.2 Alternative 2 (Rail with Trail on Opposite Side of Tracks) 5-35
5.2.3 Alternative 3 (No Project) 5-49
5.3 Environmentally Superior Alternative 5-55
6 List of Preparers and References 6-1
6.1 List of Preparers 6-1
6.2 References 6-3

Appendices

A, Project Design Plans
A.1, Ultimate Trail Configuration
A.2, Optional Interim Trail
A.3, Design Option A: Interim Trail on Capitola Trestle
A.4, Design Option B: Inland Side Grove to Coronado
A.5, Tree Removal for Ultimate Trail Configuration
A.6, Tree Removal for Optional Interim Trail
A.7, Tree Quantity and Evaluation Summaries
A.8, Tree Inventory for Ultimate Trail and Optional Interim Trail
B, NOP and Scoping Comments
C, Initial Study
D, Draft Mitigation Monitoring and Reporting Program

E, Air Quality and Greenhouse Gas Modeling Assumptions

F, Biological Resources

F.1, Special-Status Plants and Wildlife Species with Potential to Occur

F.2, U.S. Fish and Wildlife Service Official Species List

F.3, Observed Plant Species

F.4, Avian Species Detected

G, Traffic Technical Memorandum

Tables

Table ES-1 Summary of Project Impacts ES-8

Table ES-2 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives ES-16

Table ES-3 Comparison of Impacts for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives ES-18

Table 1-1 Segments 10 and 11 Project Funding Sources 1-7

Table 1-2 Summary of NOP Comments Received 1-13

Table 2-1 Estimated Construction Duration for the Ultimate Trail Configuration 2-25

Table 2-2 Construction Estimates for Ultimate Trail Configuration (Trail next to Rail Line) 2-29

Table 2-3 Construction Estimates for Optional Interim Trail (Trail on the Rail Line) 2-37

Table 2-4 Anticipated Approvals, Permits, and Agreements Required for Proposed Project 2-39

Table 3.1-1 Summary of Project Impacts on Aesthetics 3.1-1

Table 3.1-2 City of Capitola and County of Santa Cruz General Plan Aesthetics Policy Consistency Analysis 3.1-19

Table 3.2-1 Summary of Project Impacts Related to Air Quality 3.2-1

Table 3.2-2 Current Federal and State Ambient Air Quality Standards 3.2-4

Table 3.2-3 Santa Cruz County Air Basin Attainment Status 3.2-5

Table 3.2-4 Ambient Air Quality Data 3.2-5

Table 3.2-5 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Ultimate Trail Configuration 3.2-15

Table 3.2-6 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Optional Interim Trail Part 1 (Rail Removal and Optional Interim Trail Construction) 3.2-17

Table 3.2-7 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Optional Interim Trail Part 2 (Demolition of Optional Interim Trail and Rebuilding of Rail Line) 3.2-18

Table 3.2-8 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Implementation of Ultimate Trail Configuration with Design Options A and B.. 3.2-19

Table 3.3-1 Summary of Project Impacts on Biological Resources 3.3-1

Table 3.3-2 Habitat Types in Rail Trail Segment 10/11 Study Area and Project Footprint (acres) 3.3-7

Table 3.3-3 Sensitive Habitats and Regulatory Authority Considered Under CEQA 3.3-18

Table 3.3-4 Tree Removal at Known and Potential Monarch Roost Sites..... 3.3-44

Table 3.3-5 Temporary and Permanent Impacts on Known and Potential Roost Sites 3.3-44

Table 3.3-6 Estimated Tree Removal (Number of Trees) within Breeding Bird Habitat, Roosting Bat Habitat, and San Francisco Dusky-Footed Woodrat Habitat by Habitat Type 3.3-62

Table 3.3-7 Temporary and Permanent Impacts (Acres) on Breeding Bird Habitat, Roosting Bat Habitat, and San Francisco Dusky-Footed Woodrat Habitat..... 3.3-63

Table 3.3-8 Temporary and Permanent Impacts (acres) to Sensitive Habitat from the Proposed Project 3.3-80

Table 3.3-9 Preferred Timing for Construction Activities Listed by Biological Resource 3.3-86

Table 3.3-10 Wildlife Movement along Segments 10/11 of the Rail Corridor, from West to East, Santa Cruz County, California 3.3-99

Table 3.3-11 Tree Removal Required for Construction and Operation of the Proposed Project, including Native Trees, Protected and Significant trees, and Native Protected and Significant Trees 3.3-108

Table 3.3-12 Tree Removal Required for Construction and Operation of the Proposed Project by Sensitive Habitat Type 109

Table 3.4-1 Summary of Project Impacts on Cultural Resources 3.4-1

Table 3.5-1 Summary of Project Impacts on Geology and Soils..... 3.5-1

Table 3.5-2 Geologic Unit Sensitivity..... 3.5-5

Table 3.6-1 Summary of Project Impacts Related to Greenhouse Gas Emissions/ Climate Change 3.6-1

Table 3.7-1 Summary of Project Impacts on Hazards and Hazardous Materials 3.7-1

Table 3.7-2 Hazardous Materials Sites within 1/8-Mile of the Project Corridor..... 3.7-6

Table 3.8-1 Summary of Project Impacts on Hydrology and Water Quality 3.8-1

Table 3.8-2 Aquatic Features along Rail Trail Segments 10 and 11 ..... 3.8-3

Table 3.8-3 Beneficial Uses of Waterbodies in the Project Corridor..... 3.8-4

Table 3.8-4 Aquatic Features and Planned Improvements for Ultimate Trail Configuration..... 3.8-19

Table 3.8-5 Aquatic Features and Planned Improvements for Optional Interim Trail..... 3.8-21

Table 3.9-1 Summary of Impacts on Land Use and Planning 3.9-1

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis 3.9-11

Table 3.9-3 City of Capitola General Plan Policy Consistency Analysis 3.9-19
Table 3.10-1 Summary of Project Impacts Related to Noise..... 3.10-1
Table 3.10-2 Human Response to Groundborne Vibration..... 3.10-3
Table 3.10-3 Federal Transit Administration Groundborne Vibration Impact Criteria 3.10-4
Table 3.10-4 Typical Construction Noise Levels 3.10-8
Table 3.10-5 Vibration Source Levels for Construction Equipment 3.10-14
Table 3.11-1 Summary of Impacts on Public Safety and Services 3.11-1
Table 3.12-1 Summary of Project Impacts on Transportation 3.12-1
Table 3.13-1 Summary of Project Impacts on Tribal Cultural Resources 3.13-1
Table 3.14-1 Summary of Impacts on Utilities and Service Systems..... 3.14-1
Table 3.14-2 Utility Relocations, Modifications, and Replacements for the Ultimate Trail 3.14-12
Table 3.14-3 Utility Relocations, Modifications, and Removals for the Optional Interim Trail..... 3.14-17
Table 3.14-4 Summary of Solid Waste Generation during Construction of the Interim Trail ...3.14-28
Table 4-1 List of Cumulative Projects 4-3
Table 4-2 Summary of Project Contribution to Significant Cumulative Impacts 4-9
Table 5-1 Summary of Alternatives Considered..... 5-17
Table 5-2 Project Objectives and Alternative Trail Alignments..... 5-20
Table 5-3 Comparison of Impacts for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives 5-59
Table 5-4 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives 5-69
Table 5-5 Summary Comparison of Impacts and Environmentally Superior Alternative by Resource Topic..... 5-71

Figures

Figure 1-1 Regional Location 1-2
Figure 1-2 CEQA EIR Process..... 1-11
Figure 2-1a Project Location..... 2-2
Figure 2-1b Project Location 2-3
Figure 2-2 Ultimate Trail Configuration (Trail next to Rail Line) and Optional Interim Trail (Trail on the Rail Line)..... 2-12
Figure 2-3 Capitola Village Signage Directions 2-13
Figure 3.1-1 Key Viewpoint Locations 3.1-26
Figure 3.1-2 Key Viewpoint 1..... 3.1-27
Figure 3.1-3 Key Viewpoint 2..... 3.1-28

Figure 3.1-4 Key Viewpoint 3 ..... 3.1-29
Figure 3.1-5 Key Viewpoint 4 ..... 3.1-30
Figure 3.1-6 Key Viewpoint 5 ..... 3.1-31
Figure 3.1-7 Key Viewpoint 6 ..... 3.1-32
Figure 3.1-8 Key Viewpoint 7 ..... 3.1-33
Figure 3.1-9 Key Viewpoint 8 ..... 3.1-34
Figure 3.1-10 Key Viewpoint 9 ..... 3.1-35
Figure 3.1-11 Key Viewpoint 10 ..... 3.1-36
Figure 3.1-12 Key Viewpoint 11 ..... 3.1-37
Figure 3.3-1 Habitat Types – Index 3.3-117
Figure 3.3-1a Habitat Types 3.3-118
Figure 3.3-1b Habitat Types 3.3-119
Figure 3.3-1c Habitat Types 3.3-120
Figure 3.3-1d Habitat Types 3.3-121
Figure 3.3-1e Habitat Types 3.3-122
Figure 3.3-1f Habitat Types 3.3-123
Figure 3.3-1g Habitat Types 3.3-124
Figure 3.3-1h Habitat Types 3.3-125
Figure 3.3-2 Sensitive Habitat – Index 3.3-126
Figure 3.3-2a Sensitive Habitat 3.3-127
Figure 3.3-2b Sensitive Habitat 3.3-128
Figure 3.3-2c Sensitive Habitat 3.3-129
Figure 3.3-2d Sensitive Habitat 3.3-130
Figure 3.3-2e Sensitive Habitat 3.3-131
Figure 3.3-2f Sensitive Habitat 3.3-132
Figure 3.3-2g Sensitive Habitat 3.3-133
Figure 3.3-2h Sensitive Habitat 3.3-134
Figure 3.3-3 Aquatic Resources – Index 3.3-135
Figure 3.3-3a Aquatic Resources 3.3-136
Figure 3.3-3b Aquatic Resources 3.3-137
Figure 3.3-3c Aquatic Resources 3.3-138
Figure 3.3-3d Aquatic Resources 3.3-139
Figure 3.3-3e Aquatic Resources 3.3-140

Figure 3.3-3f Aquatic Resources 3.3-141
Figure 3.3-3g Aquatic Resources 3.3-142
Figure 3.3-3h Aquatic Resources 3.3-143
Figure 3.3-4 Incidental Observations of Sensitive Wildlife – Index (Including Special-Status Fish Distribution) 3.3-144
Figure 3.3-4a Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-145
Figure 3.3-4b Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-146
Figure 3.3-4c Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-147
Figure 3.3-4d Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-148
Figure 3.3-4e Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-149
Figure 3.3-4f Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-150
Figure 3.3-4g Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-151
Figure 3.3-4h Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution) 3.3-152
Figure 3.3-5 Tree Inventory – Index 3.3-153
Figure 3.3-5a Tree Inventory 3.3-154
Figure 3.3-5b Tree Inventory 3.3-155
Figure 3.3-5c Tree Inventory 3.3-156
Figure 3.3-5d Tree Inventory 3.3-157
Figure 3.3-5e Tree Inventory 3.3-158
Figure 3.3-5f Tree Inventory 3.3-159
Figure 3.3-5g Tree Inventory 3.3-160
Figure 3.3-5h Tree Inventory 3.3-161
Figure 3.3-5i Tree Inventory 3.3-162
Figure 3.3-5j Tree Inventory 3.3-163
Figure 3.3-5k Tree Inventory 3.3-164
Figure 3.3-5l Tree Inventory 3.3-165
Figure 3.3-5m Tree Inventory 3.3-166
Figure 3.3-5n Tree Inventory 3.3-167

Figure 3.3-5o Tree Inventory 3.3-168
Figure 3.3-5p Tree Inventory 3.3-169
Figure 3.3-5q Tree Inventory 3.3-170
Figure 3.3-5r Tree Inventory 3.3-171
Figure 3.3-5s Tree Inventory 3.3-172
Figure 3.3-5t Tree Inventory 3.3-173
Figure 3.3-5u Tree Inventory 3.3-174
Figure 3.3-5v Tree Inventory 3.3-175
Figure 3.5-1 Major Faults 3.5-31
Figure 3.5-2 Liquefaction Zones 3.5-32
Figure 3.5-3a Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity . 3.5-33
Figure 3.5-3b Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity . 3.5-34
Figure 3.5-3c Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity . 3.5-35
Figure 3.5-3d Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity . 3.5-36
Figure 3.6-1 Potential Future Tidal Inundation Area 3.6-5
Figure 3.6-2 Potential Future Storm Flooding Hazard Area 3.6-6
Figure 3.7-1 Hazardous Materials Sites in Project Vicinity 3.7-7
Figure 3.8-1 Aquatic Features 3.8-6
Figure 3.8-2 Groundwater Basin 3.8-7
Figure 3.8-3 Flood and Tsunami Inundation Zones 3.8-8
Figure 3.9-1 County of Santa Cruz General Plan Land Use Designations 3.9-25
Figure 3.9-2 County of Santa Cruz Zoning Districts 3.9-26
Figure 3.9-3 City of Capitola General Plan Land Use Designations 3.9-27
Figure 3.9-4 City of Capitola Zoning Districts 3.9-28
Figure 3.11-1a Parks and Recreation Facilities along Project Corridor 3.11-5
Figure 3.11-1b Parks and Recreation Facilities along Project Corridor 3.11-6

Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
2045 MTP/SCS	2045 Metropolitan Transportation Plan/Sustainable Community Strategy
AAQS	Ambient Air Quality Standards
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
AMBAG	Association of Monterey Bay Area Governments
AMR	American Medical Response
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ATP	Active Transportation Program
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Central Coast Water Quality Control Plan
BCC	Birds of Conservation Concern
BCE	before Common Era
BMP	best management practice
CAAP	County Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalOES	California Office of Emergency Services
CalOSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery

Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCC	California Coastal Commission
CCR	California Code of Regulations
CCRWQCB	Central Coast Regional Water Quality Control Board
CDFW	California Department of Fish and Wildlife
CE	Common Era
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFD	Central Fire District of Santa Cruz County
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CH_4	methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
City	City of Capitola
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Construction General Permit	General Permit for Discharges of Stormwater Associated with Construction Activity
County	County of Santa Cruz
CPD	Capitola Police Department
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CY	cubic yard
dB	decibel

dBA	A-weighted decibel
DBH	diameter at breast height
DEIR	Draft Environmental Impact Report
DOGGR	California Department of Conservation Division of Oil, Gas, and Geothermal Resources
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
ESA	Environmental Site Assessment
ESHA	Environmental Sensitive Habitat Area
FAR	floor area ratio
FHSZ	Fire Hazard Severity Zone
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FRP	fiberglass-reinforced polymer
GHG	greenhouse gas
gpd	gallons per day
GWP	global warming potential
HA	hydrologic area
HAZWOPER	Hazardous Waste Operations and Emergency Response
HMA	hot mix asphalt
HOT	high-occupancy toll (lane)
HOV	high-occupancy vehicle
HU	hydrologic unit
Hz	hertz
IPCC	Intergovernmental Panel on Climate Change
ISA	Initial Site Assessment
IUCN	International Union for Conservation of Nature
K-12	kindergarten through grade 12
LBP	lead-based paint
lbs	pounds
LCP	Local Coastal Program
Ldn	Day-Night Noise Level
LED	light-emitting diode

Leq	Equivalent Noise Level
LHMP	Local Hazard Mitigation Plan
LOS	level of service
LSAA	Lake and Streambed Alteration Agreement
LUST	Leaking Underground Storage Tank
MACT	Maximum Achievable Control Technology
MBARD	Monterey Bay Air Resources District
MBARD Guidelines	California Environmental Quality Act Air Quality Guidelines
MBNMS	Monterey Bay National Marine Sanctuary
MBSST	Monterey Bay Sanctuary Scenic Trail
MBTE	methyl tert-butyl ether
MMP	Mitigation and Management Plan
MMT	million metric ton
MT	metric ton
MTP/SCS	Metropolitan Transportation Plan and Sustainable Communities Strategy
N_2O	nitrous oxides
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCAB	North Central Coast Air Basin
NIMS	National Incident Management System
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic PlacesOHWM ordinary high-water mark
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAH	polynuclear aromatic hydrocarbon
PCE	perchloroethylene
PG&E	Pacific Gas & Electric

PM_{10}	particulate matter 10 microns or less in size
$PM_{2.5}$	particulate matter 2.5 microns or less in size
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
Project	Coastal Rail Trail Segments 10 and 11 Project
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
ROG	reactive organic gas
ROW	right-of-way
RTC	Santa Cruz County Regional Transportation Commission
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCBRL	Santa Cruz Branch Rail Line
SCCSD	Santa Cruz County Sanitation District
SCR911	Santa Cruz Regional 9-1-1
SCS	Sustainable Community Strategy
SCWD	City of Santa Cruz Water Department
SF_6	sulfur hexafluoride
SLF	Sacred Lands File
SO_2	sulfur dioxide
SO_X	sulfur oxides
SPRR	Southern Pacific Railroad
SqCWD	Soquel Creek Water District
SR-1 or Highway 1	State Route 1
STB	Surface Transportation Board
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCAA	Transit Corridor Alternatives Analysis
TMDL	Total Maximum Daily Load

TPH	total petroleum hydrocarbon
UC	University of California
UCS	Unified Corridor Investment Study
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
USC	United States Code
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UWMP	Urban Water Management Plan
VdB	vibration decibel
VMT	vehicle miles traveled
VOC	volatile organic compound
WBWG	Western Bat Working Group
WDR	waste discharge requirement
WHA	Weber, Hayes & Associates
WWTF	wastewater treatment facility

Executive Summary

The County of Santa Cruz (County), in coordination with the City of Capitola (City) and the Santa Cruz County Regional Transportation Commission (RTC), is proposing the **Coastal Rail Trail Segments 10 and 11 Project** (Project) to be developed along the RTC-owned rail corridor that generally parallels the coastline in central Santa Cruz County (**Figure 1-1**, Regional Location). The County is serving as the California Environmental Quality Act (CEQA) lead agency.

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the Proposed Project in compliance with the *CEQA Guidelines*. This section summarizes the characteristics of the Project, alternatives to the Project, and the environmental impacts and mitigation measures associated with the Project.

Project Synopsis

The Project is an approximately 4.5-mile new multi-use bicycle and pedestrian trail proposed to extend along the RTC-owned railroad corridor from the eastern side of 17th Avenue at the western limits of the Project to the western side of State Park Drive at the eastern limits of the Project, extending through unincorporated Santa Cruz County and the City of Capitola (**Figure 2-1**, Project Location). Segment 10 extends from 17th Avenue to 47th Avenue, and Segment 11 extends from 47th Avenue to State Park Drive.

The project purpose is to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

This EIR includes an evaluation of the *Ultimate Trail Configuration (Trail Next to Rail Line)*, which includes an *Optional Interim Trail (Trail on the Rail Line)* as a first phase, for both Segments 10 and 11. Therefore, both the Ultimate Trail Configuration and the Optional Interim Trail alignments are part of the Proposed Project and analyzed at an equal level of detail. The trail alignments are presented in **Appendices A.1** and **A.2**, respectively. The Ultimate Trail Configuration is consistent with the MBSST Network Master Plan alignment and is considered the preferred alignment and approach by the County.

Ultimate Trail Configuration (Trail next to Rail Line)

In Segment 10, the trail would be located along the inland side of the railroad tracks. The Project would result in four new trail connections and improvements at four roadway crossings and one waterway crossing, including flashing pedestrian/bicycle signs, bulb-outs, sidewalk extensions, and drainage improvements.

In Segment 11, the trail would be located on the coastal side of the railroad tracks, except in two areas. At the east end of Segment 11, the trail would be on the inland side of the tracks between Mar Vista Drive and State Park Drive. In Capitola between the Cliff Drive Parking Lot and Monterey Avenue (which includes the Capitola Trestle Bridge), trail users would be directed off the RTC-owned rail corridor and onto the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village.

In Segment 11, the Project would result in improvements at eight new trail connections, including chicanes and public art (Cliff Drive Plaza/Capitola Village) and a new concrete stairway (Coronado Ramp/New Brighton Parking Lot). There would be six waterway crossings and improvements at five roadway crossings, including a new clear-span bridge, regrading of a roadway, drainage improvements, flashing pedestrian/bicycle signs, and a new crosswalk.

The Ultimate Trail Configuration includes the following design options, which are also analyzed in this EIR:

- **Design Option A: Interim Trail on Capitola Trestle over Soquel Creek.** In Segment 11, the trail would be modified to transition from alongside the rail (Ultimate Trail Configuration) to on the rail line (Optional Interim Trail) for a 0.5-mile section in Capitola between the Cliff Drive Parking Lot and Monterey Avenue (including the Capitola Trestle Bridge), instead of directing trail users to bicycle lanes and sidewalks through Capitola Village.
- **Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola.** In Segment 11, the trail would be located on the inland side of the rail (instead of the coastal side) for a 0.3-mile section between Grove Lane and Coronado Street, where the Coronado Ramp is proposed for a trail connection to the Park Avenue/Coronado Street intersection.

For the Ultimate Trail Configuration, the typical width of the paved trail would be 12 feet with striping in the middle to separate eastbound and westbound.

Optional Interim Trail (Trail on the Rail Line)

In Segment 10, the trail would be located on the rail line (rather than next to the rail line). The trail would generally be constructed along the Santa Cruz Branch Railroad centerline. Improvements to waterway and roadway crossings would generally be the same as described above for the Ultimate Trail Configuration, except that the trail would be built on the existing railroad bridges for waterway crossings, and at roadway crossings, rail equipment would be removed, and no concrete track panels would be installed.

In Segment 11, the trail would also be located on the rail line, including the 0.5-mile section between the Cliff Drive Parking lot and Monterey Avenue in Capitola (which includes the Capitola Trestle Bridge); thus, trail users would not be directed off the RTC-owned rail corridor through Capitola Village. Improvements at other waterway and road crossings would generally be the same as described above for the Ultimate Trail Configuration, except that the trail would be built on the existing railroad bridges for waterway crossings, and at roadway crossings, the rail equipment would be removed, no concrete track panels would be installed, and an additional crossing at Monterey Avenue with updated curb ramps and striping would be installed.

Upon completion of the first phase of the Optional Interim Trail (estimated to be 30 years in duration for purposes of analysis), the Optional Interim Trail would be removed, and the Ultimate Trail Configuration would be constructed. Thus, the Optional Interim Trail includes three phases (hereinafter referenced as parts): (1) implementation of the Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

For the Optional Interim Trail, the typical width of the paved trail would be 16 feet with striping in the middle to separate eastbound and westbound.

Trail Amenities and Features

For both the Ultimate Trail Configuration and the Optional Interim Trail, fencing and/or guardrails would be installed along the trail alignment for safety and security in accordance with the MBSST Master Plan. Lighting that is "dark sky compliant" would be installed along portions of the trail that do not benefit from existing light sources along adjacent roadways and crossings. On bridges and viaducts and in environmentally sensitive areas, there would be low-level lighting, similar to that on the San Lorenzo River Trestle Bridge. Trash receptacles, including recycling receptacles and dog waste stations, would be added near 12 roadway crossings. Informational, educational, and directional signage would be placed at strategic locations along the trail.

Construction Timing

Ultimate Trail Configuration. Construction of the Ultimate Trail Configuration without the Optional Interim Trail is estimated to begin in 2026 and would continue for approximately 48 months.

Optional Interim Trail. Construction of the Optional Interim Trail is estimated to occur as follows. It is estimated by the RTC, County, and City that the Optional Interim Trail could be in operation for approximately 25–30 years, recognizing that this is an interim or temporary condition driven by freight activity and that it could be longer or shorter than estimated below for purposes of analysis:

1. Implementation of the Optional Interim Trail: 2023–2027 (4 years)
    - 2023–2025 – Complete environmental review, design, and right-of-way process
    - 2026–2027 – Trail construction
2. Demolition of the Optional Interim Trail and Rebuilding of the Rail Line: 2056–2060 (4 years)
3. Construction of the Ultimate Trail Configuration: 2060–2064 (4 years)

Construction Activities

In general, construction activities for Segments 10 and 11 would include excavation of material sources, clearing and grubbing, and tree removal; grading, rail realignment, retaining wall and abutment construction, viaduct and bridge construction, drainage improvements, and placement of crushed aggregate base and paved surface; and revegetation, installation of fencing, signs, lighting, and other trail- and safety-related features. There would be drilling associated with construction of the retaining walls and viaducts but no pile driving.

The Project would be constructed in accordance with the recommendations included in the Draft Geotechnical Investigation Report (Pacific Crest Engineering 2021) and any additional recommendations identified in the final Geotechnical Investigation to be prepared upon final project design. Additionally, the structures (viaducts, bridges) would be constructed in accordance with American Association of State Highway and Transportation Officials and California Department of Transportation (Caltrans) standards.

Several best management practices are included in the project description and will be identified in the construction bid documents and implemented during project construction to minimize dust, emissions, and erosion and to protect air quality, biological resources, and water quality.

Project Purpose and Objectives

The project **purpose** is to provide an Americans with Disabilities Act (ADA)-accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing rail corridor.

The project **objectives** are based on and consistent with objectives and policies in the adopted MBSST Network Master Plan.

The project objectives include the following:

1. Provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County (Master Plan Objective 1.1)
2. Develop the trail so future rail transportation service along the corridor is not precluded (Master Plan Policy 1.2.4)
3. Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), coastal environment, local history, and affected communities (Master Plan Policies 1.1.2 and 1.1.4, Objective 2.1)
4. Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic (Master Plan Goal 1)
5. Minimize trail impacts to private lands, including agricultural, residential, and other land uses (Master Plan Objective 1.5)
6. Minimize trail impacts to sensitive habitat areas and special-status plant and animal species (Master Plan Objective 1.4, Policy 1.4.1)
7. Comply with requirements of local, state, and federal agencies with jurisdiction

Project Alternatives

Pursuant to Section 15126.6 of the *CEQA Guidelines*, the County considered several project alternatives, including design options and features, suggested during the scoping process. The following project alternatives are evaluated in this EIR (Chapter 5, *Project Alternatives*, Section 5.2).

- Alternative 1: Trail Only
- Alternative 2: Rail with Trail on Opposite Side of Tracks
- Alternative 3: No Project

Alternative 1. The Trail Only Alternative would involve permanent removal of the existing railroad tracks and ties and construction of the trail generally on the rail bed, including across the Capitola Trestle Bridge. Thus, trail users would not be directed to sidewalks and bicycle lanes along surface streets through Capitola Village. The paved trail would have a typical width of 16 feet.

Alternative 2. Under Alternative 2, the trail would be located on the opposite side of the tracks than the Ultimate Trail Configuration in most sections. Like the Ultimate Trail Configuration, trail users would be directed to sidewalks and bicycle lanes along surface streets through Capitola Village. The paved trail would have a typical width of 12 feet.

Alternative 3. The No Project Alternative assumes that the project corridor would remain “as is” with no planned development of a trail for alternative transportation, recreation, or other uses.

Areas of Known Controversy and Key Issues

Areas of known controversy and key issues include the tree removal required for project implementation.

Issues to be Resolved

Issues to be resolved include the County's (as well as the City's and RTC's) choice among the Proposed Project with or without the Optional Interim Trail and Project alternatives and implementation of mitigation measures to reduce the significant impacts to the extent feasible.

Summary of Impacts and Mitigation Measures

Proposed Project

The potential impacts of the *Ultimate Trail Configuration (Trail Next to Rail Line)*, including Design Options A and B, and the *Optional Interim Trail (Trail on the Rail Line)* were analyzed at an equal level of detail in Chapter 3. The potential cumulative impacts are addressed in Chapter 4, *Other CEQA Required Discussions*.

Table ES-1, located at the end of this Executive Summary, includes a summary of the impacts of the *Ultimate Trail Configuration (Trail Next to Rail Line)*, including Design Options A and B, and the *Optional Interim Trail (Trail on the Rail Line)*; proposed mitigation measures, if required, and the residual impact after application of mitigation. Impacts are categorized as follows:

- **No Impact.** No adverse effect at all on environmental conditions and/or a beneficial effect by reducing the severity of existing environmental problems or hazards.
- **Less than Significant.** An impact that may be adverse but does not exceed the identified significance threshold and does not require mitigation measures.
- **Less than Significant with Mitigation.** An impact that may be adverse and exceed the identified significance threshold but can be reduced to below the significance threshold level with the adoption of identified mitigation measures.
- **Significant and Unavoidable.** An impact that may be adverse and exceed the identified significance threshold and cannot be reduced to below the threshold level even with the adoption of any identified mitigation measures.

Table ES-2, located at the end of this Executive Summary, provides a summary list of the mitigation measures identified for the Proposed Project and Project Alternatives.

Project Alternatives

The potential impacts of Alternatives 1, 2, and 3 were analyzed at a lesser level of detail, as allowed by CEQA, in Chapter 5, *Project Alternatives*, Section 5.2, *Alternatives Evaluated in Draft EIR*.

Table ES-3, located at the end of this Executive Summary, provides a comparative summary of the Project impacts for the Proposed Project, including Ultimate Trail Configuration and Optional Interim Trail, and Project Alternatives. Refer to Section 5.2 for the complete alternatives analysis.

Significant and Unavoidable Impacts

As presented in **Table ES-1** and **Table ES-2**, the *Ultimate Trail Configuration (Trail Next to Rail Line)*, *Optional Interim Trail (Trail on the Rail Line)*, Alternative 1 (Trail Only), and Alternative 2 (Rail with Trail on Opposite Side of Tracks) would all result in the following significant and unavoidable Project impacts:

- Aesthetics
  - Adverse effect on scenic vistas through the removal of mature trees (Impact AES-1)
  - Inconsistency with policies that pertain to tree and vegetation removal (Impact AES-2)
  - Cumulative aesthetics impacts from increased development in open spaces disrupting scenic vistas from tree removal (Impact AES-C)
- Biological Resources
  - Adverse effect on monarch butterfly and autumnal and/or wintering roost sites from tree removal (Impact BIO-1)
  - Interference with wildlife movement from tree removal and habitat fragmentation (Impact BIO-9)
  - Conflict with policies and ordinances protecting trees (Impact BIO-10)
  - Cumulative biological resources impacts from tree removal and fragmentation of habitat and wildlife corridors (Impact BIO-C)
- Greenhouse Gas Emissions/Climate Change
  - Inconsistency with applicable greenhouse gas reduction plans related to tree removal (Impact GHG-2)
  - Cumulative greenhouse gas impacts from tree removal (Impact GHG-C)

Environmentally Superior Alternative

As described in Chapter 5, *Project Alternatives*, Section 5.3, *Environmentally Superior Alternative*, and **Table 5-5**, the impacts of the following were compared:

- *Ultimate Trail Configuration (Trail Next to Rail Line)*
- *Optional Interim Trail (Trail on the Rail Line)*
- Alternative 1 (Trail Only)
- Alternative 2 (Rail with Trail on Opposite Side of Tracks)
- Alternative 3 (No Project)

Based on this comparison, Alternative 3 (No Project) would result in less or substantially less environmental impacts for all the resource topics. Therefore, CEQA requires an environmentally superior build alternative be identified.

As described in Section 5.3, the overall impacts of the build alternatives are similar, and there is no clear environmentally superior alternative. Therefore, the County considered two measures to identify an environmentally superior alternative: (1) minimizing significant and unavoidable impacts and (2) environmentally superior for most resource topics.

Minimizing Significant and Unavoidable Impacts. Using this measure, the County considers Alternative 1 (Trail Only) to be environmentally superior because it results in substantially less tree removal:

- Ultimate Trail Configuration – 803 trees
- Optional Interim Trail – 957 trees

- Alternative 1 (Trail Only) – 288 trees
- Alternative 2 (Rail with Trail on Opposite Side of Tracks) – 1,000 trees

However, this alternative results in increased impacts to monarch habitat at Escalona Gulch because it requires the removal of large wind buffer and autumnal roost trees on the north (inland) side of the tracks that would not be affected by the *Ultimate Trail Configuration (Trail Next to Rail Line)*.

Environmentally Superior for Most Resource Topics. Using this measure, the County considers the *Ultimate Trail Configuration (Trail Next to Rail Line)* to be environmentally superior because it requires less ground disturbance overall. Compared to *Ultimate Trail Configuration (Trail Next to Rail Line)*:

- Optional Interim Trail includes two additional construction periods, the wider construction footprint disturbs both sides of the tracks, and rail demolition increases risk of hazardous materials exposure.
- Alternative 1 (Trail Only) has a wider construction footprint that disturbs both sides of the tracks (16-foot-wide trail instead of 12-foot-wide trail) and extends an additional 0.5 mile (by continuing the trail in the rail corridor, rather than directing users to the on-street system through Capitola Village), rail demolition increases risk of hazardous materials exposure, and permanent removal of the Santa Cruz Branch Rail Line increases impacts to identified historic resource.
- Alternative 2 (Rail with Trail on Opposite Side of Tracks) requires more earthwork and ground disturbance for additional retaining wall construction (and fewer viaducts), also resulting in more impacts on sensitive habitats and aquatic features.

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Aesthetics			
AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
AES-3. The Project would not adversely affect daytime or nighttime views.	Less than Significant	None Required	Less than Significant
AES-C. Cumulative development may result in significant cumulative aesthetic impacts. The Project's contribution would not be cumulatively considerable, except for cumulative impacts to scenic quality due to the removal of mature trees.	Cumulatively Considerable	BIO-7a, BIO-7b, BIO-7c BIO-C	Cumulatively Considerable
Beneficial Effects: The Project would facilitate public access to viewing points of scenic vistas in both segments of the Project corridor.			
Air Quality			
AIR-1. The Project would not conflict with or obstruct implementation of the adopted MBARD AQMP.	Less than Significant	None Required	Less than Significant
AIR-2. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment.	Less than Significant	None Required	Less than Significant
AIR-3. The Project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	None Required	Less than Significant
AIR-4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than Significant	None Required	Less than Significant
AIR-C. Cumulative development may result in significant cumulative air quality impact. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Beneficial Effect: The Project would provide an alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.			

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Biological Resources			
BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.[b]	Potentially Significant	BIO-1a, BIO-1b BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
BIO-2. The Project could adversely affect sensitive fish species.[c]	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation
BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation
BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	Potentially Significant	BIO-1a BIO-4 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-5. Project construction could adversely affect sensitive and common roosting bat species that may use coast live oak, riparian, and other trees along the alignment.	Potentially Significant	BIO-1a BIO-5 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.	Potentially Significant	BIO-1a BIO-6 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats.	Potentially Significant	BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation
BIO-9. The Project would interfere with wildlife movement.[b]	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Significant and Unavoidable

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
BIO-10. The Project would conflict with policies and ordinances protecting trees, including the City of Capitola Community Tree Management Ordinance and County of Santa Cruz Significant Tree Ordinance.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
BIO-C. Cumulative development would result in significant cumulative biological resources impacts. The Project's contribution would be cumulatively considerable.	Cumulatively Considerable	BIO-7a, BIO-7b, BIO-7c BIO-C	Cumulatively Considerable
Cultural Resources			
CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).			
Ultimate Trail Configuration	Less than Significant	None Required	Less than Significant
Optional Interim Trail	Potentially Significant	CR-1	Less than Significant
Ultimate Trail Configuration Design Option A	Less than Significant	None Required	Less than Significant
Ultimate Trail Configuration Design Option B	Potentially Significant	CR-1	Less than Significant
CR-2. Ground-disturbing activities during project construction may unearth or adversely impact subsurface archaeological resources.	Potentially Significant	CR-2a, CR-2b, CR-2c, CR-2d	Less than Significant
CR-3. Ground-disturbing activities during project construction may disturb human remains.	Less than significant	None Required	Less than Significant
CR-C. Cumulative development may result in significant cumulative cultural resource impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Geology and Soils			
GEO-1. The Project would not exacerbate the existing exposure of people or structures to risks from strong seismic ground shaking.	Less than Significant	None Required	Less than Significant
GEO-2. The Project may exacerbate exposure of the public to liquefaction or landslide hazards and may be located on a geological unit or soil that would become unstable as a result of lateral spreading, landslides, and liquefaction.	Less than Significant	None Required	Less than Significant
GEO-3. The Project may result in substantial soil erosion or loss of topsoil.	Less than Significant	None Required	Less than Significant

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
GEO-4. The Project would not exacerbate the existing risk to life or property resulting from expansive soils.	Less than Significant	None Required	Less than Significant
GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	GEO-5	Less than Significant
GEO-C. Cumulative development would not result in significant cumulative geology and soils impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Greenhouse Gas Emissions/Climate Change			
GHG-1. The Project would not result in GHG emissions that would have a significant impact on the environment.	Less than Significant	None Required	Less than Significant
GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
GHG-3. The Project would not expose people or structures to substantial risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.	Less than Significant	None Required	Less than Significant
GHG-C. Cumulative statewide development would result in a significant cumulative GHG impact. The Project's contribution of GHG emissions would not be cumulatively considerable. The Project's contribution to tree removal would be cumulatively considerable and unavoidable.	Cumulatively Considerable	BIO-7a, BIO-7b, BIO-7c BIO-C	Cumulatively Considerable
Beneficial Effect: The Project would provide an alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.			
Hazards and Hazardous Materials			
HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.	Less than Significant	None Required	Less than Significant
Ultimate Trail Configuration	Potentially Significant	HAZ-1a, HAZ-1b	Less than Significant
Optional Interim Trail	Potentially Significant	HAZ-1a, HAZ-1b, HAZ-1c	Less than Significant

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Ultimate Trail Configuration Design Option A	Potentially Significant	HAZ-1a, HAZ-1b, HAZ-1c	Less than Significant
Ultimate Trail Configuration Design Option B	Potentially Significant	HAZ-1a, HAZ-1b	Less than Significant
HAZ-C. Cumulative development would not result in significant cumulative hazards and hazardous materials impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Hydrology and Water Quality			
HYD-1. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality or conflict with a Water Quality Control Plan.	Less than Significant	None Required	Less than Significant
HYD-2. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	Less than Significant	None Required	Less than Significant
HYD-3. The Project would not substantially alter drainage patterns within the Project corridor or vicinity.	Less than Significant	None Required	Less than Significant
HYD-4. The Project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.	Less than Significant	None Required	Less than Significant
HYD-C. Cumulative development would not result in significant cumulative hydrology and water quality impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Land Use and Planning			
LUP-1. The Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	None Required	Less than Significant
LUP-C. Cumulative development would not result in significant cumulative land use impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Beneficial Effect. The Project would increase connectivity across established communities by providing a pedestrian and bicycle trail using an existing corridor.			

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Noise			
N-1. Construction may result in a substantial temporary increase in noise levels.	Potentially Significant	N-1	Less than Significant
N-2. Operation of the Project would not expose persons to or generate excessive noise levels.	Less than Significant	None Required	Less than Significant
N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Potentially Significant	N-3	Less than Significant
N-C. Cumulative development may result in significant cumulative noise impacts to ambient vehicle noise. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Public Safety and Services			
PUB-1. The Project would not result in the need for additional fire protection facilities or emergency medical services response to maintain acceptable service ratios or response times.	Less than Significant	None Required	Less than Significant
PUB-2. The Project would not result in the need for additional police protection or law enforcement facilities to maintain acceptable service ratios or response times.	Less than Significant	None Required	Less than Significant
PUB-3. The Project would not result in the need for the construction of new or additional park facilities or in the degradation of existing facilities.	Less than Significant	None Required	Less than Significant
PUB-4. The Project would not result in the need for the construction of new or additional health service facilities.	Less than Significant	None Required	Less than Significant
PUB-C. Cumulative development could result in significant cumulative impacts to public safety and services. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Beneficial Effect: The Project would provide a new alternative transportation and recreational facility and would improve access to New Brighton State Beach and other parks and recreation facilities, such as the Simpkins Family Swim Center, Jade Street Park, Capitola Beach, and other beaches. Additionally, the Project would improve access to the rail line for police, fire, and emergency response medical services.			

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Transportation			
T-1. The Project would meet the screening criteria set by the OPR, Caltrans, Santa Cruz County, and City of Capitola and thus would not conflict or be inconsistent with *CEQA Guidelines*, Section 15064.3(b).	Less than Significant	None Required	Less than Significant
T-2. Neither construction nor operation of the Project would substantially increase hazards due to a geometric design feature or incompatible use.	Less than Significant	None Required	Less than Significant
T-C. Cumulative development would result in significant cumulative traffic impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Beneficial Effect: The Project would provide the option for alternative transportation modes along the Project corridor, resulting in an overall reduction in vehicle miles traveled (VMT) that would ultimately improve the existing circulation system. Furthermore, the Project would implement new striping and sidewalk extensions to crosswalks across Park Avenue and Coronado Street along Segment 11, reducing user conflicts and providing an improved connection from the residential neighborhoods to New Brighton State Beach.			
Tribal Cultural Resources			
TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	Potentially Significant	TCR-1a, TCR-1b	Less than Significant
TCR-C. Cumulative development may result in significant cumulative tribal cultural resource impacts. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable
Utilities and Service Systems			
UTIL-1. The Project would require the relocation or replacement of water, wastewater, electricity, gas, and telecommunications conveyance infrastructure.	Less than Significant	None Required	Less than Significant
UTIL-2. Sufficient water supplies are available to serve construction and operation of the Project.	Less than Significant	None Required	Less than Significant
UTIL-3. The Project would not generate wastewater in excess of existing treatment capacity.	Less than Significant	None Required	Less than Significant

Table ES-1 Summary of Project Impacts[a]

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
UTIL-4. The Project would not generate solid waste in excess of local landfill capacity and would comply with applicable regulations related to solid waste.	Less than Significant	None Required	Less than Significant
UTIL-C. Cumulative development may result in significant cumulative impacts to utilities and service systems. The Project's contribution would not be cumulatively considerable.	Not Cumulatively Considerable	None Required	Not Cumulatively Considerable

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail Next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as *Ultimate Trail Configuration Design Options A (Interim Trail on Capitola Trestle over Soquel Creek) and B (Inland Side of Track between Grove Lane and Coronado Street in Capitola),* unless otherwise noted.

[b] The impact was determined Potentially Significant, pending the assessment of feasible mitigation to reduce the impact to a less than significant level. Mitigation has been identified to reduce the impact, but it cannot be reduced to a less than significant level. Therefore, the impact is determined Significant and Unavoidable after mitigation.

[c] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

AQMP = Air Quality Management Plan; Caltrans = California Department of Transportation; ESHA = Environmentally Sensitive Habitat Area; GHG = greenhouse gas; MBARD = Monterey Bay Air Resources District; OPR = Governor's Office of Planning and Research; SCBRL = Santa Cruz Branch Rail Line

Table ES-2 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Mitigation Measure	Proposed Project		Project Alternatives		
	Ultimate Trail Configuration (Trail Next to Rail Line)[a]	Optional Interim Trail (Trail on the Rail Line)	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Note: Most of the mitigation measures are required for the Ultimate Trail Configuration, Optional Interim Trail, and Alternatives 1 and 2. The shaded rows indicate for which impacts the mitigation requirements are different.					
BIO-1a. Conduct Biological Monitoring for Sensitive Wildlife Species	Yes	Yes	Yes	Yes	No
BIO-1b. Enhance Monarch Roost Habitat along Rail Corridor (Escalona Gulch, New Brighton State Beach, Borregas Creek)	Yes	Yes	Yes	Yes	No
BIO-4. Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction Occurs between February 1 and August 31	Yes	Yes	Yes	Yes	No
BIO-5. Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction	Yes	Yes	Yes	Yes	No
BIO-6. Implement San Francisco Dusky-Footed Woodrat Protection Measures during Construction	Yes	Yes	Yes	Yes	No
BIO-7a. Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing	Yes	Yes	Yes	Yes	No
BIO-7b. Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation	Yes	Yes	Yes	Yes	No
BIO-7c. Implement Best Management Practices to Protect Biological Resources during Construction	Yes	Yes	Yes	Yes	No
BIO-8a. Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats	Yes	Yes	Yes	Yes	No
BIO-8b. Develop and Implement Aquatic Resources Mitigation and Monitoring Plan	Yes	Yes	Yes	Yes	No
BIO-9c. Implement Best Management Practices to Protect Biological Resources during Construction	Yes	Yes	Yes	Yes	No
BIO-C. Include cumulative conservation goals and objectives in the Project-Specific Biological Resources Mitigation and Management Plan (Mitigation Measure BIO-9b)	Yes	Yes	Yes	Yes	No

Table ES-2 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Mitigation Measure	Proposed Project		Project Alternatives		
	Ultimate Trail Configuration (Trail Next to Rail Line)[a]	Optional Interim Trail (Trail on the Rail Line)	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
CR-1. Standards Rehabilitation Review	No[b]	Yes	Yes	No	No
CR-2a. Worker's Environmental Awareness Program	Yes	Yes	Yes	Yes	No
CR-2b. Archaeological Monitoring	Yes	Yes	Yes	Yes	No
CR-2c. Native American Monitoring	Yes	Yes	Yes	Yes	No
CR-2d. Implementation of Protocol for Unanticipated Discovery of Cultural Resources	Yes	Yes	Yes	Yes	No
GEO-5. Implement Paleontological Resources Protection	Yes	Yes	Yes	Yes	No
HAZ-1a. Conduct Soil Sampling and Implement Necessary Remediations	Yes	Yes	Yes	Yes	No
HAZ-1b. Prepare and Implement Soils Management Plan	Yes	Yes	Yes	Yes	No
HAZ-1c. Evaluate and Cap Contaminated Subgrade Soil and Ballast	No[b]	Yes[c]	Yes	No	No
N-1. Implement Noise-reducing Measures for Construction Equipment Used within 275 Feet of Residences/Hotels	Yes	Yes	Yes	Yes	No
N-3. Provide Notification of Construction Vibration to Residential Units and Manufacturing Operations within 235 Feet	Yes	Yes	Yes	Yes	No
TCR-1a. Conduct Native American Monitoring During Construction in Previously Undisturbed Native Soils	Yes	Yes	Yes	Yes	No
TCR-1b. Implement Protocol for Unanticipated Discovery of Tribal Cultural Resources if Monitor Not Present	Yes	Yes	Yes	Yes	No

[a] The Ultimate Trail Configuration includes the following design options. The mitigation measures would apply to both design options, unless otherwise indicated.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[b] This mitigation measure would be required for Design Option A but not for Design Option B.

[c] This mitigation measure is required for Optional Interim Trail Part 1 only, not Part 2 (interim trail removal and rail reconstruction) or Part 3 (Ultimate Trail Configuration construction).

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Aesthetics					
AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees.	SU MM BIO-7a, BIO7-b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Similar, less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	NI Less
AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.	SU MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Similar, less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	NI Less
AES-3. The Project would not adversely affect daytime or nighttime views.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**NI**
Air Quality					
AIR-1. The Project would not conflict with or obstruct implementation of the adopted MBARD AQMP.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Slightly more[d]
AIR-2. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	LTS Less from construction; Slightly more from operation[d]
AIR-3. The Project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, more	NI Less
AIR-4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	LTS Similar	LTS Similar	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Biological Resources					
BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.	SU MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	NI Less
BIO-2. The Project could adversely affect sensitive fish species.[i]	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	LTSM MM BIO-1a MM BIO-4 MM BIO-7ª,b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	NI Less

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
BIO-5. Project construction could adversely affect sensitive and common roosting bat species that may use coast live oak, riparian, and other trees along the alignment.	LTSM MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	NI Less
BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.	LTSM MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	NILess
BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.	LTSM MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, slightly less MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats.	LTSM MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, slightly less MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-9. The Project would interfere with wildlife movement.	SU MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, more MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, slightly less MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, more MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
BIO-10. The Project would conflict with policies and ordinances protecting trees, including the City of Capitola Community Tree Management Ordinance and County of Santa Cruz Significant Tree Ordinance.	SU MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**NI**
Cultural Resources					
CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).	LTS[e]	LTSM Similar, more MM CR-1	LTSM Similar, more MM CR-1	LTS Similar	NI Less
CR-2. Ground-disturbing activities during project construction may unearth or adversely impact subsurface archaeological resources.	LTSM MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, more MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, slightly more MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, slightly more MM CR-2a, CR-2b, CR-2c, CR-2d	NI Less
CR-3. Ground-disturbing activities during project construction may disturb human remains.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Geology and Soils					
GEO-1. The Project would not exacerbate the existing exposure of people or structures to risks from strong seismic ground shaking.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-2. The Project may exacerbate exposure of the public to liquefaction or landslide hazards and may be located on a geological unit or soil that would become unstable as a result of lateral spreading, landslides, and liquefaction.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-3. The Project may result in substantial soil erosion or loss of topsoil.	LTS	LTS Simila	LTS Similar	LTS Similar	NI Less
GEO-4. The Project would not exacerbate the existing risk to life or property resulting from expansive soils.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LTSM MM GEO-5	LTSM Similar, slightly more MM GEO-5	LTSM Similar, slightly more MM GEO-5	LTSM Similar, slightly more MM GEO-5	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Greenhouse Gas Emissions/Climate Change					
GHG-1. The Project would not result in GHG emissions that would have a significant impact on the environment.	LTS	LTS Similar, more	LTSM Similar, slightly more	LTS Similar, slightly more	NI Less
GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.	SU MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Similar, less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	LTS Less

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
GHG-3. The Project would not expose people or structures to substantial risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**LTS**
Hazards and Hazardous Materials					
HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.	LTSM[g] MM HAZ-1a, HAZ-1b	LTSM Similar, more MM HAZ-1a, HAZ-1b	LTSM[h] Similar, slightly more MM HAZ-1a, HAZ-1b, HAZ-1c	LTSM Similar MM HAZ-1a, HAZ-1b	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Hydrology and Water Quality					
HYD-1. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality or conflict with a Water Quality Control Plan.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
HYD-2. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	LTS	LTS Similar, slightly more	LTS Similar, slightly more	LTS Similar	NI Less
HYD-3. The Project would not substantially alter drainage patterns within the Project corridor or vicinity.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
HYD-4. The Project would not risk release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Land Use and Planning					
LUP-1. The Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Similar, less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
Noise					
N-1. Construction may result in a substantial temporary increase in noise levels.	LTSM MM N-1	LTSM Similar, more MM N-1	LTSM Similar, slightly more MM N-1	LTSM Similar, slightly more MM N-1	NI Less
N-2. Operation of the Project would not expose persons to or generate excessive noise levels.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	LTSM MM N-3	LTSM Similar, more MM N-3	LTSM Similar, slightly more MM N-3	LTSM Similar, slightly more MM N-3	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Public Safety and Services					
PUB-1. The Project would not result in the need for additional fire protection facilities or emergency medical services response to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar, slightly less	LTS Similar	LTS Less
PUB-2. The Project would not result in the need for additional police protection or law enforcement facilities to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
PUB-3. The Project would not result in the need for the construction of new or additional park facilities or in the degradation of existing facilities.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
PUB-4. The Project would not result in the need for the construction of new or additional health service facilities.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
Transportation					
T-1. The Project would meet the screening criteria set by the OPR, Caltrans, Santa Cruz County, and City of Capitola and thus would not conflict or be inconsistent with *CEQA Guidelines*, Section 15064.3(b).	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Less for construction, more for operation
T-2. Neither construction nor operation of the Project would substantially increase hazards due to a geometric design feature or incompatible use.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
Tribal Cultural Resources					
TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	LTSM MM TCR-1a, TCR-1b	LTSM Similar, more MM TCR-1a, TCR-1b	LTSM Similar, slightly more MM TCR-1a, TCR-1b	LTSM Similar, slightly more MM TCR-1a, TCR-1b	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Utilities and Service Systems					
UTIL-1. The Project would require the relocation or replacement of water, wastewater, electricity, gas, and telecommunications conveyance infrastructure.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-2. Sufficient water supplies are available to serve construction and operation of the project.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-3. The Project would not generate wastewater in excess of existing treatment capacity.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-4. The Project would not generate solid waste in excess of local landfill capacity and would comply with applicable regulations related to solid waste.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**

[a] The resource topics and impacts of the Proposed Project are presented in the first column. The impact determination and any required mitigation for the *Proposed Project, including the Ultimate Trail Configuration* and the *Optional Interim Trail*, and Project Alternatives are presented in the other columns. The anticipated impacts of the Project Alternatives, as well as the Optional Interim Trail, are described in comparison to the *Ultimate Trail Configuration* (e.g., similar, more, less), with the reasoning presented primarily in the text discussion and also in **Table 5-5**. A summary of the required mitigation is presented in **Table 5-4**.

[b] The "Overall Impact Determination" for the resource topic is based on the highest or "worst" level of potential impact for the resource topic.

[c] The impact determinations are for the whole of the optional Interim Trail, including implementation of all three parts: (1) removal of the rail and construction of the Interim Trail on the rail line; (2) demolition of the Interim Trail and rebuilding the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail. This results in three separate construction periods

[d] The No Project alternative was determined to have more operational impact than the Ultimate Trail Configuration, Optional Interim Trail and Alternatives 1 and Alternative 2, because these build scenarios would provide alternative transportation for bicycles and pedestrians, which is anticipated to reduce vehicular use and associated emissions, which is the goal in several planning documents including: California Air Resources Board Scoping Plan, Monterey Bay Air Resources District Air Quality Management Plan, Association of Monterey Bay Area Government Metropolitan Transportation Plan and Sustainable Communities Strategy, City Climate Action Plan, County Climate Action and Adaptation Plan.

[e] The Ultimate Trail Configuration includes the following design options. The mitigation measures would apply to both design options, unless otherwise indicated.

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Table ES-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)

[f] Design Option A would be LTSM and require Mitigation Measure CR-1.

[g] Design Option A would also require Mitigation Measure HAZ-1c

[h] Mitigation Measure HAZ-1c is for Optional Interim Trail Part 1 only, but not Part 2 or 3.

[i] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

NI = No Impact; LTS = Less than Significant without Mitigation; LTSM = Less than Significant with Mitigation; SU = Significant and Unavoidable

AQMP = Air Quality Management Plan; Caltrans = California Department of Transportation; ESHA = Environmentally Sensitive Habitat Area; GHG = greenhouse gas; MBARD = Monterey Bay Air Resources District; OPR = Governor's Office of Planning and Research; SCBRL = Santa Cruz Branch Rail Line

This page intentionally left blank.

1 Introduction

This document is a project-specific Environmental Impact Report (EIR) for the **Coastal Rail Trail Segments 10 and 11 Project** (Project), located in both unincorporated Santa Cruz County (County) and the City of Capitola (City) (**Figure 1-1,** Regional Location).

The Project, proposed by the County in coordination with the City and Santa Cruz County Regional Transportation Commission (RTC), is an approximately 4.5-mile new bicycle and pedestrian trail along the RTC-owned rail corridor from 17th Avenue on the west to State Park Drive on the east.

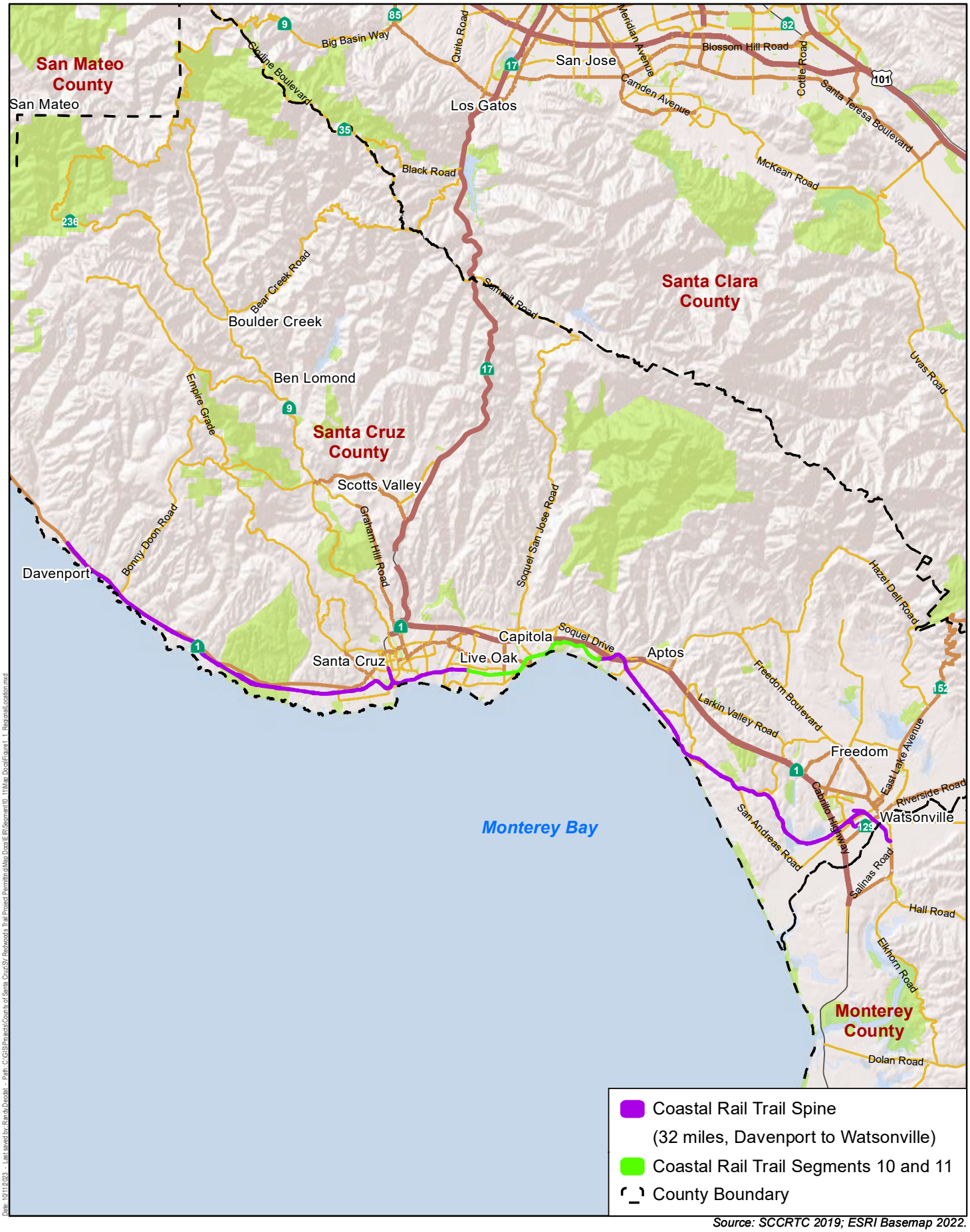
The project purpose is to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

This EIR includes an evaluation of the *Ultimate Trail Configuration (Trail next to Rail Line)*, which includes an *Optional Interim Trail (Trail on the Rail Line)* for both Segments 10 and 11. Therefore, both the Ultimate Trail Configuration and the Optional Interim Trail alignments are analyzed at an equal level of detail. The trail alignments are presented in **Appendices A.1 and A.2**, respectively. The Ultimate Trail Configuration is consistent with the MBSST Network Master Plan alignment and is considered the preferred alignment and approach by the County.

- **Ultimate Trail Configuration (Trail next to Rail Line)**. The trail would be 4.2 miles long. In Segment 10 (1.5 miles), the trail would be constructed on the inland side of the railroad tracks. In Segment 11 (2.7 miles), the trail would be constructed on the coastal side of the railroad tracks from 47th Avenue to Mar Vista Drive and on the inland side of the tracks from Mar Vista Drive to State Park Drive (0.3 mile). In Segment 11, the trail would not include an approximately 0.5-mile section of the rail corridor from Opal Street to Monterey Avenue (which encompasses the Capitola Trestle Bridge) in the City of Capitola. Instead, trail users would be directed to use the existing on-street bicycle lanes and pedestrian sidewalks extending through Capitola Village.
- **Optional Interim Trail (Trail on the Rail Line)**. The trail would be 4.7 miles long. The trail in Segments 10 (1.5 miles) and 11 (3.2 miles) would be constructed in approximately the same location of the railroad tracks with the removal of the rails and ties. The Optional Interim Trail includes the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11. If and when the rail line is later reactivated, the Optional Interim Trail would be removed, the rail would be reinstated, and the Ultimate Trail Configuration would be constructed as described above.

This EIR chapter includes discussion of the following topics:

1. EIR Purpose and County Legal Authority
2. Project Background
3. California Environmental Quality Act (CEQA) Environmental Review Process
4. EIR Scope and Content
5. EIR Organization
6. Public Outreach



Source: SCCRTC 2019; ESRI Basemap 2022.

Harris & Associates

N

0 2 4

Miles

Figure 1-1

Regional Location

Coastal Rail Trail Segments 10 and 11

1.1 EIR Purpose and County Legal Authority

In order to implement the Project, discretionary approval by the County, as well as the City and RTC, is required. This renders the Project subject to the requirements of CEQA. The County is the CEQA lead agency, and the City and RTC are responsible agencies. Refer to Section 1.3.1, *Lead, Responsible, and Trustee Agencies*.

In accordance with Section 15121 of the *CEQA Guidelines* (Title 14 CCR Section 15000 et seq.), the purpose of an EIR is to serve as an informational document that "will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."

This EIR serves as an informational document for the public, responsible agencies, and County decision-makers. The decision-makers will review and consider the information in the EIR, along with any other relevant information, in making final decisions regarding the Project.

1.2 Project Background

1.2.1 Project Inception and Rail Purchase

The Project is part of the MBSST Network, a two-county (Santa Cruz and Monterey Counties) bicycle and pedestrian transportation facility to promote appreciation for the Monterey Bay National Marine Sanctuary.

In its entirety, the planned trail network would extend the length of coastal Santa Cruz County, from the San Mateo County line on the north to the Monterey County line on the south. The Transportation Agency for Monterey County would be responsible for the portion in Monterey County, while the RTC would be responsible for the Santa Cruz County portion in partnership with numerous local government entities. The Project only addresses a central portion of the facility in the City of Capitola and unincorporated Santa Cruz County.

In 2012, the RTC purchased the Santa Cruz Branch Rail Line (SCBRL), a 32-mile-long federally regulated freight railroad line between Davenport on the north and Pajaro on the south, from the Union Pacific Railroad. Acquisition of the SCBRL was funded primarily by Proposition 116 and other transit funds from the California Transportation Commission. Proposition 116 funding was approved by the California Transportation Commission with the conditions that freight rail service continue as long as required by the federal Surface Transportation Board (STB) and the institution of recreational passenger rail service.

In November 2013, the RTC adopted the MBSST Network Master Plan and certified a programmatic EIR. The RTC made minor revisions to the Master Plan and EIR in February 2014.

The MBSST Network Master Plan identified the 32-mile Coastal Rail Trail along the SCBRL as the spine of the 50-mile MBSST Network. The MBSST Network in its entirety includes the 32-mile Coastal Rail Trail and 18 miles of spur trails. The MBSST Network will connect to existing and planned trails in Santa Cruz County and Monterey County.

The SCBRL Line serves as the "Coastal Rail Trail spine" of the Santa Cruz County portion of the MBSST Network (**Figure 1-1**).

1.2.2 Rail Operation and Maintenance

Although the RTC owns the SCBRL right-of-way (ROW), the RTC does not own the freight rail operation rights. The RTC has an Administration, Coordination, and License Agreement with a rail operator that owns a freight easement over the tracks and is designated as the common carrier by the STB, which is the federal agency with regulatory jurisdiction over the interstate freight railroad network.

The freight easement extends 10 feet on either side of the centerline of the tracks and includes rights of access along the length of the easement. The easement is for conducting freight rail operations and fulfilling rights and obligations as a common carrier freight railroad under applicable federal laws and regulations.

Currently, freight service is only provided south of Lee Road in the City of Watsonville. Repairs to the rail line are needed prior to re-initiating freight operations north of Lee Road, including the Project area. The cost of rail repairs exceeds the RTC's available revenue at this time.

The RTC's rail line maintenance includes but is not limited to vegetation control, ditch grading, culvert clearing, and slope repair. The RTC's Administration, Coordination, and License Agreement with the common carrier transfers maintenance within the freight easement to the common carrier once initial repairs are completed by the RTC. The RTC is currently moving forward with implementing a capital maintenance program for the rail ROW that includes bridge rehabilitation and other capital repairs as funding is available.

Recreational passenger rail service is provided by Roaring Camp between the unincorporated community of Felton and the Santa Cruz Beach Boardwalk (Boardwalk), which includes a portion of the SCBRL outside the Project area. New recreational rail service is also contemplated as part of the Administration, Coordination, and License Agreement.

In February 2021, the RTC completed the Transit Corridor Alternatives Analysis (TCAA) to evaluate public transit on the line, which represents another potential use of the line. The TCAA identified electric passenger rail as the preferred public transit alternative on the SCBRL. Public transit on the rail corridor remains in the RTC's Regional Transportation Plan (RTP) but on the financially unconstrained list of projects due to the lack of identified funding to the region for a commuter rail project. Refer to Section 1.2.4, *Subsequent Actions and Considerations*, for other relevant studies.

In 2022, the RTC allocated Measure D funding to initiate a Project Concept Report for Zero Emission Passenger Rail and Trail, which will identify alignment options for zero emission rail transit along the rail ROW. The RTC received the Transit and Intercity Rail Project in 2023 to fully fund the Project Concept Report for Zero Emission Passenger Rail and Trail. The RTC is seeking funding for preliminary design and environmental analysis.

1.2.3 MBSST Network Master Plan and EIR

MBSST Network Master Plan

The RTC prepared the MBSST Network Master Plan (RTC 2014) to establish the continuous alignment and a set of design standards for the MBSST Network, including a bicycle and pedestrian (multi-use) trail along the Coastal Rail Trail spine (RTC-owned rail corridor) and associated spur trails, for the length of Santa Cruz County.

The trail network was divided into 20 segments, each with independent utility and logical beginning and end points, to be built as funding became available. Starting in Davenport and continuing to the

Santa Cruz/Monterey County line, trail projects are located within or adjacent to the rail corridor and serve as the Coastal Rail Trail. The spine is complemented by spur trails or other bicycle and pedestrian facilities that connect to coastal access points or other desirable destination points.

The planning process for the MBSST Network Master Plan involved extensive stakeholder interviews and public workshops.

On November 7, 2013, after a 2.5-year planning and public outreach process, the MBSST Network Master Plan was adopted and the Master Plan EIR was certified (with a revision adopted in February 2014). These documents are available on the RTC website: www.sccrtc.org. All local jurisdictions through which the trail will traverse have also adopted the MBSST Network Master Plan, including the Cities of Capitola, Santa Cruz, and Watsonville, as well as the County of Santa Cruz. It is recognized that the MBSST Network will be funded, designed, and constructed in independent segments and that the on-road street system outside the rail ROW may serve as portions of the trail network until the MBSST Network within the rail ROW is complete.

MBSST Network Master Plan EIR

The MBSST Network Master Plan EIR (RTC 2013) is a programmatic EIR,[1] prepared to understand the environmental impacts of the proposed MBSST Network project at a planning level. The process is designed to enable informed decision-making and public participation. As a program-level document, the MBSST Network Master Plan EIR focuses on the broad changes to the environment that would be expected to result from implementing the MBSST Network project. As individual trail segments move forward with implementation and design, it is understood that additional environmental review may be required.

Since the MBSST Network Master Plan EIR was certified, the following trail projects have been completed, are under development, or are being constructed in phases as funding is secured:

- Segment 5 (7.5 miles): Phase 1 and 2 construction 2024
- Segment 7 (2.1 miles): Phase 1 completed 2021, Phase 2 construction 2023–2024
- Segment 8 (San Lorenzo River Trestle Bridge): Completed 2019
- Segments 8 and 9 (2.2 miles): Construction 2025–2026
- Segments 10 and 11 (4.5 miles): Design and environmental review
- Segments 12 (1.2 miles): Design and environmental review
- Segments 13–17 (approximately 10 miles): Preliminary Concept Report to determine alignment
- Segment 18 (1.2 miles): Phase 1 completed 2021, Phase 2 to be determined
- Segments 19 and 20 (2 miles): Preliminary Concept Report to determine alignment

Coastal Rail Trail Segments 10 and 11 EIR

In November 2021, the County issued a Notice of Preparation (NOP) to begin the process of preparing this stand-alone, project-level EIR for the Project (refer to Section 1.3.2, *Notice of Preparation*). Although this EIR is not formally "tiering" from the MBSST Network Master Plan EIR

[1] A "program EIR" is an EIR that may be prepared on a series of actions that can be characterized as one large project and are related geographically or as logical parts in the chain of contemplated actions (*CEQA Guidelines*, Section 15168). A program EIR is typically a planning level document providing a more general level of analysis, whereas a project-level EIR is prepared for a specific project and includes more focus and detail (see *CEQA Guidelines*, Section 15161).

(see *CEQA Guidelines*, Section 15152), it will nevertheless make use of relevant information contained in the MBSST Network Master Plan EIR, including applicable mitigation measures.

As described in the beginning of this section, this EIR includes an evaluation of the County's *Ultimate Trail Configuration (Trail next to Rail Line)* and an *Optional Interim Trail (Trail on the Rail Line)*, which is part of the Proposed Project and therefore analyzed at an equal level of detail.

No rail service is proposed as part of the Project, and no other changes in the existing rail corridor would occur as a result of the Project other than those described above as they relate to the implementation of the Ultimate Trail Configuration, including rail realignment described in Section 2.4.1, *Ultimate Trail Configuration (Trail next to Rail Line)*.

The Project, the Ultimate Trail Configuration with or without the optional first phase, does not include rail service but includes preservation of the railroad facilities consistent with the policies set forth in the adopted MBSST Network Master Plan, including Policy 1.2.4, *Develop trails in such a way so that future rail transit services along the corridor are not precluded* (RTC 2014).

1.2.4 Subsequent Actions and Considerations

This section discusses several relevant actions and considerations since adoption of the MBSST Network Master Plan and Master Plan EIR in 2013, including other relevant studies, project funding, railbanking, and local advocacy groups.

Other Relevant Studies

The following studies have been conducted since the MBSST Network Master Plan was adopted in 2013.

Rail Transit Feasibility Study (2015)

In June 2015, the RTC completed a feasibility study to examine the potential for regularly scheduled rail transit service on the SCBRL. Several rail transit service scenarios were examined based on different assumptions, such as headways, station locations, and train vehicle technology. Ridership and cost estimates were generated for each scenario to provide information based on the types of service for which data was available at the time and what transit service may look like on the rail line.

The study raised additional questions that need to be considered before the RTC and community decide if rail transit should be pursued and, if so, what characteristics and technologies are best suited to the community. To that end, the Expenditure Plan in Measure D has a Rail Corridor category that includes (1) protecting and maintaining the ROW, including existing infrastructure of the rail line, and (2) performing environmental and economic analysis of future transit and other transportation options on the ROW through a transparent public process.

Unified Corridor Investment Study (2019)

The RTC's Unified Corridor Investment Study (UCS), completed in January 2019, contains an analysis of the options for transportation uses of the rail ROW. The UCS examines which transportation improvements work together to make the most effective use of the community's north/south transportation corridor, including three parallel routes: State Route 1 (SR-1 or Highway 1), Soquel/Freedom, and the SCBRL.

The UCS identified improvements for travel by automobile, public transit, bicycle, and walking. Improvements on the RTC-owned rail corridor that were evaluated in the UCS include a trail next to the rail line, a trail on the rail line, freight rail, passenger rail, and bus rapid transit. The UCS

provided information about how changes to Highway 1, Soquel/Freedom, and the SCBRL could impact the community. One of the outcomes of this study was to protect the SCBRL for high-capacity public transit adjacent to a bicycle and pedestrian trail.

The UCS Preferred Scenario adopted by the RTC includes protection of the rail line in public ownership for high-capacity public transit use by maintaining the tracks and allowing freight and excursion service. The Preferred Scenario also envisions continued development of the trail along the rail ROW as presented in the MBSST Master Plan and EIR. Although the Preferred Scenario provides a recommendation for an approach to future transportation investments, the UCS does not approve a project or commit to a definite course of action for implementation.

Transit Corridor Alternatives Analysis (2021)

In February 2021, the RTC completed the TCAA to evaluate public transit uses on the SCBRL. The TCAA identified electric passenger rail as the preferred public transit alternative on the SCBRL. The RTC secured funding to develop a Project Concept Report for Zero Emission Passenger Rail and Trail in 2023. Funding needed to complete environmental review, final design, and construction of passenger rail on the SCBRL has not been secured.

Santa Cruz County Regional Transportation Plan (2022)

The RTP is a long-range (22-year) transportation plan for the Santa Cruz County area. The plan includes strategies to address the County's transportation challenges, a list of transportation needs, and priorities for limited funds. The RTP is updated every 4 to 5 years to address new trends, issues, and priorities and to incorporate new federal and state regulations. The RTC adopted the 2045 RTP in June 2022.

The potential environmental impacts of the 2045 RTP are collectively detailed in one EIR for the 2045 Metropolitan Transportation Plan and its Sustainable Communities Strategy, which encompass the three RTPs for Santa Cruz, Monterey, and San Benito Counties. The Final EIR was certified by Association of Monterey Bay Area Governments in June 2022.

Funding

The Project is receiving funds for design, engineering, environmental review, and construction from multiple sources, as shown in **Table 1-1**.

Table 1-1 Segments 10 and 11 Project Funding Sources

Purpose	Measure D (RTC)	ATP	Total
Design and Environmental	$4.2 million	$3 million	$7.2 million
ROW	$0	$1.8 million	$1.8 million
Construction	$12.8 million	$61.8 million	$74.6 million

ATP = Active Transportation Program; ROW = right-of-way; RTC = Santa Cruz County Regional Transportation Commission

Santa Cruz County Measure D: Transportation Improvement Expenditure Plan

In November 2016, Measure D was approved by over two-thirds of Santa Cruz County voters. The half-cent, 30-year sales tax measure includes funding for transportation projects that provide safer routes to schools for local students; maintain mobility and independence for older adults and those

with disabilities; invest in bicycle and pedestrian pathways and bridges; repave roadways, repair potholes, and improve safety on local streets; ease congestion on major roadways; and reduce greenhouse gas emissions that causes global warming. The 2016 Measure D Transportation Improvement Expenditure Plan (Measure D Expenditure Plan) is available on the RTC website: https://sccrtc.org/wp-content/uploads/ExpenditurePlan-voterApproved_8Nov2016.pdf.

According to the Measure D Expenditure Plan, 17% of the revenue will be allocated for the MBSST, otherwise known as the Coastal Rail Trail, for people walking and bicycling along the coast in Santa Cruz County. Funds will be used for trail construction, maintenance, operation, management, and drainage of the rail and trail corridor and will leverage other state and federal grants for completion of the trail network.

The Measure D Expenditure Plan also states that 8% of the revenue will be used for preservation of the rail corridor infrastructure and analysis of its future potential use to better serve Santa Cruz County residents and visitors. Projects include analysis of possible future transit and other transportation uses of the corridor and maintenance and repair of the publicly owned SCBRL. Measure D revenue does not include funding for any new train/rail service.

The RTC has programmed a total of $17 million in Measure D funding for the project: $4.2 million for preliminary design and environmental review, and $12.8 million for construction. The $12.8 million for construction serves as a grant match for the County's Active Transportation Program Cycle 6 application.

Active Transportation Program Funding

The County of Santa Cruz was awarded $67.6 million in California Active Transportation Program (ATP), Cycle 6 funds in December 2022. Of the ATP funding, $1 million was allocated for non-infrastructure bicycle and pedestrian education programming, which is a separate project under CEQA and not included in this EIR. The ATP grant provides funds for final design, ROW, and construction, as noted in **Table 1-1**. The ATP was created by Senate Bill 99 (Chapter 359, Statutes of 2013) and Assembly Bill 101 (Chapter 354, Statutes of 2013) to encourage increased use of active modes of transportation. Funds in the ATP are both state and federal and were augmented by Senate Bill 1 transportation funds.

The County's success in receiving the ATP funding is largely attributed to the Project's competitiveness in meeting the goals of the grant program.

Railbanking

Railbanking is required to implement *Optional Interim Trail (Trail on the Rail Line)* and *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek*.

Railbanking allows a freight railroad corridor that would otherwise be abandoned to instead be preserved under federal legislation. Railbanking falls under the jurisdiction of the federal STB with no guarantees regarding outcome. To railbank the SCBRL, the common carrier would need to file for abandonment and work with the RTC to negotiate a railbanking agreement, subject to the approval of the STB, or for the RTC to petition the STB for an adverse abandonment.

Railbanking can be prevented by another freight operator who is willing to assume the financial liability of the line by providing an Offer of Financial Assistance to assume the freight easement, the associated common carrier responsibilities, and the maintenance obligation of the line. Railbanking can also

potentially be prevented by objections by freight rail customers or the owner of a potential stranded line. However, the STB may not refuse to issue a railbanking order based on third-party objections.

With cooperation of effected parties, railbanking could be completed in as short as 6 months. However, without an agreement, the RTC would need to file an action with the STB to allow for the line to be railbanked. The STB would make its determination based on the viability of freight beyond Watsonville, the current condition of the rail line, and the cost associated with its repair. With opposition, an STB determination on railbanking could take 2–3 years.

Although a railbanking agreement preserves the railroad ROW, an interim trail cannot preclude the future potential re-activation of freight rail service. The Ultimate Trail Configuration can also be constructed if railbanking occurs, but railbanking is not required to construct the Ultimate Trail Configuration.

Although railbanking is required to construct the trail on the rail line, the County, in coordination with the RTC and City, decided to include a "trail on the rail line" as an optional first phase of the Project in the CEQA environmental document for the Project.[2] Therefore, this EIR includes an evaluation of the County's *Ultimate Trail Configuration (Trail next to Rail Line)* and an *Optional Interim Trail (Trail on the Rail Line)*, as well as *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek*, at an equal level of detail.[3]

Local Advocacy Groups

Trail with Rail

The Santa Cruz County Friends of the Rail and Trail was established in 2002 and worked to advocate for the purchase of the trail ROW and to support development of a trail within the rail ROW. The Santa Cruz County Friends of the Rail and Trail's mission is to promote, support, and enable the development of a rail with trail transportation system in Santa Cruz County (FORT 2023; www.railandtrail.org).

Trail Only

During development of trail planning efforts, citizen groups formed to advocate for a "trail only" project on the SCBRL. In this scenario, freight service would be abandoned, rail transit service would not be implemented, tracks would be removed, and pedestrian and bicycle paths would be located on the rail bed. Citizen groups include Trail Now (www.trailnow.org) and Greenway (www.sccgreenway.org). Greenway authored Measure L, a citizen initiative regarding the Capitola Trestle Bridge and possible detour in the future trail design, which was approved by voters on November 6, 2018.

1.3 CEQA Environmental Review Process

CEQA requires all state and local government agencies to consider the environmental consequences of nonexempt projects over which they have discretionary authority before taking action on those

[2] Such hurdles do not make the Optional Interim Trail infeasible per se. Rather, CEQA case law holds that alternatives that would require legislative actions or other policy hurdles may sometimes be part of a reasonable range of alternatives in an EIR (refer to *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 573 ["the mere fact that an alternative may require legislative action does not necessarily justify its exclusion from the EIR"]; *Residents Ad Hoc Stadium Committee v. Board of Trustees* (1979) 89 Cal.App.3d 274, 286 ["it is not appropriate to disregard alternatives simply because the alternative . . . may require implementing legislation"] for example).

[3] Such a level of detail is more than is required under CEQA, which normally does not require that options or alternatives be addressed at the same level of detail as a proposed project (e.g., *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 546–547 [rejecting the need for an "in-depth review" of alternatives, and upholding the use of a "checkbox matrix" as a vehicle for addressing them, citing *CEQA Guidelines*, Section 15126.6[d]).

projects. To identify and disclose the environmental impacts, the lead agency must prepare the appropriate environmental documentation (EIR or negative declaration). As the CEQA lead agency, the County has decided to prepare a project-specific EIR. Although this EIR is not tiering from the RTC's MBSST Network Master Plan EIR, this project-specific EIR uses relevant information contained in the MBSST Network Master Plan EIR, including identification of appropriate and feasible mitigation measures to reduce potentially significant impacts.

CEQA requires agencies to comply with the following objectives and procedures and with the process summarized on **Figure 1-2** when preparing an EIR:

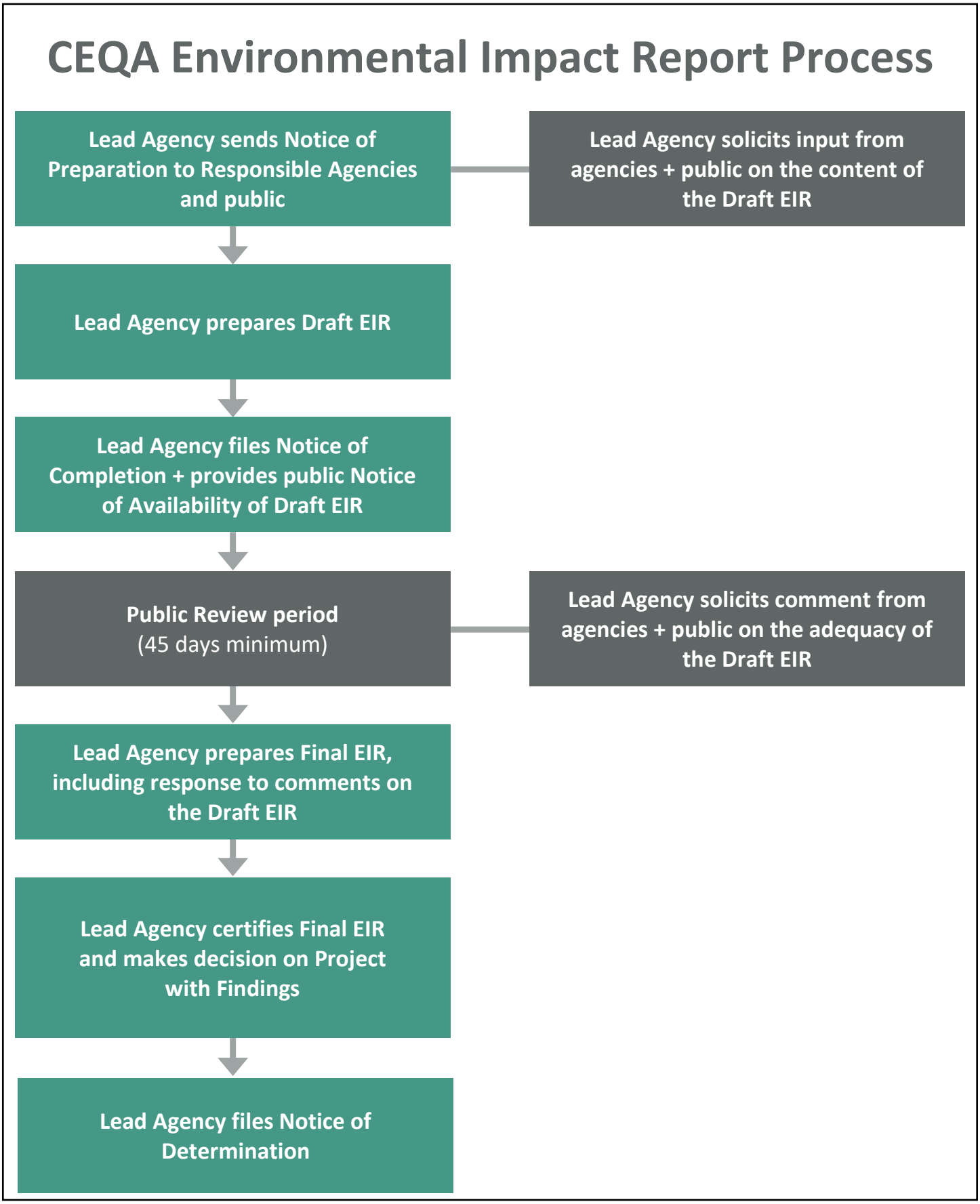
- Identify and prevent environmental damage (i.e., significant environmental effects) by identifying mitigation measures, alternatives, and mitigation monitoring
- Enhance public participation and foster intergovernmental coordination through:
  - Publication of the NOP
  - Project scoping
  - State Clearinghouse and public review of environmental documents
  - Preparation of a Final EIR responding to public input
- Disclose the rationale for agency decision-making through the adoption of findings addressing the disposition of all significant environmental effects identified in the EIR and the issuance of Statements of Overriding Consideration where projects with significant unavoidable environmental effects are approved

1.3.1 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define "lead," "responsible," and "trustee" agencies. "Lead agency" means the public agency that has the principal responsibility for implementing or approving a project. The lead agency will determine the appropriate environmental documentation and be responsible for its preparation. The County is the CEQA lead agency for the Project.

A "responsible agency" refers to a public agency subject to California law other than the "lead agency" with discretionary approval over a project. A "trustee agency" refers to a state agency having jurisdiction by law over natural resources affected by a project. As listed in Section 2.7, *Required Permits and Approvals*, responsible and trustee agencies for the Project include the following:

- California Coastal Commission
- California Department of Fish and Wildlife
- California Department of Transportation
- California Public Utilities Commission Rail Crossings and Engineering Branch
- California State Parks
- California Regional Water Quality Control Board
- Santa Cruz County RTC
- City of Capitola



Harris & Associates

Figure 1-2
CEQA EIR Process

1.3.2 Notice of Preparation

The purpose of the NOP is to solicit participation from responsible and coordinating federal, state, and local agencies and from the public in determining the scope of an EIR. CEQA requires a 30-day NOP review period.

The scoping process for this EIR was formally initiated on November 5, 2021, with submission of the NOP to the State Clearinghouse in compliance with CEQA (State Clearinghouse No. 2021090262) for distribution to state agencies. The NOP was also posted on the County's website and published in the Santa Cruz Sentinel, a newspaper of general circulation in Santa Cruz County. Additionally, a copy of the NOP was sent to 163 federal, state, and local agency representatives; 89 members of various organizations; and 16 individual members of the public who expressed interest in County and RTC projects in the past. Further, 3,561 NOP postcard mailers were sent to residents and businesses within 300 feet of the Project alignment, and 16 copies of the NOP were mailed to people who had previously requested to be notified of County EIRs. The NOP review period was from November 5, 2021, to December 7, 2021 (33 days total). A copy of the NOP is included in **Appendix B**.

1.3.3 Scoping Process

Scoping refers to the process used to assist the lead agency in determining the focus and content of an EIR. Scoping solicits input on the potential topics to be addressed in an EIR, range of project alternatives, and possible mitigation measures. Scoping is also helpful in establishing methods of assessment and in selecting the environmental effects to be considered in detail. Scoping this EIR included distribution of the NOP (described above) and public scoping meetings.

A virtual public scoping meeting was held on November 17, 2021. The scoping meeting provided another opportunity for attendees to comment on environmental issues of concern and the alternatives that should be discussed in the EIR.

In response to the NOP and public scoping meeting, the County received written comments from seven agencies, three organizations, and 14 individuals. **Table 1-2** provides a summary of the written comments received from the agencies and organizations concerning the scope of the environmental analyses and alternatives to be considered, but it is not a comprehensive list of all comments received. **Appendix B** includes the NOP, a more detailed summary table of the comments received, and a copy of all the comments received.

Table 1-2 Summary of NOP Comments Received

Commenters	Summary of Key Issues and Concerns	Location of Topic in EIR
Agencies		
California Coastal Commission	Railbanking and the steps required should be clearly described.	Chapter 1, *Introduction*
	The DEIR should explain the implications of the City's Measure L and whether signage or other improvements through Capitola Village would be included as part of the preferred alternatives.	Chapter 2, *Project Description*
	The alternatives should address an expanded/cantilevered path off trestle, on-street improvements through Capitola Village, and maximizing connectivity to coastal destinations. The DEIR should identify a preferred alternative that is most protective of coastal resources and complies with California Coastal Act policies.	Chapter 5, *Project Alternatives*
	Overwater crossings should minimize impacts to public views and visual character, employ construction BMPs to protect water quality and sensitive species, and consider tsunami events.	Chapter 3, *Environmental Impact Analysis*, Sections 3.1, *Aesthetics*; 3.3, *Biological Resources*; and 3.8, *Hydrology and Water Quality*
	The DEIR should identify trail widths throughout, what happens at pinch points, and pedestrian/vehicular crossings.	Chapter 2, *Project Description,* and **Appendix A**
	The DEIR should identify impacts to biological resources, including wetlands and environmentally sensitive areas, and mitigation where impacts are unavoidable.	Chapter 3, *Environmental Impact Analysis*, Section 3.3, *Biological Resources*
California Department of Fish and Wildlife	The DEIR should include reasonably foreseeable phases of the Project with sufficient detail for analysis.	Chapter 2, *Project Description,* and **Appendix A**
	The DEIR should discuss direct and indirect impacts to biological resources, including take of special species, disturbance to and loss of habitat, and wildlife movement. Habitat descriptions should be from multiple sources. Surveys should be conducted for special-status species.	Chapter 3, *Environmental Impact Analysis*, Section 3.3, *Biological Resources*
	Waterways should be identified, and permeable surfaces should be incorporated to allow percolation and prevent hydromodification.	Chapter 3, *Environmental Impact Analysis*, Section 3.8, *Hydrology and Water Quality*
California Department of Parks and Recreation	The comment notes that riparian willow habitat is on both sides of the trail through New Brighton State Beach and Porter Senson property and that trail crossings are needed in this area.	Chapter 3, *Environmental Impact Analysis*, Section 3.3, *Biological Resources* Chapter 2, *Project Description,* and **Appendix A**
Santa Cruz County RTC	The RTC supports environmental review of alternative alignments.	Chapters 3, *Environmental Impact Analysis*, and 5, *Project Alternatives*

Table 1-2 Summary of NOP Comments Received

Commenters	Summary of Key Issues and Concerns	Location of Topic in EIR
City of Santa Cruz Water Department	The Project should avoid impacts to existing water pipelines that cross the trail alignment.	Chapter 2, *Project Description,* Section 2.6, *Project Construction* Chapter 3, *Environmental Impact Analysis*, Section 3.14, *Utilities and Service Systems*
Native American Heritage Commission	For the DEIR analysis, consult with Native American tribes, contact the California Historical Research Information Center, and include provisions for property treatment and disposition of discovered resources and remains.	Chapter 3, *Environmental Impact Analysis*, Section 3.4, *Cultural Resources,* and Section 3.13, *Tribal Cultural Resources*
Santa Cruz County, First District Supervisor	The DEIR should consider the Santa Cruz County Coastal Climate Change Vulnerability Report as a resource.	Chapter 3, *Environmental Impact Analysis*, Section 3.6, *Greenhouse Gas Emissions/Climate Change*
Organizations		
Equity Transit	Removing the rail is inconsistent with the County General Plan and would result in more impacts.	Chapter 3, *Environmental Impact Analysis*
Friends of Rail and Trail	The DEIR should include a full analysis of the Optional Interim Trail, including all three parts. The alternatives should include Railbank with the Optional Interim Trail that conforms with the Trail Only use described in RTC's UCS Appendix B.	Chapter 3, *Environmental Impact Analysis* Chapter 5, *Project Alternatives*
Anchor West Homeowners Association	The eucalyptus grove along Park Avenue needs to be maintained because overgrowth creates fire and safety hazards.	Chapter 2, *Project Description,* Section 2.5, *Operation and Maintenance* Chapter 3, *Environmental Impact Analysis,* Sections 3.11, *Public Safety and Services*, and 3.15, *Effects Found to be Less than Significant* (Section 3.15.13, *Wildfire*)

BMP = best management practice; DEIR = Draft Environmental Impact Report; RTC = Santa Cruz County Regional Transportation Commission; UCS = Unified Corridor Investment Study

1.4 EIR Scope and Content

The scope and content of the EIR is guided by the requirements set forth in the *CEQA Guidelines* and input gathered during the NOP and scoping process identified above. This EIR evaluates the potential impacts of the Project in relation to the following environmental topics:

1. Aesthetics
2. Agricultural and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Energy
7. Geology and Soils
8. Greenhouse Gas Emissions/Climate Change
9. Hazards and Hazardous Materials
10. Hydrology and Water Quality
11. Land Use and Planning
12. Mineral Resources
13. Noise
14. Population and Housing
15. Public Safety and Services
16. Recreation
17. Transportation
18. Tribal Cultural Resources
19. Utilities and Services Systems
20. Wildfire

This EIR identifies (1) potential environmental impacts, including project-specific and cumulative effects, of the Project for these topics in accordance with the provisions set forth in the *CEQA Guidelines*, Appendix G, and (2) feasible mitigation measures, where possible, that would reduce or eliminate significant adverse environmental effects.

Additionally, this EIR identifies significant unavoidable impacts, significant irreversible changes in the environment, and growth inducement.

1.5 EIR Organization

In addition to this section, the EIR contains the following sections:

- Chapter 2, *Project Description*, describes the Project in detail.
- Chapter 3, *Environmental Impact Analysis,* discusses various resources potentially affected by the Project, as outlined in Section 1.4, *EIR Scope and Content*. There is a separate section for each environmental topic that presents the existing conditions, relevant regulatory setting, methodology and significance thresholds, potential impacts, mitigation measures, and a

summary comparison of the Ultimate Trail Configuration with the Optional Interim Trail. There is also a section for effects found to be less than significant based on the Initial Study prepared for the Project (Appendix C).

- Chapter 4, *Other CEQA-Required Discussions*, discusses the Project's cumulative impacts, growth-inducing impacts, significant irreversible environmental changes, significant environmental impacts that cannot be avoided, and energy effects.
- Chapter 5, *Project Alternatives*, describes the various alternatives considered and either dismissed from further analysis or analyzed in this EIR.
- Chapter 6, *List of Preparers and References*, provides a list of preparers of and contributors to the EIR and a bibliography.

1.6 Public Outreach

This section briefly describes the public outreach that has occurred and is planned for the Project:

- October 12, 2021 – Rio Del Mar Improvement Association meeting
- November 17, 2021 – NOP scoping meeting
- January 13, 2022 – Mid County Democrats meeting
- February 17, 2022 – RTC Transportation Policy Workshop meeting
- April 6, 2022 – Virtual Public Open House to share draft schematic plans
- April 11, 2022 – RTC Bicycle Advisory Committee meeting
- April 12, 2022 – RTC Elderly and Disabled Technical Advisory Committee meeting
- April 13, 2022 – In-person Public Open House to share draft schematic plans
- April 19, 2022 – Online survey posted for 60 days to allow the public to comment on the design
- May 17, 2022 – Walk for Wellness Live Oak event
- May 19, 2022 – Bike and Walk to School Day at Live Oak Elementary
- May 19, 2022 – Boys & Girls Club Live Oak End of Year event
- May 23, 2022 – Live Oak Resource Center Food Distribution event
- May 24, 2022 – Family Drop-In Day at Chanticleer Park
- May 27, 2022 – Walk for Wellness Capitola event
- June 6, 2022 – Parks and Recreation Commission meeting
- March 14, 2023 – Seacliff Improvement Association meeting
- March 23, 2023 – Capitola City Council meeting

Project information, NOP, presentations, recordings of public meetings, and design plans are posted on the County's website: www.santacruzcounty.us/RailTrail.

Additional public engagement is planned for the release of the Draft EIR (DEIR), certification of the Final EIR, and other future events to solicit feedback on the final design.

2 Project Description

2.1 Overview

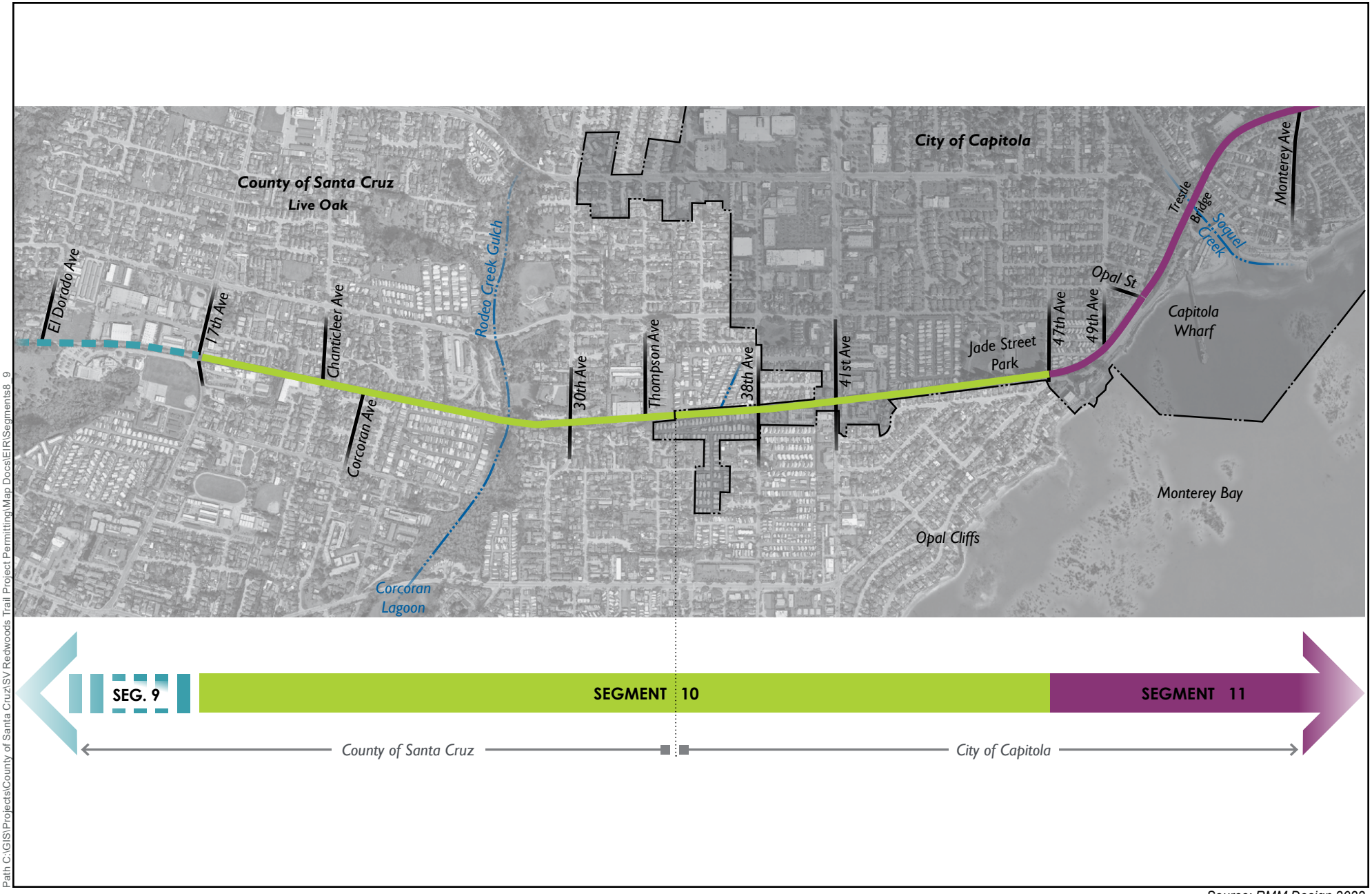
The County of Santa Cruz (County), in coordination with the City of Capitola (City) and the Santa Cruz County Regional Transportation Commission (RTC), is proposing the **Coastal Rail Trail Segments 10 and 11 Project** (Project) to be developed along the RTC-owned rail corridor that generally parallels the coastline in central Santa Cruz County (**Figure 1-1,** Regional Location). The County is serving as the California Environmental Quality Act (CEQA) lead agency.

The Project is an approximately 4.5-mile new multi-use bicycle and pedestrian trail proposed to extend along the RTC-owned railroad corridor from the eastern side of 17th Avenue at the western limits of the Project to the western side of State Park Drive at the eastern limits of the Project, extending through unincorporated Santa Cruz County and the City of Capitola (**Figure 2-1**, Project Location). Segment 10 extends from 17th Avenue to 47th Avenue, and Segment 11 extends from 47th Avenue to State Park Drive.

The project purpose is to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

This environmental impact report (EIR) includes an evaluation of the *Ultimate Trail Configuration (Trail next to Rail Line)*, which includes an *Optional Interim Trail (Trail on the Rail Line)* for both Segments 10 and 11. Therefore, both the Ultimate Trail Configuration and the Optional Interim Trail alignments are part of the Proposed Project and analyzed at an equal level of detail. The trail alignments are presented in **Appendices A.1** and **A.2**, respectively. The Ultimate Trail Configuration is consistent with the MBSST Network Master Plan alignment and is considered the preferred alignment and approach by the County.

- **Ultimate Trail Configuration (Trail next to Rail Line)**. The trail would be 4.2 miles long. In Segment 10 (1.5 miles), the trail would be constructed on the inland side of the railroad tracks. In Segment 11 (2.7 miles), the trail would be constructed on the coastal side of the railroad tracks from 47th Avenue to Mar Vista Drive and on the inland side of the tracks from Mar Vista Drive to State Park Drive (0.3 mile). In Segment 11, the trail would not include an approximately 0.5-mile section of the rail corridor, from Opal Street to Monterey Avenue (which encompasses the Capitola Trestle Bridge), in the City of Capitola. Instead, trail users would be directed to use the existing on-street bicycle lanes and pedestrian sidewalks extending through Capitola Village.
- **Optional Interim Trail (Trail on the Rail Line)**. The trail would be 4.7 miles long. The trail in Segments 10 (1.5 miles) and 11 (3.2 miles) would be constructed in approximately the same location of the railroad tracks by removal of the rails and ties. The Optional Interim Trail includes the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11. If and when the rail line is later reactivated, the Optional Interim Trail would be removed, the rail would be reinstated, and the Ultimate Trail Configuration would be constructed as described above.



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segments8_9

Source: RMM Design 2022.

Harris & Associates

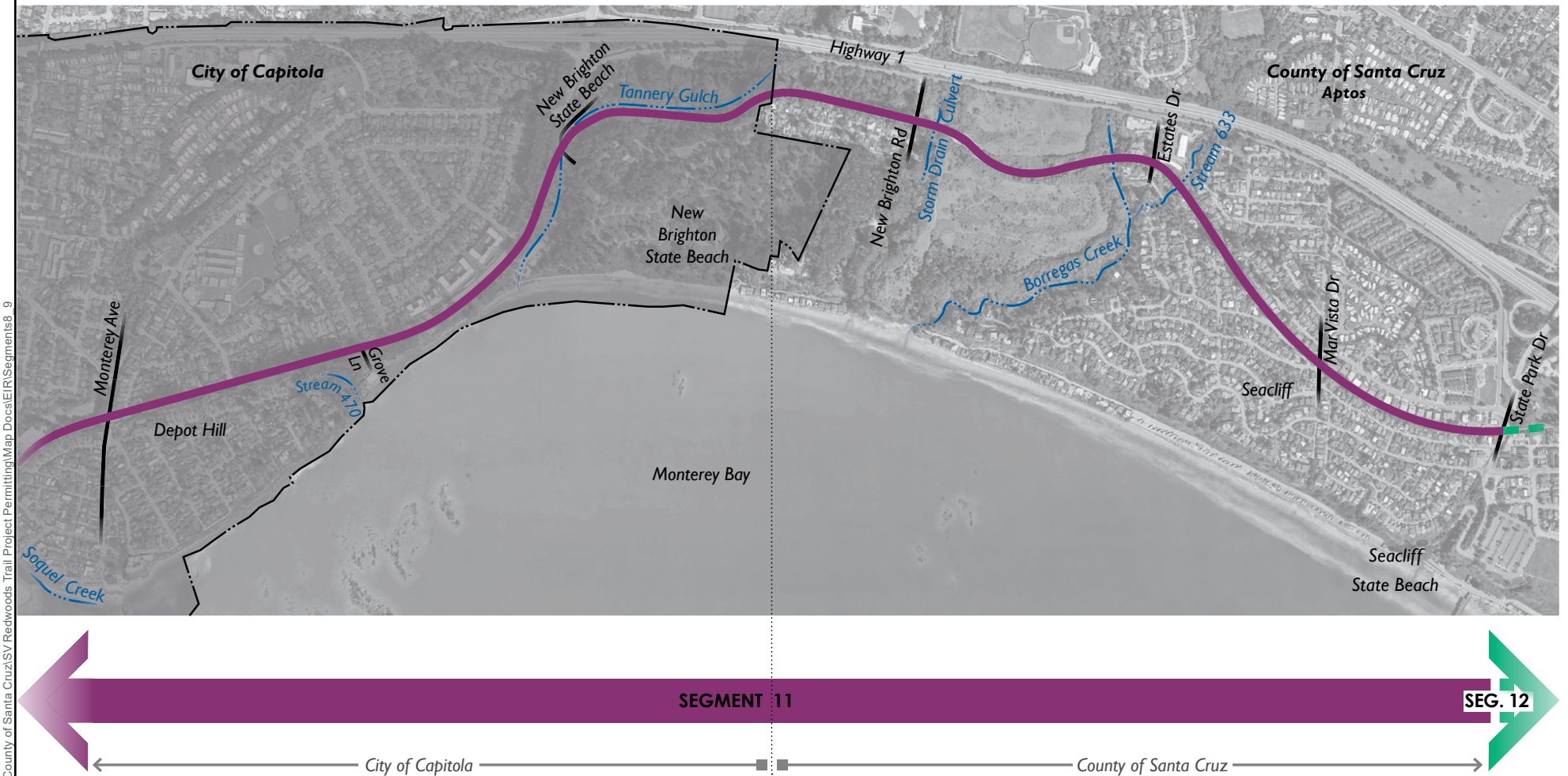
N

0 800 1600
Feet

Figure 2-1a

Project Location

Coastal Rail Trail Segments 10 and 11



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segments8_9

Source: RMM Design 2022.

Harris & Associates

N

0 800 1600

Feet

Figure 2-1b

Project Location

Coastal Rail Trail Segments 10 and 11

The Ultimate Trail Configuration would be 4.2 miles long, and the Optional Interim Trail would be 4.7 miles long. Therefore, the Project area limits to be studied are 4.7 miles long.

This EIR chapter describes the Project in detail and contains the following sections:

- Project Location
- Project Purpose and Objectives
- Project Characteristics
- Project Operation and Maintenance
- Project Construction
- Required Permits and Approvals

2.2 Project Location

The 4.7-mile-long Project area limits extend along the RTC-owned Santa Cruz Branch Rail Line corridor in central Santa Cruz County, within the California Coastal Zone (**Figure 1-1**).

The Project alignment generally runs in the east–west direction and extends from the eastern side of 17th Avenue on the west to the western side of State Park Drive on the east (**Figure 2-1**), between State Route 1 (SR-1 or Highway 1) and the Monterey Bay coastline. The Ultimate Trail Configuration does not include development of the approximately 0.5-mile section of the rail corridor, from the Cliff Drive Parking Lot to Monterey Avenue, which encompasses the Capitola Trestle Bridge. Instead, trail users would be directed off the RTC-owned rail corridor at Opal Street and Cliff Drive and onto the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village to the eastern side of Monterey Avenue. The 0.5-mile section of Segment 11 from Cliff Drive Parking Lot to Monterey Avenue is being developed as part of the RTC's Zero Emission Passenger Rail and Trail Project. Therefore, the Ultimate Trail Configuration alignment is 4.2 miles long, and the Optional Interim Trail alignment is 4.7 miles long.

The Project alignment extends through developed portions of the County and City, including residential, commercial, industrial, and recreational land uses, as well as New Brighton State Beach open space.

Appendix A includes schematic design plans of the entire trail alignment for both the Ultimate Trail Configuration (**Appendix A.1**) and the Optional Interim Trail (**Appendix A.2**).

2.3 Project Purpose and Objectives

The project **purpose** is to provide an Americans with Disabilities Act (ADA)-accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing rail corridor.

The project **objectives** are based on and consistent with objectives and policies in the adopted MBSST Network Master Plan.

The project objectives include the following:

1. Provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County (Master Plan Objective 1.1)
2. Develop the trail so future rail transportation service along the corridor is not precluded (Master Plan Policy 1.2.4)

3. Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), coastal environment, local history, and affected communities (Master Plan Policies 1.1.2 and 1.1.4, Objective 2.1)
4. Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic (Master Plan Goal 1)
5. Minimize trail impacts to private lands, including agricultural, residential, and other land uses (Master Plan Objective 1.5)
6. Minimize trail impacts to sensitive habitat areas and special-status plant and animal species (Master Plan Objective 1.4, Policy 1.4.1)
7. Comply with requirements of local, state, and federal agencies with jurisdiction

2.4 Project Characteristics

This section describes the following for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as the *Optional Interim Trail (Trail on the Rail Line)*, with additional detail provided in the design plans shown in **Appendices A.1** and **A.2**, respectively:

- Trail Alignment
- Trail Width and Materials
- Trail Features

Refer to **Figure 2-2**, Ultimate Trail Configuration (Trail next to Rail Line) and Optional Interim Trail (Trail on the Rail Line).

2.4.1 Ultimate Trail Configuration (Trail next to Rail Line)

Trail Alignment

Segment 10

Segment 10 (1.5 miles) is composed of a multi-use bicycle and pedestrian trail alongside the railroad tracks (**Figures 2-1** and **2-2**). Refer to sheets CP-1.01 to CP-1.14 in **Appendix A.1**.

From the eastern side of 17th Avenue on the west, Segment 10 extends along the inland side of the tracks until the eastern side of 47th Avenue, where Segment 10 ends and the trail crosses to the coastal side and continues in Segment 11.

The descriptions below for Segment 10 reference specific sheets in parentheses.

Trail Connections. The preliminary design plans include the following trail connections to adjacent streets and facilities (presented from west to east) in Segment 10, not including the roadway crossings presented further below:

- Chanticleer Avenue (sheet CP-1.03)
- Corcoran Avenue (sheet CP-1.04); new rail crossing may be subject to California Public Utilities Commission (CPUC) approval
- Thompson Avenue (sheet CP-1.08)
- Jade Street Park (sheets CP-1.13 and CP-1.14)

Retaining Walls. The design plans include upslope and downslope retaining walls, ranging from approximately 1 foot up to 7 feet in height, at the following general locations along Segment 10 of the trail to support slopes and provide the required distance between the trail and rail (presented from west to east). The wall lengths listed below are the distance where one or more walls are proposed, whether it is only on one side of the trail alignment or both sides (refer to **Appendix A.1** for detail). Retaining wall materials and color would blend with the surrounding environment.

- 180 feet east of 17th Avenue to 275 feet west of Chanticleer Avenue (2–4 feet high, 680 feet long) (sheets CP-1.01 through CP-1.02)
- 190 feet west of Paget Avenue to just west of Paget Avenue (1–3 feet high, 180 feet long) (sheet CP-1.03)
- 140 feet east of Corcoran Avenue to 130 feet west of Rodeo Gulch Viaduct (1–7 feet high, 820 feet long) (sheets CP-1.04 through CP-1.05)
- 60 feet west of Rodeo Gulch Viaduct, to the beginning of the west edge of Rodeo Gulch Viaduct (both sides of trail) (2–4 feet high, 60 feet long) (sheet CP-1.05)
- 100 feet east of 30th Avenue to 360 feet west of Thompson Avenue (1–3 feet high, 210 feet long) (sheets CP-1.07 through CP-1.08)
- Thompson Avenue to 38th Avenue (both sides of trail) (1–6 feet high, 1010 feet long) (sheets CP-1.08 through CP-1.10)
- 600 feet east of Thompson Avenue to 38th Avenue (1–6 feet high, 420 feet long) (sheets CP-1.09 through CP-1.10)

Waterway Crossing Structures. A bridge/viaduct combination would be used to cross the following waterway in Segment 10. The trail alignment in Segment 10 also crosses a minor waterway (Stream 472), which is conveyed through subsurface storm drain pipes, as described in Section 2.6.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, under *Waterway Crossings.*

- Rodeo Gulch Bridge – A prefabricated clear-span bridge would be used to cross Rodeo Gulch (also called Rodeo Gulch), and viaducts with fiberglass reinforced polymer (FRP) deck would be used for the bridge approaches on each side (sheets CP-1.05, CP-1.06, and BP-2.01).

Roadway Crossings. The trail crosses several roads in Segment 10 (presented from west to east). Roadway crossings include some combination of the following improvements: new sidewalks, ADA-compliant curb ramps, flexible bollards, concrete track panels, grading and drainage improvements, roadway lighting, signage, and striping improvements on the roadway and trail. Trail chicanes[1] or a slight narrowing of the trail are used at many roadway crossings to slow trail users. Additional improvements unique to each crossing are identified below:

- 30th Avenue (sheet CP-1.07)
    - Light-emitting diode (LED) W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons placed in advance of the crossing in each direction to warn drivers
    - Relocated rail crossing flashers
    - Bulb-out on eastern side
    - Drainage improvements and connections to existing storm drain system

[1] A "chicanes" is a design technique, such as a curve or an artificial narrowing (e.g., created by a median, striping, or change in surface) to slow riders.

- 38th Avenue (sheet CP-1.10)
    - LED W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons in advance of the crossing in each direction to warn drivers
    - Relocated rail crossing equipment
    - Bulb-out on east side
    - Drainage improvements
- 41st Avenue (sheet CP-1.11)
    - LED W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons placed in advance of the crossing in each direction to warn drivers
    - Relocated rail crossing equipment
    - Extension of sidewalk north to Melton Street
    - Bulb-outs on both sides
    - Drainage improvements
- 47th Avenue (sheet CP-1.14)
    - Bulb-out at southeast corner
    - Relocated rail crossing equipment
    - Crosswalk re-striping across 47th Avenue and Portola Drive on coastal side of tracks

Rail Realignment. To accommodate both the railroad tracks and the trail, almost the entire track in Segment 10 between 17th Avenue and 47th Avenue, equal to nearly 1.5 miles, would be realigned 5 to 8 feet southward within the RTC-owned rail corridor. The track realignment would extend 90 feet beyond the eastern side of 47th Avenue to transition back into the existing rail by shifting 1 to 2 feet northward (sheet CP-1.15/DM 1-1.15).

Right-of-Way (ROW). The trail and all improvements would be located primarily within the RTC-owned rail corridor ROW, City road ROW, or County road ROW, based on the current design plans (**Appendix A.1**). Temporary or permanent easements may be needed for construction, maintenance, and project features such as trail connections and drainage improvements.

There may be existing structures that encroach into the RTC-owned ROW that are in conflict with the trail. Each of these encroachments within the RTC-owned rail corridor would require relocation prior to construction of the Ultimate Trail Configuration. The RTC will work with property owners to remove encroachments along the rail line).

Segment 11

Segment 11 (2.7 miles) is composed of a multi-use bicycle and pedestrian trail alongside the railroad tracks (**Figures 2-1** and **2-2**). Refer to sheets CP-1.15 to CP-1.40 in **Appendix A.1**.

From the eastern side of 47th Avenue on the west, Segment 11 extends along the coastal side of the tracks to the northeast end of the Cliff Drive Parking Lot. The Ultimate Trail Configuration does not include development of the approximately 0.5-mile section of the rail corridor, from the Cliff Drive Parking Lot to Monterey Avenue, which encompasses the Capitola Trestle Bridge. Instead, trail users are directed off the RTC-owned rail corridor at Opal Street and Cliff Drive and onto the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village to the eastern side of Monterey Avenue (**Figure 2-3,** Capitola Village Signage Directions). The 0.5-mile section of Segment 11 from Cliff Drive Parking Lot to Monterey Avenue is being developed as part of the RTC's Zero Emission Passenger Rail and Trail Project. From the Monterey Avenue/Park Avenue intersection, the

trail continues along the coastal side of the tracks until Mar Vista Drive, where it crosses to the inland side. The trail continues on the inland side of the tracks until the western side of State Park Drive, where Segment 11 ends.

The descriptions below for Segment 11 reference specific sheets in parentheses.

Trail Connections. The preliminary design plans include the following trail connections to adjacent streets and facilities with bike lanes and sidewalks (presented from west to east) in Segment 11, not including the roadway crossings presented further below:

- Portola Drive (sheet CP-1.14)
- Opal Cliff Drive (sheet CP-1.15)
- Cliff Drive and Prospect Avenue (sheet CP-1.16); also see Cliff Drive Plaza/Capitola Village Connection below; existing private crossing U.S. Department of Transportation No. 970971N
- Park Avenue and Coronado Street (sheet CP-1.23); also see Coronado Ramp/New Brighton Beach Parking Lot Connection below; new rail crossing may be subject to CPUC approval
- New Brighton State Beach (sheet CP-1.23); also see *New Brighton Beach Parking Lot Connection* below
- Oak Trail Crossing (sheet CP-1.26); new rail crossing (to existing unpaved trails on each side) may be subject to CPUC approval
- Fire Access Road (sheet CP-1.30); new rail crossing (to existing fire road accessed from New Brighton Road) may be subject to CPUC approval
- Poplar Street (sheet CP-1.35); existing dirt trail to Poplar Street would be paved

Cliff Drive Plaza/Capitola Village Connection. Near the western portion of Segment 11, the trail ends in a plaza area with decorative pavers connecting to Cliff Drive on the coastal side and Prospect Avenue on the inland side, as listed above (sheet CP-1.16). Chicanes would be used along the trail approaching the plaza to slow bicycle and pedestrian traffic. The plaza area includes benches, bike racks, trash receptacles, and could also feature an opportunity for a public art installation. The existing private rail crossing will be upgraded with concrete track panels across the rail line, and improved stairs to Prospect Avenue at Opal Street on the inland side are also proposed.

From the plaza area, bicyclists and pedestrians using the Coastal Rail Trail would be directed with signage to the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village along Cliff Drive, the Stockton Avenue Bridge, Capitola Avenue, and Monterey Avenue (as shown on **Figure 2-3**). The signage would be placed on existing sign poles along existing streets, except on the Stockton Avenue Bridge where one new sign pole would be added in each direction (i.e., on each side of the bridge). Additionally, there would be striping modifications to improve the visibility of the existing delineated bicycle lanes and safety for both bicyclists and pedestrians. These include: revising the width of the existing bike and vehicular lanes for an approximately 350-foot-long portion of Cliff Drive, from the end of the Coastal Rail Trail to where the sidewalk begins on the coastal side of Cliff Drive, to allow demarcation of a separate 4-foot-wide pedestrian path on the coastal side adjacent to the Class II bike lane[2]; re-painting the existing white striping and adding green pavement painting to the existing Class II bike lanes; and installing white sharrow markings with green backgrounds along the Class III bike routes where bicycles and vehicles share the lane. There would be no other major

[2] As a result, the widths in the 35-foot-wide roadway would be: Inland Class II Bike Lane (5 feet), Inland Travel Lane (10.5 feet), Coast Travel Lane (10.5 feet), Coast Class II Bike Lane (5 feet), Pedestrian path (4 feet).

improvements through Capitola Village implemented as part of the Ultimate Trail Configuration. At the Monterey Avenue/Park Avenue intersection, the off-street multi-use trail would continue on the coastal side of the rail along Park Avenue. These improvements would be implemented with project funds and would not require the expenditure of City funds.

Other than the wayfinding signs and pavement striping modifications described above, the Project does not include improvements to the City road ROW for bicycle and pedestrian circulation through Capitola Village to connect the two ends of the multi-use trail. The existing roadway design (including sidewalks, bike lanes, shared lanes) and the Stockton Avenue Bridge would be used for bicyclist and pedestrian circulation between the two end points. Additional improvements through Capitola Village could be part of a separate future Active Transportation Program project, but currently, such a study has not been funded. The possibility is noted here due to the potential for public interest in this topic.

The existing parking in the Cliff Drive parking area, between the rail corridor and Cliff Drive, would be repaved and restriped from diagonal parking to parallel parking (decreasing the delineated parking spaces from 46 to 34) to provide adequate room for the trail and provide a buffer for the southwest Class II bike lane.

Coronado Ramp/New Brighton Parking Lot Connections. Near the Park Avenue/Coronado Street intersection, the project includes a new trail crossing of the rail line with concrete track panels across the rail line to the inland side and a new switchback ramp connecting to crosswalks across Park Avenue and Coronado Street, as listed above (sheet CP-1.23). The Project also includes a new concrete staircase on the coastal side connecting to the New Brighton State Beach parking lot.

Retaining Walls. The design plans include upslope and downslope retaining walls, ranging from approximately 0.5 feet up to 16 feet in height, at the following general locations along Segment 11 of the trail to support slopes and provide the required distance between the trail and rail (presented from west to east). The wall lengths listed below are the distance where one or more walls are proposed, whether it is only on one side of the trail alignment or both sides (refer to **Appendix A.1** for detail). Retaining wall materials and color would blend with the surrounding environment.

- Cliff Drive Plaza (2–4 feet high, 175 feet long) (sheet CP-1.16)
- Just east of Monterey Avenue to Grove Lane Viaduct (both sides of trail) (1–16 feet high, 1,470 feet long) (sheets CP-1.17 through CP-1.19)
- Grove Lane Viaduct to just east of Grove Lane Viaduct (both sides of trail) (0.5–3 feet high, 32 feet long) (sheet 1.20)
- 60 feet east of Grove Lane to 265 feet west of Park Avenue Viaduct (1–8 feet high, 950 feet long) (sheets CP-1.20 through CP-1.22)
- Just west of Park Avenue Viaduct to Park Avenue Viaduct (both sides of trail) (1–4 feet high, 47 feet long) (sheet CP-1.22)
- Park Avenue Viaduct on either side of Coronado Ramp (both sides of trail) (4–6 feet high, 420 feet long) (sheet CP-1.23)
- New Brighton State Beach Bridge to 250 feet east of New Brighton State Beach Bridge (1–10 feet high, 250 feet long) (sheets CP-1.24 through CP-1.25)
- 380 feet east of New Brighton State Beach Bridge to just west of Oak Trail Crossing (1–11 feet high, 220 feet long) (sheets CP-1.25 through CP-1.26)
- 40 feet west of Oak Trail Viaduct to Oak Trail Viaduct (both sides of trail) (1–10 feet high, 40 feet long) (sheet CP-1.26)

- Oak Trail Viaduct to 220 feet east of Oak Trail Viaduct (both sides of trail) (1–7 feet high, 220 feet long) (sheets CP-1.26 through CP-1.27)
- 380 feet east of Oak Trail Viaduct to 280 feet west of New Brighton Road (both sides of trail) (1–10 feet high, 1,000 feet long) (sheets CP-1.27 through CP-1.29)
- New Brighton Road to New Brighton Road Viaduct (both sides of trail) (1–9 feet high, 45 feet long) (sheet CP-1.30)
- New Brighton Road Viaduct to Fire Access Road (both sides of trail) (5–9 feet high, 22 feet long) (sheet CP-1.30)
- Fire Access Road to 150 feet east of Fire Access Road (1–5 feet high, 150 feet long) (sheets CP-1.30 through CP-1.31)
- 660 feet east of Fire Access Road to 360 feet west of Borregas Creek Viaduct (1–6 feet high, 320 feet long) (sheets CP-1.31 through CP-1.32)
- Borregas Creek Viaduct to Estates Drive (both sides of trail) (1–8 feet high, 200 feet long) (sheet CP-1.33)
- Estates Drive to Estates Drive Viaduct (both sides of trail) (1–8 feet high, 23 feet long) (sheet CP-1.33)
- Estates Drive Viaduct to Poplar Street (1–7 feet high, 630 feet long) (sheets CP-1.34 through CP-1.35)
- Mar Vista Drive to State Park Drive (both sides of trail) (1–4 feet high, 1,580 feet long) (sheets CP-1.37 through CP-1.40)

Waterway Crossing Structures. Viaducts are used to cross four waterways, described below. Other minor waterway crossings are described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line),* under *Waterway Crossings*. Additionally, viaducts are used to reduce retaining wall use and impacts to vegetation. There are six viaducts in Segment 11 (presented from west to east):

- Grove Lane Viaduct – Viaduct with FRP deck extending parallel to Escalona Gulch at top of bank (sheets CP-1.19 through CP-1.20). It is 240 feet long with seven piers.
- Park Avenue Viaduct – Viaduct with FRP deck to avoid significant retaining walls (sheets CP-1.22 through CP-1.24). The two-part viaduct is separated with an at-grade trail section connecting to the Coronado Ramp (sheet CP-1.23) and terminates with New Brighton State Beach Bridge roadway crossing (sheet CP-1.24). The western portion is 330 feet long with 10 pilings, and the eastern portion is 330 feet long with 10 pilings.
- Oak Trail Viaduct – Viaduct with FRP deck to reduce potential impacts to riparian vegetation/willow wetland to the south (sheet CP-1.26). It is 300 feet long with nine pilings.
- New Brighton Road Viaduct – Viaduct with FRP deck to cross New Brighton Creek east of New Brighton Road (sheet CP-1.30). It is 240 feet long with seven pilings.
- Borregas Creek Viaduct – Viaduct with FRP deck to cross Borregas Creek (sheets CP-1.32 through CP-1.33). It is 180 feet long with five pilings.
- Estates Drive Viaduct – Viaduct with FRP deck to cross Stream 633 and steep topography (sheet CP-1.33 through CP-1.34). It is 390 feet long with 12 pilings.

Roadway Crossings. The trail crosses several roads (presented from west to east). The roadway crossings primarily at-grade crossings and include some combination of the following improvements: new sidewalks, ADA-compliant curb ramps, flexible bollards, grading and drainage improvements, roadway lighting, signage, and striping improvements on the roadway and trail. Trail chicanes or a slight narrowing of the trail are used at many roadway crossings to slow trail users. Additional

improvements unique to each crossing are identified below. One roadway crossing (New Brighton State Beach roadway) would be a clear-span bridge.

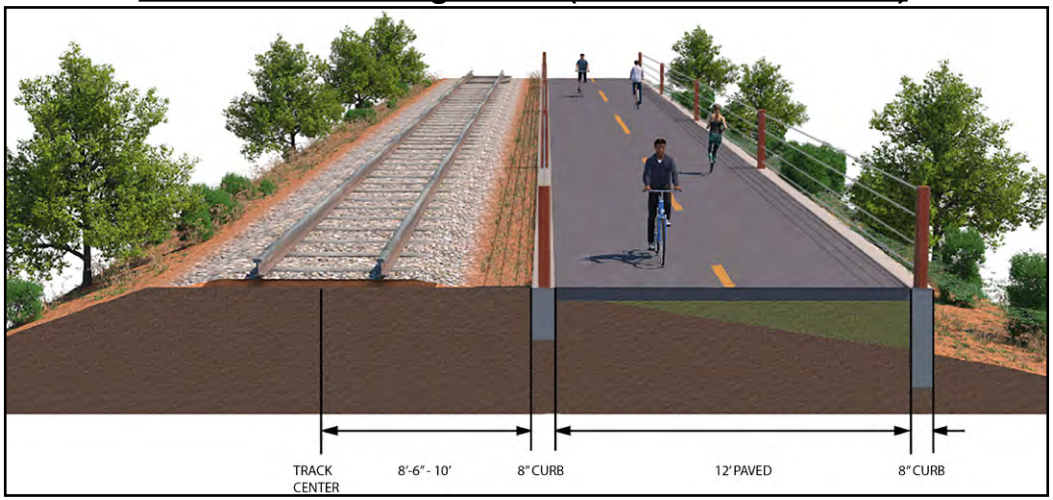
- Grove Lane (sheet CP-1.20)
- New Brighton State Beach roadway (sheet CP-1.24)
    - Clear-span bridge with FRP deck called New Brighton State Beach Bridge over New Brighton State Beach roadway (100 feet long)
- New Brighton Road (sheet CP-1.30)
    - Regrading of roadway
- Estates Drive (sheet CP-1.33)
    - Drainage improvements and connections to existing storm drain system
    - Regrading of roadway
- Mar Vista Drive (sheet CP-1.37)
    - LED W11-15 flashing pedestrian/bicycle signs placed in advance of the crossing in each direction to warn drivers
    - Trail chicanes
    - Concrete track panels
    - New crosswalk across Mar Vista Drive, northern side of the rail, to facilitate trail switching from coastal side to inland side of the tracks
    - Drainage improvements

ROW. The trail and all improvements would be located primarily within the RTC-owned rail corridor ROW, City road ROW, or County road ROW, based on the current design plans (**Appendix A.1**). Temporary or permanent easements may be needed for construction, maintenance, and project features such as trail connections and drainage improvements.

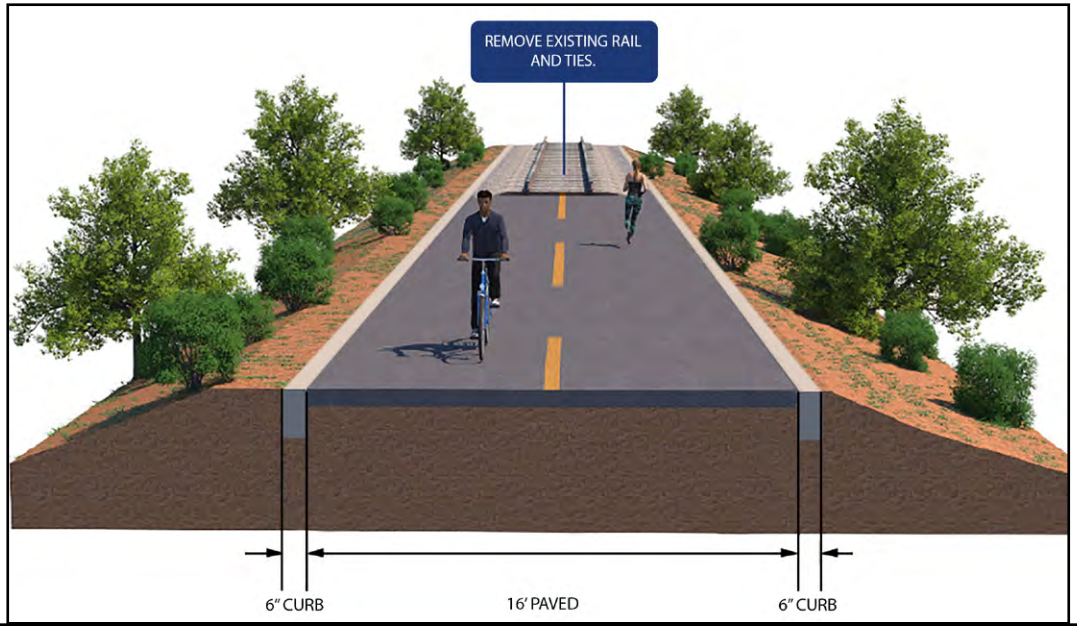
Of note is throughout New Brighton State Beach where the trail would be built on approximately 18,835 SF[3] of California State Parks property. This would require an Operating Agreement between the RTC and California State Parks to authorize construction and operation of the trail facility on State Parks property.

[3] 1,040 SF to Assessor's Parcel Number (APN) 03805103 (State Parks land) and 11,910 SF to APN 03809101 (State Parks land).

Ultimate Trail Configuration (Trail next to Rail Line)



Optional Interim Trail (Trail on the Rail Line)



Note: Conceptual renderings are not to scale

Source: RMM Design 2022.

Figure 2-2

Ultimate Trail Configuration (Trail next to Rail Line) and Optional Interim Trail (Trail on the Rail Line)

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Source: Santa Cruz County Imagery 2020.

Harris & Associates

N

0 150 300

Feet

Figure 2-3

Capitola Village Signage Directions

Coastal Rail Trail Segments 10 and 11

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek. Under this design option in Segment 11, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing users to bicycle lanes and sidewalks through Capitola Village. This 0.5 mile (2,600 linear feet) would transition back to the Ultimate Trail Configuration on the eastern side of Monterey Avenue. The transition between the Ultimate Trail Configuration and Optional Interim Trail is shown in **Appendix A.3** (sheets OPT A-1.01 through OPT A-1.06), and the 0.5-mile Optional Interim Trail is shown on sheets CP-1.17 to CP-1.21 in **Appendix A.2**). As described in Section 2.4.2 for the *Optional Interim Trail (Trail on the Rail Line)* under *Waterway Crossings Structures (Soquel Creek)*, this design option would temporarily convert the railroad bridge to trail use by implementing the necessary structural repairs and replacing the ballast, tracks, and ties with FRP deck for the trail. For additional detail, refer to Section 2.6.2 under *Bridges/Capitola Trestle*. If and when the rail line is later reactivated, the Optional Interim Trail would be removed, the rail would be reinstalled, and trail users would be directed through Capitola Village on bicycle lanes and pedestrian sidewalks per the Ultimate Trail Configuration.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola. Under this design option in Segment 11 of the Ultimate Trail Configuration, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street, where the Coronado Ramp is proposed for a trail connection to the Park Avenue/Coronado Street intersection. This 0.3-mile (1,675 linear feet) portion of the Project corridor is located along a bluff in the City of Capitola, west of New Brighton State Beach. Refer to **Appendix A.4** (sheets OPT B-1.01 through OPT B-1.04)**.** Compared to the coastal alignment, this inland design option would require approximately twice as much retaining wall and an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. The design option has a traditional ramp at Coronado in lieu of the elevated pier support ramp shown for the coastal side and does not require any viaduct structures for a reduction of 330 feet of viaduct. The reduction of viaduct increases the proposed asphalt paving by approximately 4,000 SF.

Trail Width and Materials

The planned widths and characteristics of the multi-use bicycle and pedestrian trail within the RTC-owned rail corridor are described below. The trail widths meet the MBSST Network Master Plan trail classification of a Class I bikeway.[4] Based on the design criteria for Class I bikeways, the minimum combined paved width would be 12 feet, including paved shoulders, or narrower at structures for stream crossings and areas with constrained ROW within the rail corridor, as allowed in the Caltrans Chapter 1000 Bicycle Transportation Design (July 1, 2020) and California Manual of Uniform Traffic Control Devices.[5]

- The typical width of the paved trail would be 12 to 14 feet with striping in the middle to separate eastbound and westbound. It would be primarily 12 feet but widens to 14 feet between 17th Avenue and Rodeo Gulch where there is additional space to improve access to key destinations

[4] A Class I bikeway is defined as a multi-use paved path that is separated from any street or highway and permits a variety of users (including bicyclists, walkers, joggers, wheelchairs, and scooters), per the California Department of Transportation (Caltrans) Highway Design Manual, Chapter 1000, *Bicycle Transportation Design* (Caltrans July 1, 2020: 1000-1-15).

[5] Trail paved widths may be reduced with the recommended striping per Caltrans Chapter 1000 Section 1000.3 (3) Clearance to Obstructions and recommended bicycle warning signs in CA MUTCD Chapter 9 Section 9B.19 Other Bicycle Warning Signs.

near this part of the project area. The trail could also widen to 14 feet between 30th Avenue and 38th Avenue where there is additional space.

- The trail width would be reduced at the following locations (from west to east), including roadway crossings, to slow trail users and improve safety at intersections or due to constrained ROW:
    - 10 to 12 feet – For the 200 feet approaching the eastern side of 17th Avenue (sheet CP-1.01)
    - 10 feet – For the 80 feet approaching the western side of 30th Avenue and 90 feet approaching the eastern side of 30th Avenue (sheet CP-1.07)
    - 10 to 11 feet – For the 50 feet approaching the westerns side of 38th Avenue and 80 feet approaching the eastern side of 38th Avenue (sheet CP-1.10)
    - 11 to 12 feet – For the section between 41st Avenue and 47th Avenue near Jade Street Park Jade (sheets CP-1.11 through CP-1.14)
    - 8 to 12 feet – For the 50 feet approaching the eastern side of Monterey Avenue (sheet CP-1.17)
    - 10 to 12 feet – For 425 feet between Stream 633 and Poplar Street starting approximately 450 feet east of Stream 633 (CP-1.35)
- The paved trail would be hot mix asphalt (HMA) pavement. Consistent with other completed Coastal Rail Trail segments, the impervious paved trail would provide an agency-acceptable cap that prevents the trail users from direct exposure to any underlying soil contaminants.[6]
- Bridges and viaducts are expected to have FRP decks and guardrails.
- There could be safety fencing between the trail and tracks (described under *Fencing and Guardrails* below). There would also be fencing and/or guardrails along the tops of tall retaining walls and along the sides of elevated trail features where necessary for safety, as described under *Trail Features*.

Trail Features

Fencing and Guardrails

Fencing and/or guardrails would be installed along the sides of bridges, viaducts, tops of retaining walls, and other areas along the trail alignment for safety and security in accordance with the MBSST Master Plan. The Ultimate Trail Configuration could include safety fencing to separate trail users from the rail, as needed (see **Figure 2-2**). The railroad tracks would remain in place and would not be improved as part of the Project, except for the portions requiring relocation to accommodate the trail (described under *Rail Realignment* above), where new materials would be used to reconstruct the tracks.

The minimum horizontal distance allowed by the rail owner and operator (consistent with federal guidelines) from the centerline of the railroad tracks to the edge of any trail improvements at or above the railroad track elevation would be 8 feet, 6 inches, on straight sections and 9 feet, 6 inches, to 10 feet on curved sections.

Guardrails would be installed along the sides of bridges, viaducts, walls, and other raised trail features where needed for trail user safety and where dropoffs are over 30 inches.

The fencing and guardrails are expected to be constructed at 4 feet, 8 inches, in height and consistent with the fencing types identified in the MBSST Network Master Plan or used in other rail

[6] A soil sampling report (AMEC Geomatrix 2009) concluded that soils along the rail corridor in Segments 10 and 11 have elevated concentrations of arsenic attributed to the potential application of arsenical herbicides to control weed growth.

trail segments. To promote wildlife movement, the bottom of the proposed fence would be 16 inches above finish grade. Guardrails would have no gaps exceeding 4 inches.

If determined necessary by the County or City, additional fencing and/or guardrails could be installed along the trail alignment for safety, security, and trespass prevention.

Lighting

The entire trail alignment would be illuminated as determined necessary for trail user safety, either from existing light sources along adjacent roadways and crossings or by installing new 20-foot-tall light fixtures every 100 feet (Cooper Lighting Solutions 2020). On bridges and viaducts and in environmentally sensitive areas, there would be low-level lighting, similar to that on the San Lorenzo River Trestle Bridge. Any new lighting would be "dark sky compliant" in that it would minimize light pollution and offensive glare by directing light downward so it would reduce spillage. Additionally, overhead lighting would use house side cut-offs where applicable and light projection photometrics based on light mounting height to minimize impacts to adjacent properties and environmentally sensitive habitat areas. Solar lighting would be used where feasible.

Trash Receptacles

The trail would extend past some areas with existing trash receptacles, including Jade Street Park and Cliff Drive Parking Lot. Additional trash receptacles, including recycling receptacles and dog waste stations, would be added near the following roadway crossings, as well as the Cliff Drive Plaza and the Park Avenue/Coronado Street ramp (presented west to east):

- Corcoran Avenue[7]
- 30th Avenue (sheet CP-1.07)
- 38th Avenue (sheet CP-1.10)
- 41st Avenue (sheet CP-1.11)
- 47th Avenue (sheet CP-1.14)
- Cliff Drive Plaza (sheet CP-1.16)
- Monterey Avenue crossing (sheet CP-1.17)
- Grove Lane (Sheet CP-1.20)
- Park Avenue/Coronado Street ramp[5] (Sheet CP-1.23)
- New Brighton Road (Sheet CP-1.30)
- Mar Vista Drive (Sheet CP-1.37)
- State Park Drive (Sheet CP-1.40)

Benches and Bike Racks

Benches, bike racks, and bike share stations could be added along the trail alignment where feasible and there is sufficient room within the existing ROW. Currently under consideration in Segment 11 are three benches and bike racks at the Cliff Drive Plaza (sheet CP-1.16) and a bench on Park Avenue near Monterey Avenue (sheet CP-1.17).

[7] Trash receptacles at the Corcoran Avenue trail crossing are not currently shown in the design plans.

Signage

Informational, educational, and directional signage would be placed at strategic locations along the trail similar to the family of signage developed and installed for Coastal Rail Trail Segment 7, located between Natural Bridges Drive and the Beach Street/Pacific Avenue roundabout, in the City of Santa Cruz.

Educational signage would include information about the history of the railroad and special-status plant and wildlife species, such as the tidewater goby (*Eucyclogobius newberryi*), monarch butterfly (*Danaus plexippus*), and San Francisco dusky footed woodrat (*Neotoma fuscipes* subsp. *annectens*).

Additionally, there would be trail etiquette signage with speed limit and operational guidance and signage indicating that camping is prohibited, loitering is prohibited from dusk to dawn, and passing through for active transportation is allowable 24 hours per day.[8] Other signage would be determined as necessary for public safety.

In addition, contact information would be on the signs and on the City, County, and RTC websites for issues related to security, maintenance, vandalism, and refuse collection.

In Capitola where trail users are directed to on-street bicycle lanes and sidewalks through Capitola Village under the Ultimate Trail Configuration, wayfinding and directional signage would be placed in approximately 26 locations on existing sign poles (except on Stockton Avenue Bridge where there would be one new pole on each side) along existing streets in the City to direct users to the Cliff Drive and Monterey Avenue trail connections (**Figure 2-3**).

There would be an opportunity for a public art installation at the Cliff Drive Plaza (sheet CP-1.16).

Landscaping/Revegetation

New landscaping is not currently included in the project plans. Future plantings along the trail could include a native, drought-tolerant seed mix (non-irrigated) if determined necessary for erosion control.

Any trees removed to accommodate the Project would be replaced at an appropriate location and quantity determined by qualified biologists in coordination with the regulatory permitting agencies and jurisdictional authorities (e.g., County, City, Coastal Commission, State Parks).

2.4.2 Optional Interim Trail (Trail on the Rail Line)

As described in Section 2.1, *Overview*, the County is considering an optional first phase of the Project, whereby an interim trail would be located on the rail line. This could occur if the common carrier files for abandonment of freight operations along the Santa Cruz Branch Rail Line with the Surface Transportation Board or if the RTC files for adverse abandonment. If this occurs, all or a portion of the Santa Cruz Branch Rail Line could be railbanked to preserve the corridor for future freight reactivation and then could be used for a multi-use trail as an interim condition.

Therefore, this optional first phase includes three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

[8] As stated in Section 2.6, *Operation and Maintenance*, the normal operating hours would be dawn to dusk, with public "pass through" at all times to allow for early morning and evening commuting and transportation use.

The transition from the Optional Interim Trail to Ultimate Trail Configuration would attempt to minimize trail use disruptions. There are several unknown factors about how the transition would occur, but the most likely trigger would be reactivation of freight rail service. Therefore, staff and monetary resources would likely focus on re-establishing freight service and then constructing the Ultimate Trail Configuration. However, how the transition is implemented would be informed by several factors, including available funding for trail construction and the intention of minimizing disruptions to trail users.

1) Implementation of the Interim Trail

Trail Alignment

SEGMENT 10

Segment 10 (1.5 miles) is composed of a new multi-use bicycle and pedestrian trail on the rail line. The trail would be located generally along the Santa Cruz Branch Railroad centerline, with the removal of existing tracks and ties through the process of railbanking, from the eastern side of 17th Avenue to the western side of 47th Avenue. Refer to sheets CP-1.01 to CP-1.14 in **Appendix A.2**. The descriptions below reference specific sheets in parentheses.

Trail Connections. The design plans include the following trail connections to adjacent streets and facilities (presented from west to east), not including the roadway crossings presented further below:

- Chanticleer Avenue (sheet CP-1.03)
- Corcoran Avenue (sheet CP-1.04)
- Thompson Avenue (sheet CP-1.08)
- Jade Street Park (sheets CP-1.13 and CP-1.14)

Waterway Crossing Structures. The existing bridge would be used to cross the following waterway in Segment 10. The trail alignment in Segment 10 also crosses a minor waterway (Stream 472), which is conveyed through subsurface storm drain pipes, as described in Section 2.6.2 under *Waterway Crossings*.

- Rodeo Gulch – Conversion of the railroad bridge to trail use, including removal of ballast, tracks, and ties, and addition of lightweight load-bearing filler material and HMA paving or FRP deck on existing bridge called Rodeo Gulch Bridge (sheets CP-1.06, BP-1.01, BD-1.01)

Roadway Crossings. The trail crosses several roads (presented from west to east). The improvements at road crossings would be similar to the Ultimate Trail Configuration described in Section 2.4.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, except that the rail equipment would be removed, and no concrete track panels would be installed. Refer to the sheet references indicated below in **Appendix A.2**.

- 30th Avenue (sheet CP-1.07)
- 38th Avenue (sheet CP-1.10)
- 41st Avenue (sheet CP-1.11)
- 47th Avenue (sheet CP-1.14)

ROW. The trail and all improvements would be located within the RTC-owned rail corridor ROW, County road ROW, or City road ROW based on the current design plans (**Appendix A.2**). Temporary or permanent easements may be needed for construction, maintenance, and project features such as trail connections and drainage improvements.

SEGMENT 11

Segment 11 (3.2 miles) is composed of a new multi-use bicycle and pedestrian trail on the rail line. The trail would be located generally along the Santa Cruz Branch Railroad centerline, with the removal of existing tracks and ties through the process of railbanking, from the eastern side of 47th Avenue to the western side of State Park Drive. Refer to sheets CP-1.15 to CP-1.44 in **Appendix A.2**. The descriptions below reference specific sheets in parentheses.

Trail Connections. The design plans include the following trail connections to adjacent streets and facilities (presented from west to east), not including the roadway crossings presented further below. The trail connections for the Optional Interim Trail are generally the same as for the Ultimate Trail Configuration, except that there would be additional connections via stairs near the Capitola Trestle Bridge (sheet CP-1.19) and at Park Avenue (sheet CP-1.21).

- Opal Cliff Drive (sheet CP-1.15)
- Cliff Drive and Prospect Avenue (sheet CP-1.16); also see Cliff Drive Plaza below
- Wharf Road Connection (Sheet CP-1.18)
- Capitola Road/Avenue; Beach and Village Lower Parking Lot (sheet CP-1.19)
- Park Avenue (sheet CP-1.21)
- Coronado Avenue and New Brighton State Beach (sheet CP-1.27); also see *Coronado Ramp/New Brighton Parking Lot Connection*s below
- Park Avenue/Washburn Avenue (sheet CP-1.22)
- Oak Trail (sheet CP-1.30)
- Fire Access Road (sheet CP-1.34)
- Poplar Street (sheet CP-1.39); existing dirt trail to Poplar Street would be paved

Cliff Drive Plaza. Unlike the Ultimate Trail Configuration, the trail would not end at the Cliff Drive Plaza, but rather the trail would continue along the rail centerline (tracks and ties removed) toward the Capitola Trestle Bridge. Improvements along the plaza would be similar to the Ultimate Trail Configuration, except that a concrete track across the rails would not be necessary. The plaza would include trash receptacles, bike racks, benches, and an opportunity for a public art installation, and it would include improved stairs to Prospect Avenue and Opal Street. Chicanes would be used along the trail on either side of the plaza to slow bicycle and pedestrian traffic (sheet CP-1.16).

Coronado Ramp/New Brighton Parking Lot Connections. Like the Ultimate Trail Configuration, the trail includes a new switchback ramp connecting to crosswalks across Park Avenue and Coronado Street near the Park Avenue/Coronado Street intersection and a new staircase on the coastal side connecting to the New Brighton State Beach parking lot. These connections are listed above (sheet CP-1.27).

Retaining Walls. The design plans for the Optional Interim Trail include retaining walls, ranging from approximately 1 foot to 5 feet in height, at the following locations along the trail (presented from west to east). Retaining wall materials and color would blend with the surrounding environment. The Optional Interim Trail (Part 1) has fewer retaining walls compared to the Ultimate Trail Configuration. Refer to the sheet references indicated below in **Appendix A.2**. Retaining wall materials and color would blend with the surrounding environment.

- Cliff Drive Plaza (2–4 feet high, 160 feet long) (sheet CP-1.16)
- 225 feet west of Capitola Trestle Bridge to Capitola Trestle Bridge (2–5 feet high, 225 feet long) (sheet CP-1.18)

- Capitola Trestle Bridge to 95 feet east of Capitola Trestle Bridge (2–5 feet high, 95 feet long) (sheet CP-1.19)
- Trail section between New Brighton State Beach Bridge and Oak Trail Crossing (2 feet high, 100 feet long) (sheets CP-1.29 through CP-1.30)
- Trail section between Oak Trail Crossing and New Brighton Road (2–4 feet high, 135 feet long) (sheets CP-1.30 through CP-1.31)
- Trail section between Oak Trail Crossing and New Brighton Road (3–5 feet high, 125 feet long) (sheets CP-1.31 through CP-1.32)
- Trail section between Oak Trail Crossing and New Brighton Road (1–2 feet high, 235 feet long) (sheets CP-1.32 through CP-1.33)
- Trail section between Stream 633 and Poplar Street (1–3 feet high, 290 feet long) (sheet CP-1.39)

Waterway Crossing Structures. The existing Capitola Trestle Bridge would be used to cross the following waterway in Segment 11. Other minor waterway crossings are described in Section 2.6.2 under *Waterway Crossings*.

- Soquel Creek – Conversion of the existing Capitola Trestle railroad bridge to trail use includes removal of ballast, tracks, and ties, and addition of FRP deck (sheets CP-1.18, CP-1.19, and BP-2.01). Additionally, structural repairs are needed for any future use of the Capitola Trestle Bridge, including conversion to a trail use. These repairs are described in Section 2.6.2.

Roadway Crossings. The trail crosses several roads (presented from west to east). The improvements at road crossings would be similar to the Ultimate Trail Configuration described in Section 2.4.1 except that the rail equipment would be removed, no concrete track panels would be installed, and there would be an additional crossing at Monterey Avenue (sheet CP-1.21). Refer to the sheet references indicated below in **Appendix A.2**.

- Monterey Avenue (sheet CP-1.21) – Updated curb ramps and striping
- Grove Lane (sheet CP-1.24)
- New Brighton State Beach Roadway (sheets CP-1.28 and BP-3.01) – Conversion of the existing New Brighton State Beach Bridge railroad bridge to trail use, including removal of ballast, tracks, and ties, and addition of lightweight load-bearing filler material and HMA paving or FRP deck
- New Brighton Road (sheet CP-1.34)
- Estates Drive (sheet CP-1.37)
- Mar Vista Drive (sheet CP-1.41)

ROW. The trail and all improvements would be located within the RTC-owned rail corridor ROW, County road ROW, or City road ROW based on the current design plans (**Appendix A.2**). Temporary or permanent easements may be needed for construction, maintenance, and project features such as trail connections and drainage improvements.

The primary area where work would be outside the RTC ROW is throughout New Brighton State Beach, where the trail would be built on approximately 3,050 SF of California State Parks property. This would require an Operating Agreement between the RTC and California State Parks to authorize construction and operation of the trail facility on State Parks property.

Trail Width and Materials

The planned widths and characteristics of the multi-use bicycle and pedestrian trail in Segments 10 and 11 are described below. The trail widths meet the MBSST Network Master Plan trail classification of a Class I bikeway.[9] Although the minimum width for a Class I path is 12 feet, the Optional Interim Trail width typically would be 16 feet, including paved shoulders, or narrower at structures for stream crossings, as allowed.

- The typical width of the paved trail would be 16 feet with striping in the middle to separate eastbound and westbound.
- The width would be reduced to 12 feet at various street and bridge crossings, including 17th Avenue, Rodeo Gulch Bridge, 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Capitola Trestle Bridge, Monterey Avenue, Grove Lane, New Brighton Road, Estates Drive, Mar Vista Avenue, and State Park Drive.
- The width would also be reduced at the following locations (from west to east):
    - 12 feet around the Park Avenue/Coronado Street Ramp.
    - 12 feet on either side of and including the New Brighton State Beach Bridge.
    - 14 feet on a section between New Brighton State Beach and New Brighton Road.
    - 12 feet over the Borregas Creek and Stream 633 embankments.
- The paved trail would be HMA pavement. Consistent with other completed rail trail segments, the impervious paved trail would provide an agency-acceptable cap that prevents the trail users from direct exposure to any underlying soil contaminants.[10]
- Bridges are expected to have FRP decks.

Trail Features

FENCING AND GUARDRAILS

Fencing and/or guardrails would be installed for safety in areas where drop-offs are over 30 inches and in proximity to vehicular traffic.

The fencing and guardrails are expected to be constructed at 4 feet, 8 inches, in height. To promote wildlife movement, the lowest cable of the fence would be 16 inches above finish grade. Guardrails would have no gaps exceeding 4 inches.

If determined necessary by the County or City, additional fencing and/or guardrails could be installed along the trail alignment for safety, security, and trespass prevention in accordance with the MBSST Master Plan.

LIGHTING

The entire trail alignment would be illuminated as determined necessary for trail user safety, either from existing light sources along adjacent roadways and crossings or by installing new 20-foot-tall light fixtures every 100 feet (Cooper Lighting Solutions. 2020). On bridges and viaducts and in environmentally

[9] A Class I bikeway is defined as a multi-use paved path that is separated from any street or highway and permits a variety of users (including bicyclists, walkers, joggers, wheelchairs, and scooters), per the Caltrans Highway Design Manual, Chapter 1000, *Bicycle Transportation Design* (Caltrans 2015: 1000-1-15).

[10] A soil sampling report (AMEC Geomatrix 2009) concluded that soils along the rail corridor in Segments 10 and 11 have elevated concentrations of arsenic attributed to the potential application of arsenical herbicides to control weed growth.

sensitive areas, there would be low-level lighting, similar to that on the San Lorenzo River Trestle Bridge. Any new lighting would be "dark sky compliant" in that it would minimize light pollution and offensive glare by directing light downward so it would reduce spillage. Additionally, overhead lighting would use house side cut-offs where applicable and light projection photometrics based on light mounting height to minimize impacts to adjacent properties and environmentally sensitive habitat areas. Solar lighting would be used where feasible.

TRASH RECEPTACLES

Like the Ultimate Trail Configuration, the Optional Interim Trail would extend past some areas with existing trash receptacles (e.g., Jade Street Park), and additional trash receptacles, including recycling receptacles and dog waste stations, would be added at the following locations:

- Corcoran Avenue (Sheet CP-1.04)[11]
- 30th Avenue (sheet CP-1.07)
- 38th Avenue (sheet CP-1.10)
- 41st Avenue (sheet CP-1.11)
- 47th Avenue (sheet CP-1.14)
- Cliff Drive Plaza (sheet CP-1.16)
- Monterey/Park Avenue crossing (sheet CP-1.21)
- Grove Lane (sheet CP-1.24)
- Park Avenue/Coronado Street ramp (sheet CP-1.27)[12]
- New Brighton Road (sheet CP-1.34)
- Estates Drive (sheet CP-1.37)[13]
- Mar Vista Drive (sheet CP-1.41)
- State Park Drive (sheet CP-1.44)

BENCHES AND BIKE RACKS

Benches, bike racks, and bike share stations could be added along the trail alignment where there is sufficient room. Benches are under consideration at the following locations:

- Near Chanticleer Avenue (sheet CP-1.03)
- Corcoran Avenue (sheet CP-1.04)
- Near 30th Avenue (sheet CP-1.07)
- Thompson Avenue (sheet CP-1.08)
- Near 38th Avenue (sheet CP-1.09)
- Near 41st Avenue (sheet CP-1.11)
- Three locations west of 47th Avenue near Jade Street Park (sheets CP-1.13 through CP-1.14)
- Near Opal Cliff Drive/Portola Drive connection (sheet CP-1.15)
- Cliff Drive Plaza (sheet CP-1.16)

[11] Trash receptacles at the Corcoran Avenue trail crossing are not currently shown in the design plans.

[12] Trash receptacles at the Park Avenue/Coronado Street ramp trail crossing are not currently shown in the design plans.

[13] Trash receptacles at the Estates Drive trail crossing are not currently shown in the design plans.

- Near Capitola Trestle Bridge (sheet CP-1.17)
- Three locations near Monterey Avenue and Park Avenue (sheet CP-1.21)
- Near Grove Lane (sheet CP-1.23)
- Near Coronado Ramp (sheet CP-1.26)
- Near Oak Trail Crossing (sheet CP-1.30)
- Near New Brighton Road (sheet CP-1.34)
- Near Estates Drive (sheet CP-1.36)
- Two locations near Mar Vista Drive (sheets CP-1.40 through CP-1.41)
- Near State Park Drive (sheet CP-1.44)

SIGNAGE

Informational, educational, and directional signage would be placed at strategic locations along the trail, similar to the Ultimate Trail Configuration. Refer to the description under *Signage* in Section 2.4.1. Unlike the Ultimate Trail Configuration, there would be no wayfinding and directional signage through Capitola Village.

LANDSCAPING/REVEGETATION

Like the Ultimate Trail Configuration, new landscaping is not currently included in the project plans. Future plantings along the trail could include a native, drought-tolerant seed mix (non-irrigated) if determined necessary for erosion control.

Any trees removed to accommodate the Project would be replaced at an appropriate location and quantity determined by qualified biologists in coordination with the regulatory permitting agencies and jurisdictional authorities (e.g., City, County, Coastal Commission, State Parks).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

If and when the rail line is later reactivated, the Optional Interim Trail and associated fencing, retaining walls, benches, and other supporting features would be demolished. The railroad tracks would be rebuilt in approximately the same alignment. As the trail is removed, signage would direct trail users to existing sidewalks and bicycle lanes on the roadway system until the Ultimate Trail Configuration is constructed and operational (Part 3).

3) Construction of the Ultimate Trail Configuration

The new trail would be constructed in the Ultimate Trail Configuration, as described in Section 2.4.1. This includes directing trail users through Capitola Village on bicycle lanes and pedestrian sidewalks.

2.5 Project Operation and Maintenance

The following description of trail operation and maintenance applies to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and *Optional Interim Trail (Trail on the Rail Line)* unless otherwise indicated.

No rail service of any type is proposed as part of the Project, and there would be no other changes in the rail corridor as a result of the Project, other than those described above as they relate Project implementation, including the following:

- Ultimate Trail Configuration – rail realignment described in Section 2.4.1
- Ultimate Trail Configuration – Design Option A: Interim Trail on Capitola Trestle over Soquel Creek described in Section 2.4.1
- Optional Interim Trail, including removal of the existing ballast, tracks, and ties, described in Section 2.4.2

For additional information, refer to Section 1.2.2, *Rail Operation and Maintenance*, in Chapter 1, *Introduction*.

Trail Use

Users

The ADA-accessible trail is intended for pedestrians and bicyclists. Dogs would be allowed on leash.

Electric bicycles with a rating limited to 20 miles per hour (mph) would be allowed in accordance with California law (Assembly Bill 1096);[14] however, motorized vehicles would not be allowed. The exception would be emergency vehicles and public agency maintenance vehicles, both of which would not exceed vehicular weight limits of the trail. Electronic skateboards and other personal mobility devices with a rating limited to 20 mph would be allowed as well. Other speed limits may be imposed and indicated on posted signage, as needed.

The RTC estimates that there could be 500-1,500 trail users per day based on estimates developed for the Unified Corridor Investment Study (RTC 2019).

Hours

The normal operating hours would be dawn to dusk, with public "pass through" at all times to allow for early morning and evening commuting and transportation use. These hours are consistent with Segment 7 and the Arana Gulch trail in the City of Santa Cruz. The signage described above under *Trail Features* would include the hours and recommend that trail users use a light and reflectors after dusk and before dawn.

The trail would not be gated or otherwise physically "closed." Flexible bollards (that easily bend if struck by bicyclists) may be added at roadway crossings if needed for safety. Lockable hard bollards could be installed at access points if there is a demonstrated safety issue over time.

Trail Maintenance

Trail maintenance responsibility would be based on jurisdiction. Portions of Segments 10 and 11 lie within both the County and City of Capitola, and the rail corridor is owned by the RTC.

In accordance with the MBSST Master Plan EIR, general maintenance activities anticipated for the trail include the following:

- Tree, shrub, and grass trimming
- Fallen tree removal

[14] According to Assembly Bill 1096, which took effect in January 2016, electric bicycles (e-bikes) are no longer regulated like mopeds, and the same rules of the road apply to both e-bikes and human-powered bicycles. E-bikes that go up to 28 mph are not allowed on paths. https://b.3cdn.net/bikes/2f0872d06ea26eb2b7_8zm6bi1fc.pdf.

- Weed control
- Graffiti removal
- Trash/recycling collection and disposal and waste collection bags restock
- Pavement sweeping, sealing, repaving, and pothole repair
- Bollard replacement
- Fence repair and replacement
- Signage repair and replacement
- Pavement marking refreshment and replacement
- Lighting repair and replacement
- Drainage inspection and cleaning
- Trail structure inspection and required maintenance

Additionally, the trail would be inspected for damage and signs of excessive erosion and potential inundation following major storm events. If necessary, appropriate actions would be taken to minimize the risk to trail users. Such actions could include trail segment closure, structural improvements, or trail relocation, for which appropriate environmental review would be conducted.

2.6 Project Construction

2.6.1 Ultimate Trail Configuration (Trail next to Rail Line)

Timing, Duration, Hours

Construction would occur between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Additionally, construction could also start at 7:00 a.m., Monday through Friday, or occur on Saturdays or Sundays with written approval from the County or City. No construction would occur on national holidays. Emergencies may require work outside these hours.

Construction of the Ultimate Trail Configuration, without the Optional Interim Trail, is estimated to begin in 2026 and would continue for approximately 48 months, as shown in **Table 2-1**.

Table 2-1 Estimated Construction Duration for the Ultimate Trail Configuration

Trail Section	Duration	Month
Segment 10 (17th Avenue to 30th Avenue)	12 months	1–12
Segment 10 (30th Avenue to 47th Avenue)	9 months	9–18
Segment 11 (47th Avenue to Opal Street)	6 months	12–18
Segment 11 (Monterey Avenue to New Brighton Road)	18 months	18–36
Segment 11 (New Brighton Road to State Park Drive)	12 months	36–48
Total	**57 months**	**48 months**

General Methodology

In general, construction activities for Segments 10 and 11 would include excavation of material sources, clearing and grubbing, and tree removal; grading, rail realignment, retaining wall and abutment construction, viaduct and bridge construction, drainage improvements, and placement of crushed aggregate base and paved surface; and revegetation, installation of fencing, signs, lighting,

and other trail and safety-related features. There would be drilling associated with construction of the retaining walls and viaducts but no pile driving.

The Project would be constructed in accordance with the recommendations included in the project Draft Geotechnical Investigation Report (Pacific Crest Engineering 2021) and any additional recommendations identified in the final Geotechnical Investigation to be prepared upon final project design. Additionally, the structures (viaducts, bridges) would be constructed in accordance with American Association of State Highway and Transportation Officials and California Department of Transportation (Caltrans) standards.

Retaining Walls

As described above for the Ultimate Trail Configuration under *Trail Alignment*, several upslope and downslope retaining walls of various sizes would support the trail at specific locations along the alignment. Retaining walls typically consist of steel soldier piles set into concrete-filled drilled footings. Wood or concrete lagging would be used to retain the soil where the wall is above and below the trail. If the wall is below and supports the trail, concrete lagging may be preferred to retain the soil. Walls taller than 10 feet typically use drilled and grouted tie-back anchors into the soil. The design would incorporate integral tie-back anchorages into the soldier piles to eliminate the need for protruding, horizontal walers. Other retaining wall types included and/or under consideration for design include 6-inch retaining curb, 8-inch retaining curb, and current Caltrans Standard Plans (basis of design Caltrans 2022 Standard Plans) Retaining Walls (Type 1, Type 1A, Type 5, and Type 6).

Waterway Crossings

The Ultimate Trail Configuration would cross nine identified waterways that extend below the existing rail corridor as described below (from west to east). Rodeo Gulch and Stream 472 are located in Segment 10, and the other waterways listed below are in Segment 11. For additional detail, refer to Section 3.8, *Hydrology and Water Quality*, **Figure 3.8-1** and **Table 3.8-2**.

- Rodeo Gulch (open stream channel) – new clear span bridge
- Stream 472 (underground culverts) – modify or replace culverts
- Soquel Creek (open stream channel) – use existing Stockton Avenue Bridge (no improvements to bridge)
- Escalona Gulch (underground culvert) – new viaduct (no improvements to culvert)
- Tannery Gulch (underground culvert) – no improvements to culvert
- New Brighton Creek (underground culvert) – new viaduct (no improvements to culvert)
- Borregas Creek (underground culvert) – new viaduct (no improvements to culvert)
- Stream 633 (underground culvert) – new viaduct (no improvements to culvert)
- Flatiron Creek (underground culvert) – modify or replace culvert

Bridges and Viaducts

Bridges. A prefabricated clear-span bridge would be installed over Rodeo Gulch (**Appendix A.1**, sheets CP-1.06 and BP-2.01). A second prefabricated clear-span bridge would be installed over New Brighton State Beach roadway (sheets CP-1.24 and BP-6.01). Both bridges would be a clear-span prefabricated bridge supported on each end by an abutment. Each abutment would be supported

by drilled concrete pilings. The bridges would have a viaduct with FRP bridge decks approaching at least one side of the clear-span bridge built up to the abutments. Both structures have a 12-foot clear trail width.

Viaducts. Viaducts with lightweight FRP decks would be installed at the following locations: approaching both sides of the Rodeo Gulch Bridge, over Escalona Gulch (Grove Lane Viaduct), near the Coronado ramp connection (Park Avenue Viaduct) to avoid significant retaining walls, near Oak Trail (Oak Trail Viaduct) to reduce potential impacts to riparian vegetation/willow wetland, over New Brighton Creek (New Brighton Road Viaduct), over Borregas Creek (Borregas Creek Viaduct), and over Stream 633 (Estates Drive Viaduct). The viaducts would range in length from approximately 180 feet to 330 feet. The viaducts are envisioned to consist of largely spaced (20 to 30 feet) drilled concrete pilings supporting the lightweight FRP deck system. Longer spans may be practical with a composite steel girder and FRP deck assembly. The elevated trail may extend over numerous spans to conform to the grades on each side of the water crossings. Slope stabilization methods such as hydroseeding, vegetating, high performance turf reinforcement mats (with or without vegetation), and/or linked concrete tiles (hollowed for vegetation or solid) may occur at each viaduct to reduce future maintenance needs. The pilings required for the viaducts would be at least 20 feet deep.

Guardrails would be installed along all viaducts and bridge structures.

Stormwater Drainage

In general, stormwater would surface flow from the new impervious surfaces into the existing drainage system (i.e., existing culvert, pipe, and/or creek), proposed drainage system, and/or natural material swale included in the trail design. A 2-foot-wide natural swale is proposed along the track side of the trail adjacent to the tracks for most of Segments 10 and 11.

These drainage systems (e.g., swales, V ditches, pipes) would comply with County Design Criteria Standards and City Design Criteria Standards as follows: All drainage improvements shall be designed to convey a minimum 10-year storm. In addition, means of conveying flood overflows from the site would be per the 25-year storm return period. All runoff generated by the impervious trail surface might first drain to the proposed natural material swales alongside the trail. Any trail-generated flows and off-site flows that exceed the capacity (i.e., overflows) of the proposed swales would be diverted to a proposed storm drainpipe system under the trail.

Any off-site flows that would be intercepted by existing or proposed storm drain infrastructure (e.g., catch basins, sidewalk underdrains, V ditches, swales) in the Project area would be piped in the new storm drain system under the proposed trail to an outlet structure at an existing storm drain system or creek downstream. Stormwater treatment devices (e.g., gross solids removal device, hydrodynamic separators, trash screens, and flow through water quality treatment devices) could be installed, as determined appropriate by the County and/or City, with the proposed storm drain system treating tributary off-site flows from the streets before they ultimately discharge at a creek or ocean, improving water quality. Planned storm drain installations are listed below under *Rail Realignment and Utility Relocations and Installations*.

Neither the County nor the City has post-construction stormwater requirements for trails. This is because trails are not considered a regulated project or development if no other impervious surfaces are replaced or created, and if the trail is built to direct stormwater runoff to adjacent vegetated areas (County of Santa Cruz 2022; City of Capitola 2023).

Rail Realignment and Utility Relocations and Installations

Planned rail realignment and utility relocations and installations at the schematic design level include the following.

Rail Realignment. As described in Section 2.4.1, almost the entire track in Segment 10 between 17th Avenue and 47th Avenue, equal to nearly 1.5 miles, would be realigned 5 to 8 feet southward within the RTC-owned rail corridor. In Segment 11, the track would be realigned approximately 90 feet past 47th Avenue. Realignment involves the removal of the railroad ties and other rail hardware (rail, tie plates, anchors) and installation of new Class III rail, consistent with the existing rail.

Storm Drain. Anticipated storm drain improvements include the following:

- Connect existing systems to proposed systems in Segments 10 and 11 as follows: eastern end of 17th Avenue, 30th Avenue, Blue and Gold Star Mobile Home Park, Castle Mobile Estates, existing system 600 feet east of 41st Avenue, existing system near the Cliff Drive Parking Lot, eastern side of Monterey Avenue, Coronado Street, New Brighton State Beach Bridge, and the western side of State Park Drive
- Install storm drain catch basins, pipes, culverts, stormwater treatment devices, and outlet structures (with outlet energy dissipation) along length of Segments 10 and 11
- Install proposed storm drain outfalls (pipe with riprap energy dissipation) at Rodeo Gulch, Escalona Gulch, Tannery Gulch, unnamed waterway (200 feet east of New Brighton Road), Borregas Creek, and Stream 633

Traffic Warning Devices. Anticipated traffic warning devices include installing LED W11-15 flashing pedestrian/bicycle signs and/or rectangular rapid-flashing beacons at the 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista crossings.

Lighting. Lighting would be installed as described in Section 2.4.1 with extensions from the existing electric system.

Other Utility Relocations. Utility crossings of the rail line that are in conflict with the proposed improvements would be relocated by the utility owner either prior to or part of project construction. Potential utility conflicts are unknown at this time but could include sewer, water (domestic, fire, irrigation, recycled), storm drain, gas, electrical, and communication/telecom.

Excavation and Earth Movement

It is estimated that excavation necessary for construction of the Ultimate Trail Configuration and as-needed utility trench work would be up to 6 feet deep. Proposed soldier pile walls may require up to 20 feet deep drilling (or other approved soldier pile installation methods, but not pile driving). Project construction would involve cut and fill slopes up to a maximum of 2:1. Preliminary estimates include 6,025 cubic yards (CY) of cut volume and 8,835 CY of fill volume; therefore, an earthwork balance of cut and fill is unlikely.

A summary of construction information and assumptions based on the current design is provided in **Table 2-2**.

Table 2-2 Construction Estimates for Ultimate Trail Configuration (Trail next to Rail Line)

Construction Information	Ultimate Trail Configuration (Trail next to Rail Line)	Design Option A: Interim Trail over Capitola Trestle	Design Option B: Inland Side of Track between Grove Lane and Coronado Street
Construction Duration[a]	48 months	+ 6 months	+1 month
Construction/Alignment Length[b]	4.2 miles (1.5 miles Segment 10; 2.7 miles Segment 11)	+ 0.5 mile (Segment 11)	No changes
Total Disturbance Area	10.7 acres	+ 1.2 acres	+0.09 acre
Pavement (New Impervious Surface)[c]	236,200 SF 26,245 SY	27,575 SF 3,064 SY	11,115 SF 1,235 SY
Bridges[d]	6,400 SF	No changes	No changes
FRP on Existing Bridges[e]	0	+ 7,100 SF	No changes
Viaducts[f]	26,120 SF	0	-8,824 SF
Tree Removal[g]	803 trees	No changes	+ 4 trees
Excavation and Drilling Depth			
Trail Excavation/Grading Depth[h]	Up to 6 feet	No changes	No changes
Drilled Hole Depth for Retaining Wall Soldier Piles	Up to 20 feet	No changes	No changes
Piling Depth for Viaducts	20 feet minimum	No changes	No changes
Earthwork Quantities[i]			
Excavation	6,025 CY	+ 1,602 CY	+246 CY
Embankment Construction/Fill	8,835 CY	+ 450 CY	-634 CY
Import and Export[j]			
Import			
Roadway Aggregate	5,278 CY	+ 554 CY	+ 240 CY
Asphalt	236,158 SF	+ 26,820 SF	+ 4,000 SF
Portland Concrete	8,123 SF	+ 656 SF	+ 2,936 SF
Export/Waste[k]	11,811 CY	+ 1,153 CY	+ 881 CY

Source: The construction information is provided by RRM Design in March 2023 based on the plans presented in **Appendix A.1** and subsequently refined.

[a] The estimated construction durations are based on rationale described in Sections 2.6.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, and 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, respectively.

[b] The linear distance of the trail alignment varies by 0.5 mile between the Ultimate Trail Configuration (4.2 miles) and Optional Interim Trail (4.7 miles), which has been reflected in this EIR. Thus, the Project is characterized as an approximately 4.5-mile trail in the project overview at the beginning of this Chapter 2, *Project Description*.

[c] Estimated new impervious surface for the new paved (asphalt) trail, decorative pavers, and decomposed granite, rounded to the nearest 100 square yard.

[d] The estimated bridge square footage includes the clear-span bridges at Rodeo Gulch and New Brighton State Beach.

[e] The FRP would be prefabricated off site in approximately 30-foot-long panels. This quantity only applies to FRP installed on existing bridges.

[f] The estimated viaduct square footage includes the Grove Lane, Park Avenue, Oak Trail, New Brighton Road, Borregas Creek, and Estates Drive Viaducts.

[g] Tree removal estimates are based on the tree inventory and design plans (**Appendix A**) conducted by RRM Design. **Appendices A.5** and **A.6** include the demolition plans that identify tree removal, and **Appendix A.6** includes the tree inventory.

[h] These are conservative estimates measured vertically from existing ground to bottom of excavation.

[i] The excavation material is assumed suitable to construct embankment/fill.

[j] The import materials would be used for paving the trail and identified trail connections. These estimates are independent of and have no direct correlation to the Earthwork Quantities identified above.

Table 2-2 Construction Estimates for Ultimate Trail Configuration (Trail next to Rail Line)

Construction Information	Ultimate Trail Configuration (Trail next to Rail Line)	Design Option A: Interim Trail over Capitola Trestle	Design Option B: Inland Side of Track between Grove Lane and Coronado Street

[k] The estimated export includes the remaining excavation material and hazardous waste (e.g., railroad ties) that are not used for embankment construction/fill. The railroad ties, as well as other rail hardware (rail, tie plates, anchors), would be removed for trail construction and/or railroad realignment.

CY = cubic yards; FRP = fiberglass reinforced polymer; SF = square feet; SY = square yards

Construction Vehicle Access, Equipment and Staging

Construction truck activity and haul routes would be limited to arterial and collector roads where feasible. Temporary lane closures throughout the Project alignment are anticipated, and construction signage and a flagger would be present at these locations, as needed. Construction activities are not anticipated to result in any long-term road or lane closures. It is possible that rail-mounted construction vehicles would access portions of the Project via the rail line.

Construction equipment and vehicles could include backhoes, loaders, tractors, cranes, lifts, excavators, drill rigs, concrete trucks and a pump, a paving machine, compactors/rollers, and trucks for grading and materials delivery, including import and export. Power tools could include jackhammers, air compressors, generators, concrete saws, power drills, welding equipment, sandblasting equipment, painting equipment, power and impact wrenches, and the like.

Construction staging, equipment staging, and stockpiling would take place on existing disturbed or paved areas near the rail corridor at least 50 feet from drainages or waterways. Potential construction staging areas include disturbed and vacant land in the following areas (from west to east):

- 855 7th Avenue (Assessor's Parcel Number [APN] 026-26-113, vacant Redevelopment Successor Agency-owned land)
- 901 7th Avenue (APN 026-26-116, vacant Redevelopment Successor Agency-owned land)
- 2700 Brommer Street (APN 029-21-319, County maintenance yard)
- 1404 38th Avenue (APN 034-16-441, vacant privately owned land)
- 835 Bay Avenue (APN 035-38-101, vacant privately owned and, commonly used for staging)
- 426 Capitola Avenue (APN 035-14-316, City of Capitola Beach and Village Lower Parking Lot)
- 4510 Jade Street (APN 034-55-102, very NE corner of school/park property, owned by school)
- 1500 Park Avenue (APN 036-20-101, upper part of New Brighton State Beach parking lot at the SW corner of the property)
- Seacliff State Beach (APN 042-08-104)

All equipment and materials would be stored, maintained, and refueled in designated portions of the staging areas in accordance with permit requirements. As such, no staging would be in areas with sensitive biological resources or adjacent to drainages including but not limited to Rodeo Gulch, Escalona Gulch, and Borregas Creek.

Best Management Practices

The following best management practices will be identified in the construction bid documents and implemented during project construction to minimize dust, emissions, and erosion; protect air quality, biological resources, and water quality; and control traffic.

Air Quality and Water Quality Protection

- Limit grading activities during periods of high wind (over 15 mph) or water for dust suppression.
- Water active construction areas as needed based on the activity, soil, and wind exposure.
- Apply soil stabilizers on inactive construction areas (disturbed lands unused for four consecutive days).
- Apply native hydro-seed or non-toxic binders to exposed areas after cut/fill operations.
- Maintain at least 2-foot freeboard in haul trucks, and cover all trucks hauling dirt, sand, or other loose materials.
- Place construction staging, equipment staging, and stockpiling on existing disturbed or paved areas near the rail corridor at least 50 feet from drainages or waterways.
- Cover inactive storage piles.
- Install perimeter protection (e.g., silt fence, fiber rolls) to prevent contaminated construction runoff from leaving the construction site and to protect adjacent waterways.
- Install project storm drain catch basin and inlet protection (e.g., inlet filters, fiber rolls, gravel bags).
- Implement additional measures identified in the Soil Management Plan to be prepared by the City, County, or their construction contractor.
- During construction of the new prefabricated, clear span bridge over Rodeo Gulch, install a debris containment system to ensure construction debris and materials do not enter Rodeo Gulch. The debris containment device shall remain in place during construction activities over the water. A debris containment system would also be used under the existing Capitola Trestle Bridge if *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* or the *Optional Interim Trail (Trail on the Rail Line)* is selected and implemented.
- Implement any painting required for the Project (e.g., path railings) off site in certified and approved paint shops, and deliver materials to the Project area ready for installation. Minor paint touchups shall occur as necessary on site to ensure that the quality of the materials being used for construction of the Project is maintained.

Biological Resources Protection

- Minimize removal or disturbance of existing vegetation outside the footprint of project construction activities.
- Limit site access and parking, equipment storage, and stationary construction activities to the designated staging areas to the maximum extent feasible.
- Store, maintain, and refuel all equipment and materials in designated portions of the staging areas in accordance with permit requirements. As such, no staging would occur in areas with sensitive biological resources or adjacent to drainages including but not limited to Rodeo Gulch, Escalona Gulch, and Borregas Creek.
- Prior to staging equipment on site, clean all equipment caked with mud, soils, or debris from off-site sources to avoid introducing or spreading invasive exotic plant species.

- Position all stationary equipment, such as motors, pumps, generators, and/or compressors, over drip pans.
- If security fencing is installed around the construction site, allow for passage of wildlife to maintain a link between inland and coastal habitats, including stream corridors, during construction activities. Limit the use of plastic mesh safety fencing to prevent wildlife entrapment.
- Properly contain and remove all food trash that may attract predators into the work area and construction debris and trash from the work site on a regular basis.
- To the extent feasible, conduct tree removal between September 15 and January 31 (ideally between September 15 and October 15) so it is outside avian breeding season (from February 1 to September 15) and bat maternity roosting season (from May 1 to September 1). If it is determined not feasible, mitigation has been identified to protect nesting birds.

Traffic Control

- A Traffic Control Plan shall be prepared and implemented in accordance with Santa Cruz County Code, Chapter 9.70, *Streets and Roads*. The Traffic Control Plan shall include the following elements:
    - Construction truck activity and haul routes shall be limited to arterial and collector roads where feasible.
    - Construction signage and a flagger or police officer shall be present at the location of any lane closure or substantial construction equipment or activities as needed to maintain public safety while facilitating the necessary equipment and vehicular access to the Project corridor.
    - All equipment and materials shall be stored, maintained, and refueled in clearly defined and designated portions of the staging areas in accordance with permit requirements.
    - Emergency personnel shall be notified in advance of construction-related lane closures.
    - During construction of the 100-foot-long clear-span bridge over New Brighton State Beach Road, the (1) New Brighton State Beach Road shall be temporarily closed for approximately 12 hours overnight on a weekday during the off-peak camping season to allow for the prefabricated bridge to be set in place, (2) emergency egress/ingress from New Brighton State Beach Campground shall be provided via the private New Brighton Road residential and maintenance road, and (3) construction activities in New Brighton State Beach shall be scheduled to avoid concurrent closure of New Brighton State Beach Road and New Brighton Road.

2.6.2 Optional Interim Trail (Trail on the Rail Line)

As described above, this optional first phase includes three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail. The information below applies to all three parts unless otherwise noted.

Timing, Duration, Hours

Construction would occur between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Additionally, construction could also start at 7:00 a.m., Monday through Friday, and occur on Saturdays with written approval from the County or City. No construction would occur on Sundays or national holidays.

Construction of the Optional Interim Trail is estimated to occur as follows. It is estimated by the RTC, County, and City that the Optional Interim Trail could be in operation for approximately 25–30 years, recognizing that this is an interim or temporary condition driven by freight activity and that it could be longer or shorter than estimated below for purposes of analysis:

1. Implementation of the Optional Interim Trail: 2023–2027 (4 years)
    - 2023–2025 – Complete environmental review, design, and ROW process
    - 2026–2027 – Trail construction
2. Demolition of the Optional Interim Trail and Rebuilding of the Rail Line: 2056–2060 (4 years)
3. Construction of the Ultimate Trail Configuration: 2060–2064 (4 years)

General Methodology

In general, construction activities for Segments 10 and 11 would include excavation of material sources, clearing and grubbing, and tree removal; grading, retaining wall construction, drainage improvements, and placement of crushed aggregate base and paved surface; and revegetation, installation of signs, and other trail and safety-related features. There would be drilling associated with construction of the retaining walls but no pile driving.

The Project would be constructed in accordance with the recommendations included in the project Draft Geotechnical Investigation Report (Pacific Crest Engineering 2021) and any additional recommendations identified in the final Geotechnical Investigation to be prepared upon final project design, as applicable.

1) Implementation of the Interim Trail

The railroad tracks would be removed, and the multi-use trail would be constructed in generally the same location.

Removing the railroad tracks would follow the required Surface Transportation Board requirements for abandonment, railbanking, and track removal.[15] After the required administrative tasks, the physical elements of track removal would entail (1) removing rail, ties, signage, and equipment and (2) excavating and redistributing ballast on site where feasible, regrading, compacting, and then capping with trail pavement. The aggregate base layer needs to be established for trail use because the current ballast would not be a suitable aggregate base layer for pavement because it does not meet gradation and compaction requirements.

If hazardous materials are identified through the planned soil testing, any hazardous soil would be disposed of at an appropriate disposal facility.

The railroad ties, formally designated as treated wood waste by the California Department of Toxic Substances Control, would be transported and disposed in accordance with the alternative management standards established by the California Legislature in Assembly Bill 1353 (2004), Treated Wood Waste Management in California.

No permanent storage of hazardous ballast, ties, or other unregulated hazardous materials would occur on site or on City/County or State Parks property.

[15] Title 49, Subtitle B, Chapter X, Subchapter B, Part 1152 – Abandonment and Discontinuance of Rail Lines and Rail Transportation Under 49 U.S.C. 10903.

Once the railroad tracks and ties are removed, the multi-use trail would be constructed in generally the same location with placement of crushed aggregate base and paved surface.

As described in Section 2.4.2 for the Optional Interim Trail under *Trail Alignment*, retaining walls, waterway crossings, roadway crossings, drainage improvements, and roadway improvements would occur.

Retaining Walls

Some retaining walls of various sizes would support the trail at specific locations along the alignment. Retaining wall types included and/or under consideration for design include 6-inch retaining curb, 8-inch retaining curb, and Caltrans 2018 Standard Plan Retaining Walls (Types 1, 1A, 5, and 6). Other retaining walls under consideration include steel soldier piles set into concrete drilled piles with either timber or concrete lagging.

Waterway Crossings

The Optional Interim Trail would cross nine identified waterways that extend below the existing rail corridor as described below (from west to east). Rodeo Gulch and Stream 472 are located in Segment 10, and the other waterways listed below are in Segment 11. For additional detail, refer to Section 3.8, Hydrology and Water Quality, **Figure 3.8-1** and **Table 3.8-2**.

- Rodeo Gulch – use existing bridge (no further improvements to bridge)
- Stream 472 (underground culvert) – use existing rail bed (no improvements to culvert)
- Soquel Creek – use existing Capitola Trestle Bridge (requires repairs to trestle bridge)
- Escalona Gulch (underground culvert) – use existing rail bed (no improvements to culvert)
- Tannery Gulch (underground culvert) – use existing rail bed (no improvements to culvert)
- New Brighton Creek (underground culvert) – use existing rail bed (no improvements to culvert)
- Borregas Creek (underground culvert) – use existing rail bed (no improvements to culvert)
- Stream 633 (underground culvert) – use existing rail bed (no improvements to culvert)
- Flatiron Creek (underground culvert) – use existing rail bed (no improvements to culvert)

Bridges

All Existing Bridges. A FRP deck would be installed on the existing railroad bridges (in place of the rails and ties) extending over Rodeo Gulch (sheets CP-1.06 and BP-1.01, Soquel Creek (sheets CP-1.18, CP-1.19, BP-2.01), and New Brighton State Beach (sheets CP-1.28 and BP-3.01). The Rodeo Gulch Bridge and Capitola Trestle Bridge are each 13-foot 4-inch-wide structures (sheets BD-1.01, BD-2.01). At the Capitola Trestle Bridge, along with the new FRP deck, new steel beams with spacing to match the cross frame (4 feet 3 inches to 5 feet 6 inches) would be installed. New Brighton State Beach Bridge is a 14-foot-wide structure. At all three bridges, new guardrail systems would be installed (sheets BD-1.01, BD-2.01, BD-3.01).

Capitola Trestle Bridge. The following structural repairs are required for any future use of the Capitola Trestle Bridge, including conversion to a trail use, and would be implemented as part of Optional Interim Trail (Part 1) construction. The two timber bridges (MP 15.89b and 15.89d) are in fair to poor condition. All bracings would be replaced, and approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges (MP 15.89b and MP 15.89d). Wood-treated waste would be transported and disposed in accordance with the alternative management standards established by the California Legislature in Assembly Bill 1353 (2004), Treated Wood Waste Management in California. Minor rehabilitation would also occur on the wrought iron bridge

(MP 15.89c), including replacement of the bridge's bearings. The replacement materials for the repairs would be "in kind," that is of similar dimension, location/configuration, color and appearance as the original materials for aesthetic continuity. There would be no work below the ordinary highwater mark of Soquel Creek.

The conversion of the trestle to trail use would include the following work. FRP deck with a metal guardrail would be installed for the length of the trestle. The structural support of the FRP deck would differ depending on the underlying existing bridge material/construction. The section at U-girder Wharf Road bridge (MP 15.89e) requires lightweight, load-bearing filler material in place of the existing rail ballast to support the FRP deck. The section at the timber trestle requires new steel framing above the existing timber cap beam to support the FRP deck. The section at the wrought iron truss requires new steel framing to support the FRP deck. The section at box girder (that extends over Capitola Avenue) requires lightweight load-bearing filler material in place of the existing rail ballast to support the FRP deck.

Stormwater Drainage

Like the Ultimate Trail Configuration, in general, stormwater would surface flow from the new paved trail to the adjacent existing natural material swales and similar drainage improvements necessary to maintain existing overland flow patterns would be made in conjunction with trail construction.

Rail Realignment and Utility Relocations and Installations

Like the Ultimate Trail Configuration, utility relocations and installations would take place along the length of the trail and at street intersections/crossings. However, approximately half of the relocations and modifications Like the Ultimate Trail Configuration, utility relocations and installations would take place along the length of the trail and at street intersections/crossings. However, the Optional Interim Trail would require approximately half of the relocations and modifications that are necessary for the Ultimate Trail Configuration. This is because fewer retaining walls would warrant utility modifications and because the trail is closer to the existing grade, resulting in less excavation over the existing utilities and allowing more to remain in place.

for the Optional Interim Trail would occur. This is because fewer retaining walls would warrant utility modifications and because the trail is closer to the existing grade, resulting in less excavation over the existing utilities and allowing more to remain in place.

Railroad crossing panels and signal equipment would be removed. The existing utility lines servicing the rail equipment could be removed within the corridor or abandoned in place.

Rail realignment would not be required for Optional Interim Trail Parts 1 and 2 but would be required for Part 3 when the Ultimate Trail Configuration is constructed. Refer to the discussion in Section 2.6.1.

Excavation and Earth Movement

It is estimated that excavation necessary for construction of the Optional Interim Trail construction and as-needed utility trench work would be up to 6 feet deep. Proposed soldier pile walls may require up to 20 feet deep drilling (or other approved soldier pile installation methods but not pile driving). The Project would involve cut and fill slopes up to a maximum slope of 2H:1V. Preliminary cut volume is estimated 7,363 CY, and preliminary import native soil is estimated at 11,988 CY. Based on these preliminary quantities, an earthwork balance is unlikely.

A summary of construction information and assumptions based on the current design is provided in **Table 2-3**.

Construction Vehicle Access, Equipment and Staging

Construction vehicle access, equipment and staging would be the same as that described in Section 2.6.1 for the Ultimate Trail Configuration for all three parts of implementing the Optional Interim Trail.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Construction activities include removal of the Optional Interim Trail, which would include demolishing and removing the asphalt paving and fill throughout the trail alignment; FRP decking or asphalt at the Rodeo Gulch, Soquel Creek (Capitola Trestle Bridge), and New Brighton State Beach crossings; retainer curbs; fencing; benches; and signage.

Rebuilding the rail line would include construction of the rail ballast; installation of railroad ties and tracks; and construction of concrete panel railroad crossings, signals, and equipment. The rail line would be constructed generally in the existing alignment but may be realigned in some locations. The rail line would be built in accordance with American Railway Engineering and Maintenance-of-Way Association, Federal Railroad Administration, and California Public Utility Commission requirements, as applicable. Additionally, the rail would be constructed such that stormwater flows to the existing drainage system or natural material swales that were added for the Optional Interim Trail (Part 1) would be modified as necessary to retain similar drainage patterns.

A summary of construction information and assumptions based on the current design is provided in **Table 2-3**.

3) Construction of Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration would be the same as that described in Section 2.6.1. A summary of construction information and assumptions based on the current design is provided in **Table 2-3**.

Best Management Practices

Best management practices during construction would be the same as those described in Section 2.6.1 for the Ultimate Trail Configuration.

Table 2-3 Construction Estimates for Optional Interim Trail (Trail on the Rail Line)

Construction Information	1) Implementation of the Interim Trail	2) Demolition of the Interim Trail and Rebuilding of the Rail Line	3) Construction of the Ultimate Trail Configuration
Construction Duration[a]	48 months	48 months	48 months
Construction/Alignment Length[b]	4.7 miles total (1.5 miles – Segment 10, 3.2 miles – Segment 11)	4.7 miles total (1.5 miles – Segment 10, 3.2 miles – Segment 11)	4.2 miles (1.5 miles – Segment 10, 2.7 miles – Segment 11)
Total Disturbance Area[c]	13.2 acres[d]	13.2 acres	8.9 acres
Pavement (New Impervious Surface)[e]	357,455 SF 39,717 SY	N/A	181,575 SF 20,175 SY
Bridges[f]	N/A	N/A	6,400 SF
FRP on Existing Bridges[g]	10,700 SF	N/A	N/A
Viaducts[h]	2,100 SF	N/A	27,000 SF
Tree Removal[i]	288 trees	0 trees	669 trees
Excavation and Drilling Depth			
Trail Excavation/Grading Depth[j]	Up to 6 feet	Up to 6 feet	Up to 6 feet
Drilled Hole Depth for Retaining Wall Soldier Piles	Up to 20 feet	N/A	Up to 20 feet
Piling Depth for Viaducts	Up to 20 feet	N/A	20 feet minimum
Earthwork Quantities[k]			
Excavation	7,363 CY	48,658 CY	6,025 CY
Embankment Construction/Fill	11,988 CY	7,363 CY	8,835 CY
Import and Export[l]			
Roadway Aggregate	7,878 CY	N/A	5,278 CY
Asphalt	357,457 SF	N/A	236,158 SF
Portland Concrete	7,038 SF	N/A	8,123 SF
Export/Waste[m]	36,670 CY	41,295 CY[n]	11,811 CY

Source: The construction information is provided by RRM Design in March 2023 based on the plans presented in **Appendix A.1** and subsequently refined.

[a] The estimated construction durations are based on rationale described in Sections 2.6.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, and 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, respectively.

[b] The linear distance of the trail alignment varies by 0.5 mile between the Ultimate Trail Configuration (4.2 miles) and Optional Interim Trail (4.7 miles), which has been reflected in this EIR. Thus, the Project is characterized as an approximately 4.5-mile trail in the project overview at the beginning of this Chapter 2, *Project Description*.

[c] The disturbance area for Optional Interim Trail Part 1 (13.2 acres) is greater than the Ultimate Trail Configuration (10.7 acres) due to a variety of factors which widened the disturbance along the corridor plus the additional 0.5 miles of trail between Opal Street and Monterey Avenue. Factors include but not limited to a wider trail (16 feet wide instead of 12 feet wide), additional grading to daylight with existing grades eliminating most retaining walls, and the associated clearing and grubbing.

[d] The disturbance area for Optional Interim Trail Part 1 (13.2 acres) is larger than the disturbance area for the Ultimate Trail Configuration (10.7 acres) because more clearing, grading and grubbing is required for building the wider trail (16 feet wide instead of 12 feet wide), raising the trail grade for the wider trail, filling space to avoid retaining walls, and constructing the additional 0.5 mile of trail between Opal Street and Monterey Avenue.

[e] Estimated new impervious surface for the new paved (asphalt) trail, decorative pavers, and decomposed granite, rounded to the nearest 100 square yard.

[f] The estimated bridge square footage includes the clear-span bridges at Rodeo Gulch and New Brighton State Beach.

[g] The FRP would be prefabricated off site in approximately 30-foot-long panels. This quantity only applies to FRP installed on existing bridges.

[h] The estimated viaduct square footage includes the Grove Lane, Park Avenue, Oak Trail, New Brighton Road, Borregas Creek, and Estates Drive Viaducts.

[i] Tree removal estimates are based on the tree inventory and design plans (**Appendix A**) conducted by RRM Design. The demolition plans that identify tree removal and the tree inventory are **Appendices A.6** and **A.7**, respectively.

[j] These are conservative estimates, measured vertically from existing ground to bottom of excavation.

Table 2-3 Construction Estimates for Optional Interim Trail (Trail on the Rail Line)

Construction Information	1) Implementation of the Interim Trail	2) Demolition of the Interim Trail and Rebuilding of the Rail Line	3) Construction of the Ultimate Trail Configuration

[k] The excavation material is assumed suitable to construct embankment/fill.
[l] The import materials would be used for paving the trail and identified trail connections. These estimates are independent of and have no direct correlation to the Earthwork Quantities identified above.
[m] The estimated export includes the remaining excavation material and hazardous waste (e.g., railroad ties) that are not used for embankment construction/fill. The railroad ties, as well as other rail hardware (rail, tie plates, anchors), would be removed to accommodate the Optional Interim Trail.
[n] This assumes this material will not be used for rail or trail construction following removal of the Optional Interim Trail.
CY = cubic yard; FRP = fiberglass reinforced polymer; SF = square feet; SY = square yards

2.7 Required Permits and Approvals

The anticipated required permits and approvals for the Project are listed in **Table 2-4**.

For CEQA compliance, the County, as the lead agency, is responsible for certifying the EIR and the discretionary approvals associated with the portion of the Project in their jurisdiction. When a project extends through multiple jurisdictions, CEQA requires that there is only one lead agency.

Responsible agencies, including the City and RTC, do not have to certify the EIR but rely on the EIR to carry out discretionary approvals related to the Project in their respective jurisdictions and cite the certified EIR as the CEQA clearance.

Table 2-4 Anticipated Approvals, Permits, and Agreements Required for Proposed Project

Agency	Approvals, Permits, and Agreements
County of Santa Cruz, Lead Agency	EIR certification Project approval in unincorporated County area Grading Permit Significant Tree Removal Permit Riparian Exception Permit Biotic review and approval Encroachment Permit Coastal Development Permit (unless consolidated CDP)
City of Capitola	Project approval in incorporated City of Capitola Tree Removal Permit Grading Permit Encroachment Permit
RTC	Cooperative Agreement for Construction with County and City Right of Entry for Construction with County and City
California Coastal Commission	Consolidated Coastal Development Permit for County and City
California Public Utilities Commission	New public rail crossing approval (confirm) GO88-B Permit to modify an existing crossing
Regional Water Quality Control Board	Waste Discharge Requirements National Pollutant Discharge Elimination System Permit Construction General Permit/Stormwater Pollution Prevention Plan
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement
California State Parks	Operating Agreement for portions of Segment 11 constructed on State Parks property Section 4(f) Memorandum approval
U.S. Fish and Wildlife Service	Potentially Section 7 or 10 consultation under the federal Endangered Species Act and incidental take authorization if the monarch butterfly becomes federally listed
Additional Requirements for Optional Interim Trail (Trail on the Rail Line)	
Surface Transportation Board	Approval for abandonment of freight service

CDP = Coastal Development Permit; EIR = environmental impact report; RTC = Santa Cruz County Regional Transportation Commission

This page intentionally left blank.

3 Environmental Impact Analysis

Chapter 2, *Project Description*, includes a description of physical and operational features of the **Coastal Rail Trail Segments 10 and 11 Project** (Project).

This chapter is divided into sections for the following environmental or resource topics based on the scoping process described in Chapter 1, *Introduction*:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Geology and Soils
6. Greenhouse Gas Emissions/Climate Change
7. Hazards and Hazardous Materials
8. Hydrology and Water Quality
9. Land Use and Planning
10. Noise
11. Public Safety and Services
12. Transportation
13. Tribal Cultural Resources
14. Utilities and Service Systems
15. Effects Found to be Less than Significant

Approach to Project Analysis

This chapter includes the environmental impact analysis for the ***Ultimate Trail Configuration (Trail next to Rail Line)*** and the ***Optional Interim Trail (Trail on the Rail Line)*** at an equal level of detail, as described in Chapter 1. This chapter also includes the analysis of the *Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* and *Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola*.

As described in Section 2.5, *Project Operation and Maintenance*, the Project does not include rail service of any type, and there would be no other changes in the rail corridor as a result of the Project other than those described in Section 2.4, *Project Characteristics*, as they relate to implementation of the Project (specifically, *Rail Realignment* in Section 2.4.1, *Ultimate Trail Configuration (Trail next to Rail Line)*. Therefore, the potential environmental impacts or benefits of rail service are not included in this analysis.

The Project alternatives developed during the scoping process, as well as the No Project alternative, are evaluated in Chapter 5, *Project Alternatives*.

As described in Chapter 1, this analysis includes relevant information from the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan Environmental Impact Report (EIR) (RTC 2013) and additional information specific to the Project.

Existing Conditions and Regulatory Setting

In each resource section, the *Existing Conditions* discussion describes the existing or baseline conditions for the resources in the study area; the *Regulatory Setting* discussion describes applicable plans, policies, and regulations. The study area varies depending on the resources. The study area is the same as the Project alignment for some resources and is larger for other resources, such as air quality.

Impacts and Mitigation Measures

The *Methodology and Significance Thresholds* discussion for each environmental topic describes the methodology used to identify potential impacts and the criteria used to determine the significance of those potential impacts. A "significant effect" is defined by the *California Environmental Quality Act (CEQA) Guidelines*, Section 15382, as the following:

> A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.

For each potential impact, one of the following significance determinations is made and presented in bold:

- **No Impact.** The Project or any Project alternative would have no adverse effect at all on environmental conditions or would have a beneficial effect by reducing the severity of existing environmental problems or hazards.
- **Less than Significant.** An impact that may be adverse but does not exceed the identified significance threshold levels and does not require mitigation measures. Although CEQA does not require the formulation or adoption of mitigation measures for less than significant effects, the County of Santa Cruz (County), in approving the Project or any Project alternative, could formulate conditions of approval that could further lessen the environmental effect.
- **Less than Significant with Mitigation.** An impact that can be reduced to below the significance threshold level with the adoption of identified mitigation measures. The identification of an impact that would require mitigation would require the County to adopt findings pursuant to Section 15091 of the *CEQA Guidelines* as part of its process for approving either the Project or any Project alternative that would also cause such impacts.
- **Significant and Unavoidable.** An impact that cannot be reduced to below the significance threshold level, even with the adoption of any recommended mitigation measures. The identification of a significant and unavoidable impact would require the County to adopt a Statement of Overriding Considerations pursuant to Section 15093 of the *CEQA Guidelines* if the County chooses to approve the Project or any Project alternative that would also result in such impacts.

The thresholds used to determine the significance of a potential impact differ based on the environmental topic and largely follow Appendix G of the *CEQA Guidelines*. Appendix G provides a sample Initial Study checklist that includes a number of factual inquiries for each required

environmental topic, and the sample Initial Study checklist was used for the Initial Study prepared for the Project (**Appendix C**).

Notably, lead agencies are under no obligation to use these inquiries from Appendix G of the *CEQA Guidelines* in fashioning thresholds of significance (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068). Rather and with few exceptions, "CEQA grants agencies discretion to develop their own thresholds of significance" (*CEQA Guidelines*, Section 15064[d]). Even so, it is a common practice for lead agencies to use the language from the inquiries set forth in Appendix G to fashion thresholds. The County has done so in this EIR, as described under the *Significance Thresholds* discussion in each section of this chapter.

In the *Project Impact Analysis* discussion, the threshold is presented first, followed by the potential impacts associated with that threshold. For each potential impact[1], a discussion of the *Ultimate Trail Configuration (Trail next to Rail Line)* is followed by a discussion of the *Optional Interim Trail (Trail on the Rail Line)*. Each discussion concludes with the significance determination (in bold) and any required mitigation measures. In most cases, identified mitigation measures apply to both the Ultimate Trail Configuration and the Optional Interim Trail. If any mitigation measures apply exclusively to either the Ultimate Trail Configuration or the Optional Interim Trail, it is indicated in parentheses at the end of the mitigation measure statement. In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact.

Many of the mitigation measures identified for Project impacts were originally discussed in the MBSST Network Master Plan EIR (RTC 2013). As a program-level EIR, the MBSST Network Master Plan EIR focuses on the broad changes to the environment that would be expected to result from implementation of the entire 50-mile MBSST Network. Accordingly, the mitigation measures identified in the MBSST Network Master Plan EIR are necessarily broad and general. Therefore, to ensure that the measures effectively mitigate potential impacts of the Project (Segments 10 and 11 of the 20-segment MBSST Network), the analysts considered whether the MBSST Network Master Plan EIR mitigation measures, by themselves, are sufficient to address the site-specific impacts of Segments 10 and 11 as identified in this document. In many instances, the analysts either proposed refinements, additional detail, or other changes to the MBSST Network Master Plan EIR mitigation measures, or they have proposed new additional mitigation measures to complement those taken from the MBSST Network Master Plan EIR. In individual sections, footnotes identify the MBSST Network Master Plan EIR mitigation measures that have been included verbatim or that have been refined or modified to address site-specific concerns associated with Segments 10 and 11. New mitigation measures do not have footnotes. All the required mitigation measures are included in the impact discussions in this chapter and in the Draft Mitigation Monitoring and Reporting Program (**Appendix D**).

Finally, if the impact analysis identified a beneficial effect of the Project, such as reduced vehicular emissions due to use of the trail as an alternative mode of transportation, this is acknowledged in the impact discussion and summary table for each environmental topic.

[1] In the impact discussions throughout this EIR, the terminology *potential impact* and *impact* are used synonymously. All the impacts discussed are potential impacts because the project is proposed (not approved). Additionally, in some cases, an impact is a possibility and not a certainty.

Approach to Cumulative Impacts

The cumulative impact analysis for each issue area is presented in Chapter 4, *Other CEQA-Required Discussions*. The term "cumulative impacts" refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (*CEQA Guidelines*, Section 15355).

A cumulative impact can result from the combination of two or more individually significant impacts or the combination of two or more impacts that are individually less than significant but constitute a significant change in the environment when considered together. To analyze a proposed project's contribution to cumulative impacts, CEQA requires the lead agency to identify past, present, and probable future projects in the vicinity of the proposed project, summarize their effects, identify the incremental contribution of the proposed project to any significant cumulative impacts occurring in the project region, and recommend mitigation measures as appropriate (*CEQA Guidelines*, Section 15130[b]). Mitigation measures should focus on any cumulatively considerable incremental contribution from the proposed project or alternative to any significant cumulative effect created by the past, present, and probable future projects, together with the proposed project or alternative (*CEQA Guidelines*, Section 15130[a][3]; see also *CEQA Guidelines*, Section 15126.2[a][4]).

For each resource topic, cumulative impacts were determined in the following manner:

1. Determine whether there is a significant cumulative impact under future conditions with the Project. If yes, then;
2. Determine if the Project would or would not make a cumulatively considerable (i.e., significant) contribution to the identified significant cumulative impact.

The cumulative impacts for all the resource topics are summarized in Section 4.1, *Cumulative Impact Analysis*, in Chapter 4, which includes additional information on the methodology.

Summary of Impacts and Mitigation Measures

At the beginning of each resource section, a summary table provides the impacts and mitigation measures for the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)*. The *Executive Summary* at the beginning of this EIR summarizes all impacts and mitigation measures.

3.1 Aesthetics

This section presents a discussion of existing visual resources along the Project corridor and an evaluation of potential impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* on those resources. A summary of the potential impacts is presented in **Table 3.1-1**.

Table 3.1-1 Summary of Project Impacts on Aesthetics[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
AES-3. The Project would not adversely affect daytime or nighttime views.	Less than Significant	None Required	Less than Significant
Beneficial Effects: The Project would facilitate public access to viewing points of scenic vistas in both segments of the Project corridor.			

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[b] The impact was determined Potentially Significant, pending the assessment of feasible mitigation to reduce the impact to a less than significant level. Mitigation has been identified to reduce the impact, but it cannot be reduced to a less than significant level. Therefore, the impact is determined Significant and Unavoidable after mitigation.

3.1.1 Existing Conditions

Regional Setting

The Project corridor extends along the Santa Cruz County Regional Transportation Commission-owned Santa Cruz Branch Rail Line corridor in central Santa Cruz County (County), partially within the County and the City of Capitola (City). From 17th Avenue on the west end of the alignment, Segment 10 extends eastward through unincorporated Live Oak, a developed community within the County, before passing into the City. Largely built out, the City is surrounded by Monterey Bay to the south, State Route 1 (SR-1 or Highway 1) to the north, and unincorporated County to the west and east. Segment 11 extends eastward through the City, New Brighton State Beach (under the jurisdiction of California State Parks), and the unincorporated but developed community of Aptos. Segment 11 ends at State Park Drive in Aptos.

The primary scenic resources in the County are ocean views, agricultural fields, wooded forests, open meadows, and mountain hillside views (Santa Cruz County 1994). The City identifies the Capitola Village, Capitola Wharf, Capitola Beach, historic structures, and natural features as scenic resources (City of Capitola 2019).

Project Corridor Setting

The Project corridor is in an urbanized area of the County and City and thus located in an area heavily populated with residents and tourists. The Project corridor traverses a mix of residential, commercial, and light industrial land uses until it reaches New Brighton State Beach, where it continues through this recreational area, passes eastward through an open space area, and ends in the largely developed community of Aptos at State Park Drive (refer to **Figure 2-1** in Chapter 2, *Project Description*). The Project alignment features mature, landscaped and naturally occurring, native and non-native plants, shrubs, and trees throughout the trail alignment, especially in Segment 11 in New Brighton State Beach. Low- and medium-density residential development and parks/open space occur alongside denser industrial and commercial development, such that the landscape directly surrounding the Project alignment is developed and relatively densely vegetated.

Visual Character and Quality

The current visual character in the Project alignment is consistent with urban coastal development. At the western end of the Segment 10 alignment, one- and two-story commercial and residential buildings surround the rail corridor in the County. Residential development occurs on the north side of the rail corridor, and residential and commercial development occurs on the south side of the rail corridor. Residential development in this area includes single- and multi-family homes with a mix of architectural styles and periods of development. Segment 10 of the trail alignment is characterized by residential neighborhoods as it passes from the County to the City, until the alignment reaches 41st Avenue, where the visual character transitions from residential to commercial development. As the trail alignment traverses east of 41st Avenue, the visual character reverts from a commercial to residential setting, until Segment 10 terminates at 47th Avenue, just south of Jade Street Park, a recreational facility. Visual quality is highly subjective and varies from viewer to viewer. Some viewers may interpret the visual quality to be high along the Segment 10 alignment. Although Monterey Bay is not fully visible, this area of the alignment is colorful, unified, and consistent with residential, commercial, and recreational development in urbanized coastal areas. Other viewers may consider the visual quality to be low because the residential, commercial, and industrial uses located along Segment 10 do not have a unified architectural style and many are in poor repair. In addition, as a transportation (rail) corridor, mature vegetation and scenic views are limited. For the purposes of this analysis, it was conservatively assumed that the visual quality is considered to be high.

Segment 11 of the trail alignment is also characterized by urban coastal development within the City. However, as the trail traverses east, recreational and open space visual settings are more predominant. Segment 11 begins along Cliff Drive in Capitola, which is highly scenic and offers unobstructed views of Monterey Bay, beaches, and the Capitola pier. The alignment passes through the urbanized City and is set within residential and commercial areas. As the alignment extends along Park Avenue, there are unobstructed views of Monterey Bay, with residences located adjacent to the north and some residences to the south. The visual setting of the alignment transitions from urban development to recreation as Segment 11 passes through New Brighton State Beach, and from recreation to open space as the alignment exits New Brighton State Beach and goes through the County. As Segment 11 reaches its terminus on State Park Drive, it passes from adjacent open space to a more urbanized setting characterized by one- to two-story houses and small-scale commercial development, as well as Seacliff State Beach to the south. Visual quality is high along the Segment 11 alignment, given the immediate views of Monterey Bay along Cliff Drive and Park Avenue and the presence of New Brighton State Beach and open space areas with mature, dense vegetation.

At intersections (where the trail crosses roadways) within both segments, the railroad and other transportation components create a high degree of visual clutter. The visual quality at alignment intersections is moderate to low, with the density of mature tree canopy largely dictating the visual quality as the architecture of commercial and residential structures is simple and rectangular, with metal or stucco exteriors.

Overall, the Project corridor has a moderate to high level of intactness[1] as it is consistent with an urbanized California seaside community with a mix of architecture situated along the coastline, colorful exterior finishes and artistic signage, and periodic views of the ocean. The nearby mountains and ridgelines are also visible, periodically, along the trail alignment.

Scenic Resources and Vistas

The Project corridor offers viewpoints for several scenic resources and vistas.[2] Views along Segment 10 include the Santa Cruz Mountains, Rodeo Gulch, and background views of Monterey Bay. Views along Segment 11 include the Capitola Village, Capitola Wharf, Capitola Beach, New Brighton State Beach, foreground views of Monterey Bay, and background views of the Santa Cruz Mountains.

SR-1 is a major north−south highway that traverses most of the Pacific coastline. At various points along its extent, SR-1 is either officially designated as a state scenic highway or is eligible for designation (Caltrans 2023). In Santa Cruz County, SR-1 is designated as the Cabrillo Highway and is considered eligible for state scenic highway designation. The closest portion of the Project corridor to SR-1 is 0.1 mile south of SR-1 along Segment 11, east of New Brighton State Beach (**Figures 1-1** and **2-1**). No portion of the Project corridor is within or visible from a designated state scenic highway.

Light and Glare

Since the Project area is urbanized and largely built out, sources of existing lighting include street lighting and light emitted from existing buildings/structures (residential, recreational, commercial, and industrial). The headlights of motor vehicles traveling on the roadways throughout the corridor also produce light and glare. There is much less existing lighting along the portion of Segment 11 extending through and east of New Brighton State Beach, where there is dense vegetation and no lighting in the open space area east of the park. The Project corridor itself does not currently contribute to night lighting or daytime glare within the Project vicinity.

3.1.2 Regulatory Setting

This section describes the state and local plans, policies, and laws relevant to aesthetics for the Project. There are no relevant federal regulations regarding aesthetics applicable to the Project.

State

California Coastal Act

The California Coastal Act, enacted in 1976, establishes procedures for the review of proposed developments in the Coastal Zone and policies for the protection of coastal resources and public access to the coastline. The following Coastal Act regulations in the Public Resources Code pertain to aesthetics.

[1] Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.

[2] A scenic vista can be defined as a publicly accessible viewpoint that provides expansive views of a highly valued landscape (www.lawinsider.com), such as views of the ocean and mountains.

SECTION 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 landforms, 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.

SECTION 30253

New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard

(b) 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

(c) Be consistent with requirements imposed by an air pollution control district or the state Air Resources Board as to each particular development

(d) Minimize energy consumption and vehicle miles traveled

(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses

Local

Santa Cruz County General Plan and Local Coastal Program

The Conservation and Open Space Element of the Santa Cruz County General Plan and Local Coastal Program includes objectives and policies to protect visual resources (Santa Cruz County 1994). Key policies relevant to the Project are listed below.

- **Policy 5.10.2, Development within Visual Resource Areas.** Recognize that visual resources of Santa Cruz County possess diverse characteristics and that the resources worthy of protection may include, but are not limited to, ocean views, agricultural fields, wooded forests, open meadows, and mountain hillside views. Require projects to be evaluated against the context of their unique environment and regulate structure height, setbacks and design to protect these resources consistent with the objectives and policies of this section.
- **Policy 5.10.3, Protection of Public Vistas.** Protect significant public vistas as described in policy 5.10.2 from all publicly used roads and vista points by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping and structure design. Provide necessary landscaping to screen development which is unavoidably sited within these vistas.
- **Policy 5.10.4, Preserving Natural Buffers.** Preserve the vegetation and landform of natural wooded hillsides which serve as a backdrop for new development. Also comply with policy 8.6.6 regarding protection of ridgetops and natural landforms.

- **Policy 5.10.6, Preserving Ocean Vistas.** Where public ocean vistas exist, require that these vistas be retained to the maximum extent possible as a condition of approval for any new development.
- **Policy 5.10.7, Open Beaches and Blufftops.** Prohibit the placement of new permanent structures which would be visible from a public beach, except when allowed on existing parcels of record, or for shoreline protection and for public beach access. Use the following criteria for allowed structures:
  (a) Allow infill structures (typically residences on existing lots of record) where compatible with the pattern of existing development.
  (b) Require shoreline protection and access structures to use natural materials and finishes to blend with the character of the area and integrate with the landform.

In addition, Policy 5.10.10 designates scenic roads and highways in the County and requires that public vistas from these roads be afforded the highest level of protection. There are no roadways included within Policy 5.10.10 that could offer views of the Project corridor.

Santa Cruz County Code

Chapter 13.20.130 (Design criteria for Coastal Zone developments) of the County Code outlines design criteria for projects sited anywhere in the Coastal Zone. Criteria relevant to the Project include the following:

1. **Visual Compatibility.** All new development shall be sited, designed, and landscaped to be visually compatible and integrated with the character of surrounding neighborhoods or areas.
2. **Minimum Site Disturbance.** Grading, earthmoving, and removal of major vegetation shall be minimized. Developers shall be encouraged to maintain all mature trees over 6 inches in diameter except where circumstances require their removal, such as obstruction of the building site, dead or diseased trees, or nuisance species. Special landscape features (rock outcroppings, prominent natural landforms, tree groupings) shall be retained.
3. **Ridgeline Development**. Structures located near ridges shall be sited and designed not to project above the ridgeline or tree canopy at the ridgeline. Land divisions that would create parcels whose only building site would be exposed on a ridgetop shall not be permitted.
4. **Landscaping.** When a landscaping plan is required, new or replacement vegetation shall be compatible with surrounding vegetation and shall be suitable to the climate, soil, and ecological characteristics of the area. The County's adopted landscape criteria shall be used as a guide.
5. **Fences, walls, and hedges**. Fences, walls, and hedges shall be sited and designed so that they do not block significant public views and so that they do not significantly adversely impact significant public views and scenic character.

County Code, Chapter 13.10, outlines zoning regulations and other regulations governing scenic quality, and Chapter 13.11 imposes requirements for site, architectural, and landscape design review. County Code, Section 13.11.074(D), includes lighting design requirements for sites and buildings, and Section 9.70.320 includes lighting requirements related to street and road safety.

City of Capitola General Plan

The Land Use Element, Open Space and Conservation Element, and Mobility Element of the Capitola General Plan include policies and actions pertaining to scenic and visual resources (City of Capitola 2019). Key policies relevant to the Project are listed below:

- **Policy LU-7.3, Scenic Resources.** Protect and enhance significant scenic views and resources that contribute to the unique identity and public enjoyment of the Village. Scenic resources include:
  - The general pedestrian-oriented and coastal village character of existing development in the Village.
  - Public and semi-public gathering places, including Esplanade Park, Lawn Way, Capitola Beach, Soquel Creek path, and the historic Capitola Wharf.
  - Landscaping and streetscape amenities.
  - Historic structures, including structures contributing to Capitola's four National Register Historic Districts and structures listed on the official City of Capitola Historic Structures List.
  - Natural features such as Capitola Beach, Soquel Creek and Lagoon, cliffs and bluffs, and vegetated banks.
- **Policy OSC-6.9, Urban Forest**. Continue to enforce the City's Community Tree and Forest Management Ordinance to protect trees on private and public property as important environmental and scenic resources.
- **Policy MO-9.2, Pathways.** Maintain and improve pedestrian pathways in Capitola, particularly pathways providing pedestrian access to natural areas and scenic vistas.

City of Capitola Municipal Code

Chapter 17.120 of the Capitola Municipal Code outlines requirements for design review, and Section 9.70.320 outlines design standards for lighting.

3.1.3 Methodology and Significance Thresholds

Methodology

The assessment of impacts to scenic vistas, scenic resources, and visual character involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Depending on the extent to which a project's presence would alter the perceived visual character and quality of the environment, a visual or aesthetic impact may occur. This analysis incorporates findings from the Visual Impact Assessment prepared for the Coastal Rail Trail Segments 10 and 11 (Rincon 2023).

This analysis compares existing visual conditions along the Project corridor to those anticipated after implementation of the Project. The Project area was observed and photographed along with its surrounding context. The trail design plans in **Appendix A** were analyzed to determine aesthetic impacts of the Project. Additionally, 11 representative key viewpoints for scenic vistas were identified along the Project corridor. Visual impacts were analyzed at each of the following key viewpoint locations, and **Figure 3.1-1**, Key Viewpoint Locations, illustrates the locations of the 11 key viewpoints.

- Key Viewpoint 1: 17th Avenue at Simpkins Family Swim Center, oriented northeast
- Key Viewpoint 2: Intersection of 30th Avenue and Lewis Circle, oriented north
- Key Viewpoint 3: Intersection of Melton Street and 41st Avenue, oriented south
- Key Viewpoint 4: Intersection of Portola Drive and 47th Avenue, oriented north
- Key Viewpoint 5: Cliff Drive, oriented east
- Key Viewpoint 6: Stockton Avenue Bridge, oriented north toward the Capitola Trestle Bridge

- Key Viewpoint 7: Intersection of Monterey Avenue and Park Avenue, oriented south
- Key Viewpoint 8: Park Avenue, oriented southwest
- Key Viewpoint 9: New Brighton State Beach Roadway, oriented southeast
- Key Viewpoint 10: McGregor Drive, oriented south
- Key Viewpoint 11: Intersection of State Park Drive and Sea Ridge Road, oriented south

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of aesthetics and other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this EIR, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* resulted in any of the following conditions:

A. Have a substantial adverse effect on a scenic resource or vista.

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

C. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site or its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.

D. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

In applying these thresholds to the impact analysis below, the County is concerned only with visual impacts from public views and not from private views, which is common industry practice. The County has discretion to make this distinction and does so because requiring mitigation for impacts to purely private views would give private landowners a kind of power over land uses on adjacent or nearby properties that they do not enjoy under California law (refer to *Mira Mar Mobile Community v. City of Oceanside* [2004] 119 Cal.App.4th 492-493, quoting *Wolford v. Thomas* [1987 190 Cal.App.3d 347, 358, for the proposition that "California landowners do not have a right of access to air, light and view over adjoining property").

Regarding Threshold A, a scenic resource or vista is defined as a publicly accessible viewpoint that provides views of high visual quality or highly valued landscape. Visual quality and value are subjective based on the viewer's perception. It is reasonable to assume that most viewers consider views of the ocean and mountains to be high quality. While some viewers may not like these more distant views blocked by intervening trees and vegetation, many viewers consider mature trees and natural vegetation to enhance these views and create localized high visual quality. Given the subjectivity of this analysis and to provide for a conservative analysis, mature trees and natural vegetation are considered to contribute to scenic resources and vistas.

Regarding Threshold B, the Project corridor is not visible from a state scenic highway and thus would not impact scenic resources visible from a state scenic highway. Therefore, Threshold B was found to have no impact and is discussed in Section 3.15, *Effects Found to be Less than Significant*.

Regarding Threshold C, the Project corridor and surrounding area are considered an urbanized area, whereby the focus of the analysis would conflict with applicable zoning and other regulations governing scenic quality. To provide a more conservative analysis, the County General Plan and Local Coastal Program and Capitola General Plan were also considered for policy instruction relative to visual resources and design policy.

Regarding Threshold D, the analysis considers new sources of light or glare that could be introduced within the Project corridor.

3.1.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Have a substantial adverse effect on a scenic resource or vista.

Impact AES-1 THE PROJECT WOULD HAVE AN ADVERSE EFFECT ON SCENIC RESOURCES AND VISTAS THROUGH THE REMOVAL OF MATURE TREES. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

Ultimate Trail Configuration ((Trail next to Rail Line)

Construction

During the anticipated 48-month construction period, the Project would temporarily degrade scenic views from public locations including, but not limited to, those along Cliff Drive and Park Avenue in the City. In Segment 10, west of Soquel Creek, viewers would have sporadic views of the Project corridor at the 17th Avenue, 30th Avenue, 38th Avenue, 41st Avenue, and 47th Avenue crossings. In Segment 11, east of Soquel Creek, viewers would have sporadic views of the Project corridor from the trails in New Brighton State Beach and the State Park Drive crossing.

Project construction would be noticeable, especially to motorists and bicyclists along Cliff Drive and Park Avenue, but would not highly disrupt the visual environment of the area. Disturbed surfaces, construction debris, equipment, and truck traffic would be visible to nearby viewers during construction. Most of the trail alignment would be at grade with minor grading required. Construction equipment for grading and removal of curbs and concrete and concrete trucks for delivery of materials to the site would be visible along public roadways.

Staging areas needed for construction would be situated to avoid visual impacts on existing mature vegetation, where feasible. Construction staging, equipment staging, and stockpiling would take place on existing disturbed or paved areas near the rail corridor. Staging and stockpiling areas could be visible as foreground features from public viewpoints along Cliff Drive and Park Avenue. Once construction is completed, construction equipment and materials that would temporarily disturb views would be removed. Viewers such as pedestrians, bicyclists, and motorists would only experience short durations of visual impacts from temporary construction activities. The visual impacts of construction of the Project would be temporary and minor. The overall visual impact of

the Project construction period would be low, and impacts to scenic vistas would be **less than significant**. No mitigation is required.

Operation

Key Viewpoints

Along Segments 10 and 11 of the Project corridor, key viewpoints provide public and scenic views of mature vegetation, the Santa Cruz Mountains, urban coastal development, and Monterey Bay. Scenic vistas are included in Key Viewpoints 5, 6, 8, and 10. The 11 key viewpoints shown on **Figure 3.1-1** are considered representative but not necessarily all inclusive of scenic vistas in the area. The following analysis identifies potential impacts that would occur to each key viewpoint as a result of Project operation and whether the scenic vista would be adversely affected by Project activities.

KEY VIEWPOINT 1: 17TH AVENUE AT SIMPKINS FAMILY SWIM CENTER, ORIENTED NORTHEAST

Key Viewpoint 1 is located along 17th Avenue and provides a view of urban recreational and commercial development. Photographs of Key Viewpoint 1 are provided on **Figure 3.1-2**, Key Viewpoint 1**.** The Project would connect Segment 9 and Segment 10 of the Coastal Rail Trail at the 17th Avenue roadway crossing and include a multi-purpose trail. Trail components would be at grade with existing road and rail alignments and would not impede or affect views of the natural setting or built environment, including the Simpkins Family Swim Center. Additionally, the Project would not remove mature trees visible in this area. Implementation of the Project would improve overall visual quality through safety measures in an area with high vehicular, bicyclist, and pedestrian traffic. Thus, the Project would not substantially alter views experienced from Key Viewpoint 1.

KEY VIEWPOINT 2: INTERSECTION OF 30TH AVENUE AND LEWIS CIRCLE, ORIENTED NORTH

Key Viewpoint 2 is located at the intersection of 30th Avenue and Lewis Circle, as shown on **Figure 3.1-3**, Key Viewpoint 2, and provides a view of coastal residential development and the distant Santa Cruz Mountains. The Project would improve the roadway crossing where the rail corridor intersects 30th Avenue and would include flashing pedestrian/bicycle signs, drainage improvements, trash receptacles, benches, and bike racks. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail and 30th Avenue, and the Project would not remove trees visible from this viewpoint. Thus, the Project would not substantially alter views experienced from Key Viewpoint 2.

KEY VIEWPOINT 3: INTERSECTION OF MELTON STREET AND 41ST AVENUE, ORIENTED SOUTH

Key Viewpoint 3 is located at the intersection of Melton Street and 41st Avenue, as shown on **Figure 3.1-4**, Key Viewpoint 3, and provides a view of coastal residential and commercial development. The Project would improve the roadway crossing where the rail corridor intersects 41st Avenue, would include flashing pedestrian/bicycle signs, drainage improvements, and trash receptacles, and would extend the existing sidewalk north to Melton Street. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail and 41st Avenue, and the Project would not remove trees visible from this viewpoint. Thus, the Project would not substantially alter views experienced from Key Viewpoint 3.

KEY VIEWPOINT 4: INTERSECTION OF PORTOLA DRIVE AND 47TH AVENUE, ORIENTED NORTH AND EAST

Key Viewpoint 4 is located at the intersection of Portola Drive and 47th Avenue, as shown on **Figure 3.1-5**, Key Viewpoint 4, and provides a view of recreational development and mature vegetation. The Project would improve the roadway crossing where the rail corridor intersects 47th Avenue and would include roadway re-striping, trash receptacles, benches, and bike racks. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail and 41st Avenue. The Project would remove several trees within this viewpoint; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3, *Biological Resources*). Additionally, the area contains dense vegetation, and these tree removals would not substantially decrease the quality of the vegetative setting. Thus, the Project would not substantially alter views experienced from Key Viewpoint 4. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT 5: CLIFF DRIVE, ORIENTED NORTHEAST AND EAST

Key Viewpoint 5 is located along Cliff Drive, as shown on **Figure 3.1-6**, Key Viewpoint 5, and provides a scenic vista of Monterey Bay, Capitola Wharf, Capitola Village, and the distant Santa Cruz Mountains. The Project would continue at grade and parallel to the existing rail and Cliff Drive. The Project would add an at-grade plaza between the trail and the eastern end of the Cliff Drive parking area. The Cliff Drive Plaza would include retaining walls, benches, bike racks, trash receptacles, and concrete track panels across the rail line. The Project would include improved stairs from the rail corridor to Prospect Avenue at Opal Street on the inland side. The Project would also modify the width of the existing bike and vehicular lanes for a roughly 350-foot-long portion of Cliff Drive from the end of the Coastal Rail Trail to where the sidewalk begins on the coastal side of Cliff Drive to allow demarcation of a separate 4-foot-wide pedestrian path on the coastal side adjacent to the existing Class II bike lane. The plaza area would also feature an opportunity for a public art installation. Overall visual character of this viewpoint would not change substantially, as the Project would be mostly at grade with the rail and Cliff Drive (i.e., close to the ground) and add aesthetic features, including a plaza, to a highly scenic area. The Project would not remove trees from this viewpoint. Thus, the Project would not substantially alter the scenic quality of vistas experienced from Key Viewpoint 5.

KEY VIEWPOINT 6: STOCKTON AVENUE BRIDGE, ORIENTED NORTHWEST AND NORTH TOWARD THE CAPITOLA TRESTLE BRIDGE

Key Viewpoint 6 is located at the Stockton Avenue Bridge, as shown on **Figure 3.1-7**, Key Viewpoint 6, and provides a scenic vista of Capitola Village, the Capitola Trestle, and Soquel Creek. From the Cliff Drive Plaza, signage would direct trail users to use the bicycle lane and sidewalk along Cliff Drive, cross Soquel Creek via the Stockton Avenue Bridge, and continue through the village on Capitola Avenue and Monterey Avenue. The Project would add directional signage in this area (**Figure 2-3**). While not visible from Key Viewpoint 6, two directional signs would be added on new poles on Stockton Avenue Bridge. Striping modifications are also proposed on the Stockton Avenue Bridge to improve the visibility of the existing delineated bicycle lanes, specifically the addition of green pavement paint Class II bike lanes. Overall visual quality of this viewpoint would not change substantially, as the Project would maintain existing bridge conditions, only adding signage and pedestrian and bicycle traffic to the viewpoint. The Project would not remove trees from this

viewpoint. Thus, the Project would not substantially alter the scenic quality of vistas experienced from Key Viewpoint 6.

KEY VIEWPOINT 7: INTERSECTION OF MONTEREY AVENUE AND PARK AVENUE, ORIENTED SOUTH AND SOUTHEAST

Key Viewpoint 7 is located at the intersection of Monterey Avenue and Park Avenue, as shown on **Figure 3.1-8**, Key Viewpoint 7, and provides a view of coastal residential development and Monterey Bay. The Project would improve the roadway crossing where Monterey Avenue intersects Park Avenue as well as provide benches and bike racks on either side of the intersection. Additionally, the Project would involve striping modifications to the existing delineated bicycle lanes along Monterey Avenue. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with surrounding roadways and close to the ground. The Project would remove one tree in this area, located at the southeast corner of the Monterey Avenue and Park Avenue intersection; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3). Additionally, the area contains dense vegetation, and this removal would not substantially decrease the quality of the vegetative setting. Thus, the Project would not substantially alter views experienced from Key Viewpoint 7. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT 8: PARK AVENUE, ORIENTED SOUTHWEST AND NORTHEAST

Key Viewpoint 8 is located along Park Avenue, as shown on **Figure 3.1-9**, Key Viewpoint 8, and provides a scenic vista of Monterey Bay and New Brighton State Beach. The Project would provide a maintained pedestrian and bicycle path, with retaining walls, in this viewpoint. Please refer to the retaining wall discussion below for analysis of visual impacts from retaining walls. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail, close to the ground, and visually compatible with the area's natural character. The Project would remove approximately 21 trees in this area; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3). Additionally, the area contains dense vegetation with numerous mature trees, and these tree removals would not substantially decrease the quality of the visual setting. Thus, the Project would not substantially alter the scenic quality of vistas experienced from Key Viewpoint 8. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT 9: NEW BRIGHTON STATE BEACH ROADWAY, ORIENTED EAST AND SOUTHWEST

Key Viewpoint 9 is located along New Brighton State Beach roadway, as shown on **Figure 3.1-10**, Key Viewpoint 9, and provides a view of mature vegetation within New Brighton State Beach. New Brighton State Beach roadway is the driveway extending from McGregor Drive to the New Brighton State Beach parking lot. The Project would provide a maintained pedestrian and bicycle path, with retaining walls, as well as a clear span bridge with a fiber-reinforced polymer (FRP) deck over New Brighton State Beach roadway. Overall visual quality of this viewpoint would slightly change, as the Project would be mostly at grade with the rail and close to the ground, except the portion crossing New Brighton State Beach roadway. Project improvements would be visually compatible with the area's natural character. The Project would remove approximately 35 trees in this area; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3). Additionally, the area contains dense vegetation with numerous mature trees, and these tree removals would not substantially decrease the quality of the

vegetative setting, considering the removals would occur in highly vegetated areas where viewpoints of trees to be removed would be obscured by remaining vegetation. Thus, the Project would not substantially alter views experienced from Key Viewpoint 9. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT 10: MCGREGOR DRIVE, ORIENTED SOUTHEAST AND SOUTHWEST

Key Viewpoint 10 is located along McGregor Drive, as shown on **Figure 3.1-11**, Key Viewpoint 10, and provides a scenic vista of open space land and mature vegetation east of New Brighton State Beach. The Project would provide a maintained pedestrian and bicycle path through this open space area. The rail corridor itself is not visible from Key Viewpoint 10. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail and close to the ground. Project improvements would be visually compatible with the area's natural character. The Project would remove approximately 66 trees in this area; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3). Additionally, the area contains dense vegetation with numerous mature trees, and these 66 tree removals would not substantially decrease the quality of the vegetative setting, considering that the removals would occur in highly vegetated areas where viewpoints of trees to be removed would be obscured by remaining vegetation. Thus, the Project would not substantially alter the scenic quality of vistas experienced from Key Viewpoint 10. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT 11: INTERSECTION OF STATE PARK DRIVE AND SEA RIDGE ROAD, ORIENTED SOUTH

Key Viewpoint 11 is located at the intersection of State Park Drive and Sea Ridge Road, as shown on **Figure 3.1-12**, Key Viewpoint 11, and provides a view of coastal urban development and Monterey Bay. The Project would improve the roadway crossing where the trail would intersect with State Park Drive as well as add trash receptacles. Overall visual quality of this viewpoint would not change substantially, as the Project would be at grade with the rail and surrounding roadways, and close to the ground. The Project would remove two trees in this area; however, the Project would be required to replant trees in compliance with agency ordinances and permit requirements (refer to Section 3.3). Additionally, the area contains numerous mature trees, and the removal of two trees would not decrease the quality of the vegetative setting. Thus, the Project would not substantially alter views experienced from Key Viewpoint 11. Refer also to the *Trees* subsection of Impact AES-1 for additional analysis on Project tree removal.

KEY VIEWPOINT SUMMARY

As discussed in the analyses for Key Viewpoints 1–11, the Project would not introduce structures or other features that would obstruct scenic views and would not substantially impact the quality of scenic vistas enjoyed from key viewpoints along the Project corridor. Public views of the Santa Cruz Mountains, Monterey Bay, mature vegetation, and coastal beaches would be maintained. Additionally, public views of urban coastal development would be maintained or enhanced where roadway improvements would be constructed. The Project would improve public access to scenic vistas by providing a trail with views of the Santa Cruz Mountains, Monterey Bay, beaches, Capitola Wharf, Capitola Village, and New Brighton State Beach. Impacts regarding substantial impacts to scenic vistas enjoyed at key viewpoints would be **less than significant**. No mitigation is required.

Retaining Walls

The Project would install several upslope and downslope retaining walls to support slopes and provide the required distance between the trail and rail tracks. Retaining walls would range from 1 foot to 16 feet in height at the locations specified in Section 2.4, *Project Characteristics*, under *Retaining Walls* in Chapter 2.

Proposed retaining walls would not affect visibility of scenic vistas because they would be at a lower elevation or shorter than existing landscaping and trees, respectively, and thus, would not hinder views of mature vegetation. Retaining walls would be constructed using materials and colors that blend with the surrounding environment. Additionally, the heights of retaining walls would be relative to the grades and slopes of the specific locations; therefore, the retaining walls along Segments 10 and 11 would not hinder views. Overall, retaining walls would have a **less than significant** impact on scenic vistas. No mitigation is required.

Fencing

As described in Section 2.4 under *Fencing and Guardrails*, project design includes installation of safety fencing along the sides of bridges, viaducts, and other areas along the trail alignment, such as fencing to separate trail users from the rail. Project fencing and guardrails are expected to be constructed at 4 feet, 8 inches, in height. To promote wildlife movement, the lowest cable of the proposed fence would be 16 inches above finish grade. Fencing would be placed to minimize obstruction of scenic views and would be designed to allow open visibility of the surrounding landscape. Impacts to scenic vistas from fencing would be **less than significant**. No mitigation is required.

Trees

Residents, workers, and businesses along public roadways (including but not limited to Cliff Drive, Park Avenue, and near the 17th Avenue, 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Monterey Avenue, and State Park Drive roadway crossings) currently experience scenic vistas of the Santa Cruz Mountains, Monterey Bay, mature vegetation, and urban coastal development both in front of and beyond the rail. Following project construction, the trail would be mostly at grade and would not block existing views as described for the key viewpoints. However, as discussed in Section 3.3, the Ultimate Trail Configuration would require the removal of approximately 800 trees of various sizes, including mature trees along both Segment 10 and Segment 11. Following the removal of trees, spaces left by the removed trees could improve distant views of Monterey Bay and the Santa Cruz Mountains (scenic vistas) but could degrade localized views (scenic resources). Tree removal in Segments 10 and 11 would, therefore, make the alignment more visible from some of the adjacent roadways, and the expected changes to views would be moderate to substantial.

As discussed in Section 3.3, trees removed to accommodate the Project would be replaced at ratios and locations determined in coordination with the regulatory permitting agencies and jurisdictional authorities (e.g., City, County, State Parks, California Coastal Commission) through the regulatory permitting process. Due to limited available space remaining within the corridor after construction of the Ultimate Trail Configuration, only a very limited portion of trees can be replaced on site within the rail corridor. The remaining trees would be planted elsewhere within proximity to the rail corridor either as urban street trees or as mitigation for sensitive habitats and wildlife movement corridors as outlined in Mitigation Measure BIO-7b, described under Impact BIO-7 in Section 3.3. Mitigation Measure BIO-7b requires that trees are replanted at a minimum ratio of 1:1. Higher replacement ratios would be required for native, protected, and significant trees. Mitigation Measures BIO-7a and BIO-7c would minimize impacts to existing trees to be retained by requiring

temporary protective fencing and other best management practices that would protect remaining trees, saplings, and mature trees to the extent feasible.

The exact location of replacement trees is uncertain at this time, and timing of growth to maturity equivalence to the trees that would be removed cannot be predicted with certainty. Therefore, despite required tree replacement and implementation of Mitigation Measures BIO-7a through 7c, the required tree removal would affect public views of the Project corridor, degrade existing local scenic resources that include mature trees, and disrupt existing scenic vistas of mature vegetation. Therefore, impacts to scenic resources and vistas due to tree removal would be **significant and unavoidable.**

Summary for Impact AES-1

In summary, the Ultimate Trail Configuration would not introduce structures or other features that would block scenic public views experienced from key viewpoints, because the trail would be at grade with the existing rail line. Project features such as fencing and retaining walls would be designed to maintain scenic resources and vistas. However, the Ultimate Trail Configuration includes removal of approximately 800 trees of various sizes, including mature trees, throughout Segments 10 and 11 that would degrade localized scenic resources and disrupt existing scenic vistas experienced from local roadways and pedestrian facilities.

Although Mitigation Measures BIO-7a though BIO-7c would reduce impacts to trees because trees of a similar maturity and/or size to the trees requiring removal cannot be planted in the same location, there is uncertainty regarding exactly where the trees would be planted, and there is uncertainty whether the planted trees would reach maturity in a way that contributes to localized scenic resources and does not block scenic views, impacts would be **significant and unavoidable**.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Similar to the Ultimate Trail Configuration, implementation of the Optional Interim Trail (Part 1) would involve construction activity for a 48-month period to remove the rail line and build the Optional Interim Trail, causing temporary degradation of scenic views by visible construction equipment, grading and earth movement, and paving of the trail. This would have a smaller disturbance area and would require less earthwork than the Ultimate Trail Configuration would. However, the removal of railroad tracks, ties, crossings equipment, concrete panels, and other materials would require substantially more export of construction materials via truck trips on area roadways, such as 41st Avenue, Cliff Drive, and Park Avenue. As with the Ultimate Trail Configuration, implementation of the Optional Interim Trail would result in **less than significant** construction-related impacts on scenic resources and vistas due to its temporary nature. No mitigation is required.

Once constructed, like the Ultimate Trail Configuration, the Optional Interim Trail would improve public access to scenic vistas by providing a trail with views of the Santa Cruz Mountains, Monterey Bay, beaches, Capitola Wharf, Capitola Village, and New Brighton State Beach. Similar to the Ultimate Trail Configuration, the Optional Interim Trail would not introduce structures or other features that block scenic views from key public viewpoints but would include tree removal that would have a moderate to substantial adverse impact on public views enjoyed from key viewpoints along both segments of the Project corridor. The Optional Interim Trail would install fencing/guardrails along the sides of bridges and where necessary for safety and security. However, because the railroad tracks would be removed, there would be no fencing between the trail and tracks. This overall reduction in

fencing would result in incrementally less obstruction of scenic views from public roadways. The Optional Interim Trail would not include striping modifications along Cliff Drive or through Capitola Village (including along Stockton Avenue and Monterey Avenue).

Additionally, as described in Section 3.3, implementation of the Optional Interim Trail Part 1 would include removal of approximately 288 trees of various sizes, including mature trees, compared to approximately 800 trees that would be removed for the Ultimate Trail Configuration. The removal of 288 trees is considered a substantial amount of tree removal that would have an adverse effect on scenic resources and vistas. Further, even with implementation of Mitigation Measures BIO-7a through BIO-7c, there is uncertainty regarding the location of replacement trees and of timing for when these trees would mature. Therefore, impacts to scenic vistas from tree removal would be **significant and unavoidable**.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Removal of the Optional Interim Trail and rebuilding of the rail line (Part 2) would require construction equipment for demolition of the trail and installation of railroad tracks, signals, and crossings. Haul trips from removing the trail and installing the rail and the associated large vehicles could result in temporary impacts to scenic vistas. As described above for the Ultimate Trail Configuration and implementation of the Optional Interim Trail (Part 1), construction impacts would be temporary, and impacts regarding scenic vistas would be less than significant.

Further, removing the Optional Interim Trail and rebuilding the rail line (Part 2) requires no tree removal, and the estimated start of Part 2 could occur an estimated 25 years after construction of the Optional Interim Trail (Part 1) and the associated tree removal, which provides enough time for replacement trees to reach maturity. Therefore, the impact to scenic resources and vistas would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Impacts of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. An additional 669 trees would be removed to implement Part 3. While most construction-related and operational impacts to scenic resources and vistas would be less than significant, the substantial amount of tree removal required to build the Ultimate Trail Configuration would be **significant and unavoidable** because, even with implementation of Mitigation Measures BIO-7a through BIO-c, a substantial number of trees would be removed, it is uncertain exactly where the trees would be planted, and it is uncertain whether the planted trees would reach maturity.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the implementation of the Optional Interim Trail, followed by demolition of the Optional Interim Trail and reconstruction of the rail line, then construction of the Ultimate Trail Configuration, would result in significant and unavoidable impacts to scenic resources and vistas. Although construction involved with implementation of the Optional Interim Trail would be temporary and result in less than significant impacts related to decreases in visual quality during construction, the removal of approximately 957 trees (288 trees during Part 1 and an additional 669 trees during Part 3) would constitute a **significant and unavoidable** impact to scenic vistas even after implementation of Mitigation Measures BIO-7a through BIO-7c.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village (**Appendix A.3**). This design option would not include striping modifications along Cliff Drive or through Capitola Village (including along Stockton Avenue and Monterey Avenue). This design option would require structural repairs to the Capitola Trestle Bridge's wooden structures and wrought iron truss, as well as conversion of the trestle to trail use, which would include installation of FRP decking with a metal guardrail for the length of the trestle. As stated in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, for the structural repairs, the existing bridge materials would be replaced "in kind" and would be of similar color and appearance as the original materials for aesthetic continuity. For the conversion of the rail line to trail, the tracks and ties would be removed, and FRP deck and steel components to support the FRP deck would be added. While the FRP deck and steel supports would be composed of different materials than the existing rail line, they would be designed to match the existing aesthetics of the Capitola Trestle Bridge. This design option would alter views experienced from Key Viewpoint 6, as the Project would convert the rail line on the existing trestle bridge—considered a scenic resource pursuant to Capitola General Plan Policy LU-7.3—into a pedestrian and bicycle pathway. Thus, this design option would alter views of a scenic resource, because the original materials used for construction of the trestle would be replaced, and the rail line on top of the trestle would be converted to a trail. Therefore, the impact to views from Key Viewpoint 6 and other public reviews of the Capitola Trestle Bridge would be greater with implementation of Design Option A than without it. However, the visual impact at the Capitola Trestle Bridge would be **less than significant** because the replacement materials for reinforcement and new materials used for the trail would be of similar color and appearance as the original materials for aesthetic continuity and, thus, would not be considered a substantial adverse effect.

This design option would not include tree removal and would not alter tree removal elsewhere along the Project corridor. Therefore, it would not worsen or reduce the overall **significant and unavoidable** impact of the *Ultimate Trail Configuration (Trail next to Rail Line)* on scenic resources and vistas through removal of mature trees.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option for the Ultimate Trail Configuration, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City (**Appendix A.4**). This design option would result in the removal of four additional trees. Additionally, this design option would involve construction of approximately twice the amount of retaining wall and an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. Therefore, implementation of this design option would slightly increase or worsen the **significant and unavoidable** impact on scenic resources and vistas given the greater extent of tree removal.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would result in less than significant impacts to scenic resources and vistas during most construction activities given the temporary nature of construction equipment and staging. However, the Ultimate Trail Configuration alignment (Project without the Optional Interim Trail) would result in the removal of 803 trees , and the Optional Interim Trail alignment would result in the removal of 957 trees , leading to a **significant and unavoidable** impact under both scenarios for scenic resources and vistas even after implementation of Mitigation Measures BIO-7a through BIO-7.

Threshold C:	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site or its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.

Impact AES-2 THE PROJECT WOULD BE INCONSISTENT WITH POLICIES THAT PERTAIN TO TREE AND VEGETATION REMOVAL. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

Ultimate Trail Configuration ((Trail next to Rail Line)

The Project would extend through predominately urbanized portions of the City and unincorporated County. Therefore, the following analysis in **Table 3.1-2** discusses the Project's consistency with applicable zoning and regulations governing scenic quality. To provide a more conservative analysis, **Table 3.1-2** also includes Capitola and County General Plans policies relevant to scenic quality and degradation of public views.

While construction and operation of the Project would be consistent with most applicable regulations governing scenic quality, the Project would be inconsistent with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9 (as discussed in **Table 3.1-2**), which pertain to removal of trees and vegetation. Inconsistency with these policies would lead to the Project having a **significant and unavoidable** impact**,** even after implementation of Mitigation Measures BIO-7a through BIO-7c, due to inconsistency with applicable regulations that govern scenic quality.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Similar to the *Ultimate Trail Configuration (Trail next to Rail Line)* alignment, construction of the Optional Interim Trail (Part 1) would temporarily affect scenic quality because of vegetation removal. However, construction of the Optional Interim Trail would be consistent with the same regulations governing scenic quality as the Ultimate Trail Configuration*,* which would reduce visual impacts from construction activities. Furthermore, given the temporary duration of construction, construction impacts would be **less than significant**.

The permanent impacts associated with tree removal for operation of the Optional Interim Trail would be similar to the Ultimate Trail Configuration, as shown in **Table 3.1-2**, and would be **significant and unavoidable,** even after implementation of Mitigation Measures BIO-7a through BIO-7c, due to inconsistency with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9, which pertain to tree removal.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would temporarily affect scenic quality through temporary construction activities such as demolition of paving and installation of railroad track. Please refer to the impact discussion described above for *Ultimate Trail Configuration (Trail next to Rail Line)*. Given the temporary duration of construction, construction impacts would be **less than significant**.

Rebuilding the rail corridor would occur in generally the same alignment as the Optional Interim Trail and would be consistent with the same regulations governing scenic quality as the *Ultimate Trail Configuration (Trail next to Rail Line),* as shown in **Table 3.1-2**. The demolition of the Optional Interim Trail and rebuilding of the rail line would not require tree or vegetation removal, this phase of the Optional Interim Trail would be consistent with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9. The operational impact would be **less than significant**.

Table 3.1-2 City of Capitola and County of Santa Cruz General Plan Aesthetics Policy Consistency Analysis

Policy or Regulation	Ultimate Trail Configuration	Optional Interim Trail (Parts 1, 2, 3)
California Coastal Act		
Section 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 landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.	**Consistent.** The Ultimate Trail Configuration would comply with this regulation because it would maintain scenic views of coastal areas throughout Segments 10 and 11 of the Project corridor. Fencing would be designed to protect views of scenic areas. To enhance visual quality, trees would be planted in areas where trees are removed. The Ultimate Trail Configuration would be consistent with this policy.	**Consistent.** Same as Ultimate Trail Configuration.
Santa Cruz County Code		
Section 13.20.130: This section provides design criteria for Coastal Zone projects, including visual compatibility, minimum site disturbance, and siting and design of landscaping, including fences and walls, so they do not adversely impact public views and scenic character.	**Consistent.** The Ultimate Trail Configuration would comply with this regulation because fencing is designed to maintain public views, and trail color, materials, and elements would match existing roadways to maintain visual character. The Ultimate Trail Configuration would not substantially decrease scenic quality and would be consistent with the County Code.	**Consistent.** Same as Ultimate Trail Configuration.
Santa Cruz County General Plan		
Policy 5.10.3, Protection of Public Vistas. Protect significant public vistas as described in policy 5.10.2 from all publicly used roads and vista points by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping, and structure design. Provide necessary landscaping to screen development which is unavoidably sited within these vistas.	**Inconsistent.** The Ultimate Trail Configuration would result in removal of approximately 800 trees along the Project corridor as discussed under Impact AES-1. Although the Ultimate Trail Configuration would include tree planting to restore trees along the Project corridor, there would be a potential impact to public vistas from removal of trees. The Ultimate Trail Configuration would be inconsistent with this policy.	**Inconsistent.** Similar to the Ultimate Trail Configuration, the Optional Interim Trail would result in substantial tree removal. Part 1 of the Optional Interim Trail would remove 288 trees, and Part 3 of the Optional Interim Trail would remove 669 trees, for a total of 957 trees. Thus, there would be a potential impact to public vistas from tree removal, and the Project would be inconsistent with this policy.
Policy 5.10.6, Preserving Ocean Vistas. Where public ocean vistas exist, require that these vistas be retained to the maximum extent possible as a condition of approval for any new development.	**Consistent.** The Ultimate Trail Configuration would not only retain public views of ocean vistas throughout the Project corridor but would also increase public access to viewing areas for ocean vistas. The Ultimate Trail Configuration would be consistent with this policy.	**Consistent.** Same as Ultimate Trail Configuration.

Table 3.1-2 City of Capitola and County of Santa Cruz General Plan Aesthetics Policy Consistency Analysis

Policy or Regulation	Ultimate Trail Configuration	Optional Interim Trail (Parts 1, 2, 3)
Policy 5.18.8, Encouraging Landscaping. Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.	**Inconsistent.** The Ultimate Trail Configuration would require the removal of approximately 800 trees, which would decrease the density of vegetated and forested areas along the Project corridor. Although the Ultimate Trail Configuration would replace trees along the corridor, the Ultimate Trail Configuration would be inconsistent with this policy.	**Inconsistent.** Part 1 of the Optional Interim Trail would remove 288 trees, and Part 3 of the Optional Interim Trail would remove 669 trees, for a total of 957 trees. Although the Project would replace trees along the corridor, the Project would be inconsistent with this policy.
City of Capitola General Plan		
Policy LU-7.3, Scenic Resources. Protect and enhance significant scenic views and resources that contribute to the unique identity and public enjoyment of the Village. Scenic resources include: ▪ The general pedestrian-oriented and coastal village character of existing development in the Village. ▪ Public and semi-public gathering places, including Esplanade Park, Lawn Way, Capitola Beach, Soquel Creek path, and the historic Capitola Wharf. ▪ Landscaping and streetscape amenities. ▪ Historic structures, including structures contributing to Capitola's four National Register Historic Districts and structures listed on the official City of Capitola Historic Structures List. ▪ Natural features such as Capitola Beach, Soquel Creek and Lagoon, cliffs and bluffs, and vegetated banks.	**Consistent**. The Ultimate Trail Configuration would not include structures or bulky features that would hinder public scenic views of the nearby vistas, including Capitola Village, Capitola Beach, Capitola Wharf, or natural features. Project fencing, both along the trail and at waterway crossings, is designed to maximize views of public vistas along the trail. The Ultimate Trail Configuration would be consistent with this policy.	**Consistent.** Same as Ultimate Trail Configuration.
Policy OSC-6.9, Urban Forest. Continue to enforce the City's Community Tree and Forest Management Ordinance to protect trees on private and public property as important environmental and scenic resources.	**Inconsistent.** The Ultimate Trail Configuration would require the removal of approximately 800 trees, which would decrease the density of vegetated and forested areas along the Project corridor. Although the Project would replace trees along the corridor, the Ultimate Trail Configuration would be inconsistent with this policy.	**Inconsistent.** Part 1 of the Optional Interim Trail would remove 288 trees, and Part 3 of the Optional Interim Trail would remove 669 trees, for a total of 957 trees. Although the Project would replace trees along the corridor, the Project would be inconsistent with this policy.
Policy MO-9.2, Pathways. Maintain and improve pedestrian pathways in Capitola, particularly pathways providing pedestrian access to natural areas and scenic vistas.	**Consistent.** The Ultimate Trail Configuration would increase public access to viewpoints for natural areas and scenic vistas. The Ultimate Trail Configuration would be consistent with this policy.	**Consistent.** Same as Ultimate Trail Configuration.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration following removal of the Optional Interim Trail (Part 3) would result in the same impacts as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and in **Table 3.1-2**. The visual impacts from tree removal would be **significant and unavoidable**, even after implementation of Mitigation Measures BIO-7a through BIO-7c, due to inconsistency with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9, which pertain to tree removal.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing all three parts of the Optional Interim Trail, including construction of the Ultimate Trail Configuration (Part 3), would result in **significant and unavoidable** impacts**,** even after implementation of Mitigation Measures BIO-7a through BIO-7c, due to inconsistency with applicable regulations governing scenic quality, including County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9, as shown in **Table 3.1-2**. Construction involved with Optional Interim Trail implementation and demolition and rail removal and rebuilding would be temporary and consistent with City and County regulations. Construction would result in **less than significant** impacts. However, due to tree removal (considered a permanent impact), operational impacts would be **significant and unavoidable**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village (**Appendix A.3**). This design option would require structural repairs and replacement of the ballast, tracks, and ties with FRP deck on the Capitola Trestle Bridge. Because this design option would entail no additional tree removal and would not alter tree removal elsewhere along the Project corridor, it would be consistent with County and City policies pertaining to vegetation and tree removal, and the impact would be **less than significant**.

This design option would not include tree removal and would not alter tree removal elsewhere along the Project corridor. Therefore, this design option would not worsen or reduce the overall **significant and unavoidable** impact relative to tree removal and consistency with applicable policies.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City (**Appendix A.4**). This design option would result in the removal of four additional trees, as the inland side of the rail in this area is more densely vegetated than the coastal side but would not alter tree removal elsewhere along the Project corridor. This design option would be implemented in conjunction with the Project, with or without the Optional Interim Trail. Therefore, this design option would contribute to the **significant and unavoidable** impact relative to tree removal and consistency with applicable policies.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would temporarily affect scenic quality through temporary construction activities. Although the Optional Interim Trail would have slightly greater impacts due to the two additional phases of construction, the construction-related impact would still be **less than significant**.

Even after implementation of Mitigation Measures BIO-7a through BIO-7c, the Project with and without the Optional Interim Trail would result in substantial tree removal that conflicts with applicable regulations that govern scenic quality, specifically scenic views, resulting in a **significant and unavoidable** impact.

Threshold D:	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact AES-3 THE PROJECT WOULD NOT ADVERSELY AFFECT DAYTIME OR NIGHTTIME VIEWS (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Project construction would primarily occur between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. As stated in Section 2.6, *Project Construction*, construction could also start at 7:00 a.m., Monday through Friday, or occur on Saturdays or Sundays with written approval from the City or County. Construction activities that would occur during the daytime would not necessitate lighting. During construction of the 100-foot-long clear-span bridge over New Brighton State Beach Road, New Brighton State Beach Road would be temporarily closed for approximately 12 hours overnight, which would require night lighting. Although the windows and metal on construction equipment during construction could increase glare, this effect would be minimal relative to existing glare from vehicles traveling on roadways along the Project corridor. In the portions of the corridor away from roadways, such as through New Brighton State Beach, there are fewer adjacent land uses that could be adversely affected by construction-related glare. The impact would be **less than significant**. No mitigation is required.

Operation

Segments 10 and 11 would be built in a predominately urbanized area that has existing street lighting and light emitted from existing buildings. The Project would include new lighting sources for the safety of trail users. On bridges and viaducts and in environmentally sensitive areas , there would be low-level lighting, similar to that on the San Lorenzo River Trestle Bridge (part of Segment 8). Any new lighting would be “dark sky compliant” meaning that it would minimize light pollution and offensive glare by directing light downward so it would reduce spillage. Additionally, overhead lighting would use house side cut-offs where applicable and light projection photometrics based on light-mounting height to minimize impacts to adjacent properties and environmentally sensitive habitat areas. Solar lighting would be used where feasible.

Any new lighting would be required to adhere to applicable lighting regulations in City and County codes. County Code, Section 13.11.074(D), includes lighting design requirements for site and building design, and Section 9.70.320 includes lighting requirements related to street and road safety. Capitola Municipal Code, Section 17.96.110, includes lighting criteria, which states that lights

shall be placed to direct downward and deflect light away from adjacent lots and public streets prevent adverse interference with the normal operation or enjoyment of surrounding properties. These criteria would reduce lighting impacts associated with potential lighting added to portions of the trail alignments in the City.

The Project would not include any elements with high reflective qualities that would increase daytime or nighttime glare. Therefore, potential impacts due to light and glare would be **less than significant**.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The potential light and glare impacts from implementation of the Optional Interim Trail, demolition of the rail line, and construction of the Optional Interim Trail (Part 1), would be similar to the Ultimate Trail Configuration because the hours of construction would be similar and similar lighting would be added to illuminate the trail during operation. Lighting would be required to comply with local regulations and would be dark-sky compliant. Overall, the Optional Interim Trail would have a **less than significant impact** related to light and glare. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Optional Interim Trail removal and rail installation activities (Part 2) would occur during the daytime; therefore, lighting would not be needed for construction, although there could be glare from windows and metal on construction equipment. The rebuilt rail line would not require lighting along the alignment, and because the Optional Interim Trail would be removed, lighting for the trail, excluding roadway lighting, would similarly be removed. The impact from demolition of the Optional Interim Trail and rebuilding of the rail line would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to those described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. The Ultimate Trail Configuration would result in **less than significant** impacts to light and glare.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of the Optional Interim Trail Parts 1, 2, and 3 would be slightly greater with respect to potential glare from construction equipment because there are two additional construction phases. However, the construction timeframes would have years in between and would not occur simultaneously or back-to-back. Overall, the impact for construction and operation would result in **less than significant** impacts regarding light and glare. Lighting features along the Project corridor would be regulated by the Capitola Municipal Code and County Code lighting requirements and shielded downward to minimize impacts.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes

and sidewalks through Capitola Village (**Appendix A.3**). This design option would require structural repairs and replacement of the ballast, tracks, and ties with FRP deck on the Capitola Trestle Bridge. This design option would use similar lighting as described above, and there is the potential that downcast lighting used along the Capitola Trestle would be visible from public viewing points below the trestle, given the difference in elevation and lack of intervening features. Therefore, this design option would have a slightly greater, but less than significant, impact relative to light and glare. This design option would be consistent with County and City policies pertaining to light and glare, and the impact would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola (**Appendix A.4**). This design option would use similar lighting as described above and would not worsen the overall less than significant impact relative to light and glare. This design option would be consistent with County and City policies pertaining to light and glare, and the impact would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have slightly more temporary construction-related impacts with respect to potential glare from the two additional construction periods than the Project without the Optional Interim Trail (Ultimate Trail Configuration); however, as stated above, the impact would be less than significant. The Project with and without the Optional Interim Trail would have similar operational impacts regarding lighting and glare because they would have similar lighting installed for safety along the trail corridor. Under both scenarios, lighting features would be regulated by Capitola Municipal Code and County Code lighting requirements and shielded downward to minimize impacts, which would be **less than significant**. No mitigation is required.

3.1.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees.	**SU** BIO-7a, BIO-7b, BIO-7c	**SU** Similar, slightly less BIO-7a, BIO-7b, BIO-7c	LTS Less	**SU** Similar BIO-7a, BIO-7b, BIO-7c
AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.	**SU** BIO-7a, BIO-7b, BIO-7c	**SU** Similar, slightly less BIO-7a, BIO-7b, BIO-7c	LTS Similar	**SU** Similar BIO-7a, BIO-7b, BIO-7c
AES-3. The Project would not adversely affect daytime or nighttime views.	LTS	LTS Similar	LTS Similar	LTS Similar

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented in the third column and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: Rincon 2023.

Harris & Associates

N

0 1750 3500

Feet

Figure 3.1-1

Key Viewpoint Locations

Coastal Rail Trail Segments 10 and 11



Existing Condition from Key Viewpoint 1, 17th Avenue at Simpkins Family Swim Center, Looking Northeast. Industrial and commercial development adjacent to the rail corridor can be viewed, along with the entryway to the Simpkins Family Swim Center, a public recreational facility. Several mature trees are in the area, and utility poles rise above surrounding structures.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-2

Key Viewpoint 1

Coastal Rail Trail Segments 10 and 11

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 2, Intersection of 30th Avenue and Lewis Circle, Looking North. Residential development adjacent to the rail corridor can be viewed. Many mature trees are in the area, and utility poles rise above surrounding residences.

Source: Rincon 2023.

Figure 3.1-3

Key Viewpoint 2

Coastal Rail Trail Segments 10 and 11

Harris & Associates

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 3, Intersection of Melton Street and 41st Avenue, Looking South. Residential and commercial development adjacent to the rail corridor can be viewed. Several mature trees are in the area, and utility poles and railway crossing poles rise above surrounding residences.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-4

Key Viewpoint 3

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 4, Intersection of Portola Drive and 47th Avenue, Looking North. Recreational development adjacent to the rail corridor can be viewed, along with mature trees, utility poles, and railway crossing poles.



Existing Condition from Key Viewpoint 4, Intersection of Portola Drive and 47th Avenue, Looking East. This view shows the rail corridor as it extends east, adjacent to dense vegetation and mature trees. Several trees would be removed from this view, located in the background to the right of the rail corridor.

Source: Rincon 2023.

Figure 3.1-5

Key Viewpoint 4

Coastal Rail Trail Segments 10 and 11

Harris & Associates

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 5, Cliff Drive, Looking Northeast. Residential development above the rail corridor can be viewed, along with Monterey Bay, Capitola Wharf, beach, and mountains.



Existing Condition from Key Viewpoint 5, Cliff Drive, Looking East. This view shows the rail corridor as it extends east. Views of distant mountains and coastal development, as well as Monterey Bay and the coastline, are visible.

Source: Rincon 2023.

Figure 3.1-6

Key Viewpoint 5

Harris & Associates

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 6, Stockton Avenue Bridge, Looking Northwest. Residential development beyond dense vegetation can be viewed, with Soquel Creek in the forefront and the Capitola Trestle Bridge in the background of the view.



Existing Condition from Key Viewpoint 6, Stockton Avenue Bridge, Looking Northeast. Residential development east of Soquel Creek can be viewed, with Soquel Creek in the forefront and the Capitola Trestle Bridge in the background of the view.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-7

Key Viewpoint 6

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 7, Intersection of Monterey Avenue and Park Avenue, Looking South. Development adjacent to the rail corridor can be viewed, along with multiple mature trees and railway crossing poles. Monterey Bay is visible in the background.



Existing Condition from Key Viewpoint 7, Intersection of Monterey Avenue and Park Avenue, Looking Southeast. This view shows the rail corridor as it extends eastward across Monterey Avenue and continues adjacent to dense vegetation and mature trees along Park Avenue. One tree would be removed from this view, located in the photograph's left background, to the right of the rail corridor.

Source: Rincon 2023.

Figure 3.1-8

Key Viewpoint 7

Harris & Associates

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 8, Park Avenue, Looking Southwest. Dense vegetation and mature trees adjacent to the rail corridor can be viewed, along with Monterey Bay. Several trees would be removed from this view.



Existing Condition from Key Viewpoint 8, Park Avenue, Looking Northeast. This view shows the rail corridor as it extends northeast, adjacent to dense vegetation, mature trees, and coastal bluffs. Several trees would be removed from this view.

Source: Rincon 2023.

Figure 3.1-9

Key Viewpoint 8

Coastal Rail Trail Segments 10 and 11

Harris & Associates

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 9, New Brighton State Beach Roadway, Looking East. Located in New Brighton State Beach, dense vegetation and mature trees in the area adjacent to the rail corridor are visible. Several trees would be removed from this view.



Existing Condition from Key Viewpoint 9, New Brighton State Beach Roadway, Looking Southwest. This view shows the rail corridor as it extends over New Brighton State Beach roadway and through New Brighton State Beach, adjacent to dense vegetation and mature trees. The Project would add a clear span bridge with a fiberglass-reinforced polymer deck over New Brighton State Beach roadway, visible in the center-right of this view.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-10

Key Viewpoint 9

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 10, McGregor Drive, Looking Southwest. Located in an open space area adjacent to New Brighton State Beach (in right of photograph, characterized by taller trees), the rail corridor is fully obscured by dense vegetation. Several trees would be removed from this viewpoint.



Existing Condition from Key Viewpoint 10, McGregor Drive, Looking Southeast. The rail corridor is fully obscured by dense vegetation and would not be visible to viewers along parallel roadways. Several trees would be removed from this viewpoint.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-11

Key Viewpoint 10

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs



Existing Condition from Key Viewpoint 11, Intersection of State Park Drive and Sea Ridge Road, Looking South. The rail corridor is adjacent to residential development to the west (right side of photograph) and dense vegetation to the east (left side of photograph). Views of Monterey Bay and Seacliff State Beach are visible in the background of this viewpoint.

Source: Rincon 2023.

Harris & Associates

Figure 3.1-12

Key Viewpoint 11

Coastal Rail Trail Segments 10 and 11

Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

This page intentionally left blank.

3.2 Air Quality

This section describes existing regional air quality, outlines the regulatory framework applicable to air quality management, and evaluates impacts related to criteria pollutant emissions as a result of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* construction and operation. **Table 3.2-1** presents a summary of potential impacts related to air quality.

Table 3.2-1 Summary of Project Impacts Related to Air Quality[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
AIR-1. The Project would not conflict with or obstruct implementation of the adopted MBARD AQMP.	Less than Significant	None Required	Less than Significant
AIR-2. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment.	Less than Significant	None Required	Less than Significant
AIR-3. The Project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	None Required	Less than Significant
AIR-4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than Significant	None Required	Less than Significant
Beneficial Effect: The Project would provide an alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.			

[a] The impacts apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

AQMP = Air Quality Management Plan; MBARD = Monterey Bay Air Resources District

3.2.1 Existing Conditions

Regional and Project Corridor Setting

Climate and Topography

The Project corridor is located in the North Central Coast Air Basin (NCCAB). The NCCAB is composed of Monterey, Santa Cruz, and San Benito Counties and covers an area of more than 5,100 square miles. The air basin features varied vegetation, climate, and geography and includes portions of several mountain ranges, the Santa Lucia and Gabilan Ranges in Monterey and San Benito Counties, the southern portion of the Santa Cruz Mountains in Santa Cruz County (County), and the Diablo Range in the eastern half of San Benito County. The coastal terraces in the Santa Cruz area; the flat plains surrounding Watsonville, Salinas, and King Cities; and the southern Santa Clara Valley are markedly defined by these mountain ranges. The northwestern sector of the NCCAB, where the Project corridor is located, is dominated by the Santa Cruz Mountains (Santa Cruz County 2022).

The Pacific high-pressure cell, a semi-permanent high-pressure cell in the eastern Pacific Ocean, is the controlling factor in the NCCAB's climate. In the summer, the high-pressure cell is dominant and

causes persistent west and northwest winds over the entire California coast. Air descends from the Pacific High and warms and dries as it descends, resulting in generally sunny skies and dry weather (NOAA 2018). The relatively cooler temperature of the Pacific Ocean creates a layer of cool air directly over the ocean. This stable temperature inversion of warm air over a cooler coastal layer of air creates an onshore air current that passes over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer aloft air acts as a lid that inhibits vertical air movement and allows air pollutants to concentrate in the lower level.

The generally northwest–southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure that intensifies the onshore air flow during the afternoon and evening.

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The airflow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific high-pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that north or east winds develop, transporting pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB.

During the winter, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. The general absence of deep, persistent inversions and occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring.

In the Project area, average annual temperatures in degrees Fahrenheit are relatively stable and range from winter lows in the upper 30s to summer highs in the middle 70s (WRCC 2023). The total average annual precipitation is approximately 29.33 inches, with the majority of rainfall occurring from November through March.

Air Pollutants of Primary Concern

The federal and state Clean Air Acts mandate the control and reduction of certain air pollutants. Under these acts, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards (AAQS) for certain "criteria pollutants" considered harmful to public health and the environment. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions and by the climatic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide [CO] and particulate matter) is proximity to major sources. Ambient CO levels in particular usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

OZONE

Ozone is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROGs), and oxides of nitrogen (NO_x). ROG (the organic compound fraction relevant to ozone formation and sufficient equivalent for the purposes of this analysis to volatile organic compounds [VOCs][1]) is composed of non-methane hydrocarbons (with some specific exclusions), and NO_x is made of different chemical combinations of nitrogen and oxygen, mainly nitric oxide (NO) and nitrogen dioxide (NO_2). A highly reactive molecule, ozone readily combines with many different components of the atmosphere.

[1] ROG is equivalent to VOC per MBARD Rule 101, 2.32.

Consequently, high levels of ozone tend to exist only while high ROG and NO_x levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant.

CARBON MONOXIDE

CO is an odorless, colorless, gas. CO causes a number of health problems, including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the state CO standard are generally associated with major roadway intersections during peak hour traffic conditions. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic.

NITROGEN DIOXIDE

NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is NO, but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of particulate matter 10 microns or less in size (PM_{10}) and acid rain.

PARTICULATE MATTER

Suspended particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods. Fine particulate matter includes particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects. Particulate matter can include materials such as sulfates and nitrates, which are particularly damaging to the lungs. Health effects studies resulted in revision of the Total Suspended Particulate Standard in 1987 to focus on particulates that are small enough to be considered "inhalable," (i.e., 10 microns or less in size [PM_{10}]). In July 1997, a further revision of the federal standard added criteria for $PM_{2.5}$, reflecting recent studies that suggested that particulates less than 2.5 microns in diameter are of particular concern.

Federal and state standards have been established for ozone, CO, NO_2, sulfur dioxide (SO_2), lead, and fine particulates (PM_{10} and $PM_{2.5}$). **Table 3.2-2** summarizes the current federal and state standards for each of these pollutants. The primary standards listed below have been set at levels intended to protect public health. California standards are generally more restrictive than federal standards. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or in "non-attainment."

Table 3.2-2 Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	—	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	8-Hour	9 ppm	9 ppm
	1-Hour	35 ppm	20 ppm
Nitrogen Dioxide (NO_2)	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.1 ppm	0.18 ppm
Sulfur Dioxide (SO_2)	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
Respirable Particulate Matter (PM_{10})	Annual	—	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	35 µg/m^3	—
Lead	30-Day Average	—	1.5 µg/m^3
	3-Month Average	0.15 µg/m^3	—

Source: BAAQMD 2017.
µg/m^3 = micrograms per cubic meter; ppm = parts per million

"Pollutant" – Current Air Quality

The Monterey Bay Air Resources District (MBARD) consists of all three counties in the NCCAB, including Santa Cruz County; therefore, the Project corridor is under the jurisdiction of the MBARD. The MBARD is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, education, and public information activities related to air pollution in the NCCAB. The MBARD monitors ambient air quality in the NCCAB at monitoring stations located in Carmel Valley, Davenport, Hollister, Salinas, Santa Cruz, Scotts Valley, and Watsonville. The MBARD monitors air pollutant levels to measure and determine if that air quality standards are met and, if they are not met, to develop strategies to meet the standards. As indicated above, depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or in "non-attainment," respectively. **Table 3.2-3** summarizes the federal and state attainment status for criteria pollutants.

As shown in **Table 3.2-3**, the NCCAB is in attainment or unclassifiable status for all federal AAQS. For state AAQS, the NCCAB is currently in non-attainment status for respirable particulate matter (PM_{10}).

Table 3.2-3 Santa Cruz County Air Basin Attainment Status

Pollutant	Averaging Time	California Standards	Federal Standards
Ozone	1-Hour	Attainment	No Federal Standard
	8-Hour		Attainment
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	Non-Attainment	No Federal Standard
	24-Hour		Unclassified[a]
Sulfur Dioxide (SO_2)	24-Hour	Attainment	Unclassified/Attainment
	1-Hour		
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	Attainment	Attainment
	24-Hour	No State Standard	
Carbon Monoxide (CO)	8-Hour	Unclassified	Unclassified/Attainment
	1-Hour		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	No State Standard	Unclassified/Attainment
	1-Hour	Attainment	No Federal Standard

Source: CARB 2022.
[a] Unclassified; indicates data are not sufficient for determining attainment or non-attainment.
Attainment = Meeting air quality standards
Non-attainment = Exceeding air quality standards

Table 3.2-4 summarizes available annual air quality data for the County for the most recent years available at the MBARD's Soquel Avenue monitoring station and the Hollister-Fairview Road monitoring station in Hollister. The Soquel Avenue monitoring station, located at 2544 Soquel Avenue in Santa Cruz, is the closest station to the Project corridor. The Hollister-Fairview Road monitoring station is the closest station to monitor PM_{10} in the NCCAB that has data available for multiple years. The data collected at the MBARD-operated stations is shown in **Table 3.2-4**.

Table 3.2-4 Ambient Air Quality Data

Pollutant	Monitoring Station	2019	2020	2021
Ozone, ppm – Worst Hour	Soquel Avenue	0.068	0.070	0.072
Number of Days of State Exceedances (>0.09 ppm)		0	0	0
Ozone, ppm – Worst 8-Hour Average	Soquel Avenue	0.059	0.057	0.058
Number of Days of Federal/State Exceedances (>0.07 ppm)		0	0	0
Particulate Matter <10 microns, μg/m^3 Worst 24 Hours	Hollister-Fairview Road	130.7	159	130
Number of Samples of State Exceedances (>50 μg/m^3)		— [a]	— [a]	5
Number of Samples of Federal Exceedances (>150 μg/m^3)		0	1	0
Particulate Matter <2.5 microns, μg/m^3 Worst 24 Hours	Soquel Avenue	21.3	90.4	17.5
Number of Days Federal Exceedances		0	13	0

Source: CARB 2023.
[a] Insufficient data available
μg/m^3 = micrograms per cubic meter; ppm = parts per million

Given that the NCCAB is designated as non-attainment for PM_{10}, this is the primary pollutant of concern for the NCCAB. As indicated in **Table 3.2-4**, average PM_{10} concentrations exceeded the state standard for PM_{10} in 2021 and the federal standard in 2020.

Sensitive Receptors

Certain population groups are more sensitive to air pollution than others, in particular children, older adults, and people with acute and chronic illnesses, especially those with cardio-respiratory diseases. As described in the MBARD's 2008 California Environmental Quality Act (CEQA) Air Quality Guidelines (MBARD Guidelines), a sensitive receptor is defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources, such as preschools and kindergarten through grade 12 (K–12) schools; daycare centers; and healthcare facilities, such as hospitals or retirement and nursing homes (MBARD 2008). Residences are located throughout the Project corridor.

3.2.2 Regulatory Setting

This section describes the federal, state, regional, and local plans, policies, and laws relevant to air quality for the Project.

Federal

Clean Air Act and National Ambient Air Quality Standards

The Clean Air Act (CAA) of 1970 is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The CAA authorizes the USEPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. Current NAAQS are listed in **Table 3.2-2**.

The USEPA has classified air basins (or portions thereof) as being in "attainment," "non-attainment," or "unclassified" for each criteria air pollutant based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data was available as a basis for a non-attainment or attainment designation. **Table 3.2-3** lists the attainment status of the NCCAB for the criteria pollutants. The NCCAB is in attainment or unclassified for all criteria pollutants.

The CAA was amended in 1990 to better address hazardous air pollutants (Title III). Title III offers a comprehensive plan for achieving significant reductions in emissions of hazardous air pollutants from major sources. It includes a list of 189 toxic air pollutants of which emissions must be reduced. The USEPA maintains and updates a list of source categories including (1) major sources emitting 10 tons per year of any one, or 25 tons per year of any combination, of those pollutants, and (2) area sources (smaller sources, such as dry cleaners). As required by Title III, the USEPA developed Maximum Achievable Control Technology (MACT) standards. MACT standards use the hazardous air pollutant emissions of the best-performing industry sources to set the "MACT floor," which becomes the minimum standard that an industry must at least meet in order to comply with the CAA.

State

California Clean Air Act and California Ambient Air Quality Standards

As a part of the California Environmental Protection Agency, CARB is responsible for the coordination and administration of both federal and state air pollution control programs in California. The federal CAA allows states to adopt AAQS and other regulations provided that they are at least as stringent as federal standards. The California CAA became effective in 1989 and requires all areas of the state to attain the state AAQS at the earliest practicable date. To that end, California has adopted ambient standards (California Ambient Air Quality Standards [CAAQS]) that

are equal to or stricter than the federal standards for six criteria air pollutants. The CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations and are provided in **Table 3.2-2**. Similar to the federal CAA, areas have been designated as attainment, non-attainment, or unclassified with respect to the CAAQS. The NCCAB is currently in state non-attainment status for respirable particulate matter (PM_{10}).

Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles

In September 2000, CARB approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB 2000). The plan outlines a comprehensive and ambitious program that includes the development of numerous control measures aimed at substantially reducing emissions from new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). CARB has adopted several regulations that reduce diesel emissions from in-use vehicles and engines throughout California. In some cases, the particulate matter reduction strategies also reduce smog-forming emissions, such as NO_x. As an ongoing process, CARB reviews air contaminants and identifies those that are classified as toxic air contaminants. CARB also continues to establish new programs and regulations for the control of toxic air contaminants, including diesel particulate matter, as appropriate.

Air Quality and Land Use Handbook

In 2005, CARB's Community Health Program made available the Air Quality and Land Use Handbook: A Community Health Perspective to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (CARB 2005). The recommendations in the handbook are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

Regional

The MBARD regulates air quality in the NCCAB and is responsible for attainment planning related to criteria air pollutants and for district rule development and enforcement. It also reviews air quality analyses prepared for CEQA assessments and published the MBARD Guidelines (last revised February 2008) for use in the evaluation of air quality impacts (MBARD 2008). The purpose of the MBARD Guidelines is to assist in the review and evaluation of air quality impacts from projects that are subject to CEQA. The MBARD Guidelines are an advisory document intended to provide lead agencies, consultants, and project proponents with uniform procedures for assessing potential air quality impacts and preparing the air quality section of environmental documents. The MBARD Guidelines are also intended to help these entities anticipate areas of concern from the MBARD in its role as a lead, commenting, and/or responsible agency for air quality.

According to the MBARD Guidelines, during construction, an impact would occur if the Project would cause a violation of PM_{10} AAQS at nearby or upwind of sensitive receptors based on if the Project would emit more than 82 pounds (lbs)/day of PM_{10}. Ozone impacts during construction would potentially occur if the Project would use equipment that is not "typical construction equipment." Typical construction equipment includes but is not limited to dump trucks, scrapers, bulldozers, compactors, and front-end loaders. Construction projects using typical construction equipment are accommodated in the emission inventories of federally and state-required air plans and would not have a significant impact.

During operation, a project is considered to have a significant impact if it would:

- Generate direct (area source or stationary) plus indirect (operational or mobile) emissions of either ROG or NO_x that exceed 137 lbs/day
- Generate on-site emissions of PM_{10} exceeding 82 lbs/day
- Generate direct emissions of CO exceeding 550 lbs/day
- Generate direct emissions of sulfur oxides (SO_X) exceeding 150 lbs/day

The MBARD Guidelines state that the 82 lbs/day threshold for construction emissions of PM_{10} is the threshold for both individual and cumulative impacts on local air quality. Projects that are inconsistent with the Air Quality Management Plan (AQMP), described below, would result in a significant cumulative impact related to ozone emissions. A project is consistent with the AQMP if it is consistent with the growth assumptions in the AQMP and is, therefore, accommodated in the emissions inventories.

For impacts related to CO, the MBARD Guidelines indicate that any of the following traffic effects should be assumed to generate a significant CO impact unless CO dispersion modeling demonstrates otherwise:

- Intersections or road segments that operate at level of service (LOS) D or better that would operate at LOS E or F with the Project's traffic
- Intersections or road segments that operate at LOS E or F where the volume-to-capacity ratio would increase 0.05 or more with the Project's traffic
- Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the Project's traffic
- Unsignalized intersections that operate at LOS E or F where the reserve capacity would decrease by 50 or more with the Project's traffic (This criterion is based on the turning movement with the worst reserve capacity.)
- Project would generate substantial heavy-duty truck traffic or generate substantial traffic along urban street canyons or near a major stationary source of CO

In accordance with the California CAA, the MBARD has developed an AQMP (MBARD 2017). The focus of the plan is achieving the 8-hour ozone standard in the region. The plan includes an updated air quality trends analysis; emissions inventory that includes the latest information on stationary, area, and mobile emission sources; and mobile source programs.

Local

Santa Cruz County General Plan and Local Coastal Program

The Conservation and Open Space Element of the County General Plan and Local Coastal Program provides a list of policies and programs intended to improve the air quality of the NCCAB (Santa Cruz County 1994). Key programs and policies from the General Plan are provided below:

- **Policy 5.18.1.** Ensure new development projects are consistent at a minimum with the Monterey Bay Unified Air Pollution Control District [now MBARD] Air Quality Management Plan and review such projects for potential impact on air quality
- **Policy 5.18.7.** Emphasize bicycles and pedestrian modes of transportation rather than automobiles
- **Program E.** Encourage lesser polluting transportation alternatives through the construction of bikeways and the provisions of public transit

Santa Cruz County Code

Chapter 13.16 of the County Code outlines a plan to reduce vehicle miles traveled (VMT). A purpose of the plan is to improve air quality. Additionally, Chapter 16.92, *Environmental Principles and Policies to Guide County Government*, includes a policy to ensure that future development does not create unacceptable levels of air pollution.

City of Capitola General Plan

The Capitola General Plan includes goals, policies, and actions to address air quality in the Open Space and Conservation Element. Goal OSC-3 is to support atmospheric conditions that are clean and healthful, provide maximum visibility, and meet air quality standards. Relevant policies and actions that implement Goal OSC-3 consist of the following (City of Capitola 2019):

- **Policy OSC-3.1, Air Quality Management Plans.** Cooperate with regional agencies—including the Monterey Bay Unified Air Pollution Control District [now MBARD], the Santa Cruz County Regional Transportation Commission, and the Association of Monterey Bay Area Governments—in developing and implementing air quality management plans.
- **Policy OSC-3.2, Development Design.** Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by reducing vehicle trips (e.g. projects with access to transit and projects that provide walking and bicycling amenities), as well as by being energy-efficient.
- **Policy OSC-3.3, Best Management Practices.** Encourage development projects to implement best management practices that reduce air pollutant emissions associated with the construction and operation of the project. open space and conservation element.
- **Policy OSC-3.4, Wood-Burning Fireplace Alternatives.** Encourage low emission alternatives to wood-burning fireplaces in new and significantly renovated residential projects.
- **Policy OSC-3.5, Stationary Sources.** Require that stationary air pollutant emission sources be located more than 500 feet and/or downwind from residential areas and other sensitive receptors.
- **Policy OSC-3.6, Health Risk Assessments.** Use the results of the Health Risk Assessments required by the California Air Toxics "Hot Spots" Act to establish appropriate land use buffer zones around any new sources of toxic air pollutants that may pose substantial health risks.
- **Policy OSC-3.7, Sensitive Receptors.** Ensure that residential development or other projects with sensitive receptors that are proposed within 500 feet of a stationary or mobile air pollutant source do not create any substantial health risks.
- **Policy OSC-3.8, Roadway Materials.** Encourage the use of roadway materials that minimize particulate emissions.

City of Capitola Municipal Code

Chapter 8.54, *Trip Reduction*, of the Capitola Municipal Code includes programs and requirements for employers, landlords, and developers to reduce vehicle traffic in the City. A stated purpose of the chapter is to improve air quality.

3.2.3 Methodology and Significance Thresholds

Methodology

The analysis of air quality impacts associated with the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* follows the guidance and methodologies recommended in the MBARD Guidelines and in Appendix G of the *CEQA Guidelines*.

The Project's construction criteria pollutant emissions are estimated using the California Emissions Estimator Model, Version 2022.1.1.12, and based on construction assumptions provided by the Project engineer. These assumptions include anticipated construction equipment, schedule, and earth movement, which are summarized in Section 2.6, *Project Construction*.

The following scenarios were modeled separately to determine the estimated construction emissions for both the Ultimate Trail Configuration and the Optional Interim Trail. As described in Section 2.4.2, *Optional Interim Trail (Trail on the Rail Line)*, implementing the Optional Interim Trail includes three parts: (1) removal of the rail and construction of the Optional Interim Trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

- Construction of the Ultimate Trail Configuration (the estimates will also be used to represent Part 3 of the Optional Interim Trail, which is construction of the Ultimate Trail Configuration)
- Construction of the Ultimate Trail Configuration with both design options (*Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* and *Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola*), which represents the worst-case construction scenario
- Construction of the Optional Interim Trail Part 1, which includes demolition of the rail and construction the Optional Interim Trail in generally the same location
- Construction of the Optional Interim Trail Part 2, which includes demolition of the Optional Interim Trail and rebuilding of the rail line

Model defaults were assumed for the Ultimate Trail Configuration and Optional Interim Trail schedules of linear construction activities over the estimated construction periods:

- Ultimate Trail Configuration – 48 months
- Ultimate Trail Configuration if Design Options A and/or B are implemented – 55 months
- Optional Interim Trail Part 1 (implementation of the Optional Interim Trail, including rail removal and Optional Interim Trail construction) – 24 Months[2]
- Optional Interim Trail Part 2 (demolition of the Optional Interim Trail and rebuilding of the rail line) – 48 months

As shown in **Table 2-2** and **Table 2-3** in Section 2.6, the Ultimate Trail Configuration would disturb a total of 10.7 acres, the Ultimate Trail Configuration with both design options would disturb 12.02 acres, and the Optional Interim Trail would disturb 13.23 acres during both the implementation of the Optional Interim Trail (Part 1) and removal of the Optional Interim Trail (Part 2). These tables also summarize required earthwork and trail material import. For the purposes of analysis, it is assumed that the amount of material exported for demolishing the rail line (Part 1) would be similar

[2] Construction of the Optional Interim Trail Part 1 is anticipated to take approximately 48 months. The first 24 months of the construction period would consist of completing environmental review, design, and right-of-way process and is not included in construction modeling.

to the amount of material imported for rebuilding the rail line (Part 2). Based on the soil excavation and total export quantities provided in **Table 2-3**, it is assumed that approximately 41,295 cubic yards of material would be exported as part of rail demolition (Part 1) and imported for rebuilding the rail line (Part 2).

As described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, for implementation of Optional Interim Trail (Part 1), if hazardous materials are identified through the planned soil testing, any hazardous soil would be disposed as an appropriate disposal facility. As described in Section 3.7.4, *Project Impact Analysis*, for Impact HAZ-1, appropriate disposal facilities are located in Livermore, approximately 60 miles (respectively) northeast of the Project corridor. The quantity of contaminated material is currently unknown. Therefore, although not anticipated but to provide a conservative analysis, it is assumed that 50% of excavated soils would be disposed locally and that 50% would be disposed outside the area in Livermore. It is similarly assumed that 50% of demolished rail line materials would be disposed locally that and 50% would be disposed in Livermore. Detailed construction modeling assumptions, including construction fleet for each activity, are available in **Appendix E**, Air Quality and GHG Modeling Assumptions.

Operational emissions and CO hotspots are qualitatively evaluated based on the nature of the Project, which provides a transportation alternative to vehicular travel. To determine if the Project would conflict with or obstruct implementation of the 2012–2015 AQMP, the Project is compared to growth assumptions in the County of Santa Cruz and City of Capitola General Plans in accordance with the MBARD Guidelines.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of air quality and the other environmental topics. For air quality, *CEQA Guidelines* Appendix G states that "where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon" in making significance determinations. Thus, the County uses the MBARD Guidelines.

For the purposes of this EIR, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. Conflict with or obstruct implementation of the adopted MBARD AQMP.

B. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. The MBARD Guidelines state that the 82 lbs/day threshold for construction emissions of PM_{10} is the threshold for both individual and cumulative impacts on local air quality. Projects that are inconsistent with the AQMP would result in a significant cumulative impact related to ozone emissions.

C. Expose sensitive receptors to substantial pollutant concentrations.

D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

3.2.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Conflict with or obstruct implementation of the adopted MBARD AQMP.

Impact AIR-1 THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE ADOPTED MBARD AQMP. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

According to the MBARD Guidelines, a project would conflict with or obstruct implementation of the AQMP for the NCCAB if it is inconsistent with the growth assumptions included in the AQMP in terms of population, employment, or regional growth in VMT (MBARD 2008). The growth assumptions inform estimated future emissions, particularly from vehicle use. The Proposed Project does not contain a residential or commercial component and, therefore, would not increase the residential population or employment in the area.

Construction of the Project would generate temporary employment opportunities, which could be filled by the existing workforce in the City, County, or immediately surrounding areas such as the San Francisco Bay Area and Monterey Bay Area. No direct growth inducement is expected to result from Ultimate Trail Configuration implementation.

Additionally, the Project would provide new alternative, non-motorized transportation opportunities that would likely result in a net decrease in regional VMT. The Project does not include new parking lots or other facilities that would encourage new vehicle trips to the Project corridor. Restriping in the Cliff Drive parking area would slightly reduce parking compared to existing conditions. Although some users are anticipated to drive to the trail and may park in existing parking lots or along adjacent roadways, an overall decrease in trips is anticipated, as described in Section 3.12, *Transportation*. As such, the trail would not result in vehicle trips that were not accounted for in regional VMT projections modeled by the Association of Monterey Bay Area Governments.

The AQMP outlines strategies for reducing vehicle-related emissions of ozone precursors. The 2012–2015 AQMP mobile source programs include a focus on direct emissions reduction. That is, the AQMP introduces programs that target consumer vehicle choices, including incentives for purchase or lease of electric vehicles, funding for electric vehicle infrastructure, and voluntary accelerated vehicle retirement programs for older vehicles. These programs focus on the choices of individual consumers. Implementation of the Ultimate Trail Configuration is not related to consumer vehicle choice, and the Ultimate Trail Configuration would have no impact on implementation of these AQMP mobile source programs.

As part of the proposed Monterey Bay Sanctuary Scenic Trail Network, the Ultimate Trail Configuration would improve the regional bicycle and pedestrian network, which would encourage the use of non-motorized transportation, which could lead to more walking and use of bicycles and

other non-motorized modes of travel (e.g., skateboards) in general in the regional mode split. Therefore, the Ultimate Trail Configuration supports the emissions reduction goals of the AQMP.

This impact would be **less than significant** because the Ultimate Trail Configuration would be consistent with AQMP growth assumptions and emissions reduction goals. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The impacts of the *Optional Interim Trail (Trail on the Rail Line)* would be similar to those described above for the Ultimate Trail Configuration because operation of the Optional Interim Trail would be substantially similar as the Ultimate Trail Configuration. The Optional Interim Trail would not result in any population growth and would support the emissions reduction goals of the AQMP. Therefore, as with the Ultimate Trail Configuration, impacts of implementation of the Optional Interim Trail related to air quality plans would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

The impacts of demolishing the Optional Interim Trail would be similar to the construction-related impacts described above for the Ultimate Trail Configuration. This part of the Optional Interim Trail would involve additional construction activities compared to the Ultimate Trail Configuration because it involves both Optional Interim Trail removal and rebuilding of the rail line, but it would not induce population growth or include a permanent source of operation emissions. This part of the Optional Interim Trail would not provide an active transportation facility; therefore, the associated reduction in vehicular emissions would be lost until the Ultimate Trail Configuration is constructed. Similar to the Ultimate Trail Configuration, the Optional Interim Trail would not result in any population growth and would ultimately support the emissions reduction goals of the AQMP. Therefore, as with the Ultimate Trail Configuration, impacts from demolition of the Optional Interim Trail and rebuilding of the rail line related to air quality plans would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as part of the Optional Interim Trail would be similar to that described above for Ultimate Trail Configuration without the Optional Interim Trail. Refer to the discussion above for Impact AIR-1 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant.** No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Implementing the Optional Interim Trail requires three construction periods for each of the three parts. However, the separate construction periods would take place over a longer period of time. As stated in Section 2.6.2, it is estimated that the Optional Interim Trail could be in use for approximately 25 years before it would be demolished, and the Ultimate Trail Configuration would be constructed.

Similar to the Ultimate Trail Configuration, trail operation would not result in population growth, and operation of the Optional Interim Trail would be similar to the Ultimate Trail Configuration and would also support the emissions reduction goals of the AQMP. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would require additional construction and associated emissions compared to the Ultimate Trail Configuration without this design option because of the additional 0.5 mile of new trail and required rehabilitation of the Capitola Trestle Bridge. However, there would be no change in operation as a result of this design option. Operation would be consistent with AQMP growth assumptions and emissions reduction goals. The impact would still be **less than significant** with no mitigation required because no change in operation would occur as a result of this design option.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola (**Appendix A.4**). This design option would require additional construction and associated emissions compared to the Ultimate Trail Configuration without this design option because it requires approximately twice as much retaining wall and an additional staircase and ramp. However, there would be no change in operation as a result of this design option. Operation would be consistent with AQMP growth assumptions and emissions reduction goals. The impact would still be **less than significant** with no mitigation required because no change in operation would occur as a result of this design option.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project impacts related to consistency with the AQMP would be similar with and without the *Optional Interim Trail (Trail on the Rail Line)* because operation of the Project as an active transportation route would be the same with or without the Optional Interim Trail.

Threshold B:	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

Impact AIR-2 THE PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE REGION IS DESIGNATED NON-ATTAINMENT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction and operational impacts of the Ultimate Trail Configuration are addressed separately below.

Construction

The NCCAB is in non-attainment of the state PM_{10} standard. Regarding construction impacts, the MBARD Guidelines state that the 82 lbs/day threshold for construction emissions of PM_{10} is the

threshold for both individual and cumulative impacts on local air quality since the background concentration reflects the collective contribution of PM_{10} from nearby sources.

Construction of the Project would result in the temporary generation of air pollutants from operation of heavy construction equipment and generation of fugitive dust in the construction area and emissions from worker vehicle trips and hauling of import and export materials. Maximum daily emissions levels associated with construction of the Ultimate Trail Configuration are shown in **Table 3.2-5**. The MBARD has only adopted a quantitative threshold for PM_{10} emissions during construction; however, emissions from the other criteria pollutants are also provided for informational purposes.

Table 3.2-5 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Ultimate Trail Configuration

Construction Phase	VOC	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	10	13	<1	1	1
Grading/Excavation	9	77	92	<1	5	3
Drainage Installation and Road Base Construction	7	52	66	<1	3	2
Asphalt and Concrete Installation	2	15	26	<1	2	1
Maximum Daily Emissions	**9**	**78**	**93**	**<1**	**5**	**3**
MBARD Threshold	—	—	—	—	82	—
Significant Impact?	—	—	—	—	No	—

Source: CAPCOA 2022 (CalEEMod Version 2022.1.1.12).

Emission quantities are rounded to the nearest whole number. Exact values are provided in **Appendix E**.

CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; NO_x = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in size; $PM_{2.5}$ = particulate matter 2.5 microns or less in size; SO_x = sulfur oxides; VOC = volatile organic compound

As shown in **Table 3.2-5**, construction of the Ultimate Trail Configuration is estimated to generate a maximum of 5 lbs/day of PM_{10} during construction, which is well below the MBARD's threshold of 82 lbs/day. The MBARD does not identify quantitative thresholds for other criteria pollutants during construction. Construction projects using typical construction equipment, such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders that temporarily emit precursors of ozone (i.e., VOC or NO_x), are accommodated in the emission inventories of state- and federally required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS. However, a project that would use non-typical equipment would have the potential to result in a significant impact related to emissions of VOCs or NO_x. The Ultimate Trail Configuration would employ typical construction equipment, and it would not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories.

Further, as described in Section 2.6 under *General Methodology*, the following best management practices (BMPs) would be implemented during project construction to reduce in compliance with the MBARD's Rule 402 (Nuisance) and *CEQA Guidelines*:

- Limit grading activities during periods of high wind (over 15 mph) or water for dust suppression.
- Water active construction areas as needed based on the activity, soil, and wind exposure.
- Apply soil stabilizers on inactive construction areas (disturbed lands unused for 4 consecutive days).
- Apply native hydro-seed or non-toxic binders to exposed areas after cut/fill operations.
- Maintain at least 2-foot freeboard in haul trucks, and cover all trucks hauling dirt, sand, or other loose materials.

- Place construction staging, equipment staging, and stockpiling on existing disturbed or paved areas near the rail corridor at least 50 feet from drainages or waterways.
- Cover inactive storage piles.
- Install perimeter protection (e.g., silt fence, fiber rolls) to prevent contaminated construction runoff from leaving the construction site and to protect adjacent waterways.
- Implement additional measures identified in the Soil Management Plan to be prepared by the City, County, or their construction contractor.

The Ultimate Trail Configuration would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. Because the emissions would be below the applicable health-based significance thresholds, no adverse health effects would occur. No mitigation is required. Because the Project would be below the PM_{10} threshold and would not require any construction practices that would be atypical, the Ultimate Trail Configuration would not result in cumulatively considerable impact during construction.

Operation

Operation of the Project would consist of a new pedestrian and bicycle facility, which would be used as a form of active transportation. The Project does not include any new parking or other facilities that would generate new vehicular trips. Parking would continue to be available in existing parking lots and along adjacent streets; however, a net decrease in vehicle trips is anticipated, as described in Section 3.12, *Transportation*. Maintenance of the trail would result in occasional criteria pollutant emissions from operation of landscaping or maintenance equipment or repainting or coating of facilities. However, emissions would be minimal on the limited number of days that maintenance would occur, and the Project would likely result in a net decrease in criteria pollutant emissions. Additionally, as described for Impact AIR-1, the Ultimate Trail Configuration would be consistent with the AQMP. Thus, a cumulatively considerable net increase in criteria pollutant emissions would not occur. This impact would be **less than significant.** No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

CONSTRUCTION

Similar to the Ultimate Trail Configuration, construction of the Optional Interim Trail would result in the temporary generation of air pollutants from operation of heavy construction equipment and generation of fugitive dust in the construction area and emissions from worker vehicle trips and hauling of import and export materials. Maximum daily emissions levels associated with removing the rail line and building the Optional Interim Trail are shown in **Table 3.2-6**.

Table 3.2-6 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Optional Interim Trail Part 1 (Rail Removal and Optional Interim Trail Construction)

Construction Phase	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	9	11	<1	1	<1
Grading/Excavation	10	81	94	<1	5	3
Drainage Installation and Road Base Construction	7	56	67	<1	3	2
Asphalt and Concrete Installation	2	17	26	<1	1	1
Maximum Daily Emissions	**10**	**81**	**94**	**<1**	**5**	**3**
MBARD Threshold	—	—	—	—	82	—
Significant Impact?	—	—	—	—	No	—

Source: CAPCOA 2022 (CalEEMod Version 2022.1.1.12).
Emission quantities are rounded to the nearest whole number. Exact values are provided in **Appendix E**.
CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; NO_x = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in size; $PM_{2.5}$ = particulate matter 2.5 microns or less in size; SO_x = sulfur oxides; VOC = volatile organic compound

As shown in **Table 3.2-6**, construction of the Optional Interim Trail Part 1 (rail removal and Optional Interim Trail construction) is estimated to generate a maximum of 5 lbs/day of PM_{10} during construction, which is well below the MBARD's threshold of 82 lbs/day. Maximum daily emissions would be similar to the Ultimate Trail Configuration. Similar to the Ultimate Trail Configuration, implementation of the Optional Interim Trail would also not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories and would include implementation of the BMPs listed in Section 2.6 under *General Methodology*. Implementation of the Optional Interim Trail would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. No mitigation is required.

OPERATION

Operation of the Optional Interim Trail as an active transportation route would be substantially similar to the Ultimate Trail Configuration. This impact would be **less than significant.** No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

CONSTRUCTION

Similar to the Ultimate Trail Configuration, as well as Part 1 of implementing the Optional Interim Trail, Part 2 (demolition of the Optional Interim Trail and rebuilding of the rail line) would result in the temporary generation of air pollutants from operation of heavy construction equipment, fugitive dust in the construction area, and emissions from worker vehicle trips and hauling of import and export materials. Maximum daily emissions levels associated with demolition of the Optional Interim Trail and rebuilding of the rail line are shown in **Table 3.2-7**.

Table 3.2-7 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Optional Interim Trail Part 2 (Demolition of Optional Interim Trail and Rebuilding of Rail Line)

Construction Phase	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	<1	3	5	<1	1	<1
Grading/Excavation	2	13	27	<1	1	1
Drainage Installation and Road Base Construction	2	11	23	<1	1	<1
Asphalt and Concrete Installation	1	9	16	<1	1	<1
Maximum Daily Emissions	**2**	**28**	**23**	**<1**	**1**	**1**
MBARD Threshold	—	—	—	—	82	—
Significant Impact?	—	—	—	—	No	—

Source: CAPCOA 2022 (CalEEMod Version 2022.1.1.12).

Emission quantities are rounded to the nearest whole number. Exact values are provided in **Appendix E**.

CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; NO_x = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in size; $PM_{2.5}$ = particulate matter 2.5 microns or less in size; SO_x = sulfur oxides; VOC = volatile organic compound

As shown in **Table 3.2-7**, demolition of the Optional Interim Trail and rebuilding of the rail line is estimated to generate a maximum of 1 lb/day of PM_{10} during construction, which is well below the MBARD's threshold of 82 lbs/day and slightly less than the Ultimate Trail Configuration and Optional Interim Trail Part 1. Similar to the Ultimate Trail Configuration, demolition of the Optional Interim Trail and rebuilding of the rail line would not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories and would include implementation of the BMPs listed in Section 2.6 under *General Methodology*. Therefore, demolition of the Optional Interim Trail and rebuilding of the rail line would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. No mitigation is required.

OPERATION

Demolition of the Optional Interim Trail and rebuilding of the rail line would have **no impact** from operation because there would be no trail and no sources of operational emissions.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration and provided in **Table 3.2-5**. Refer to the discussion for Impact AIR-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. Emissions in **Table 3.2-5** are conservative because increased emissions standards for construction equipment would likely reduce maximum daily emissions if the Ultimate Trail Configuration were to occur at the later date. Following construction, operation would be identical to the Ultimate Trail Configuration addressed above. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Total construction days would increase with implementation of all three parts of the Optional Interim Trail compared to the Ultimate Trail Configuration without the Optional Interim Trail. However, maximum daily construction emissions would not exceed the MBARD thresholds during any phase of construction. Additionally, the separate construction periods would take place over a longer period of

time. As stated in Section 2.6.2, it is estimated that the Optional Interim Trail could be in use for approximately 25 years before it is demolished and the Ultimate Trail Configuration is constructed.

Operation of the Project with the Optional Interim Trail would be substantially similar as the Ultimate Trail Configuration and would not result in significant operational emissions. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would require additional ground disturbance and material movement compared to the Ultimate Trail Configuration without this option because of the additional 0.5-mile of new trail, as well as material movement required for rehabilitation of the Capitola Trestle Bridge. Maximum daily emissions levels associated with the Ultimate Trail Configuration including both Design Options A and B (for a more conservative estimate) are shown in **Table 3.2-8**.

Table 3.2-8 Estimated Construction Daily Maximum Air Pollutant Emissions (lbs/day) – Implementation of Ultimate Trail Configuration with Design Options A and B

Construction Phase	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Grubbing/Land Clearing	1	9	12	<1	1	1
Grading/Excavation	9	77	92	<1	6	3
Drainage Installation and Road Base Construction	7	52	66	<1	3	2
Asphalt and Concrete Installation	2	15	26	<1	2	1
Maximum Daily Emissions	**10**	**82**	**94**	**<1**	**6**	**3**
MBARD Threshold	—	—	—	—	82	—
Significant Impact?	—	—	—	—	No	—

Source: CAPCOA 2022 (CalEEMod Version 2022.1.1.12).
Emission quantities are rounded to the nearest whole number. Exact values are provided in **Appendix E**.
CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; NO_x = oxides of nitrogen; PM_{10} = particulate matter 10 microns or less in size; $PM_{2.5}$ = particulate matter 2.5 microns or less in size; SO_x = sulfur oxides; VOC = volatile organic compound

As shown in **Table 3.2-8**, construction of the Ultimate Trail Configuration with both design options is estimated to generate a maximum of 6 lbs/day of PM_{10} during construction, which is slightly increased compared to the Ultimate Trail Configuration with the design options, but well below the MBARD's threshold of 82 lbs/day. Similar to the Ultimate Trail Configuration, implementation of this design option would also not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories and would include implementation of the BMPs listed in Section 2.6 under *General Methodology*. Implementation of this design option would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This design option would require additional material movement compared to the Ultimate Trail Configuration without this option because it requires approximately twice as much retaining wall and an additional staircase and ramp. Maximum daily emissions levels associated with the Ultimate Trail Configuration, including both Design Options A and B (for a more conservative estimate), are shown in **Table 3.2-8**.

As shown in **Table 3.2-8**, construction of the Ultimate Trail Configuration with both design options is estimated to generate a maximum of 6 lbs/day of PM_{10} during construction, which is well below the MBARD's threshold of 82 lbs/day. Similar to the Ultimate Trail Configuration, implementation of this design option would also not require any non-typical construction equipment or techniques that have not been accounted for in the NCCAB emissions inventories and would include implementation of the BMPs listed in Section 2.6 under *General Methodology*. Implementation of this design option would result in a **less than significant** impact related to maximum daily criteria pollutant emissions during construction. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would result in more construction-related emissions overall because there would be two additional construction periods. However, the Project with or without the Optional Interim Trail would not result in significant construction or operational emissions. This impact would be **less than significant**. No mitigation is required.

Threshold C:	Expose sensitive receptors to substantial pollutant concentrations.

Impact AIR-3 THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Residences are located along the length of the Project corridor. As such, Ultimate Trail Configuration construction activities would occur near sensitive receptors and potentially expose these receptors to short-term criteria pollutant emissions.

The pollutant of primary concern during construction is diesel particulate matter. However, as shown in **Table 3.2-5**, construction-related emissions associated with the Ultimate Trail Configuration would be minimal, as indicated by compliance with the PM_{10} threshold ($\leq$82 lbs/day). Emissions of PM_{10} would be well below the MBARD threshold during all construction activities. The MBARD threshold for PM_{10} is established for regional compliance with the state and federal AAQS, which are intended to protect public health. Because the emissions for the Ultimate Trail Configuration are below the applicable MBARD threshold, it would not contribute to regional long-term health impacts related to non-attainment of the AAQS.

The MBARD has not established thresholds for the remaining pollutants; however, construction emissions are minimal. The NCCAB is in attainment or unclassified for the other criteria pollutants. Additionally, the project construction zone would be linear. An individual existing receptor would be

exposed to project construction for only a few days during each construction activity. The Project's short-term, temporary, and minimal construction emissions for the Ultimate Trail Configuration would not result in any regional non-attainment of any pollutant that could result in health impacts.

As discussed in Section 3.2.1, *Existing Conditions*, the criteria pollutants also have the potential to result in health impacts, such as headaches or throat irritation, at the time of exposure. However, individual exposure levels and individual reactions to exposure to pollutant emissions from the Project cannot be feasibly determined. As previously described, the concentration of criteria pollutants at any given time depends on a variety of factors, including ambient traffic levels and other emissions sources, weather conditions that affect pollutant formation and dissipation, and time of day or year. Additionally, concentrations of ozone precursors along the Project corridor do not indicate levels of ozone exposure along the Project corridor because ozone is not necessarily formed there, as NO_x and VOC may be carried away before forming ozone (USEPA 2018).

Following construction, the Ultimate Trail Configuration would not include any stationary sources or air pollutants, such as an exhaust pipe at a factory, which is a fixed emissions source. Additionally, the Ultimate Trail Configuration would not result in new vehicle trips and would not contribute to any potential CO hotspot. As discussed under Impact AQ-2, Project operational emissions of all criteria pollutants would be minimal. Therefore, the Project would not significantly contribute to potential regional health impacts related to AAQS non-attainment. Operation of the Ultimate Trail Configuration would not expose sensitive receptors to substantial pollutant concentrations. This impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

As with the Ultimate Trail Configuration, the closest sensitive receptors to the Optional Interim Trail are residences located adjacent to the Project corridor. Similar to the Ultimate Trail Configuration, construction emissions from implementation of the Optional Interim Trail would be below the MBARD threshold for PM_{10} and would not contribute to regional long-term health impacts related to non-attainment of the AAQS. Construction of the Optional Interim Trail would also be linear, and individual receptors would be exposed to construction for only a few days during each construction activity. Short-term, temporary, and minimal construction emissions for the Optional Interim Trail would not result in any regional non-attainment of any pollutant that could result in health impacts.

Following construction, operation of the Optional Interim Trail would be substantially similar as the Ultimate Trail Configuration and would not include any stationary sources of air pollutants or contribute to any potential CO hotspot. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Potential impacts related to sensitive receptors during construction would be similar to the Ultimate Trail Configuration and Optional Interim Trail Part 1 (rail removal and Optional Interim Trail construction) because a similar construction fleet and activities would be required. Refer to the discussions above. Following these construction activities, Optional Interim Trail Part 2 (demolition of Optional Interim Trail and rebuilding of the rail line) would not operate as an active transportation corridor because there would be no trail and it would not include any stationary sources of air pollutants or contribute to any potential CO hotspot. This impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for Ultimate Trail Configuration without the Optional Interim Trail. Refer to the discussion above for Impact AIR-3 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

When considering all three parts of implementing the Optional Interim Trail, it requires an additional 96 months of construction and the associated emissions reported in **Table 3.2-6** and **Table 3.2-7**. Overall sensitive receptor exposure to construction emissions would increase. However, construction would take place over decades, and emissions during all phases would be well below MBARD standards. Operation of the trail with the Optional Interim Trail (Part 1) and the Ultimate Trail Configuration (Part 3) would not expose sensitive receptors to any pollutant sources. No operational impact would occur between demolition of the Optional Interim Trail and the Ultimate Trail Configuration (Part 2). This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Total sensitive receptor exposure to air pollutants would increase with this design option because total construction would increase by 6 months and because there are additional sensitive receptors in this 0.5-mile section. However, the emissions would still be less than significant. Operational impact would be substantially similar because no change in operation emissions would occur as a result of use of a trail on the rail line compared to use of existing facilities in this area. This impact would still be a **less than significant** impact with no mitigation required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Total sensitive receptor exposure to air pollutants would increase with this design option because total construction would increase by 1 month, but the emissions would still be less than significant. Following construction, the impact would be substantially similar because no change in operation would occur as a result of this design option. This impact would still be a **less than significant** impact with no mitigation required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would result in more sensitive receptor exposure to air pollutants than without the Optional Interim Trail because the Optional Interim Trail requires two additional construction periods and there are more sensitive receptors along the 0.5-mile section of rail corridor between Opal Street and Monterey Avenue. However, although total construction would increase, but the emissions would still be less than significant. Operation of the Project would

be substantially similar with or without the Optional Interim Trail because the anticipated number of trail users is the same. This impact would be **less than significant**. No mitigation is required.

Threshold D:	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Impact AIR-4 THE PROJECT WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Operation of heavy equipment during construction has the potential to result in odors from diesel construction equipment exhaust. However, as shown in **Table 3.2-5**, emissions of sulfurous gases (SO_x), the main source of odors from construction equipment, would be extremely limited during construction (MBARD 2008). Additionally, due to the linear nature of the Project, very few existing receptors would be located within a few hundred feet of the active construction area on any given day.

Following construction, the Project would accommodate pedestrians and bicyclists, who typically do not generate odors. As described in Section 2.4, *Project Characteristics*, the trail would extend past several areas with existing trash receptacles, including Cliff Drive Plaza/Capitola Village. Additional trash receptacles, including recycling receptacles and dog waste stations, would be added at several roadway crossings, as well as Cliff Drive Plaza and the Park Avenue/Coronado Street ramp. Trash receptacles would be emptied, and waste collection bags would be restocked regularly as part of trail maintenance. As a result, odors from animal waste would be minimal.

Therefore, the Ultimate Trail Configuration would not create objectionable odors affecting a substantial number of people. The impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Potential odor impacts related to construction Optional Interim Trail Part 1 (rail removal and Optional Interim Trail construction) and Optional Interim Trail operation would be similar to the Ultimate Trail Configuration because a similar construction fleet would be required, and operation would be substantially similar with the same estimated number of trail users. Refer to the discussion for the Ultimate Trail Configuration above.

Implementation of the Optional Interim Trail Part 1 would not create objectionable odors affecting a substantial number of people. The impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Potential odor impacts related to construction of Optional Interim Trail Part 2 (demolition of the Optional Interim Trail and rebuilding of the rail line) would be similar to the Ultimate Trail Configuration and Optional Interim Trail Part 1 (rail removal and trail construction) because a similar construction fleet would be required. Refer to the discussion above. This part of the Optional Interim Trail would not include operation as an active transportation corridor and thus would not include any operational sources of odor.

Demolition of the Optional Interim Trail and rebuilding of the rail line (Optional Interim Trail Part 2) would not create objectionable odors affecting a substantial number of people. The impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration without the Optional Interim Trail. Refer to the discussion above for Impact AIR-4 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

An additional 96 months of construction would be required with implementation of the Optional Interim Trail. Total time of sensitive receptor exposure to construction odors would increase. However, daily odors would not increase as a result of Optional Interim Trail implementation because construction would take place over decades, and emissions during all phases would be minimal. None of the parts of the Optional Interim Trail would expose sensitive receptors to any significant sources of odor during operation. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Total odor exposure would increase with this design option because total construction would increase by 6 months and because there are additional sensitive receptors in this 0.5-mile section. However, the emissions would still be less than significant. Following construction, this impact would be substantially similar because no change in operation would occur as a result of this design option, and it would still be a **less than significant** impact with no mitigation required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Total odor exposure would increase with this design option because total construction would increase by 1 month. Exposure would be slightly increased at receptors north of the alignment but slightly reduced to receptors on the southern side. However, emissions at all receptors would still be less than significant. Following construction, this impact would substantially similar because no change in operation would occur as a result of this design option and it would still be a **less than significant** impact with no mitigation required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

Construction of the Project with the Optional Interim Trail would result in more potential sensitive receptor exposure to odor than without the Optional Interim Trail because the Optional Interim Trail requires two additional construction periods and because there are more additional sensitive receptors along the 0.5-mile section of rail corridor between Opal Street and Monterey Avenue. However, potential odors with or without the Optional Interim Trail would be minimal. Operation of the Project would be substantially similar with or without the Optional Interim Trail. This impact would be **less than significant**. No mitigation is required.

3.2.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
AIR-1. The Project would not conflict with or obstruct implementation of the adopted MBARD AQMP.	LTS	LTS Similar	LTS Similar	LTS Similar
AIR-2. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment.	LTS	LTS Similar	LTS Similar	LTS Similar
AIR-3. The Project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	LTS Similar	LTS Similar	LTS Similar
AIR-4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	LTS Similar	LTS Similar	LTS Similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.
The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.
The impacts of Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.
NI = No Impact
LTS = Less than Significant without Mitigation
LTSM = Less than Significant with Mitigation
SU = Significant and Unavoidable
MM = Mitigation Measure

This page intentionally left blank.

3.3 Biological Resources

This section evaluates potential impacts relating to biological resources within and nearby the Project corridor. This analysis is based on observations made during a series of field surveys between June 2022 and July 2023, and a review of available literature and data for known and potentially occurring biological resources. This section includes an analysis of sensitive habitats, including aquatic resources, and special-status plants and wildlife that may be impacted by the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)*. **Table 3.3-1** presents a summary of potential impacts on biological resources. The analysis was conducted by qualified biologists[1] with EcoSystems West Consulting Group (refer to Section 6.1, *List of Preparers*), and supporting documentation is included in **Appendix F**.

Table 3.3-1 Summary of Project Impacts on Biological Resources[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.[b]	Potentially Significant	BIO-1a, BIO-1b BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
BIO-2. The Project could adversely affect sensitive fish species.[c]	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation
BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation
BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	Potentially Significant	BIO-1a BIO-4 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-5. Project construction could adversely affect sensitive and common roosting bat species that use coast live oak, riparian, and other trees along the alignment.	Potentially Significant	BIO-1a BIO-5 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.	Potentially Significant	BIO-1a BIO-6 BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Less than Significant with Mitigation
BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats.	Potentially Significant	BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Less than Significant with Mitigation

[1] A qualified biologist shall have a minimum of 5 years of academic training and professional experience in biological sciences and related resource management activities with a minimum of 2 years conducting surveys for each species that may be present within the study area. The biologists who evaluated the study area possessed considerably more experience with biological resources, CDFW and USFWS standards and protocols, have been authorized on previous projects, and are trained and recognized experts on specific resources.

Table 3.3-1 Summary of Project Impacts on Biological Resources[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
BIO-9. The Project would interfere with wildlife movement.[b]	Potentially Significant	BIO-1a BIO-7a, BIO-7b, BIO-7c BIO-8a, BIO-8b	Significant and Unavoidable
BIO-10. The Project would conflict with policies and ordinances protecting trees, including the County of Santa Cruz Significant Tree Ordinance and City of Capitola Community Tree Protection and Management Ordinance.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

[b] The impact was determined Potentially Significant, pending the assessment of feasible mitigation to reduce the impact to a less than significant level. Mitigation has been identified to reduce the impact, but it cannot be reduced to a less than significant level. Therefore, the impact is determined Significant and Unavoidable after mitigation.

[c] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

ESHA = Environmentally Sensitive Habitat Area

3.3.1 Existing Conditions

Regional Setting

The Project study area[2] is situated within the urbanized unincorporated Live Oak and Aptos communities in Santa Cruz County, and the City of Capitola. The County of Santa Cruz and City of Capitola communities are characterized by urban, light industrial, and residential development. The intersecting drainages and associated open space and parks provide fragmented and disjunct naturalized areas, that serve as refugia for a multitude of plants and wildlife species.

The alignment is positioned on the first marine terrace above the Pacific Ocean within the Santa Cruz Hydrologic Area (HA) and San Lorenzo and Soquel Hydrologic Sub-Areas (HAS) (CIWMC 2004). This portion of the Pacific Ocean is part of the Monterey Bay National Marine Sanctuary. The regional aquatic features vary in their origin. Soquel Creek has headwaters in the coastal Santa Cruz Mountains north of Soquel Village and southeast of Loma Prieta Mountain. Several smaller watercourses including Rodeo Gulch, Borregas Creek and its tributaries (Stream 633 and an unnamed drainage, herein Flatiron Creek) originate in the lower coastal foothills or on the first or second marine terraces of the urbanized cityscape. Several of these ephemeral or intermittent features, including Stream 472, Escalona Gulch (Stream 470), an unnamed drainage originating southwest of Cabrillo College (herein New Brighton Creek), and Tannery Gulch, are fragmented with some reaches conveyed below the surface in underground pipes and culverts, or in channelized ditches. In this primarily urbanized setting, somewhat degraded natural vegetation communities are present including coast live oak woodland and forest, coastal terrace prairie (native grassland), arroyo willow and mixed riparian forest, coastal scrub, mixed evergreen forest, and non-native

[2] The Project study area was determined to be the Project footprint, including potential temporary and permanent impacts, and an approximately 150-foot buffer on each side of the corridor. We also conducted surveys of aquatic features (creeks and wetlands) up to 300 feet up and downstream of the Project corridor, where accessible.

grassland. Non-native forest, which supports roosting monarch butterflies, and areas landscaped with ornamental vegetation are also present throughout the urbanized areas of the City of Capitola and unincorporated Santa Cruz County. The mosaic of aquatic features, native and naturalized vegetation communities, and non-native forest provides limited but highly valuable habitat for resident and migratory wildlife. Several designated open space areas within urban Santa Cruz County and Capitola support special-status plants and wildlife, and management plans have been developed for some of these areas to protect sensitive biotic resources.

The Mediterranean climate of the region supports intermittent precipitation from late fall through spring with approximately 25–30 inches of average annual precipitation. Winters are typically cool, and summers often include periods of persistent fog and high clouds, typically clearing by early afternoon. The Santa Cruz area typically has more than 300 days of sunshine and average daytime temperatures range from 13 to 26 degrees Celsius (56–79°F).

Project Corridor Setting

Overview

The Project corridor extends through the unincorporated community of Live Oak beginning at 17th Avenue, passing through the City of Capitola and ending in Aptos at State Park Drive. The rail corridor varies between level, depressed, and elevated relative to the immediate surroundings. The corridor is situated almost entirely within areas of urban, light industrial, and residential development, with a sizable portion of open space associated with New Brighton State Beach, including the Porter-Sesnon open space element immediately east of the New Brighton campground. In addition, the alignment supports several distinct naturalized areas along the aquatic features and associated habitats that intersect the alignment, including (from west to east): Rodeo Gulch, Soquel Creek, Escalona Gulch (Stream 470), Tannery Gulch, New Brighton Creek, Borregas Creek and its tributaries, Stream 633, and Flatiron Creek. In many locations, patchy coast live oak woodland and forest, as well as non-native forest line the corridor. Together, these areas provide habitat for the limited sensitive biological resources that are present along or near the alignment.

Literature Review

To obtain baseline knowledge of the biological resources along the Project corridor, qualified biologists reviewed relevant studies and information sources prior to conducting their field surveys. Based on the literature review, the biologists compiled a list of special-status plants and wildlife species with potential to occur along the proposed alignment and in the vicinity[3] (**Appendix F.1**). The following relevant studies and information are presented by name or title of the source:

- Monterey Bay Sanctuary Scenic Trail Network Master Plan Draft Environmental Impact Report (EIR), Final EIR (RTC 2013a, 2013b), and Final EIR Addendum (RTC 2014)
- Rail Trail Segment 8 and 9 EIR
- Federally listed, proposed, and candidate species, designated critical habitat from U.S. Fish and Wildlife Service (USFWS) (2023a, 2023b, 2023c) and National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (Fisheries) (NOAA Fisheries 2005,

[3] Following CNDDB and other standard survey protocols, the biologists reviewed distribution information for sensitive species to determine which species would have the potential to occur in or near the alignments and which species could be eliminated from consideration, based on vegetation and habitat types in the alignments and surroundings, locations of known occurrences, dispersal distances (for wildlife), and professional knowledge of the region and local sensitive species.

2006); and from published Federal Registers, including an official species list for the Project (**Appendix F.2**)
- State-listed endangered, threatened, and rare plants (CDFW 2023a) and animals (CDFW 2023b)
- California Department of Fish and Wildlife (CDFW) Natural Communities (CDFW 2023c)
- USFWS National Wetlands Inventory (USFWS 2023d)
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (Tibor 2001; CNPS 2023)
- Soil Survey of Santa Cruz County (Bowman and Estrada 1980; NRCS 2023)
- Local and regional floras (Thomas 1961; Munz and Keck 1973; Hickman 1993; Baldwin et al. 2012; Neubauer 2013)
- CDFW Species of Special Concern (Bolster 1998; Shuford and Gardali 2008; Moyle et al. 2015; Thomson et al. 2016; CDFW 2023d; CDFW CNDDB 2023)
- CDFW Fully Protected Animals (CDFW 2023e)
- CDFW Special Animals (CDFW CNDDB 2023)
- Birds of Conservation Concern (USFWS 2021)
- Western Bat Working Group (WBWG) (WBWG 2017)
- International Union for Conservation of Nature (IUCN) (2022)
- The Xerces Society of Invertebrate Conservation (Xerces Society) (2023a, 2023b)
- eBird database (eBird 2023)
- California Herps (Nafis 2023)
- Records and maps of occurrences of special-status species and sensitive natural communities for the USGS 7.5-minute Felton, Laurel, Loma Prieta, Santa Cruz, Soquel, and Watsonville West quadrangles maintained by the CNDDB of CDFW (CDFW 2023f) and by the Biogeographic Information and Observation System (CDFW 2023g)
- Experts on specific local biological resources (Allaback 2016; Alley 2023; Dayton 2023; Heady 2018; Hyland 2023; Rinkert 2022; Steiner 2018, 2023)
- County of Santa Cruz 1994 General Plan and Local Coastal Program (1994)
- City of Capitola General Plan; and Local Coastal Program (2019)

Field Surveys

Qualified biologists conducted field surveys of the study area during summer/fall 2022 and spring/summer 2023. **Appendix F.3** includes a list of all vascular plant species observed during 2023 surveys. **Appendix F.1** includes narratives for special-status plant and wildlife species that are known to occur or have potential to occur. **Appendix F.4** lists avian species observed by habitat.

The purpose of field surveys was to:

- Characterize habitat types, including sensitive habitats
- Conduct an assessment of aquatic resources, including wetlands
- Conduct a floristic-level rare plant survey for the potential species listed in **Appendix F.1**
- Assess the alignment for common and sensitive wildlife species and potential habitat (**Appendix F.1**)
- Conduct a preliminary assessment of wildlife movement along and across the alignments

The biologists conducted field surveys along the Project corridor on multiple occasions, using the intuitive control method[4] for rare plant surveys, and focusing on known and potential habitat for

[4] Intuitive control method is a complete survey of habitat with the highest potential for supporting rare plants and a lesser survey of those areas less likely to support rare plants.

sensitive wildlife resources. The biologists noted the presence of sensitive natural resources, potential habitat and habitat features, and wildlife sign[5] in field journals, and they documented occurrences using resource-grade GPS with sub-meter accuracy and with high-resolution photographs.

BOTANY/AQUATIC RESOURCES

In April and July 2023, a qualified botanist identified all vascular plant species in identifiable condition to species or infraspecific taxon, regardless of their regulatory status (**Appendix F.3**). The identifications were facilitated by the use of keys and descriptions (Thomas 1961; Munz and Keck 1973; Hickman 1993; Baldwin et al. 2012). The timing of the surveys was adequate for identification of all special-status plant species listed in **Appendix F.1**.

Following the field surveys, the biologist characterized and mapped all habitat types occurring within the study area, and recorded data on physiognomy, dominant and characteristic species, topographic position, slope, aspect, substrate conditions, hydrologic regime, and evident disturbance for each habitat type. Classification of the habitat types on the site was based on field observations and the generalized plant community classification schemes (Holland 1986; Sawyer et al. 2009; CDFW 2023c).

The aquatic resources assessment was completed using protocols outlined in the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008). The USACE defines three criteria to delineate wetlands: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. Because the proposed alignment occurs in the Coastal Zone, wetlands using the California Coastal Act's "one parameter" criteria were also identified and mapped in the field using resource-grade GPS technology. A formal aquatic resources delineation will be completed prior to preparing regulatory permit applications for the Project.

WILDLIFE

The Project corridor was evaluated for the presence of the special-status wildlife species listed in **Appendix F.1** including invertebrates, fish, amphibians, reptiles, birds, and mammals.

For invertebrates, the biologists identified potential habitat for the federal candidate monarch butterfly, listed as endangered by the IUCN and a candidate species for listing under the federal Endangered Species Act (ESA).

For fish species, biologists evaluated the occupied drainages (based on distribution information) that intersect the Project corridor to determine if the Project had the potential to impact the federally listed tidewater goby (*Eucyclogobius newberryi*), federally listed steelhead (*Oncorhynchus mykiss*) and CDFW Species of Special Concern Pacific lamprey (*Entosphenus tridentatus*), or their habitat. Sensitive amphibian and reptile habitats were evaluated to determine if suitable habitat features were present.

For avian species, avian biologists conducted a reconnaissance bird survey to determine which birds might use the Project corridor, documented all avian species observed (**Appendix F.4**), noted breeding behavior, and documented nest sites. A comprehensive breeding bird survey was not conducted because nest sites for most avian species are dynamic, and nest locations vary from year to year. Biologists also reviewed eBird (2023) for other known occurrences of sensitive avian species.

[5] Wildlife sign includes trails, tracks, scat, vocalizations, food caches, or other indications of presence.

Finally, the assessment included an evaluation of potential habitat for sensitive mammals. For San Francisco dusky-footed woodrat (Neotoma fuscipes annectens), the Project corridor was examined for woodrat houses, woodrat sign, and recent activity. During night surveys, observations of individual woodrats were noted. All observations were documented using GPS. For sensitive and common bat species, biologists examined trees and bridges for bat roost features (such as senescent limbs, hollows, crevices, holes, and furrowed bark) or signs of bat presence (such as guano) and conducted 4 nights of emergence surveys with acoustic monitoring to record call signatures of bats. Wildlife movement along the Project corridor was assessed by looking for and documenting observations of individual species and sign, including trails, tracks, scat, vocalizations, and/or food caches, and reviewing CDFW's collection of maps and data that identify wildlife corridors and assess connectivity (CDFW 2023g).

Floristic Inventory and Habitat Characterization

Using the methodology described above, a total of 207 species of vascular plants were observed within the study area. A complete species list of plants encountered during the focused special-status plant surveys is presented in **Appendix F.3**. Of these species, 73 are identified as native to the study area, while the remaining 134 species are considered either introduced or naturalized. A total of 37 non-native plants encountered within the study area are considered to be invasive species with "moderate to high" potential for substantial or severe ecological impacts on physical processes, plant and animal communities, and vegetation structure by the California Invasive Plant Council (Cal-IPC) (2023). Of these invasive species, 10 are graminoids (grass and grass-like plants) with very limited potential for eradication and control using conventional means (e.g., herbicides, mowing, hand pulling, goat grazing) due to their tolerance of disturbance and/or ability to produce an extensive annual seedbank. No special-status plants were identified within the study area nor are any expected to occur[6].

Fifteen predominant habitat types were identified in the study area, and each type is discussed in greater detail below. **Figures 3.3-1** and **3.3-1a** through **3.3-1h** illustrate the extent of habitat types and terrestrial vegetation communities in the study area. **Table 3.3-2** shows acreages for each of these communities in the study area and along the trail alignments for the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)*.

Vegetation classification was based on A Manual of California Vegetation, Second Edition (Sawyer et al. 2009) and Preliminary Descriptions of the Terrestrial Communities of California (Holland 1986); but has been modified as needed to accurately describe the existing habitats observed on site, including habitat types not presented in the literature (e.g., ruderal) and areas not supporting naturally occurring vegetation (e.g., sandy beach, developed, ornamental/landscaped).

[6] One special-status plant species, the Santa Cruz tarplant (*Holocarpha macradenia*) (Federal Threatened, State Endangered, CRPR List 1B.1) (USFWS 2000) was identified at Twin Lakes State Beach immediately south of the rail corridor in Segment 9 of the proposed Coastal Rail Trail to the west. This small, disjunct population is located in degraded coastal terrace prairie grassland, immediately south of a narrow band of coast live oak and Monterey cypress trees abutting the rail corridor and north of a heavily used dirt walking path within Twin Lakes State Beach Park. Twin Lakes State Beach is very similar to New Brighton State Beach in its proximity to the Pacific Ocean on the first marine terrace, as well as edaphic (soil) properties, vegetation communities, and plant species present. Nevertheless, there are no known occurrences of Santa Cruz tarplant recorded from the Porter-Sesnon open space element of New Brighton State Beach or elsewhere along Segments 10 and 11 of the proposed rail trail.

Table 3.3-2 Habitat Types in Rail Trail Segment 10/11 Study Area and Project Footprint (acres)[a]

Habitat Type	Project Study Area[b]	Project Footprint[c]				
		Ultimate Trail Configuration (Trail Next to Rail Line)	Grove to Coronado Inland Option	Cliff to Park Capitola Trestle Option	Optional Interim Trail (Trail on the Rail Line)[d]	
					Part 1[e]	Part 1+3[f]
Coast Live Oak Woodland and Forest	**10.64**	**1.90**	**1.90**	**2.12**	**1.63**	**2.76**
Mixed Evergreen Forest	7.17	0.19	0.19	0.19	0.09	0.26
Mixed Riparian Forest	**12.03**	**0.42**	**0.42**	**0.42**	**0.31**	**0.63**
Arroyo Willow Riparian Forest	**0.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Coastal Scrub	**2.48**	**0.14**	**0.14**	**0.14**	**0.02**	**0.15**
Palustrine Emergent Wetland	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**
Palustrine Scrub-Shrub Wetland	**1.19**	**0.38**	**0.35**	**0.38**	**0.02**	**0.41**
Aquatic	**2.11**	**0.05**	**0.05**	**0.05**	**0.00**	**0.00**
Coastal Terrace Prairie	**2.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Non-Native Grassland	1.91	0.04	0.04	0.04	0.05	0.04
Non-Native Forest	34.97	5.26	4.97	5.32	5.78	8.02
Sandy Beach/Mudstone	**2.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Ornamental/Landscaped	4.88	0.79	0.79	0.79	0.82	0.92
Developed	128.82	14.33	14.57	14.95	16.97	17.98
Ruderal	11.48	4.03	3.89	4.30	2.80	4.64
Total	**222.55**	**27.53**	**27.31**	**28.70**	**28.49**	**35.82**

[a] Sensitive Habitat Types in Bold.

[b] The Project study area was determined to be the Project footprint, including potential temporary and permanent impacts, and an approximately 150-foot buffer on each side of the corridor. We also conducted surveys of aquatic features (creeks and wetlands) up to 300 feet up and downstream of the Project corridor, where accessible.

[c] The area evaluated is the Project footprint, including temporary and permanent impacts (the outermost boundary of Ultimate Trail activities).

[d] Part 2 of the Optional Interim Trail would occur entirely within the developed footprint of the rail line; therefore, habitat types for Part 2 are not listed in **Table 3.3-2**.

[e] Part 1 is implementation of the Interim Trail, which includes removal of the rail track and ties and construction of the Interim Trail on the rail bed. Part 2 is demolition of the Interim Trail and rebuilding of the rail line.

[f] Part 3 is construction of the Ultimate Trail Configuration, which would be the same as described for *Ultimate Trail Configuration (Trail next to Rail Line)* plus the Optional Interim Trail.

COAST LIVE OAK WOODLAND AND FOREST

In the study area, coast live oak woodland and forest closely corresponds to the *Quercus agrifolia* Alliance (71.060.00; G5/S4) and Association (71.060.02; G5/S5) (Sawyer et al. 2009; CDFW 2023c), and to the Central Coast phase of the coast live oak forest type (Holland 1986). The overstory consists of almost entirely of coast live oak (*Quercus agrifolia*) with a patchy herbaceous understory dominated by the non-native, weedy vines Cape ivy (*Delairea odorata*), Canary ivy (*Hedera canariensis*), and English ivy (*H. helix*). Other common understory associates include poison oak (*Toxicodendron diversilobum*), Pacific blackberry (*Rubus ursinus*), Himalayan blackberry (*Rubus*

armeniacus), brome grasses (*Bromus diandrus, B. hordeaceus*), slender wild oat (*Avena barbata*), and veldt grass (*Ehrharta erecta*).

Approximately 10.64 acres of coast live oak woodlands and forests occur in Segments 10 and 11 of the study area between 17th Avenue and State Park Drive. Along the study area, patchy to contiguous coast live oak woodland and forest intergrades with mixed riparian forest associated with Rodeo Gulch, and coastal terrace prairie and non-native grassland habitats in New Brighton State Beach. The physiognomic (structural) orientation of this habitat type ranges from scattered trees and patchy aggregations to dense closed canopy forest. Coast live oak forests and woodlands in the study area are mostly fragmentary or planted, occurring in linear strips along the rail corridor abutting urbanized development.

In several areas, the coast live oak forest and/or woodland extends into naturalized areas, including private residential property along the rail corridor, as well as public open space in the vicinity of New Brighton State Beach Campground, Porter-Sesnon open space element, and Borregas Creek. These contiguous, notable stands are situated on the relatively flat, first marine terrace, which receives approximately 25–30 inches of annual rainfall and is subject to relatively cool, foggy summers. Because coast live oak trees are the predominant native (non-planted) upland tree species in this portion of central Santa Cruz County, solitary oak trees greater than 4 inches diameter at breast height (DBH) are mapped as a component of the coast live oak woodland and forest habitat type for the purposes of analysis and impact calculations for the Project.

Where mature forest exists, the coast live oak woodlands/forests along the study area are rich in habitat features, such as multi-tiered branches, hollows, crevices, and peeling bark, and these forests typically support a dense understory. At the Porter-Sesnon open space, the coast live oak woodland/forest habitat type abuts scrub habitat, non-native grassland, and eucalyptus groves, as well as the aquatic features of New Brighton Creek, Borregas Creek and its tributaries and their adjacent riparian habitats. These ecotones or edge habitats[7] support diverse plant species and provide an abundance and variety of food sources and microhabitat variability, including cover, shelter, and shade, as well as sun exposure for warmth and air flow for circulation. The edge habitats at the Porter-Sesnon open space make any one habitat type more valuable to wildlife through this habitat variability. Insectivorous, cavity-nesting, and ground-nesting birds are likely to use oak woodland for nesting and foraging. Birds of prey are also likely to use the coast live woodland for nesting. During our surveys, on multiple visits we observed a pair of red-tailed hawks that are likely a nesting pair, as well as an individual Cooper's hawk. Red-shouldered hawk, sharp-shinned hawk, and white-tailed kite have all been observed there (eBird 2023) and are likely to use the coast live oak woodland and eucalyptus groves for nesting. Biologists observed numerous San Francisco dusky-footed woodrat houses along the study area in the oak woodland, and common and sensitive bat species were detected during emergence/acoustic surveys.

MIXED EVERGREEN FOREST

Mixed evergreen forest corresponds to an urbanized phase of the coast live oak woodland and forest habitat type described above and to the non-native (naturalized) *Hesperocyparis macrocarpa-Pinus radiata* Semi-Natural Alliance (79.400.00/SNA) of Sawyer et al. (2009) and CDFW CNDDB (2023) dominated by coast live oak and Monterey pine (*Pinus radiata*), with California buckeye (*Aesculus californica*), coast redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii* var. *menziesii*), box elder (*Acer negundo*), and big leaf maple (*A. macrophyllum*) common overstory associates. The

[7] Edge habitats occur when two or more habitat types abut one another.

understory comprises poison oak, California blackberry, coffeeberry (*Frangula californica*), Cape ivy, English ivy, bracken fern (*Pteridium aquilinum*), sword fern (*Polystichum munitum*), veldt grass, brome grasses, and wild oats. Within the study area, mixed evergreen forest is located along the former embankment of the buried segment of Noble Gulch west of Monterey Avenue, and adjacent to Tannery Gulch and within the campground facility of New Brighton State Beach. In their native range, both Monterey pine and Monterey cypress are CRPR List 1B.2 special-status species. The Swanton/Año Nuevo region, which is approximately 20 miles northwest of the study area, is the nearest native stand of Monterey pine. Native Monterey cypress are restricted entirely to the Monterey Peninsula and Del Monte Forest, located approximately 40 miles south of the study area. Outside their native range, both species are considered invasive (limited) by Cal-IPC (2023).

The mixed evergreen forest of the study area provides roosting, foraging, and nesting habitat for birds, including raptors, and roosting habitat for bat species. Mixed evergreen forest is likely to support a range of common mammal species such as skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and western gray squirrel (*Sciurus griseus*). San Francisco dusky-footed woodrats are likely to build their houses on the edges of mixed evergreen forest adjacent to more open habitats such as scrub and grassland.

MIXED RIPARIAN FOREST

Within most of study area, riparian vegetation corresponds to the mixed riparian forest habitat type, which is not described by Sawyer et al, CDFW, or Holland, but represents an urbanized, mesic phase of mixed evergreen forest (described above) and the Salix lasiolepis Alliance (61.201.00; G4/S4) (Sawyer et al 2009; CDFW 2023c).

Approximately 12.03 acres of mixed riparian forest occurs within the study area along several prominent drainages including Rodeo Gulch, Tannery Gulch, and Borregas Creek and its tributaries. The overstory is dominated by native and non-native trees and arboreal shrubs including arroyo willow (*Salix lasiolepis*), red willow (*S. laevigata*), Pacific willow (*S. lasiandra*), black elderberry (*Sambucus nigrum*), twinberry (*Lonicera involucrata*), coast live oak, silver wattle acacia (*Acacia dealbata*), and box elder. The arborescent to arboreal canopy is typically dense and often impenetrable, although openings of various sizes occur locally. The native woody vines California blackberry and poison oak are abundant and often very dense in the understory. Similar to the coast live oak woodland and forest and mixed evergreen forest habitat types, the invasive vines Cape ivy, English ivy and Canary ivy are also prevalent, with periwinkle (*Vinca major*) a common spreading ground cover associate. Few other understory species occur except in relatively open areas but dense sedge (C*arex densa*), foothill sedge (*C. tumulicola*), stinging nettle (*Urtica dioica*), and California bee plant (*Scrophularia californica*) are common in more mesic areas. Mixed riparian forest may also be considered a wetland habitat in the Coastal Zone where hydrophytes such as willow species are dominant.

Riparian forest along the Project corridor provides pockets of ecologically rich habitat for wildlife, compared to the developed surroundings. Riparian vegetation provides a dense multi-tiered canopy with diverse foraging, roosting, sheltering, and/or nesting habitat. The riparian vegetation provides cover from predators and insulating properties that shelter wildlife species from the sun and prevailing weather patterns. The biologists observed a suite of wildlife species, including insects, amphibians, birds and mammals within the riparian forests along the Project corridor. Chorus frogs (*Pseudacris sierra*) were observed, and other amphibian species such as common salamanders are likely to use these habitats. Migratory and resident avian species use the riparian habitats adjacent to the alignment (**Appendices F.1** and **F.4**). San Francisco dusky-footed woodrat houses were

observed within the riparian forest at Tannery Gulch and the Porter-Sesnon open space, and common and sensitive bat species were detected during acoustic surveys. During our surveys, a pair of great horned owls was observed on multiple visits using the riparian forest along Borregas Creek, immediately upstream of the rail corridor.

As noted in the oak woodland description above, the riparian habitats of the study area abut coast live oak woodland, eucalyptus forest, and grasslands, forming edge habitats. The riparian forest also buffers adjacent aquatic habitats contributing shade, food, and sources of nutrients to the gulches and creeks. Structurally, downed trees and willow mats create scour pools that are important for birds, fish, amphibians, and aquatic insects.

ARROYO WILLOW RIPARIAN FOREST

The remaining riparian vegetation within the study area corresponds to the Central Coast arroyo willow riparian forest habitat type (Holland 1986), although Holland does not recognize this type north of Monterey County, and the *Salix lasiolepis* Alliance (61.201.00; G4/S4) and Association (61.201.01; "Sensitive") of CDFW (2023c) and Sawyer et al. (2009). Large shrub to tree-sized arroyo willow dominates this riparian forest habitat type. The arborescent to arboreal canopy is typically dense and often impenetrable, although openings of various sizes occur locally. This habitat type is limited to areas entirely dominated by monospecific stands of arroyo willow with associates limited to understory grasses and forbs including brome grasses. This habitat type is limited in the study area to a recently restored swale north of the railbed connecting to Stream 633, and at the outfall of Tannery Gulch into the Pacific Ocean below the New Brighton State Beach parking lot.

Arroyo willow riparian forest provides similar habitat features for wildlife as those described above under mixed riparian forest.

COASTAL SCRUB

The coastal scrub habitat type in the study area is typified by low to moderate sized woody shrubs with mesophilic leaves and small diameter flexible branches. These shrubs are often relatively short-lived with a shallow root structure and typically occur in shallow, often rocky soils. Due to marine influence, soils tend to be higher in concentration in salts than more inland areas. Coastal scrub tends to persist as a climax seral state in areas with cool, mesic microclimates and persistent fog. Growth habits of dominant shrubs range from prostrate to arboreal. Along the Project corridor, this habitat type corresponds to a phase of northern coastal scrub habitat type (Holland 1986) and to the *Baccharis pilularis* Alliance (32.060.00; G5/S5) of Sawyer et al. (2009) and CDFW (2023c).

Approximately 2.48 acres of coastal scrub occurs within the study area, primarily within the Porter-Sesnon open space element of New Brighton State Beach. The structure and composition of coastal scrub is variable along the Project corridor. Differing relative cover of native and non-native species often corresponds to disturbance regimes, proximity to urbanized development (e.g., roads, trails, structures), microclimate, topographic position, and edaphic (soil) properties (Barbour et al. 2007). In general, areas dominated by coastal scrub are dense with mostly closed canopy, but openings consist of a diverse mix of native and non-native grasses and forbs. In the study area, the *Baccharis pilularis* Alliance primarily describes areas that are dominated by a dense assemblages of coyote brush with Pacific blackberry, coffeeberry, and poison oak common associates, and occasionally co-dominant. This habitat type intergrades with coast live oak forest and coastal terrace prairie on both sides of the rail corridor in the Porter-Sesnon open space element of New Brighton State Beach.

Coastal scrub habitats support a range of wildlife species, offering varied food sources, cover from predators, and shelter. The coastal scrub habitats near the proposed trail alignment are in proximity to New Brighton Creek and Borregas Creek, as well as to open areas such non-native grassland and degraded coastal prairie. Habitat mosaics and reliable water sources increase the habitat value of these coastal scrub habitats for wildlife.

Numerous avian species were observed using the coastal scrub for perching, foraging and nesting, such as song sparrow, goldfinch species, California towhee, Anna's hummingbird, and other species listed in **Appendix F.4**. Coastal scrub is a preferred habitat for small mammals, such as brush rabbit (*Sylvilagus bachmani*) and ground squirrel (*Otospermophilus beecheyi*). Numerous San Francisco dusky-footed woodrat houses were observed within the coastal scrub and coast live oak woodland habitats of the study area. Skunks (*Mephitis mephitis*) may use the coastal scrub for cover. Coast range fence lizard (*Sceloporus occidentalis bocourtii*) was also observed in this habitat.

PALUSTRINE EMERGENT WETLAND

Wetlands are those areas that transition between aquatic and terrestrial systems, where surface water is at a depth and duration sufficient to promote the development of hydric soils and a preponderance of hydrophytic wetland vegetation. In the study area, emergent freshwater wetlands are limited to linear ditch wetlands along the ballast of the railbed. Ditch wetlands along the rail corridor occasionally connect directly to larger natural drainages (creeks and rivers) intersecting the study area. These ditch features are not formally identified by the USFWS National Wetlands Inventory, and ditch wetlands may be inundated temporarily, seasonally, or semi-permanently (USFWS 2023d).

Within the study area, there are two ditch wetlands lined with a contiguous layer baserock/aggregate to the surface; thereby lacking evidence of hydric soil development, but supporting periodic standing water and a preponderance of hydrophytic vegetation. Plant species composition varies depending on standing water depth and duration, substrate, and proximity to seepage and other sources of hydrology. Observed plants include hydrophytic grasses and forbs such as watercress (*Nasturtium officinale*; OBL), rabbitfoot grass (*Polypogon monspeliensis*; FACW), hyssop loosestrife (*Lythrum hyssopifolia;* FACW), bog rush (*Juncus effusus*; FACW), and flatsedge (*Cyperus eragrostis*; FACW).

These ditch wetland features provide hydration points for wildlife and habitat for invertebrates (see also Palustrine Scrub-Shrub and Forested Wetland below.)

PALUSTRINE SCRUB-SHRUB AND FORESTED (ARROYO WILLOW-POISON OAK) WETLAND

This habitat type corresponds to the *Salix lasiolepis* Alliance (61.201.00; G4/S4) and a phase of the *Salix lasiolepis-Rubus* spp. Association (61.201.03; G4/S4?) (Sawyer et al. 2009; CDFW 2023c), and to an arborescent phase of the Central Coast riparian scrub described by Holland (1986). Palustrine emergent scrub-shrub wetlands consist of areas dominated almost entirely by dense thickets of arroyo willow, with a patchy understory of annual grasses, herbs, poison oak, and California blackberry. These woody wetlands are generally not associated with flowing watercourses and are formed by elevated groundwater and surface runoff from urban landscapes, or by impoundments caused by the rail ballast which bisected natural arroyos and floodplains, including near Tannery Gulch. Similar to its riparian (non-wetland) counterpart, this wetland type supports small- to medium-sized tree or arborescent willows, but is no longer associated directly with an intermittent or perennial stream or waterbody. Many of these wetlands lack hydric soil development and are regulated as wetlands by the Coastal Act or the Santa Cruz County and City of Capitola Local Coastal Programs.

Approximately 1.19 acres of wetlands occur in the study area, including the palustrine emergent wetlands described above together with scrub-shrub wetlands. Scrub-shrub and/or forested wetlands within the study area provide hydration points for birds and other wildlife species, as well as breeding and non-breeding habitat for common amphibians, such as chorus frog and salamanders. Algae, insect larva, and other invertebrates are important amphibian, avian, and bat food sources. Wetland emergent vegetation is an essential habitat feature for wildlife, providing structure for perches, roosts, and nests; cover and shelter from predators; and insulation for the wetland environment from both heat and cold.

AQUATIC/RIVERINE

Aquatic and riverine habitat consists of natural and human-made open bodies of still or flowing water. Natural waterbodies include various perennial and intermittent drainages and streams crossing the study area, originating inland in the Santa Cruz Mountains, coastal foothills, and coastal terraces of Santa Cruz and terminating in the Pacific Ocean. Named and unnamed streams that cross the Project corridor include (from west to east) the following:

- **Rodeo Gulch.** At the proposed trail alignment, Rodeo Gulch flows under the existing railroad bridge. Rodeo Gulch originates in the immediate coastal foothills and is conveyed through a natural stream channel. Rodeo Gulch is perennial watercourse with direct connectivity to the Pacific Ocean via Corcoran Lagoon outlet. Rodeo Gulch supports a mature, mixed riparian forest canopy with a well-developed understory.
- **Stream 472.** At the proposed alignment, Stream 472 is conveyed under the rail line and ballast though a 60-inch corrugated metal pipe and a 42-inch reinforced concrete pipe. Historically, Stream 472 likely originated on the first marine terrace and meandered through Live Oak. Much of this stream is now conveyed through subsurface storm drain pipes, but daylighted sections persist, including through the Blue and Gold Star Mobile Home Park immediately north of the proposed trail alignment, parallel to and south of Walker Way, along 34th Avenue, and just before the stream enters the open space along the DA Porath County Sanitation facility. Once the stream is flowing along the Moran Lake Open Space, it remains conveyed through a naturalized channel until it outlets at Moran Lake, where it ultimately flows through a culvert under East Cliff to discharge into the Pacific Ocean.
- **Soquel Creek.** Soquel Creek flows under the existing Capitola Trestle (railroad bridge), and its tributary, Noble Gulch is conveyed through a culvert along its final reach and outlets into Soquel Creek at the Capitola Trestle. The Interim Trail would use the Capitola Trestle to cross Soquel Creek. The proposed Ultimate Trail would divert along the streets of Capitola and cross Soquel Creek using the on-street bike lanes and sidewalks on the existing Stockton Avenue Bridge further south from the Capitola Trestle (refer to **Figures 2-1a** and **2-1b**, Project Location). Soquel Creek originates in the coastal foothills above Soquel Village and flows through an open stream channel. Soquel Creek is a perennial watercourse with direct connectivity to the Pacific Ocean at Capitola. Soquel Creek supports a mature, yet highly disturbed and urbanized mixed riparian forest canopy. Residential development abuts the left (east) bank of Soquel Creek and is situated just above the terrace along the right (west) bank.
- **Escalona Gulch.** At the proposed trail alignment, Escalona Gulch is conveyed through a closed concrete pipe under the rail line and ballast, to daylight in a swale south of rail corridor on the right (west) bank. Escalona Gulch collects stormwater runoff from the urbanized neighborhoods to the north, which is conveyed through a subsurface pipe until the outlet south of the rail line. Escalona Gulch terminates at the Pacific Ocean.

- **Tannery Gulch.** Tannery Gulch conveys flows from upstream Porter Gulch (and its tributaries), meanders through New Brighton State Beach along the rail line (the channel has been modified by the rail line). Tannery Gulch is conveyed through anthropogenically modified channels, as well as pipes and culverts, and terminates at the Pacific Ocean at China Beach, in New Brighton State Beach.
- **Unnamed Stream (New Brighton Creek).** At the proposed trail alignment, New Brighton Creek flows under a maintained fire/access road, the rail line and the ballast through a large 4-foot by 3-foot concrete arch culvert into a broad arroyo. New Brighton Creek flows parallel to and east of New Brighton Road, bordering the Porter-Sesnon open space element of New Brighton State Beach on the west. The creek carries ephemeral or intermittent flows during storm events and terminates at the Pacific Ocean at Potbelly Beach in New Brighton State Beach. The creek supports a dense overstory canopy of eucalyptus and Monterey cypress south of the proposed trail.
- **Borregas Creek.** Borregas Creek flows under the railway through a 3-foot corrugated metal culvert. Borregas Creek originates on the second marine terrace in the near coastal foothills, flows under Highway 1 and the rail corridor to meander along the eastern and southeastern boundary of the Porter-Sesnon open space element of New Brighton State Beach. The creek discharges into the Pacific Ocean just east of New Brighton Creek at Pot Belly Beach.
- **Stream 633.** Stream 633 is a tributary to Borregas Creek and flows under the railway through an 8-foot by 6-foot concrete tunnel arch. Like Borregas Creek, Stream 633 originates on the second marine terrace, flows under Highway 1 and the rail corridor to the confluence with Borregas Creek, approximately 600 feet downstream (southeast and then east) of the rail corridor.
- **Unnamed Stream (Flatiron Creek).** Flatiron Creek flows under the rail corridor through a 2-foot concrete pipe. This tributary to Borregas Creek likely originated on the first marine terrace. The creek was recently modified with a drop structure and pipe to convey flow between the rail line and the Flatiron residence at 212 Poplar Street. The new pipe outlets into the naturalized channel that flows alongside (immediately southwest of) the rail line before veering off northwest to the confluence with Stream 633 and then Borregas Creek.

All of these stream courses and waterbodies have been manipulated to some extent and, as noted above, flow is often conveyed via constrained channels, tunnels, and culverts beneath roadways and the rail line. Many of these features support a dense overstory of mature riparian forest of coast live oak, blue gum eucalyptus, Monterey pine, arroyo willow, Pacific willow, and in some areas, emergent wetland vegetation.

The study area also includes a portion of the Pacific Ocean (Monterey Bay) east of Capitola and west of New Brighton State Beach. In this area, the sandy beach is narrow and often inundated by high tides. A near vertical mudstone/sandstone sea cliff rises nearly 93 feet to the first marine terrace above.

The aquatic features that intersect the study area and their respective tributaries, lagoons, and estuaries are the foundation for the most naturalized habitats within the study area, especially given the surrounding urbanization and development. Together with the riparian habitat and open spaces that border them, these features offer important habitat values to wildlife species, providing water, food sources, shade, and cover. Aquatic habitats in the area moderate the Mediterranean climate of the region, allowing wildlife to adjust to seasonal and climatic fluctuations. Some of the aquatic habitats that intersect the study area support sensitive fish species. Aquatic features and the associated riparian habitats often provide movement habitat for wildlife species.

COASTAL TERRACE PRAIRIE

Coastal terrace prairie is a unique herbaceous plant community corresponding to the *Stipa pulchra* Herbaceous Alliance of Sawyer et al. (2009) and CDFW (2023c), and to a phase of the coastal terrace prairie community type described by Holland (1986). Intact coastal prairie is typically dominated by native perennial grasses with widely scattered annual and perennial forbs. Due to past anthropogenic disturbance (i.e., influenced by human beings), including cultivation and domestic livestock grazing that began with Spanish colonization in the late 1700s, the majority of remaining native coastal terrace prairie vegetation has largely been displaced by non-native annual grasses and forbs of Eurasian origin. Presently, much of California's historical coastal prairies have been lost to development and agriculture. Remaining coastal prairie habitat is typically located in proximity to the coast, in areas with annual rainfall exceeding 25–30 inches and cooler summer temperatures due to the influence of persistent fog. This habitat type is dependent on periodic disturbance that includes grazing, mowing, and/or fire that prevent natural succession to woody shrub and tree dominated plant communities. It should be noted, however, that the type and extent of disturbance may be either beneficial or detrimental to coastal terrace prairie structure and function.

The coastal terrace prairie habitat type within the study area is limited entirely to the northernmost grasslands of New Brighton State Beach (Porter-Sesnon open space element) and intergrades with coastal scrub and coast live oak forest. Coastal terrace prairie comprises patchily distributed native bunchgrasses, including purple needlegrass (*Stipa pulchra*), California oat grass (*Danthonia californica*), and California brome (*Bromus sitchensis* ssp. *carinatus*). Native forbs and other graminoids are limited but include blue-eyed grass (*Sisyrinchium bellum*), sun cup (*Taraxia ovata*), toad rush (*Juncus bufonius*), and brown-headed rush (*Juncus phaeocephalus*). As is typical with coastal prairie habitats, a substantial proportion of vegetation consists of non-native annual grasses and forbs commonly found in areas described as non-native grassland including wild oats, brome grasses, English plantain (*Plantago lanceolata*), sheep sorrel (*Rumex acetosella*), subterranean clover (*Trifolium subterraneum*), and sow thistle (*Sonchus oleraceus*). Native coastal terrace prairie indicator species have high rates of endemism (i.e., limited to a specific geographic location), and many are considered rare or having limited distribution within California.

A number of common avian species use the pockets of coastal terrace prairie near the study area to forage for invertebrates and/or seeds, including mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), song sparrow (*Melospiza melodia*), savannah sparrow (*Passerculus sandwichensis*), American robin (*Turdus migratorius*), lesser goldfinch (*Spinus psaltria*), and American goldfinch (*Spinus tristis*) (**Appendix F.4**). Swallow species forage on insects over the grasslands. Small mammals, such as Botta's pocket gopher (*Thomomys bottae*), ground squirrel, and California meadow vole (*Microtus californicus*) commonly occur in prairie and grassland habitats, along with lizards such as coast range fence lizard. These species in turn provide prey for garter snake (*Thamnophis* sp.), gopher snake (*Pituophis catenifer catenifer*), raptors (hawks and owls), bobcat (*Lynx rufus*), and coyote (*Canis latrans*). Killdeer (*Charadrius vociferous*), mourning dove, western meadowlark (*Sturnella neglecta*), and song sparrow may use the grasslands for nesting.

NON-NATIVE GRASSLAND

The non-native grassland habitat type of the study area corresponds to the *Bromus* spp.-*Avena* spp. Semi-Natural Alliance (42.027.00; GNA/SNA) (Sawyer et al. 2009; CDFW 2023c) and to a phase of the non-native grassland type of Holland (1986). In the study area, the most common species assemblage of this grassland type corresponds to the *Bromus-Avena* Association (42.026.22; GNA/SNA), with a lesser component consists of the *Bromus*-Mixed herbs Association (42.026.11;

GNA/SNA) (CDFW 2023c). Non-native grassland commonly occurs on tracts formerly supporting horticulture (flower nurseries), or past and/or planned urban development. Due to repeated disturbance and soil manipulation, the native seed bank is largely or entirely displaced. As a result, grassland habitat in the study area is composed primarily of weedy, non-native annual grasses and forbs, including: ripgut brome (*Bromus diandrus*) soft chess (*Bromus hordeaceus*), wild oats (*Avena barbata, A. fatua*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Festuca perennis*), six-weeks fescue (*Festuca myuros*), wild radish (*Raphanus sativus*), sheep sorrel (*Rumex acetosella*), and rough cat's ear (*Hypochaeris radicata*). In general, a large percentage of plant species identified in this habitat type are listed as invasive weeds with "moderate to high" potential for substantial to severe ecological impacts by the California Invasive Plant Council (Cal-IPC 2023). This habitat type is limited in the study area, occurring on terraces adjacent to Rodeo Gulch and does not extend into the rail corridor or Project impact area.

Non-native grassland near the rail corridor can be expected to support similar wildlife to coastal terrace prairie described above.

NON-NATIVE FOREST

Non-native forest is composed of planted and volunteer conifers, ornamental trees, and blue gum eucalyptus. This habitat type supports small, monospecific and mixed stands of blue gum eucalyptus (*Eucalyptus globulus*), Monterey pine (*Pinus radiata*), Monterey cypress (*Cupressus macrocarpa*), blackwood acacia (*Acacia melanoxylon*), and silver wattle acacia (*Acacia dealbata*). As described under mixed evergreen forest above, Monterey pine and Monterey cypress are CRPR List 1B.1/2 special-status species in their native range, but are considered invasive (limited impact potential) by Cal-IPC (2023) elsewhere, including within the study area for Segments 10 and 11 of the rail trail.

Blue gum eucalyptus, the most prevalent species in this habitat type, is able to rapidly grow from seed or can re-sprout after disturbance (e.g., cutting, fire) to an existing tree. Understory vegetation is often sparse due to leaf litter accumulation and possible allelopathic effects of oils found in eucalyptus leaf and root exudates (i.e., eucalyptus produces chemicals that could inhibit germination and growth of other plants). Blue gum eucalyptus trees are an exotic species rated as moderately invasive by Cal-IPC (2023). This habitat is widespread in the study area and is largely differentiated from mixed evergreen forest by the co-dominance of native coast live oak, big leaf maple, box elder, and native understory dominated by Pacific blackberry, periwinkle, coffeeberry, and poison oak. Non-native forest is also mapped in urban and residential areas where trees are naturalized and unmaintained as opposed to ornamental/landscaped areas which are described below.

Groves of blue gum eucalyptus within the study area have potential to support the overwintering (roosting) monarch butterfly, a federal ESA candidate species and recently listed in 2022 as endangered by the IUCN. Other groves provide autumnal habitat for the monarch and wind buffers for the overwintering trees. These groves supporting roosting monarchs are considered sensitive habitat despite being dominated by invasive, non- native species. Non-native trees in the study area also provide roosting and nesting habitat for a number of common avian species listed in **Appendix F.4**, as well as habitat for San Francisco dusky-footed woodrat, squirrels and other common mammal species.

ORNAMENTAL/LANDSCAPED

Actively landscaped and regularly maintained areas dominated by planted ornamental and non-native, showy vegetation is relatively common within the study area surrounding residences, businesses, public parks, campground facilities, and public infrastructure. Common ornamental

plants are extensive and include: Mexican feathergrass (*Nassella tenuissima*), wisteria (*Wisteria sinensis*), fountaingrass (*Pennisetum setaceum*), pride of Madeira (*Echium candicans*), red hot poker (*Kniphofia uvaria*), statice (*Limonium sinuatum*), glossy privet (*Ligustrum lucidum*), Jupiter's beard (*Centranthus ruber*), bamboo (*Phyllostachys aurea*), French lavender (*Lavandula stoechas*), stone plant (*Crassula ovata*), and wooly cotoneaster (*Cotoneaster pannosus*). Landscaped areas dominated by ornamental vegetation are predominately associated with developed areas and in many instances provide similar habitat values for wildlife Moreover, in areas where ornamental landscaping is contained within enclosed residential yards located entirely within the study area, but outside the Project area, this habitat is grouped with, and mapped as "developed" areas to indicate that only very opportunistic and urbanized wildlife species will likely utilized these areas. This habitat type is also differentiated from non-native forest by the extent of routine maintenance of these areas (e.g., mowing, pruning, weed removal, etc.).

Ornamental/landscaped habitats along the study area provide habitat for opportunistic wildlife species, including coast range fence lizard, common avian species (**Appendix F.4**), pocket gopher, brush rabbits, western gray squirrel (*Sciurus griseus*), opossums (*Didelphis virginiana*), and skunks that use power poles and lines, buildings, landscaping, and gardens.

DEVELOPED

Developed areas include the rail corridor (railbed and tracks), active roads, maintained trails, public facilities and utilities, businesses, private residences, parking areas, and other areas with anthropogenic influences (i.e., human activity) that do not support naturalized vegetation. Developed areas are extensive in the study area. Enclosed residential yards are typically mapped as developed, particularly where not adjacent to the rail corridor, even where actively landscaped with ornamental vegetation as habitat for wildlife is limited due to impervious fencing and largely undifferentiated between these anthropogenically modified habitat types.

Developed habitats along the study area provide habitat for similar opportunistic wildlife species to those listed above under ornamental/landscaped.

RUDERAL

Ruderal areas are not described by Holland (1986), Sawyer et al. (2009), or the CDFW (2023c). Ruderal habitat consists of highly disturbed, weedy areas immediately adjacent to existing urban infrastructure or along dirt roads. Ruderal vegetation consists of aggressive, colonizing species such as cheeseweed (*Malva parviflora*), fennel (*Foeniculum vulgare*), jubata grass, French broom (*Genista monsplessulana*), Himalayan blackberry, bur clover (*Medicago polymorpha*), sand spurry (*Spergularia rubra*), black mustard (*Brassica nigra*), filarees (*Erodium* spp.), wild radish, spiny sowthistle (*Sonchus asper*), and cutleaf plantain (*Plantago coronopus*). In many instances, ruderal habitat is in a relatively stable seral state due to repeated, ongoing disturbance and is not likely to develop into more ecologically valuable habitat types. Ruderal habitat is primarily located along active roads and trails, and close to developed areas.

Wildlife species accustomed to disturbed environments, such as those listed under the ornamental/ landscaped habitat type above, are likely to occur in ruderal environments.

Sensitive Habitats

Sensitive habitats are generally considered by federal, state, or local agencies as those habitats that support special-status plants and wildlife; provide important habitat values for wildlife; represent

areas of unusual, limited distribution, or regionally restricted habitat types; show a decrease in acreage globally and/or statewide; and/or support high biological diversity.

Habitat types considered sensitive include: those listed as Environmentally Sensitive Habitat Areas (hereinafter Coastal Act ESHA) in the California Coastal Zone in regional Local Coastal Programs (LCP) or by the California Coastal Act (1976) and in municipal ordinances and management plans; habitats with state and global rarity rank S1-S3 and/or G1-G3, described as Sensitive Natural Communities by the CDFW (CDFW 2023c); wetlands and other waters subject to Section 401 and 404 of the Clean Water Act (1977); and waters of the state including riparian habitat subject to the Porter-Cologne Water Quality Control Act (2023), and Coastal Act one- and two-parameter wetlands. Special-status species include: those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS or NOAA Fisheries under the federal ESA; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as Species of Special Concern, Fully Protected, or Watch List by the CDFW; plants with a California Rare Plant Rank of 1 or 2; and/or other species that meet the criteria for rarity (CDFW CNDDB 2023).

Figures 3.3-2 and **3.3-2a** through **3.3-2h** depict the extent of sensitive habitats, and **Figures 3.3-3** and **3.3-3a** through **3.3-3h** depict aquatic habitats including wetlands and "other waters" in the study area. **Table 3.3-3** details regulatory authority over these sensitive habitats, focusing on areas that may incur direct and indirect impacts from Project implementation. Descriptions of common and sensitive wildlife species that may use the sensitive habitats listed below are provided in the *Floristic Inventory and Habitat Characterization* section above.

Table 3.3-3 Sensitive Habitats and Regulatory Authority Considered Under CEQA

Habitat Type	CEQA	CCC ESHA	County of Santa Cruz Sensitive Habitat	CDFW Sensitive Natural Community	City of Capitola Sensitive Habitat Area	Clean Water Act Section 401 and 404	Porter-Cologne Water Quality Act
Mixed riparian forest	X	X	X	X	X	X	X
Coast live oak woodland and forest	X	X	X				
Palustrine scrub-shrub and forested wetland	X	X	X	X	X	X	X
Coastal scrub	X	X	X				
Aquatic/riverine	X	X	X		X	X	X
Western monarch roost sites	X	X	X		X		
Special-status plants and wildlife	X	X	X		X		

CCC = California Coastal Commission; CDFW = California Department of Fish and Wildlife; CEQA = California Environmental Quality Act; ESHA = Environmentally Sensitive Habitat Area

COAST LIVE OAK WOODLAND AND FOREST

Coast live oak woodland and forest is listed as a sensitive habitat type by the County of Santa Cruz Sensitive Habitat Ordinance (County Code, Section 16.32). Coast live oak dominated habitats within the study area are also considered Coastal Act ESHA because they meet the requirements for 'especially valuable habitat', based on the "special role" of this habitat to support a diversity of wildlife species, including the sensitive San Francisco dusky-footed woodrat, a CDFW Species of Special Concern (Bolster 1998; CDFW 2023d), and to represent a locally restricted habitat type within Santa Cruz urban forest and the mosaic of habitat types comprising the study area. This habitat type is not a CDFW sensitive natural community.

Although mostly fragmented, these forests support large mature coast live oak trees and are positioned immediately adjacent to riverine, riparian, and scrub habitats, thus representing a locally important function in the assemblage of ecotones or edge habitats. Larger trees also provide habitat features for foliage-roosting and cavity-roosting bats and other species, as described in the *Floristic Inventory and Habitat Characterization* section above. These habitats also support the San Francisco dusky-footed woodrat, a CDFW Species of Special Concern (Bolster 1998; CDFW 2023d).

MIXED RIPARIAN FOREST

Mixed riparian forest is considered Coastal Act ESHA and sensitive habitat type by the County of Santa Cruz LCP, County Sensitive Habitat Ordinance, and County Riparian Corridor and Wetlands Protection Ordinance (County Code, Section 16.32). These areas are considered ESHA and are regulated as one or two-parameter wetland features lacking hydric soils and/or wetland hydrology by the California Coastal Commission (CCC) where hydrophytic vegetation (e.g., willows) exceeds 50% relative cover. Riparian communities are also considered especially valuable habitat by the CCC, and County sensitive habitat due to their value to wildlife, limited distribution, and decreasing acreages locally and statewide. Further, the mixed riparian forests in the study area are valued for flood protection, stream bank stabilization, erosion control, and water quality related to nutrient and sediment filtration by riparian vegetation.

Mixed riparian forest occurs along several prominent drainages within the study area, including Rodeo Gulch, Tannery Gulch, and Borregas Creek and its tributaries providing habitat and movement corridors for a variety of common and special-status wildlife species. This habitat's rich ecological values for wildlife are described in *Floristic Inventory and Habitat Characterization* section above.

PALUSTRINE SCRUB-SHRUB AND FORESTED WETLAND

All wetland features within the study area are palustrine features including all nontidal wetlands dominated by trees, shrubs, and persistent emergent graminoids and forbs; and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. Palustrine scrub-shrub and forested wetland habitat is considered a Coastal Act ESHA and sensitive habitat by the County of Santa Cruz LCP (Santa Cruz County 1994), Sensitive Habitat Ordinance (County Code 16.32), and Riparian Corridor and Wetlands Protection Ordinance (County Code 16.30). Moreover, these areas are subject to federal jurisdiction under the Clean Water Act (1977) and state regulation under the authority of the Porter-Cologne Water Quality Act (2023) and California Coastal Act (1972). In the Coastal Zone, only one positive wetland indicator (hydrology, hydric soils, or hydrophytic plants) is required to identify wetlands. Palustrine wetlands in the study area support a unique array of specially adapted native and non-native hydrophytic trees, shrubs, grasses, and

forbs that provide habitat for a variety of animals. These are described in the *Floristic Inventory and Habitat Characterization* section above.

Palustrine scrub-shrub or forested wetlands within the study area provide hydration points and nesting sites for birds and other wildlife species, as well as breeding and non-breeding habitat for amphibians, such as those listed in the *Floristic Inventory and Habitat Characterization* section above. Algae, insect larva, and other invertebrates are important amphibian, avian, and bat food sources. Wetland vegetation including willows are essential habitat features for wildlife, providing structure for perches, roosts, and nests; cover and shelter from predators; and insulation for the wetland environment from both heat and cold.

AQUATIC/RIVERINE

Natural aquatic and riverine habitats are considered Coastal Act ESHA and sensitive habitat by the County of Santa Cruz LCP, Sensitive Habitat Ordinance, and Riparian Corridor and Wetlands Protection Ordinance, and City of Santa Cruz Citywide Creeks and Wetlands Management Plan. Aquatic and riverine habitats are also subject to federal jurisdiction under the Clean Water Act (1977) and state regulation under the authority of the Porter-Cologne Water Quality Act (2023), California Coastal Act (1972), and Sections 1600–1616 of the California Fish and Game Code (CFGC) (CFGC Section 1600–1616).

Aquatic habitats include open waters such as lagoons, ponds, and estuaries (harbor). Riverine features include a series of creeks crossing the study area. Aquatic habitats also include all wetlands (e.g., gravel or sandbars, wetland embankments) and deep-water habitats (e.g., riffle pools) contained in natural or artificial channels that have periodically or continuously flowing water. Substrates generally consist of mud, rock, cobble, gravel, or sand.

As described in the *Floristic Inventory and Habitat Characterization* section above, aquatic and riverine habitats occupy a critical role in urbanized Santa Cruz County, providing hydration for wildlife species and, in some features, supporting special-status fish.

MONARCH BUTTERFLY ROOST SITES (BLUE GUM EUCALYPTUS GROVES)

The monarch butterfly utilizes eucalyptus, Monterey pine, and Monterey cypress trees for autumnal and winter roost sites, typically within 1.5 miles (2.4 kilometers) of the Pacific Ocean. These groves are predominantly composed of non-native plant species, many of which are classified as invasive by Cal-IPC and the USDA. However, the monarch butterfly is an imperiled species, a candidate for listing under the federal Endangered Species Act (USFWS 2020, 2023e) and was classified as endangered by the IUCN in July 2022. Winter roost sites of the monarch butterfly are listed by NatureServe as imperiled/vulnerable (S2/S3) within California (CDFW CNDDB 2023). In the 1994 General Plan, the County of Santa Cruz recognizes as sensitive habitat “areas which provide habitat for species which meet the definition of Section 15380 of the CEQA guidelines.” Monarch butterflies meet this criterion.

Winter roost sites are sufficiently heterogeneous to permit shifts of roost location in accord with prevailing weather conditions and seasonal variation in insulation. The roost site consists of the trees upon which the butterflies cluster, as well as the surrounding trees that provide wind protection. Monarchs form aggregations in the foliage on the underside of peripheral branches. In addition, overwintering habitat includes nearby nectar plants and water sources surrounding the roost site, although monarchs may fly some distance to obtain these resources (Pelton et al. 2016; Griffiths and Villablanca 2015).

Known and potential roost sites within the study area include blue gum eucalyptus trees bordering the rail corridor in the following areas: immediately south of the Rodeo Gulch trestle bridge immediately west of 30th Avenue; along Park Avenue between Monterey Avenue and Cabrillo Street extending south into Escalona Gulch; along Park Avenue within the Tannery Gulch corridor from Coronado Street to Kennedy Drive; between the New Brighton State Beach Oak Trail and New Brighton Road with an overwintering grove south of the study area near Pot Belly Beach; and along the rail corridor near the Flatiron Creek tributary connecting to Stream 633 and Borregas Creek.

The monarch butterfly is discussed further under *Special-Status Wildlife Species* below.

Special-Status Plant Species

Plant species are considered to be of sensitive (i.e., special-status protected) based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of unique habitat required by the special-status plants occurring on site.

Special-status plants were not observed within Segments 10 and 11 of the proposed Ultimate Trail. Only six special-status plant species occupy habitat types or occur at known locations within proximity to the study area (**Appendices F.1** and **F.3**), including the federally Endangered Santa Cruz tarplant. Much of the study area is disturbed or developed; however, several prominent open spaces including Rodeo Gulch, Escalona Gulch, and New Brighton State Beach support potential habitat for listed plants and were thoroughly evaluated during the focused surveys.

Details on occurrence information and a life history species narrative for this species listed under the federal ESA or otherwise considered to have potential to occur in the study area are provided in **Appendix F.1**.

Special-Status Wildlife Species

The following sensitive wildlife species are known or have potential to occur within or near the study area and are depicted in **Figures 3.3-4** and **3.3-4a** and **3.3-4b**. Details on occurrence information and life history species narratives for these species are provided in **Appendices F.1** and **F.2.**

MONARCH BUTTERFLY

The monarch butterfly (*Danaus plexippus plexippus*) is a candidate for listing under the federal ESA (USFWS 2020, 2023e). Formal listing under the federal ESA is anticipated to occur in late 2023 or 2024. On July 21, 2022, the IUCN listed the monarch as Endangered. Winter roost sites of the monarch butterfly are listed by NatureServe as imperiled/vulnerable (S2/S3) within California (CDFW CNDDB 2023). In the 1994 General Plan, the County of Santa Cruz recognizes as sensitive habitat "areas which provide habitat for species which meet the definition of Section 15380 of the CEQA guidelines." The roost sites of monarch butterflies meet this criterion.

The monarch butterfly is known to occur within the study area in Capitola along Park Avenue at Escalona Gulch (Xerces Site 2985), New Brighton State Beach (Xerces Site 2986), and along Borregas Creek (Xerces Site 2987) (Xerces Society 2023a, 2023b) (**Figures 3.3-4** and **3.3-4a–g**). Another site is located north of the rail corridor, west of Rodeo Gulch, between Harper Street and Brommer Street (Xerces Site 2892).

Potential winter roost habitat is present in the eucalyptus groves along the rail corridor, which also provide potential autumnal roost habitat and wind buffers for wintering roost habitat. Known and potential autumnal and winter roost habitat is located immediately south of the Rodeo Gulch

railroad bridge immediately west of 30th Avenue; along Park Avenue between Monterey Avenue and Cabrillo Street extending south into Escalona Gulch; along Park Avenue within the Tannery Gulch corridor from Coronado Street to Kennedy Drive; between the New Brighton State Beach Oak Trail and New Brighton Road with an overwintering grove south of the study area near Pot Belly Beach; and along the rail corridor near the Flatiron Creek tributary connecting to Stream 633 and Borregas Creek. These eucalyptus groves are also described under the *Sensitive Habitats* section above. No designated critical habitat for monarch butterfly exists.

TIDEWATER GOBY

The tidewater goby (*Eucyclogobius newberryi*) is listed as Endangered under the federal ESA (USFWS 1994) and a Species of Special Concern by CDFW (CDFW 2023d; Moyle et al. 2015). The tidewater goby is known to occur within the study area in Rodeo Gulch and Soquel Creek. Critical habitat for the goby occurs downstream of the Project alignment (USFWS 1999), but goby are known to occur as far upstream as Highway 1 (CDFW CNDDB 2023), as depicted in **Figures 3.3-4** and **3.3-4a** through **3.3-4b.**

CENTRAL CALIFORNIA COAST STEELHEAD

The central California coast steelhead (*Oncorhynchus mykiss*) is listed as Threatened under the federal ESA (NOAA Fisheries 2006). The central California coast steelhead is known to occur in Soquel Creek (SCCWRP 2019; DW Alley & Associates 2016; CalFish 2011), and the river is designated critical habitat for central California coast steelhead (NOAA Fisheries 2005).

PACIFIC LAMPREY

The Pacific lamprey is a CDFW Species of Special Concern (CDFW 2023d; Moyle et al. 2015). The Pacific lamprey is known to occur in Soquel Creek (Alley 2023).

SANTA CRUZ BLACK SALAMANDER

The Santa Cruz black salamander may occur in the moist habitats along the drainages that intersect the study area, including Rodeo Gulch, Tannery Gulch, or the impounded wetlands near Tannery Gulch. The Santa Cruz black salamander is known to occur in Pogonip Park and the University of California Santa Cruz quarry, approximately 3.5 miles northwest of the western terminus of the study area and in Aptos Creek, 2.5 miles north of the eastern terminus (CDFW 2023f, 2023g).

ALLEN'S HUMMINGBIRD

The Allen's hummingbird (*Selasphorus sasin*) is a USFWS Bird of Conservation Concern (USFWS 2021). The woodland, forest, riparian, scrub, and ornamental habitats along the Project corridor provide potential nesting habitat for the Allen's hummingbird. This species was observed during field surveys at Rodeo Gulch and is also known to occur in New Brighton State Beach, including the Porter-Sesnon open space (eBird 2023).

OLIVE-SIDED FLYCATCHER

The nesting olive-sided flycatcher (*Contopus cooperi*) is a CDFW Species of Special Concern (CDFW 2023d; Shuford and Gardali 2008) and a USFWS Bird of Conservation Concern (USFWS 2021). Woodlands and forests near the creeks and drainages provide potential nesting habitat for this species. This species was observed during field surveys within New Brighton State Beach and along

the unnamed stream (New Brighton Creek) within the Porter-Sesnon open space. eBird (2023) also documents this species in these locations.

OAK TITMOUSE

The titmouse (*Baeolophus inornatus*) is a USFWS Bird of Conservation Concern (USFWS 2021). The coast live oak woodland along the Project corridor provides potential nesting habitat for the oak titmouse. The species was observed during field surveys at Tannery Gulch, and along New Brighton Creek, in the Porter-Sesnon open space, both within New Brighton State Beach. In addition, eBird documents this species along Soquel Creek (eBird 2023).

NUTTALL'S WOODPECKER

The Nuttall's woodpecker (*Dryobates nuttallii*) is a USFWS Bird of Conservation Concern (USFWS 2021). The woodland, forest, riparian, and ornamental habitats provide potential nesting habitat for the woodpecker. The species was observed during field surveys along the rail line in Live Oak between 30th Avenue and Thompson Avenue and within the Porter-Sesnon open space in New Brighton State Beach.

WRENTIT

The wrentit (*Chamaea fasciata*) is a USFWS Bird of Conservation Concern (USFWS 2021). The woodland, forest, riparian, scrub, and ornamental habitats along the Project corridor provide potential nesting habitat for the wrentit. The species was observed during field surveys at Tannery Gulch, and along New Brighton Creek, within the Porter-Sesnon open space, both within New Brighton State Beach.

YELLOW WARBLER

The yellow warbler (*Setophaga petechia*) is CDFW Species of Special Concern (CDFW 2023d; Shuford and Gardali 2008) and a USFWS Bird of Conservation Concern (USFWS 2021). The dense riparian habitats along the study area provide potential nesting habitat for the yellow warbler. This species has been observed recently within New Brighton State Beach and along Soquel Creek (eBird 2023). Recent breeding within the County has been confirmed along the Pajaro River and San Lorenzo River.

WHITE-TAILED KITE

The white-tailed kite (*Elanus leucurus*) is listed by the CDFW as Fully Protected (CDFW 2023e). Tree stands, coastal scrub, and riparian habitats in and adjacent to the Project corridor provide potential nesting habitat for the white-tailed kite. Observations of this species along the alignment are uncommon. eBird documents this species in the Porter-Sesnon open space in 2016 and 2018 and within New Brighton State Beach in 2017 (eBird 2023).

PEREGRINE FALCON

The American peregrine falcon (*Falco peregrinus anatum*) is listed as Fully Projected by CDFW (CDFW 2023e). The Capitola bluffs south of Park Avenue and west of New Brighton State Beach provide potential nesting habitat; however, observations of this species along the alignment are uncommon and primarily outside the breeding season, in New Brighton Beach and the Porter-Sesnon open space (eBird 2023).

BALD EAGLE

The bald eagle is listed as Endangered under the CESA and as Fully Protected by CDFW (CDFW 2023e). Adult eagle/s have been observed within New Brighton State Beach open space, along Tannery Gulch, and in the adjacent Porter-Sesnon open space (eBird 2023). Tall stands of trees (e.g., eucalyptus, mature coast live oak, and conifers) provide potential nesting habitat; however, these locations lack the open freshwater or brackish water habitats this species prefers for hunting.

COMMON NESTING BIRDS

The Migratory Bird Treaty Act (MBTA) of 1918 protects the breeding activities of native birds, including their eggs, nests, and young. **Appendix F.4** lists avian species observed incidentally during field surveys and the habitat types that they are likely to use along the alignment. Many of these common native avian species are likely to nest along the Project alignment, especially near Rodeo Gulch, along Park Avenue, within New Brighton State Beach, and the Porter-Sesnon open space. Common avian species that are adapted to human environments are also likely to use developed, ruderal, ornamental and non-native habitat types for nesting.

During field surveys, incidental observations of nesting activity were documented, including mallard (*Anas Platyrhynchos*)*,* band-tailed pigeon (*Patagioenas fasciata*), bushtit (*Psaltriparus minimus*), pygmy nuthatch (*Sitta pygmaea*), chestnut-backed chickadee (*Poecile rufescens*), dark-eyed junco (*Junco hyemalis*), Hutton's vireo (*Vireo huttoni*), house finch (*Haemorhous mexicanus*), California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii),* California towhee (*Melozone crissalis*), northern mockingbird (*Mimus polyglottos*), California scrub jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and great horned owl (*Bubo virginianus*).

BATS

The silver-haired bat and the hoary bat are listed as Medium Priority in the California Coast region by the WBWG, and the western red bat is listed as a CDFW Species of Special Concern and High Priority by WBWG (WBWG 2017; Bolster 1998; CDFW 2023d).

The silver-haired bat and hoary bat were detected during bat emergence and acoustic surveys of Rodeo Gulch, Tannery Gulch, New Brighton Creek, and Borregas Creek and its tributaries. The silver-haired bat uses natural tree hollows for maternity roosts and both hollows and crevices for winter hibernacula.[8] The mature oak trees within the study area provide potential roosting habitat for this species, although it is also known to travel long distances to forage. The hoary bat is primarily a foliage-roosting bat that uses coniferous and deciduous trees. The trees within the study area provide potential roosting habitat for this species. The western red bat was detected at Twin Lakes State Beach open space during 2022 emergence/acoustic surveys and has potential to occur within the study area. This species is a foliage-roosting bat that may use the willow riparian and coast live oak woodland habitats within the study area for roosting. Coast live oak woodland and forest habitats along the Project corridor also provide potential habitat for long-legged myotis (Heady 2018), a High Priority species (WBWG 2017).

[8] "Hibernacula" are shelters occupied during the winter by a bat or group of bats in torpor (slowed heart rate and slowed breathing). Hibernacula are typically removed from predators and possess the right environmental conditions (temperatures between zero and 15 degrees Celsius and humid). Bats use up energy stores call "brown fat" in winter hibernacula but are vulnerable to disturbance (such as construction) which can cause repeated waking, and in turn, starvation and mortality.

A number of common bat species were detected during emergence/acoustic surveys including California myotis (*Myotis californicus*), big brown bat (*Eptesicus fuscus*), and Mexican free-tailed bat (*Tadarida brasiliensis*). In addition, one individual bat was identified roosting in a crevice underneath the Rodeo Gulch railway bridge, likely a California myotis or Yuma myotis (*Myotis yumanensis*). These and other common bat species are likely to inhabit the trees, bridges, and culverts within the study area. The CFGC protects non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. These include CFGC Section 86; 2000; 2014; 3007; 4150, along with several sections under Title 14 of California Code of Regulations (CCR).

SAN FRANCISCO DUSKY-FOOTED WOODRAT

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is considered a CDFW Species of Special Concern (Bolster 1998; CDFW 2023d). The coast live oak woodland and forest, riparian, and non-native forest (in some locations) habitats in or adjacent to the Project corridor provide habitat for the woodrat. Ideal locations have proximity to water sources and are edge habitats, with a variety of woodrat food sources. A number of woodrat houses were documented in these habitats, both on the ground and arboreal (or in the trees). These incidental observations are illustrated on **Figure 3.3-4b.**

Wildlife Movement

Corridors for wildlife movement (also known as dispersal corridors, wildlife corridors, or landscape linkages) are features whose primary function is to connect at least two isolated habitat areas (Bond 2003). A basic description of the functions of corridors is as follows (Beier and Loe 1992):

> Corridors provide avenues along which (1) wide ranging animals can travel, migrate, and meet mates . . .(2) plants can propagate . . . (3) genetic interchange can occur . . . (4) populations can respond to environmental change . . . [and] (5) locally extirpated populations can be replaced from other areas.

Corridors provide for or facilitate the movement of wildlife and plants between two or more otherwise disjunct habitats (Lidicker 1999; Hilty et al. 2006). In the urban/open space interface, corridors can provide links between different types of habitat areas, including but not limited to core habitat areas, supportive natural landscapes (or habitat patches), and linear habitats (described below).

In an effort to protect landscape connectivity on a regional scale, several research projects have been conducted to identify important habitat areas, as well as existing or proposed linkages or connectivity areas. Commissioned by the CDFW, the following studies assess habitat connectivity on a large scale. California Essential Habitat Connectivity (CEHC) Project identified Natural Landscape Blocks, Small Natural Areas, and Essential Connectivity Areas (Spencer et al. 2010). Critical Linkages: Bay Area and Beyond identified Large Landscape Blocks and Linkage Designs (SCCW 2014). Missing Linkages: Restoring Connectivity to the California Landscape identified critical and at-risk linkages (Penrod et al. 2001).

CORE HABITATS

Undeveloped or natural areas serve as core habitats, which are also called Natural Landscape Blocks (Spencer et al. 2010) or Large Landscape Blocks (SCCW 2014), for a variety of plant and wildlife species. Core habitat areas support the viability of rare plant or animal populations, or they consist of exemplary natural communities. Providing functional connectivity between core habitats through corridors is essential to sustaining healthy wildlife populations and allowing for the continued

dispersal of native plant and wildlife species. No core habitats are present along the study area. The nearest core habitats are located inland (north) of Highway 1, in the foothills of the Santa Cruz Mountains, including (from west to east) the following:

- De Laveaga Park and undeveloped land further inland, northeast of the proposed trail segments' western terminus.
- Anna Jean Cummings Park, north of the proposed trail segments, which skirts the east side of Rodeo Gulch and extends east to Soquel High School and north into undeveloped open space.
- Nisene Marks State Park, which extends from Grover Gulch and Bates Creek in the hills of Soquel, east to the hills of Day Valley, north to the Soquel Demonstration Forest, and south to Aptos Village. The CEHC Project and Critical Linkages both identify Nisene Marks State Park as a core habitat.

HABITAT PATCHES

Habitat patches or supportive natural landscapes are areas that may lack the requisite structural or spatial heterogeneity to be considered core habitat, but still provide relictual habitat for rare plants and/or provide opportunities for wildlife to forage, cover, and shelter. The CEHC Project identifies habitat patches as "[Small] Natural Areas." Habitat patches may provide opportunities to manage and enhance rare plant populations.

Within the study area and vicinity, the following areas are considered habitat patches or Small Natural Areas (from west to east):

- Twin Lakes State Beach open space, immediately west of the western terminus of the Project
- Rodeo Gulch/grounds of New Hope Community Church/Brommer Street Park, at/near the intersection of the proposed trail
- Corcoran Lagoon, downstream of the proposed trail
- Moran Lake open space and Lagoon, south of the proposed trail
- Rispin Mansion on Soquel Creek, upstream of the proposed trail
- Portions of Noble Gulch, upstream of the proposed trail
- Escalona Gulch, intersecting the proposed trail
- New Brighton State Beach, including Tannery Gulch, intersecting and alongside (north and south of) the trail
- Porter-Sesnon open space, part of New Brighton State Beach, alongside (north and south of) the proposed trail
- Coastlands Church, immediately east of the eastern terminus of the Project

LINEAR HABITATS

Linear habitats are long, narrow features with a suitable substrate and other physical conditions, and enough vegetation, cover, shelter, and/or forage to support native plants and/or wildlife. Riparian corridors, agricultural buffers, hedgerows, powerlines with vegetation underneath, and rail corridors can serve as linear habitats.

In developed landscapes, riparian corridors and streamside buffers often occupy an important role in the environment, providing habitat for native plants, canopy cover, opportunities for foraging, and refuge from predators for wildlife species. In addition, riparian corridors and buffers offer plants and wildlife the opportunity to disperse (Beier and Loe 1992). In these ways, rivers, creeks and creekside buffers serve as both linear habitats and corridors. Because riparian corridors support a

disproportionate amount of biodiversity compared to other landscapes, riparian buffers enhance species richness by providing additional habitat with high quality habitat features (Hilty et al. 2006).

When riparian corridors, buffers, and other linear habitats serve to link habitat patches (and thus allow movement between otherwise separate populations), the persistence of wildlife populations increases (Hilty et al. 2006).

Linear habitats in/near the study area include the aquatic, wetland and/or riparian habitats of Leona Creek and its tributaries (600 feet west of the western terminus of the proposed trail); Rodeo Gulch; Soquel Creek and its tributary Noble Gulch; Tannery Gulch and its upstream tributary, Porter Gulch (and its tributaries); New Brighton Creek; Borregas Creek, its tributaries Stream 633 and Flatiron Creek; and east of the eastern terminus, Aptos Creek (including its tributaries Mangels Gulch, Trout Gulch, and Valencia Creek).

The rail corridor also serves as a linear habitat in limited locations. Between Soquel Creek and Noble Gulch and New Brighton State Beach, the rail corridor provides canopy, cover, shelter, and refuge (in varying degrees), and/or the rail line is depressed relative to the surroundings, providing cover. This section of the rail corridor is limited in its habitat value in that it is surrounded by dense urban and residential development, in some locations the adjacent vegetation consists of only a narrow band of trees (e.g., a portion of the stretch between the City of Capitola's civic/administrative center and Monterey Avenue), or limited vegetation is present and the area is exposed to sun and wind (e.g., a portion of the stretch between Cabrillo and Coronado), and requires wildlife to cross busy roads that are considered barriers to movement. Nevertheless, this stretch of the rail corridor does serve to provide an east–west route, thereby connecting the otherwise disjunct habitats of Soquel Creek, Nobel Gulch, and the open spaces associated with New Brighton State Beach, including Tannery Gulch and the Porter-Sesnon open space.

Between 17th Avenue and Rodeo Gulch the rail corridor has limited canopy cover and vegetation (residential fences provide some shelter) but is free of motor vehicle traffic. This section provides a connection between the Twin Lakes open space and Rodeo Gulch with no intervening roads for wildlife to cross, after 17th Avenue. At night especially, this section of the rail corridor provides an east–west movement route for smaller animals traveling locally that is preferable to the developed surroundings.

Southeast of the Porter-Sesnon open space, (between the Porter-Sesnon open space and State Park Drive) the rail corridor has limited canopy cover and vegetation (residential fences provide some shelter) but the rail corridor is free of motor vehicle traffic and provides a connection to the open space around Coastlands Church and further south to Aptos Creek and its tributaries. Terrestrial wildlife would be required to cross Mar Vista Drive to use the corridor for movement. At night especially, this section of the rail corridor provides an east–west movement route for smaller animals traveling locally that is preferable to the developed surroundings.

WILDLIFE MOVEMENT WITHIN THE STUDY AREA AND LARGER REGIONAL CONTEXT

The rail corridor is set within the largely urbanized, residential, and light industrial areas of Santa Cruz County and the City of Capitola. Nevertheless, in some locations the rail corridor provides the only east–west movement opportunity for wildlife and serves to connect otherwise disjunct habitat patches and linear habitats, that have already been fragmented by development. The Project corridor provides limited functional connectivity between these habitats.

Within the study area, the rail corridor and adjacent vegetation currently provide limited east–west movement habitat, between 17th Avenue and Rodeo Gulch, between Soquel Creek and New Brighton State Beach, and between the Porter-Sesnon open space and the Coastlands Church and

Aptos Creek. Large trees, scrub vegetation, and understory that line the rail corridor provide shelter, cover, and refuge for wildlife, and the rail corridor is free of motor vehicle traffic, thereby providing limited connectivity between open spaces and creeks along these sections. In turn, Soquel Creek, Noble Gulch, Tannery Gulch and Borregas Creek provide opportunities for wildlife to move to the open spaces inland from Highway 1. Another east–west movement route parallel to the rail corridor exists immediately inland of Highway 1 within the undeveloped strip of land (of varying width) that lines the highway; however, the highway itself and highway overpasses and underpasses are barriers to movement. Wildlife may use the creeks and culverts for north-south movement and, to gain access to the creek corridors, both the rail corridor and the undeveloped strip adjacent to the highway for east–west movement.

Based on observations made during field surveys, wildlife is more likely to use the study area for localized movement. Biologists observed individual wildlife species and/or their trails, tracks, scat and/or carcasses within and adjacent to the study area including coyote, bobcat (*Lynx rufus*), fox, black-tailed deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), skunk, and brush rabbit; owls, raptors foraging over the corridor; and migratory, resident and wintering avian species. Opossum (*Didelphis marsupialis*) are likely to use the study area as well. Common lizards, amphibians, and invertebrates were also observed.

3.3.2 Regulatory Setting

Federal, state, regional, and local regulations have been enacted to provide for the protection and management of sensitive biological and water resources. Those pertinent to the Project are summarized below.

Federal

Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (Title 16 United States Code, Section 1531 et seq., as amended) provisions protect federally listed Threatened and Endangered species and their habitats from unlawful "take."[9] Activities that may result in "take" of federally listed individuals are regulated by the USFWS and NOAA Fisheries, with responsibilities roughly divided between terrestrial and marine species, respectively, with some exceptions. Listed species are taxa for which proposed and final rules have been published in Federal Register (USFWS 2023a, 2023b). Candidate species are not afforded any legal protection under federal ESA but typically receive special attention from federal and state agencies during the environmental review process (USFWS 2023c, 2023d).

The federal ESA or its implementing regulations do not prohibit "take" of listed plant species. However, federal agencies cannot undertake activities that would jeopardize[10] the continued existence of a threatened or endangered plant. In addition, the removal of threatened or endangered plants may be a violation of the federal ESA under certain circumstances, if the action is not in compliance with state law.

[9] Section 3(18) of the federal ESA defines "take" to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Service regulations (50 Code of Federal Regulations [CFR] 17.3) define "harm" to include significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. "Harassment" is defined by USFWS as an intentional or negligent action that creates the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.

[10] Under the ESA, "jeopardy" occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced.

For actions carried out, funded, or authorized by a federal agency, the project proponent initiates "Interagency Cooperation" with USFWS under Section 7 of the federal ESA. Consultation under Section 7 may be informal (technical assistance for activities with "no effect" on listed species) or formal (the proposed activity "may affect" the listed species). If formal consultation is determined to be necessary, the USFWS prepares a biological opinion on whether the proposed activity will result in jeopardy or is "likely to adversely affect" the listed species. With this latter determination, the USFWS issues an "incidental take statement" that includes reasonable or prudent measures to minimize take along with the terms and conditions of the measures. NOAA Fisheries follows a similar process for the endangered and threatened species under their regulatory authority, including anadromous fish.

Designated "Critical Habitat" for plants or animals, determined and published in the Federal Register as a formal rule, receives protection under Section 7 through the prohibition of destruction or adverse modification of critical habitat by actions with a federal nexus.

For actions with no federal nexus, consultation with USFWS or NOAA Fisheries takes place under 10(a)(1)(B) of federal ESA.

Migratory Bird Treaty Act

All migratory birds and their nests are federally protected under the MBTA of 1918 (Title 16 United States Code, Section 703–712 as amended; 50 Code of Federal Regulations Section 21; and 50 CFR Section 13) (and by California Department of Fish and Game Code provisions that support the act). The MBTA makes it unlawful to "take" any migratory bird or raptor listed in the 50 CFR Section 10, including their nests, eggs, or products.

Birds of Conservation Concern

The USFWS Birds of Conservation Concern (BCC) (USFWS 2021) was developed to fulfill the mandate of the 1988 amendment to the Fish and Wildlife Conservation Act (Public Law 100-653 [102 Statute 3825]) to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the federal ESA" and to stimulate coordinated and proactive conservation actions among federal and state agencies and private entities. The avian species included on the BCC lists include "nongame birds, gamebirds without hunting seasons, and Endangered Species Act candidates, proposed endangered or threatened, and recently delisted species" that USFWS considers to be of concern in the U.S. because of (1) documented or apparent population declines, (2) small or restricted populations, or (3) dependence on restricted or vulnerable habitats. Species on this list fall under the authority of Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds" (Federal Register, vol. No, 11, January 17, 2001).

Bald Eagle Protection Act

The Bald Eagle Protection Act of 1940 (16 U.S.C. 668–668d, 54 Stat. 250) as amended, provides for the protection of the bald eagle and the golden eagle by prohibiting the taking, possession, and commerce of such birds, their eggs, and their nests except under certain specified conditions. In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

Executive Order 13112 – Invasive Species

This order enlists federal agencies to prevent the introduction of invasive species, provide for their control and minimize the economic, ecological, and human health impacts that invasive species cause. In addition, federal agencies are required, when feasible, to restore native species and ecosystems and promote public awareness about invasive species.

Wetlands and Waters of the U.S.

Wetlands are defined by the USACE as, "those 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." Wetlands generally include swamps, marshes, bogs, and similar areas (USEPA, 40 CFR 230.3, and CE 33 CFR 328.3).

The USACE uses three criteria to delineate wetlands: the presence of (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. According to the USACE Manual, evidence of at least one positive wetland indicator from each parameter must be found in order to make a positive determination.

Areas that are inundated for sufficient duration and depth to exclude growth of hydrophytic vegetation, such as lakes and ponds, or convey water, such as streams, are considered "other waters." Along the central California coast, these other waters can include intermittent and ephemeral streams, as well as lakes and rivers. Other waters are identified by the presence of an ordinary high-water mark[11], a defined river or stream bed, or a bank, or by the absence of emergent vegetation in ponds or lakes.

Wetlands and other waters of the U.S., including streams, ponds and lakes, are regulated by the USACE and the Regional Water Quality Control Board (RWQCB) under Sections 401 and 404 of the Clean Water Act.

FEDERAL CLEAN WATER ACT (SECTION 404)

Under Section 404 of the Clean Water Act, the USACE is responsible for regulating the discharge of fill material into waters of the U.S. The term "waters" includes wetlands and other waters that meet specific criteria as defined in the CFR (USEPA, 40 CFR 230.3, and CE 33 CFR 328.3). In general, a permit must be obtained before fill can be placed in wetlands or other waters of the U.S. The type of permit depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the USACE.

FEDERAL CLEAN WATER ACT (SECTION 401)

Section 401 of the Clean Water Act (CWA) assigns overall responsibility for water quality protection to the California State Water Resource Control Board and directs the nine statewide RWQCBs to develop and enforce water quality standards within their boundaries. A 401 Certification is required from the RWQCB whenever improvements are made within jurisdictional waters of the U.S.

EXECUTIVE ORDER 11990

Executive Order 11990 (42 FR 26961, 3 CFR, 1977 Comp., p. 121) mandates that federal or federally assisted projects and programs minimize the destruction, loss, or degradation of wetlands and avoid

[11] An ordinary high-water mark is defined as the natural line on the shore established by fluctuations of water.

new construction in wetlands, taking into account public health and safety, maintenance of natural systems, and other public interests.

National Marine Sanctuaries Act

The National Marine Sanctuaries Act of 1972 is a federal law that directs the NOAA to create national marine sanctuaries in special ocean areas of the United States and develop plans and regulations for their management. NOAA designated the Monterey Bay National Marine Sanctuary (MBNMS) in September 1992, and the MBNMS regulations include prohibiting activities such as ocean dumping and wildlife harassment. The Project study area is located adjacent to the MBNMS.

State

California Environmental Quality Act

As described in Chapter 1, *Introduction*, the Project is subject to CEQA, and the purpose of preparing an EIR is to inform public agency decision-makers and the public generally of the significant environmental effects of a project and identify possible ways to minimize the significant effects (*CEQA Guidelines*, Section 15121). A "significant effect" is defined as a substantial or potentially substantial adverse change in the physical conditions, including plants and animals (biological resources), within the area affected by the project (*CEQA Guidelines*, Section 15382).

As described in Section 3.3.3, *Methodology and Significance Thresholds*, a project would have a significant effect on biological resources, if it would have a substantial adverse effect, either directly or indirectly, on listed species. This includes plants and animals with the following protected status: federally listed endangered or threatened species under the federal ESA, federal Proposed and Candidate species, and species listed by the State of California as Endangered, Threatened, or Rare under the CESA or California Native Plant Protection Act (*CEQA Guidelines*, Section 15380).

In addition, under Section 15380(d), a species not included on any list recognized by the state "shall nevertheless be considered rare or endangered if the species can be shown to meet the criteria" for listing. The CDFW, USFWS, and U.S. Forest Service all maintain independent lists of species with designated conservation status that meet the *CEQA Guidelines* criterion for consideration. Based on provisions of Section 15380(d) of the *CEQA Guidelines*, lead agencies, in making a determination of impact significance, typically treat non-listed plant and animal species as equivalent to listed species, if the non-listed species satisfy the minimum biological criteria for listing. In assigning "impact significance" to populations of non-listed species, analysts generally consider factors such as population-level effects, proportion of the taxon's range affected by a project, regional effects, and impacts to habitat features.

California Endangered Species Act

CESA protects native plant and animal species (and their habitats) "in danger of, or threatened with, extinction because their habitats are threatened with destruction, adverse modification, or severe curtailment, or because of overexploitation, disease, predation, or other factors" (CFGC 1984, Section 2050–2116). CESA prohibits the "take"[12] of state-listed endangered, threatened, and candidate species. The CDFW maintains lists of Endangered, Threatened, and Rare plants (CDFW 2023a) and Endangered and Threatened animals (CDFW 2023b), as designated by the California Fish and Game Commission and under the California Native Plant Protection Act (NPPA) (1977). The

[12] The CESA defines "take" as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (CFGC Section 86).

Habitat Conservation Planning Branch of CDFW administers the state's rare species program. In addition to recognizing three levels of endangerment, CDFW can afford interim protection to candidate species while the California Fish and Game Commission reviews them. Habitat degradation or modification is not expressly included in the definition of "take" under the CFGC, but CDFW has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification."

California Native Plant Protection Act

The California NPPA (CFGC Section 1900–1913) was enacted in 1977 and allows the California Fish and Game Commission to designate plants as rare or endangered. The NPPA limits the circumstances in which endangered or rare native plants may be taken. Project permitting and approval requires compliance with NPPA.

California Native Plant Society Inventory

The CNPS prepares and regularly updates an *Inventory of Rare and Endangered Vascular Plants of California*. In general, CDFW qualifies for legal protection under CEQA those plant species on List 1A (Plants Presumed Extinct in California), List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere) or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the CNPS *Inventory* (CNPS 2023). Species on CRPR List 3 (Plants About Which We Need More Information--A Review List), or List 4 (Plants of Limited Distribution--A Watch List) are considered to be of lower sensitivity, and generally do not fall under specific federal or state regulatory authority. Specific mitigation considerations are not generally required for species in these two categories.

Species of Special Concern

In addition to lists of designated Endangered, Threatened, and Rare plant and animal species, CDFW maintains lists of animal "Species of Special Concern," most of which are species whose breeding populations in California may face complete destruction or extirpation (Bolster 1998; Shuford and Gardali 2008; Moyle et al. 2015; Thomson et al. 2016; CDFW 2023d; CDFW CNDDB 2023). Although these species have no legal status under the CESA, CDFW recommends considering these species during analysis of Project impacts to protect declining populations, and to avoid the need to list them as threatened or endangered in the future. These species may "be considered rare or endangered [under CEQA] if the species can be shown to meet the criteria."

California Fish and Game Code and California Code of Regulations

CFGC protects the active nests and eggs of birds from take, possession, or needless destruction (3503), and prohibit the take, possession, or destruction birds of prey (orders Falconiformes and Strigiformes) and their eggs and nests (3503.5). CFGC (Sections 86; 2000; 2002; 2014; 3000–3012; 4150) and several sections under Title 14 of CCR protect non-listed bat species and their roosting habitat, including individual roosts and maternity colonies (14 CCR Section 472). Section 86 of CFGC generally defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Other CFGC sections prohibit the willful take, capture, confinement, possession, or destruction of particular wildlife species, including bats and other nongame mammals. CCR Title 14 provisions also prohibit the take of nongame birds and mammals, including bats.

Fully Protected Species

The CFGC contains lists of vertebrate species designated as "Fully Protected" (CFGC 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], and 5515 [fish]) (CDFW 2023e). This classification was the state's initial effort in the 1960s to identify and provide protection to those animals that were rare or faced possible extinction. Fully Protected species generally may not be taken or possessed at any time and no licenses or permits may be issued for their take except pursuant to an approved Natural Community Conservation Plan or for relocation of avian species, the protection of livestock, or the collection of those species necessary for scientific research. Impacts on these species are also considered under CEQA.

Western Bat Working Group Lists

The WBWG maintains a region-by-region matrix of the status of bat species throughout their western North American range. Bats that are designated as "High Priority" by the WBWG are "imperiled or are at high risk of imperilment" based on available information on distribution, status, ecology, and known threats (WBWG 2017). Bats may also be designated as medium-or low-priority. These designations are included on CDFW's Special Animals list of sensitive wildlife species (CDFW CNDDB 2023). High Priority bat species qualify for legal protection under Section 15380(d) of the *CEQA Guidelines*.

Sensitive Habitats

Sensitive habitats include CDFW Sensitive Natural Communities (rank of S1–S3), riparian corridors,[13] wetlands, and habitats for species that are protected under federal ESA, CESA, NPPA, or other rare species (CDFW 2023c). Sensitive habitats may also include areas of high biological diversity, areas providing important wildlife habitat, and vegetation types that are rare or unique to the region. CEQA also considers impacts to natural communities identified as sensitive in local and regional plans, regulations, and ordinances.

Wetlands and Waters of the State

CDFW Lake and Streambed Alteration

Jurisdictional authority of CDFW over relatively permanent bodies of standing or flowing water is established under Sections 1600–1616 of the CFGC, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The CFGC stipulates that "an entity may not substantially divert or obstruct the natural flow of, or substantially change…the bed, channel, or bank of, any river, stream, or lake" without notifying CDFW, incorporating necessary mitigation, and obtaining a Lake and Streambed Alteration Agreement. Any work which takes place below the break in bank would be under the jurisdictional authority of CDFW.

The code defines "entity" to mean "any person, state or local government, or public utility that is subject to this chapter" and is not generally taken to refer to federal agencies. If an entity does not initially accept the mitigation conditions proposed by CDFW for inclusion in a streambed alteration agreement, the matter may be submitted to an arbitration panel under Section 1603.

[13] A universally accepted definition of riparian habitat is not currently available; however, USFWS defines riparian areas as "plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways). Riparian areas have one or both of the following characteristics: 1) distinctively different vegetative species than adjacent areas, and 2) species similar to adjacent areas but exhibiting more vigorous or robust growth forms. Riparian areas are usually transitional between wetland and upland" (USFWS 2009).

CDFW has the opportunity to review projects and issue project conditions under CEQA and is also responsible for commenting on projects requiring USACE permits under the Fish and Wildlife Coordination Act of 1958. Federal lead agencies may also elect to notify CDFW according to Section 1602 and comply with the conditions and recommendations issued under this mechanism.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Act (2023) assigns overall responsibility for water quality protection to the California State Water Resource Control Board, and directs the nine statewide RWQCBs, who are tasked to develop and enforce water quality standards within their boundaries. Under California state law, waters of the state pertains to "any surface water or groundwater, including saline waters, within the boundaries of the state." As a result, water quality laws and permitting authority apply to both surface and groundwater. In the absence of a federal permit requirement, impacts to waters of the state, including wetlands, require a Waste Discharge Requirement (WDR) authorization from the RWQCB.

WETLANDS RESOURCES POLICY

The Wetlands Resources Policy of CDFW states that the California Fish and Game Commission will strongly discourage development in or conversion of wetlands, unless, at a minimum, project mitigation ensures that there will be no net loss of either wetland habitat values or acreage.

California Coastal Act

Under the Coastal Zone Management Act of 1972 and California Coastal Act of 1976, the CCC is entrusted to review proposed development in the Coastal Zone with the goal of protecting and enhancing the coastal environment while allowing utilization and public access for Coastal Zone-dependent uses. When a federal agency serves as the lead for the project, the mechanism for Coastal Commission review is through a "consistency determination" in which the project would be required to comply with the statues of the Coastal Act with the Local Coastal Program providing guidance.

Under the Coastal Act, Environmental Sensitive Habitat Areas (ESHA)[14] and wetlands are given special protection, with a different set of rules for each. Allowed uses within ESHA are limited to those that are resource-dependent; and uses within wetlands are limited to a specific list of activities, which includes "nature study" and "similar resource-dependent activities." (Compare Cal. Pub. Resources Act Sections 30240 [ESHA] and 30233 [wetlands].)

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

In Coastal Act wetlands – all areas meeting at least one wetland parameter – a handful of specifically authorized uses, including "nature study" and "similar resource-dependent activities," are permitted, but only where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects."

[14] Under the Coastal Act, ESHA is defined as "any 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." 'Especially valuable habitat' is identified by (1) by its **special nature** or (2) its **special role** in the ecosystem.

In *Bolsa Chica Land Trust v. Superior Court* (1999) 71 Cal.App.4th 493, 514–515, the California Court of Appeal held that, where an area in the Coastal Zone is both a wetland and an ESHA, the Coastal Act provision governing wetlands (Section 30233) controls, and the provision governing ESHA (Section 30233) does not also apply.

The Coastal Commission has approved several paved multi-use trail projects located in or adjacent to ESHA and wetlands, with identified goals of facilitating public access and protecting sensitive resources. In many of these approvals, the Commission determined that the public access, recreation, and educational benefits of the project were dependent on their location within the natural habitat. Interpretive signs and resource management plans were imperative to successfully protecting and enhancing sensitive habitats, while also improving public access in the Coastal Zone.

Based on the legal standards and Coastal Commission experience described above, the Project can achieve consistency with the Coastal Act as follows. Where a proposed trail segment would pass through an ESHA, it must be designed to prevent "any significant disruption of habitat values." Where a trail segment would be adjacent to ESHA, it must be "sited and designed to prevent impacts which would significantly degrade" the ESHA, and "be compatible with the continuance of" the ESHA. Where a trail segment would pass through a wetland, "feasible mitigation measures" must be "provided to minimize adverse environmental effects"; and the overall trail alternative chosen must be the least environmentally damaging feasible alternative with respect to wetlands effects.

Local

Santa Cruz County General Plan and Local Coastal Program

The County General Plan and Local Coastal Program provides the following objectives and policies to protect biological resources within the Coastal Zone (Santa Cruz County 1994):

- **Objective 5.1, Biological Resource Protection.** To maintain the biological diversity of the County through and integrated program of open space acquisition and protection, identification and protection of plant habitat and wildlife corridors and habitats, low-intensity and resource compatible land uses in sensitive habitats and mitigations on projects and resource extraction to reduce impacts on plant and animal life.
    - **Policy 5.1.2, Sensitive Habitat Definition (LCP).** An area is defined as a sensitive habitat if it meets one or more of the following criteria:
        (a) Areas of special biological significance as identified by the California State Water Resources Control Board.
        (b) Areas which provide habitat for locally unique biotic species/communities, including coastal scrub, maritime chaparral, native rhododendrons, and associated Elkgrass, mapped grasslands in the Coastal Zone, and sand parkland and Special Forests including San Andreas coast Live Oak Woodlands, Valley Oak, Santa Cruz Cypress, indigenous Ponderosa Pine, indigenous Monterey Pine and ancient forests.
        (c) Areas adjacent to essential habitats of rare, endangered or threatened species as defined by (e) and (f) below.
        (d) Areas which provide habitat for Species of Special Concern as listed by the California Department of Fish and Game [Wildlife] in Special Animals list, Natural Diversity Database.
        (e) Areas which provide habitat for rare or endangered species which meet the definition of Section 15380 of the California Environmental Quality Act.

(f) Areas which provide habitat for rare, endangered or threatened species as designated by the State Fish and Game Commission, United States Fish and Wildlife Service, or CNPS.
(g) Near-shore reefs, rocky intertidal areas, seacaves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sand beaches, shorebird roosting, resting and nesting areas, cliff nesting areas and marine, wildlife or educational/research reserves.
(h) Dune plant habitats.
(i) All lakes, wetlands, estuaries, lagoons, streams and rivers.
(j) Riparian corridors.

- **Policy 5.1.3, Environmentally Sensitive Habitat Area (ESHA) Protection (LCP).** Designate the areas described in 5.1.2 (d) through (J) as Environmentally Sensitive Habitats per the California Coastal Act and unless other uses are:
  (a) consistent with habitat protection policies and serve a specific purpose beneficial to the public;
  (b) it is determined through environmental review that any adverse impacts on the resource will be completely mitigated and that there is no feasible less-damaging alternative; and
  (c) legally necessary to allow a reasonable economic use of the land, and there is no feasible less-damaging alternative.
- **Policy 5.1.6, Development in Sensitive Habitats (LCP).** Sensitive Habitats shall be protected against a significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance functional capacity of the habitat. Reduce in scale, redesign, or if no other alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of project is legally necessary to allow a reasonable use of the land.
- **Policy 5.10.4, Preserving Natural Buffers.** Preserve the vegetation and landform of natural wooded hillsides which serve as a backdrop for new development. Also comply with policy 8.6.6 regarding protection of ridgetops and natural landforms.
- **Policy 5.10.8, Significant Tree Removal Ordinance (LCP).** Maintain the standards in the County's existing ordinance which regulates the removal of significant trees and other major vegetation in the Coastal Zone, and provide appropriate protection for significant trees and other major vegetation in areas of the County located within the Urban Services Line.
- **Policy 5.2.2, Riparian Corridor and Wetland Protection Ordinance (LCP).** Implement the protection of Riparian Corridors and Wetlands through the Riparian Corridor and Wetland Protection ordinance to ensure no net loss of riparian corridors and riparian wetlands. The ordinance identifies and defines riparian corridors and wetlands, determines the uses which are allowed in and adjacent to these habitats, and specifies required buffer setbacks and performance standards for land in and adjacent to these areas. Any amendments to this ordinance shall require a finding that riparian corridors and wetlands shall be afforded equal or greater protection by the amended language.
- **Policy 5.2.3, Activities Within Riparian Corridors and Wetlands (LCP).** Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the US Army Corps of Engineers, California Department of Fish and Game, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.

- **Policy 5.2.4, Riparian Corridor Buffer Setback (LCP).** Require a buffer setback from riparian corridors in addition to the specified distances found in the definition of riparian corridor. This setback shall be identified in the Riparian Corridor and Wetland Protection ordinance and established based on stream characteristics, vegetation and slope. Allow reductions to the buffer setback only upon approval of a riparian exception. Require a 10 foot separation from the edge of the riparian corridor buffer to any structure.
- **Policy 5.2.5, Setbacks From Wetlands (LCP).** Prohibit development within the 100 foot riparian corridor of all wetlands. Allow exceptions to this setback only where consistent with the Riparian Corridor and Wetlands Protection ordinance, and in all cases, maximize distance between proposed structures and wetlands. Require measures to prevent water quality degradation from adjacent land uses, as outlined in the Water Resources section.
- **Policy 5.27, Compatible Uses With Riparian Corridors (LCP).** Allow compatible uses in and adjacent to riparian corridors that do not impair or degrade the riparian plant and animal systems, or water supply values, such as non-motorized recreation and pedestrian trails, parks, interpretive facilities and fishing facilities. Allow development in these areas only in conjunction with approval of a riparian exception.

Santa Cruz County Urban Forest Master Plan

The 1992 Santa Cruz County Urban Forestry Master Plan (Santa Cruz County 1992) was developed as a comprehensive urban forestry and street tree program. This plan was originally developed for the County Redevelopment Agency to commit funding, prioritize projects, develop a uniform tree program, provide for appropriate maintenance, and enhance community image. The program was also designed to assist with mitigation for Redevelopment Agency projects. The agency was dissolved in 2012 and the County Board of Supervisors was named as the Successor agency. Remaining projects and responsibilities were incorporated into the Santa Cruz County Planning, Public Works, and Parks Departments. The following goals and objectives are outlined in the Urban Forest Master Plan:

1. Create community identity
2. Integrate design and responsible planting practices with environmental and functional planting requirements for each site
3. Mitigate the adverse physical and visual impacts of streets
4. Preserve, enhance, and expand the existing urban forest
5. Establish and maintain a coordinated, timely, high quality, and efficient program of management and maintenance for public trees
6. Promote and foster public awareness, interest and support for urban forestry efforts

Urban streetscape designs outlined in the concept plan element of the Plan attempt to connect newly planted “Heritage groves” of regional natives at regularly spaced intervals throughout the County right-of-way connected by a mosaic of highway and riparian “gateways” and linear streetscape plantings. Heritage groves would be composed of prominent native trees including coast redwood, coast live oak, tanoak, and buckeye that provide visual context to the natural Heritage and biogeography of the community. Riparian gateways placed at strategic locations adjacent to urban watercourses include recommended plantings of white alder, box elder, blue elderberry, big leaf maple, and western sycamore.

County of Santa Cruz Significant Tree Ordinance

The County of Santa Cruz regulates the removal of "significant trees" in the Coastal Zone (County Code, Section 16.34). Within the urban and rural services line, significant trees are those greater than 20 inches in DBH for single stemmed trees; any sprout clump of five or more stems each of which is greater than 12 inches DBH; or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches DBH. Outside the urban services or rural services line where visible from a scenic road, any beach, or within a designated scenic resource area, significant trees include those equal to or greater than 40 inches DBH (approximately 10 feet in circumference); any sprout clump of five or more stems, each of which is greater than 20 inches DBH (approximately 5 feet in circumference); or, any group consisting of 10 or more trees on one parcel, each greater than 20 inches DBH. Significant trees also include any tree located in a sensitive habitat as defined in Chapter 16.32 (Sensitive Habitat Protection Ordinance) of the County Code, unless exempted by provisions in Section 16.34.090. No stipulations are made for native versus non-native and/or ornamental trees. Exceptions are made for trees that are diseased or deemed hazardous to public safety; or pursuant to a Timber Harvest Plan or Fire Protection Plan submitted to and approved by the California Department of Forestry. Removal of significant trees would require a permit issued by the County of Santa Cruz Community Development and Infrastructure Department and would likely require mitigation including, but not limited to, planting of replacement trees at a ratio and species composition determined by the Planning Department.

County of Santa Cruz Sensitive Habitat Protection Ordinance

The County of Santa Cruz Sensitive Habitat Protection ordinance (County Code, Section 16.32) is intended to "minimize the disturbance of biotic communities which are rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activity." Sensitive habitats under the County Code relevant to the Project include areas that provide habitat for locally unique biotic species/communities, such as oak woodlands and coastal scrub; areas adjacent to essential habitats of rare, endangered or threatened species, or other rare species considered under CEQA; dunes, wetlands, lagoons, rivers, and riparian corridors; and areas defined as ESHA under the Coastal Act.

The Project is required to mitigate any unavoidable environmental impacts to sensitive habitats. The ordinance calls for protection of sensitive habitats "undisturbed by the proposed development activity" or on an adjacent parcel through measures such as conservation easements. Additionally, restoration "commensurate with the scale of the proposed development" is required for degradation of sensitive habitats caused by the Project. Exemptions to this ordinance may be granted concurrently with authorized riparian exceptions.

County of Santa Cruz Riparian Corridor and Wetlands Protection Ordinance

The County of Santa Cruz Riparian Corridor and Wetlands Protection (County Code, Section 16.30) limits development activities in riparian areas[15] and provides buffer/setback requirements[16] based on slope and vegetation composition. The Santa Cruz County Planning Commission may authorize a riparian setback exception on a case-by-case basis. Exceptions are granted pending an approved

[15] The County Code defines riparian vegetation/woodland as "those plant species/woody plant species that typically occur in wet areas along streams or marshes" (County Code 16.30.030). See also USFWS definition of riparian habitat under the *Sensitive Habitats* section (USFWS 2009).

[16] The ordinance states that a buffer "shall always extend 50 feet beyond the edge of riparian woodland for perennial streams and 20 feet beyond the edge of other woody vegetation as determined by the dripline" (Section 16.3.040).

application stating the applicant's proposed activities, best management practices (BMP), and measures for mitigating impacts to the riparian corridor.

A riparian exception is required for development activities that fall within the protected areas. In order for a riparian exception to be approved, all of the following findings must be made:

1. That there are special circumstances or conditions affecting the property
2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property
3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located
4. That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative
5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program Land Use Plan

City of Capitola Local Coastal Program

Capitola's LCP is a comprehensive long-term plan for land use and physical development within the City's Coastal Zone. Prior to the issuance of any permit for development within the Coastal Zone, the City is required to prepare necessary findings that the development meets the standards set forth in all applicable Land Use policies. Relevant LCP policies pertaining to biological resources include, but are not limited to, the following:

- **Policy VI-1.** It shall be the policy of the City of Capitola to take measures within its purview to preserve and improve the quality of the waters of Monterey Bay, to support Marine Habitats, public recreation, and commercial pursuits consistent with sound resource management principles.
- **Policy VI-2.** It shall be the policy of the City of Capitola to protect, maintain and, where possible, enhance the environmentally sensitive and locally unique habitats within its Coastal Zone, including dedication and/or acquisition of scenic conservation easements for protection of the natural environment. All developments approved by the City within or adjacent to these areas must be found to be protective of the long-term maintenances of these habitats.
- **Policy VI-3.** It shall be the policy of the City of Capitola to maintain the maximum amount of native vegetation along Soquel Creek and other riparian areas, and to strongly support the California Department of Fish and Game in requiring a minimum flow that will support a healthy riparian habitat and permanent fishing resource in Soquel Creek.
- **Policy VI-4.** Parking lot and stream drains, and stormwater runoff culverts shall be improved by installing energy dissipators and sand traps or other types of grease/sediment traps in conjunction with new development or intensification of use.
- **Policy VI-5.** The City shall, as a condition of new development, ensure that runoff does not significantly impact the water quality of Capitola's creeks and wetlands through increased sedimentation, biochemical degradation, or thermal pollution.
- **Policy VI-6.** The City shall enact regulations to control erosion and runoff.
- **Policy VI-7.** The City should coordinate with Santa Cruz County and AMBAG to investigate and implement sound watershed management methods for the lands within Capitola to: a) maintain adequate stream flow for fish, wildlife, and riparian vegetation; b) control contaminated urban runoff, and c) encourage water conservation.

- **Policy VI-8.** The City shall maintain and, as feasible, continue to enhance the habitat values of Soquel Creek through the use of the Automatic Review Zone for the Soquel Creek Riparian Corridor and Lagoon. When considering or granting a permit in this area, the City shall give special consideration to the environmental sensitivity of this area, including dedication of scenic conservation easements. In addition, the City shall encourage the use of appropriate native local riparian vegetation.
- **Policy VI-9.** The City shall maintain the habitat values of Noble Gulch where existing natural riparian corridors exist.
- **Policy VI-10.** a) It shall be the policy of the City of Capitola to protect the winter resting sites of the Monarch Butterfly in the eucalyptus groves of Escalona Gulch, New Brighton Gulch, and Soquel Creek by requiring detailed analysis of the impacts of development on the habitat; b) it is the goal of the City to preserve the monarch butterfly overwintering site in the area known as Escalona Gulch.

City of Capitola Municipal Code – Environmentally Sensitive Habitat Areas

The Capitola Municipal Code establishes standards to protect and preserve ESHA in Capitola consistent with the Capitola General Plan, LCP, and the requirements of the Coastal Act. Development may not encroach into required minimum setbacks from ESHA as defined in the code. Reductions and exceptions to the setbacks may be granted by the City provided there are no significant adverse effects or degradation of ESHA and that the proposed use is consistent with the habitat. The City may attach conditions to ensure compliance with the protection of ESHA.

City of Capitola Municipal Code – Native Riparian Trees

Removal of native riparian trees within riparian corridors is prohibited unless it is determined by the community development director, on the basis of an arborist report, that such removal is in the public interest by reason of good forestry practice, disease of the tree, or safety considerations.

City of Capitola Municipal Code – Monarch Butterfly Habitat

Construction for otherwise allowable development within or on properties contiguous to the designated butterfly groves shall be prohibited during fall and winter months when the monarch butterflies are present. Removal or modification of trees (including pruning) within the groves shall not be permitted during these periods except when determined by the community development director, on the basis of an arborist report, to be an emergency necessary to protect human life or property. Barrier fencing shall be installed around large trees, especially cluster trees, for protection during construction.

Development shall be sited and designed to avoid removal of larger trees. New development located immediately adjacent to large trees shall be evaluated by an arborist to ensure that the development will not negatively impact the tree in the future. Trees removed for construction shall be replaced based on a written tree replanting program developed in consultation with a qualified monarch butterfly expert. The trees shall be sited in strategic locations as identified by the replanting program.

City of Capitola Community Tree and Forest Management Ordinance

The Community Tree and Forest Management ordinance of the Capitola Municipal Code (Capitola Municipal Code, Section 12.12), establishes regulations relating to the protection, planting, maintenance, removal, and replacement of trees, and sets forth the process for development of a

comprehensive plan for the planting and maintenance of a sustained community forest within the City. All trees, regardless of species greater than 6 inches at 48 inches above grade require a permit for removal, with the exception of edible-fruit bearing trees. Replacement trees at a minimum ratio of 2:1 is required to ensure a canopy coverage of at least 15% will result, or in-lieu fees may be paid into an existing City tree planting program. Replacement trees are not required if post-removal tree canopy coverage on a site or parcel will be 30% or more.

Capitola Municipal Code, Sections 12.12.090 and 12.12.100, establish the Heritage Tree Historic Context and tree list and nomination process. Heritage trees are defined as any locally significant, historic, scenic and/or mature tree growing on public or private property, that is listed on the City's adopted Heritage tree list that is supported by the property owner and by the City council. Section 12.12.130 establishes tree protection, management, and maintenance requirements. To date, only four trees have been formally designated as Heritage Trees within the City of Capitola, although none are located within the study area.

3.3.3 Methodology and Significance Thresholds

Methodology

This section describes the potential environmental impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* relevant to biological resources. The impact analysis is based on an assessment of baseline conditions for the Project corridor. The methodology for identifying the biological resources within and adjacent to the Project corridor is described above in Section 3.3.1, *Existing Conditions*.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of biological resources, as well as the other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this EIR, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions.

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS
C. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Regarding Threshold F, there is no applicable adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan. Therefore, there would be No Impact, and this topic is not addressed further in this EIR.

3.3.4 Project Impact Analysis

In the Project impact analysis, potentially significant impacts are presented in the order of the significance thresholds A-E listed above. Mitigation measures have been developed to reduce these impacts to a less than significant level, where possible. A detailed description of each mitigation measure is provided with its corresponding impact statement (i.e., the impact for which it was developed). Some mitigation measures reduce the significance of more than one impact and are so referenced in the Project impact analysis below. For example, Mitigation Measure BIO-9a was developed to mitigate Impact BIO-9 and is fully described under the discussion for Impact BIO-9. In addition, Mitigation Measure BIO-9a serves to mitigate Impact BIO-1 and is referenced (but not fully described) under Impact BIO-1.

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Interim Trail and rebuilding the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
Threshold B:	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
Threshold C:	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
Threshold D:	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
Threshold E:	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact BIO-1 THE PROJECT WOULD ADVERSELY AFFECT MONARCH BUTTERFLY AND AUTUMNAL AND/OR WINTERING ROOST SITES. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

Ultimate Trail Configuration (Trail next to Rail Line)

The Ultimate Trail would have an adverse effect on monarch butterfly and its autumnal and/or winter roost habitat through habitat modification as a result of tree and understory removal during construction, as well as from trail operation (use) of the Project corridor. The monarch butterfly is a candidate for listing under the federal ESA (USFWS 2020, 2023e). On July 21, 2022, the IUCN listed the monarch as Endangered. Winter roost sites of the monarch butterfly are listed by NatureServe as imperiled/vulnerable (S2/S3) within California (CDFW CNDDB 2023). In the 1994 General Plan, the County of Santa Cruz recognizes as sensitive habitat "areas which provide habitat for species which meet the definition of Section 15380 of the CEQA guidelines"; the monarch butterfly meets this criterion.

Construction

To accommodate the Ultimate Trail and meet California Public Utilities Commission safety requirements and Caltrans Class 1 trail width requirements, tree removal would occur in known and potential monarch roost sites, as shown on **Figures 3.3-4** and **3.3-4a–g**. Tree removal would result in habitat modifications that would affect the suitability of autumnal and overwintering monarch roost sites. Construction would permanently impact 2.05 acres of known and potential monarch roost habitat and temporarily impact 0.60 acres of habitat. These sites vary in their suitability for autumnal and overwintering roosting monarchs. **Appendix F.1** provides a more detailed description of monarch roost habitat requirements.

The removal of known and potential monarch roost trees and other impacts (e.g., understory removal of nectar plants) would occur at several locations along the Project corridor. Potential monarch roost habitat is present along Rodeo Gulch, south of Xerces Site# 2982[17], as shown on **Figure 3.3-2b** and **Figure 3.3-4b**. These trees provide potential autumnal and winter roost sites with suitable monarch habitat features, including winter flowering plants for nectaring. Escalona Gulch is a known winter roost site managed by CDFW (Xerces Site #2985), depicted on **Figure 3.3-2e** and **Figure 3.3-4e**. This site is currently known to support a small number of overwintering butterflies; autumnal roost trees and nectar plants are also present. At New Brighton State Beach, the known winter roost site (Xerces Site #3986) would not be directly impacted by the Project; however, autumnal roost trees and wind buffer trees that line the rail corridor between Coronado and Kennedy and immediately north of Xerces Site # 3986 would be removed to construct the trail, as shown on **Figure 3.3-2f** and **Figure 3.3-4f**. Borregas Creek is a winter roost site within the Porter-Sesnon open space element of New Brighton State Beach and adjacent private property (Xerces Site #2987). Xerces Society does not conduct annual Thanksgiving counts at this site. Large trees along the Project corridor likely buffer the winter roost trees to the south, and trees to the east, along Flatiron Creek provide potential autumnal roosting habitat, but the overwintering site would not be directly impacted by the project.

Table 3.3-4 lists tree removal within known and potential roost sites along the Project corridor and **Table 3.3-5** quantifies temporary and permanent impacts at these locations. Under Impact BIO-10 further details regarding tree removal are provided including in **Table 3.3-11**, **Table 3.3-12**, **Figure 3.3-5**, and **Figures 3.3-5a–v**, which depict tree removal along the rail corridor.

[17] Xerces Society does not conduct Thanksgiving counts at this site.

Table 3.3-4 Tree Removal at Known and Potential Monarch Roost Sites

Known and Potential Autumnal and Winter Roost Sites	Ultimate Trail	Interim Trail Part 1	Part 1 + 3	Option A[a]	Option B
Rodeo Gulch (South of Xerces Site #2982)	9	0	9	9	9
Escalona Gulch (Xerces Site #2985)	97	42	125	97	101
New Brighton State Beach (Coronado Street to Kennedy Drive)	62	7	64	62	62
New Brighton State Beach (Immediately north of Xerces Site #2986)	130	17	136	130	130
Borregas Creek (Xerces Site #2987)	0	0	0	0	0
Flatiron Creek (east of Xerces Site #2987)	20	13	24	20	20
Total	**318**	**79**	**358**	**318**	**322**

For more detail on the species and size of trees to be removed see also Impact BIO-10, including **Table 3.3-11**, **Figure 3.3-5**, and **Figures 3.3-5a–v**, which depicts tree removal for the trail options.

[a] No additional trees would be removed for Design Option A.

Table 3.3-5 Temporary and Permanent Impacts on Known and Potential Roost Sites

Known and Potential Autumnal and Winter Roost Sites	Ultimate Trail		Interim Trail Part 1		Part 1 + 3		Option A		Option B	
	Temp	**Perm**	**Temp**	**Perm**	**Temp**	**Perm**	**Temp**	**Perm**	**Temp**	**Perm**
Rodeo Gulch (South of Xerces Site #2982)	0.05	0.09	0.02	0.04	0.05	0.09	0.05	0.09	0.05	0.09
Escalona Gulch (Xerces Site #2985)	0.18	0.68	0.26	0.56	0.45	1.22	0.18	0.68	0.13	0.49
New Brighton State Beach (Coronado Street to Kennedy Drive)	0.13	0.34	0.18	0.35	0.31	0.69	0.13	0.34	0.12	0.33
New Brighton State Beach (Immediately north of Xerces Site #2986)	0.18	0.81	0.40	0.77	0.58	1.58	0.18	0.81	0.18	0.81
Borregas Creek (Xerces Site #2987)	0	0	0	0	0	0	0	0	0	0
Flatiron Creek (East of Xerces Site #2987)	0.06	0.13	0.03	0.13	0.09	0.26	0.06	0.13	0.06	0.13
Total	**0.60**	**2.05**	**0.89**	**1.85**	**1.48**	**3.84**	**0.60**	**2.05**	**0.54**	**1.85**

See also **Table 3.3-2** and **Table 3.3-9**.

In addition to tree removal, construction activities may result in disturbance, injury, or mortality to autumnal or winter roosting monarchs from noise, vibration, dust, vehicle strikes, damage to nectar plants, and/or loss or contamination of water sources.

As described in Section 2.6.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, the Project includes several construction BMPs to minimize construction impacts on biological resources, but additional mitigation is necessary to further reduce this impact.

Mitigation Measure BIO-1a requires pre-construction surveys for sensitive wildlife species, environmental training for all construction personnel, and biological monitoring during construction to protect sensitive wildlife species, including the monarch butterfly.

Mitigation Measure BIO-7a, which is identified for and described in detail under Impact BIO-7, would minimize construction activities in and adjacent to sensitive habitats, including monarch habitat, and requires protective construction fencing be installed to confine construction to the work area and minimize inadvertent disturbance of sensitive habitat.

Mitigation Measure BIO-7b, which is identified and described in detail under Impact BIO-9, outlines the development of a Project-specific Biological Resources Mitigation and Management Plan (MMP), and includes protection and enhancement of the existing monarch roost sites at Escalona Gulch, New Brighton State Beach, and Borregas Creek as well as compensation (e.g., replacement tree planting) for permanent impacts to monarch roost habitat.

Mitigation Measure BIO-7c, which is identified for and described in detail under Impact BIO-7, would time Project activities to minimize impacts to sensitive resources. Monarch butterflies would be protected by timing tree removal and other potentially disruptive construction activities to be performed outside the monarch roost season. This measure further reduces construction-related impacts through additional BMPs that protect sensitive habitats.

While the Project MMP would include provisions for the enhancement of monarch habitat, the permanent loss of mature monarch roost trees, including buffer trees, cannot be adequately mitigated. This is because enhancement plantings would take many years to fully mature and provide adequate buffer quality of and functions. In addition, mitigation sites for tree replacement planting are not readily available in locations that would benefit monarch roost habitat.

Therefore, this construction-related impact is **significant and unavoidable** (Mitigation Measures BIO-1, BIO-7a, BIO-7b, and BIO-7c).

Operation

Once constructed, use of the trail may result in impacts to autumnal or winter roosting monarchs through increased presence of pedestrians and cyclists on the trail which may directly impact individual monarchs through trampling or vehicle strikes and/or degradation of nectar and roost habitat. Autumnal and winter roost habitat and individual butterflies would be protected to the extent feasible during trail operation.

Additional measures identified and described in detail under Mitigation Measure BIO-7b would minimize operational impacts to individual monarch butterflies, roost habitat, and nectar habitat. Mitigation Measure BIO-7b, which is described in detail under Impact BIO-7, would mitigate temporary disturbance and permanent loss of sensitive habitats. As noted above under construction-related impacts, the MMP would describe provisions to protect and enhance the

functions and values of sensitive habitat, including enhancement of the existing monarch roost sites at Escalona Gulch, New Brighton State Beach, and Borregas Creek.

Therefore, the impact from trail use would be **less than significant with mitigation** (Mitigation Measures BIO-7b).

In summary, the overall impact from construction and operation would be **significant and unavoidable** (Mitigation Measures BIO-1a, BIO-1b, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

During construction of the Ultimate Trail, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement biological monitoring measures for sensitive wildlife species, as specified below:

- Prior to initiation of construction activities, a USFWS- and/or CDFW-approved biologist shall prepare a construction monitoring plan that identifies all areas to be protected with exclusion fencing, and all areas requiring monitoring by an agency -approved biologist or trained construction monitor.
- Prior to initiation of construction activities, an agency-approved biologist shall conduct an environmental training for all construction personnel. The training shall include a description of the sensitive wildlife species known or with potential to occur in the Project alignment and surroundings (monarch butterfly, sensitive fish species, potential Santa Cruz black salamander, sensitive and common native nesting avian species, sensitive and common roosting bats species, and San Francisco dusky-footed woodrat).
- Prior to initiation of construction activities, the construction contractor shall install temporary exclusion fencing (solid silt fencing) in specified areas along the Project boundaries, approximately 6 inches below grade and 3.0 feet above grade, with wooden stakes at intervals of not more than 8.0 feet. Breaks in the exclusion fencing at minimum intervals of 0.25 miles shall allow for wildlife passage across the alignment. The fence shall be maintained in working order for the duration of construction activities. The agency-approved biologist or trained construction monitor shall inspect the fence daily and notify the construction foreman when fence maintenance is required.
- Construction activities shall be timed to minimize impacts to sensitive biological resources, as shown in **Table 3.3-9**.
- The agency-approved biologist shall be present on site, to direct and inspect all ground-disturbing activities (including but not limited to tree removal, vegetation removal, grading, grubbing, exclusion fence installation and removal, and for construction activities located in or near sensitive wildlife resources). Any vegetation removed shall be placed directly into a disposal vehicle. Vegetation shall not be piled on the ground unless later transferred, piece by piece, under the direct supervision of an approved biologist.
- The approved biologist shall train a designated construction monitor who shall oversee implementation of all protective mitigation measures when the biologist is not present. This representative shall be trained in the identification of special-status wildlife. This representative shall not have the authority to handle special-status species.
- Once ground disturbance activities have been completed, the approved biologist or trained construction monitor shall conduct regular inspections of the work area. Prior to the start of work each day, the biologist or monitor shall check for wildlife underneath any vehicle or heavy equipment within the construction site.

- The biologist will remain on call. In the event that the construction monitor identifies a sensitive wildlife species in or near the Project area, the approved biologist will be available to confirm the identification and, depending on the species and with agency authorization, relocate the animal out of harm's way. Suitable relocation sites shall be identified in advance with the approval of the relevant agencies.
- The approved biologist and construction monitor shall have the authority to stop work that may result in the "take" of a special-status species.
- At the end of each workday, excavations (i.e., trenches, holes) shall be secured with a cover (preferably) or a ramp to prevent wildlife entrapment.
- All trenches, pipes, culverts, or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.
- With agency approval, the approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat in and near the construction impact area, if present.

Mitigation Measure BIO-1b: Enhance Monarch Roost Habitat along the Rail Corridor (Escalona Gulch, New Brighton State Beach, and Borregas Creek)

As a discreet component of Mitigation Measure BIO-7b [described under Impact BIO-7 (Sensitive Habitats)], the County of Santa Cruz shall work with property owners, including CDFW (Escalona Gulch) and State Parks (New Brighton State Beach and Borregas Creek) to develop a Monarch Roost Site Enhancement Plan for monarch roost sites near the rail corridor. Enhancement may include but is not limited to:

- Protecting and maintaining the eucalyptus grove to support monarch roosting through maintenance of roost trees and wind buffer trees;
- Topping, thinning, and/or limbing of the grove, as needed, to allow sun penetration while preserving wind buffers and variable roost site conditions within the grove (i.e., sun, shade, and insulation from heat and cold);
- Planting of saplings [to develop wind buffers and promote growth of future roost trees (avoid senescence[18])]; and
- Cultivating fall- and winter-blooming nectar plants.

Implementation of this compensatory mitigation would be arranged through payment of in-lieu fees to the implementing body (i.e., CDFW or State Parks or mitigation contractor) or similar fiscal arrangement to be developed for the purposes of the Project.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

[18] "Senescence" is the age-related declines in woody plant communities that may be affected by physiological changes (e.g. reduced stem sap flow) in individual trees as well as the growing environment (e.g. drought) and interactions between these factors.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The Interim Trail would have an adverse effect on monarch butterfly and its autumnal and/or winter roost habitat through habitat modification as a result of construction and tree removal during Part 1, as well as from trail operation (use) of the Project corridor.

CONSTRUCTION

During construction of Part 1 of the Interim Trail, impacts on monarch habitat would occur on both sides of the railroad tracks, particularly within monarch roost habitat at Escalona Gulch. Part 1 would result in permanent impacts to 1.85 acres of monarch roost habitat, temporary impacts to 0.89 acres of habitat, and the removal of 79 trees within monarch roost habitat (**Table 3.3-4** and **Table 3.3-5**). At Escalona Gulch, 42 trees would be removed within monarch roost habitat during Part 1. These trees are positioned primarily on the inland the tracks, as shown on **Figure 3.3-5k**. See also **Figure 3.3-2**, **Figures 3.3-2a–h**, **Figure 3.3-4**, **Figures 3.3-4a–h**, Impact BIO-10, **Table 3.3-11**, and **Figure 3.3-5**, and **Figures 3.3-5a–v**.

Impacts during construction of Part 1 would be similar to those described above for the Ultimate Trail. Construction would also include the removal of the tracks, which involves transporting the railroad ties (treated wood waste) off site for disposal, excavating and redistributing the ballast on site (where feasible), and regrading, compacting, and capping the rail bed with trail pavement. These additional activities are likely to generate increased and potentially more hazardous dust and vibrations than the construction of the Ultimate Trail alone.

Implementation of the same mitigation measures described above for the Ultimate Trail would reduce impacts but not to a less than significant level. Therefore, this construction-related impact **would significant and unavoidable** (Mitigation Measures BIO-1a, BIO-1b, BIO-7a, BIO-7b, and BIO-7c).

OPERATION

Operation of Part 1 of the Interim Trail would result in similar impacts to the operation of the Ultimate Trail. The increased presence of pedestrians and cyclists may directly impact individual monarchs through trampling or vehicle strikes and/or degradation of nectar and roost habitat.

Therefore, as noted above under the Ultimate Trail, this impact from trail use would be **less than significant with mitigation** (Mitigation Measure BIO-7b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-1b: Enhance Monarch Roost Habitat along the Rail Corridor (Escalona Gulch, New Brighton State Beach, and Borregas Creek)

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Interim Trail and rebuilding of the rail line (Part 2) would not require additional tree removal that would impact monarch roosting habitat. Impacts during Part 2 would be associated with construction activities and would be similar to those described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail (Part 1). However, removal of the Interim Trail and reinstallation of the rail line is likely to generate significantly more dust and vibrations than the construction activities associated with the Ultimate Trail alone. There would be no operational impact associated with Part 2 because there would be no trail.

Although the construction impacts would be temporarily greater, no trees would be removed resulting in fewer permanent impacts on monarch roost habitat during Part 2. Implementation of the same mitigation measures described above for the Ultimate Trail would reduce the impacts to a less than significant level. Therefore, this construction-related impact **would be less than significant with mitigation** (Mitigation Measures BIO-1, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction

3) Construction of the Ultimate Trail Configuration

Construction of Part 3 would permanently impact 1.99 acres of monarch roost habitat and temporarily impact and 0.59 acres of habitat (**Table 3.3-5**). During Part 3, 279 trees would be removed within monarch habitat, including 83 trees at Escalona Gulch (**Table 3.3-4**).

Construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* for construction and operational impacts. Refer to the discussion for Impact BIO-1, under *Ultimate Trail Configuration (Trail next to Rail Line)*.

These impacts would be **significant and unavoidable** (Mitigation Measures BIO-1a, BIO-1b, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effect of Interim Trail Parts 1, 2, and 3 would result in 3.84 acres of permanent impacts and 1.48 acres of temporary impacts and 358 trees being removed overall within monarch habitat (**Table 3.3-4** and **Table 3.3-5**). In addition, at Escalona Gulch, a known overwintering roost site, tree removal would occur on both sides of the tracks and would include the large eucalyptus trees immediately north of the tracks that likely regulate wind at Escalona Gulch. Therefore, this impact is likely to alter wind patterns and could significantly disrupt or eliminate roosting at this location. Further, major construction activities would occur three times in the same location, albeit likely over a period of years. As described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, for purposes of analysis, it is estimated that construction of Parts 1 and 2 could be 25 years apart, while construction of Parts 2 and 3 would likely be closer so users are not without the trail for a prolonged period of time. In addition, removal of the tracks and subsequently the Interim Trail would likely result in the generation of greater amounts and potentially more hazardous dust and vibrations. In order to reduce impacts to the monarch, whose disposition may change over the time period (i.e., this species is likely to be listed under the federal ESA), construction activities in known and potential monarch overwintering sites would occur outside the monarch roosting period and monarch roost habitat would be preserved to the greatest extent feasible. The impacts of the Optional Interim Trail as a whole would be **significant and unavoidable**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not impact monarch roost habitat differentially from the Project.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This option would result in the removal of four more trees than the Project. Impacts to monarch habitat would be reduced by 0.06 acres for temporary impacts and 0.20 acres for permanent impacts. This option would be similar to the Project in its impact to monarch roost habitat. The main difference is the location of the trees to be removed-- for Grove to Coronado Option B, the trees would be removed on the inland side of the trail; whereas for the Project the trees would be removed on the coast side.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have a larger footprint (**Table 3.3-5**) and greater tree removal (**Table 3.3-4**) overall than the Project without the Optional Interim Trail. Because tree removal would occur on both sides of the tracks, particularly at Escalona Gulch, tree removal impacts associated with the Interim Trail would be greater than those for the Project. In addition, the Project without the Optional Interim Trail would subject monarch roost habitat to one set of construction activities, whereas the Project with the Optional Interim Trail would affect monarch roost habitat over the course of three separate major construction periods. In addition, greater

amounts and potentially more hazardous dust would be generated through removal of the tracks and ballast and subsequently, the Interim Trail. Thus, although impacts would be significant and unavoidable under both scenarios, the impact of the Project with the Optional Interim Trail would be greater than without the Optional Interim Trail.

Impact BIO-2 THE PROJECT COULD ADVERSELY AFFECT SENSITIVE FISH SPECIES (TIDEWATER GOBY, CENTRAL CALIFORNIA COAST STEELHEAD (AND THESE TWO SPECIES CRITICAL HABITAT), AND PACIFIC LAMPREY). (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

The Ultimate Trail could have an adverse effect on tidewater goby as a result of trail construction activities, as well as trail operation (use), over and adjacent to Rodeo Gulch. The Ultimate Trail would avoid impacts to Soquel Creek (because it diverts through the neighborhood streets of Capitola and utilizes the existing Stockton Avenue Bridge sidewalks for crossing Soquel Creek) and would therefore not result in impacts to central California coast steelhead or Pacific lamprey.

The tidewater goby is listed as Endangered under the federal ESA (USFWS 1994) and a Species of Special Concern by CDFW (Moyle et al. 2015; CDFW 2023d). The tidewater goby is known to occur in Rodeo Gulch from Corcoran Lagoon up to Highway 1, and this species' designated critical habitat is present in Rodeo Gulch downstream of the rail crossing (**Figure 3.3-4b**). Goby is known to occur in Soquel Creek up to Highway 1 (**Figures 3.3-4c–e**). This creek is not within designated critical habitat for the goby (USFWS 2005).

Construction

At Rodeo Gulch, a new clear span bridge and combination viaduct from the existing bridge would be constructed over Rodeo Gulch. No work would occur below the ordinary high-water mark (OHWM) of Rodeo Gulch and dewatering would not be required. Construction activities could result in the introduction of debris, sediment, other construction materials, or chemicals into Rodeo Gulch. As described in Section 2.6 under *Best Management Practices,* a debris containment device would be installed to curtail the amount of construction debris and materials entering Rodeo Gulch. The debris containment device would remain in place during all construction activities over and near the water. This device would protect tidewater goby from direct impacts (injury and mortality) associated with construction debris falling into the water. In addition, erosion and sediment control measures would be installed and maintained during construction to reduce sediment, other materials, and chemical-laden runoff introductions to the creek. These measures would reduce potential direct and indirect impacts to tidewater goby and indirect impacts to its critical habitat downstream in Rodeo Gulch.

No construction would occur at or near Soquel Creek; therefore, no impacts on that habitat are anticipated.

Federal and state agencies that regulate sensitive fish species and work below the break in bank may require additional measures to protect tidewater goby and critical habitat. The Project may require permits from USFWS and would require permits from CDFW. As part of this process, the County or its agent (with approval from the City) may request technical assistance from USFWS. Through the Lake and Streambed Alteration Agreement permitting process, CDFW may identify additional protective measures for tidewater goby.

Operation

Trail operation could result in impacts to Rodeo Gulch and tidewater goby through an increase in human traffic and associated trampling, trash, and human/dog excrement and through potential increases in erosion and sedimentation. These impacts would be reduced through the development of an MMP, described in Mitigation Measure BIO-7b, which would protect and enhance sensitive habitats and in Mitigation Measure BIO-8b, which would protect and enhance aquatic features.

In summary, the construction and operation impacts on tidewater goby would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1a, BIO-7a, b, c and BIO-8a, b, which are identified and described in detail under Impacts BIO-1 above and BIO-7 and BIO-8 further below, for potential impacts to monarch butterfly, sensitive natural communities and aquatic features.

Mitigation Measure BIO-1a would reduce potential impacts on fish habitat through biological monitoring, including environmental training of construction personnel by an agency-approved biological monitor and regular inspections of the work area to ensure compliance with all protective measures and conditions.

Mitigation Measures BIO-7a and BIO-8a would limit construction in sensitive and aquatic/riverine habitats, through minimizing the construction footprint (confining construction equipment, operations, staging, and access to designated areas) and the installation of temporary protective construction fencing. Mitigation Measures BIO-7c and BIO-8c outline BMPs to further protect sensitive and aquatic habitats during construction, to protect water quality, prevent erosion and sedimentation, and protect fish habitat. Mitigation Measure BIO-7c also identifies the preferred construction window (the dry season) for work in or near aquatic features which would limit sediment-laden runoff into aquatic features.

Mitigation Measure BIO-7b outlines the development of a Project-specific Biological Resources MMP, which would mitigate temporary disturbance and permanent loss of sensitive habitats and mitigate impacts to other sensitive biological resources, including provisions to protect and enhance the functions and values of riparian habitats adjacent to Rodeo Gulch.

Additionally, water quality would be protected through implementation of the BMPs to be included in the construction specifications and compliance with the National Pollutant Discharge Elimination System-required Stormwater Pollutant Prevention Plan, City's Grading Ordinance, and County's grading regulations would reduce the risk of water degradation on and off site from soil erosion and other pollutants related to construction activities, and would not obstruct or conflict with the implementation of the Central Coast Basin Plan.

Mitigation Measure BIO-8b would compensate for any losses to wetlands and aquatic/riverine habitats through implementation of an aquatic habitat mitigation and monitoring plan, which would include creation, restoration, enhancement, and/or preservation of wetlands and aquatic/riverine habitats.

There would be no direct Project impacts to marine sources protected under the MBNMS. Potential indirect impacts would be avoided and minimized with implementation of the mitigation measures described above.

Therefore, the construction and operation impacts would be **less than significant with mitigation**. Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b are described in detail under Impacts BIO-7 and BIO-8, respectively.

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The tidewater goby is listed as Endangered under the federal ESA (USFWS 1994) and a Species of Special Concern by CDFW (Moyle et al. 2015; CDFW 2023d). The tidewater goby is known to occur in Rodeo Gulch from Corcoran Lagoon up to Highway 1, and this species' designated critical habitat is present in Rodeo Gulch downstream of the rail crossing (**Figure 3.3-4b**). Goby is known to occur in Soquel Creek up to Highway 1 (**Figures 3.3-4c–e**). This creek is not within designated critical habitat for the goby.

The central California coast steelhead is listed as Threatened under the federal ESA (NOAA Fisheries 2006). This species is known to occur in Soquel Creek (CalFish 2011), which is designated critical habitat (NOAA Fisheries 2005) (**Figures 3.3-4c–e**).

The Pacific lamprey is a CDFW Species of Special Concern (CDFW 2023d) and is known to occur in Soquel Creek (Alley 2023) (**Figures 3.3-4c–e**).

For Part 1 of the Interim Trail, the trail would use the existing bridge across Rodeo Gulch and no further improvements to the bridge would be required. The bridge would be converted to trail use through the removal of the ballast, tracks, and ties. A lightweight load-bearing filler material would be applied to the existing bridge and hot mix asphalt or fiberglass reinforced polymer (FRP) decking and guard rails would be installed. These activities would not occur below the OHWM or below the break in bank; however, these potentially hazardous materials and debris could directly impact tidewater goby or degrade aquatic habitat in Rodeo Gulch, including critical habitat downstream. A debris containment device would be utilized during the removal of the rail and conversion to the trail. This device would minimize the introduction of debris and other hazardous materials into the creek.

For Part 1 of the Interim Trail, the trail would use the existing Capitola Trestle Bridge to cross Soquel Creek. The railroad bridge would be converted to trail use through removal of the ballast, tracks, and ties, the installation of new steel beams, and the addition of an FRP deck and guard rails. Additionally, structural repairs of the Capitola Trestle would be needed for any future use of the Capitola Trestle Bridge, including conversion to trail use. Repairs and conversion would include the replacement of all the wood bracings and approximately 30–40% of the vertical piles on the timber portions of the trestle. Treated wood waste would be disposed of in accordance with current safety

standards. Minor repairs would also be made to the wrought iron bridge component of the trestle including replacement of the bridge's bearings (see also Section 2.6.2).

No work would occur below the OHWM of Soquel Creek and dewatering would not be required. Construction activities could result in the introduction of debris, sediment, other construction materials, or chemicals into Soquel Creek. A debris containment device would be employed during all construction activities over or near the water. This device would protect sensitive fish from direct impacts (injury and mortality) associated with construction debris falling into the water. In addition, erosion and sediment control measures would be installed and maintained during construction to reduce sediment, other materials, and chemical-laden runoff introductions to the creek. These measures would reduce potential direct and indirect impacts to sensitive fish and indirect impacts to critical habitat for central California coast steelhead in Soquel Creek.

Federal and state agencies that regulate sensitive fish species and work below the break in bank may require additional measures to protect sensitive fish species and steelhead critical habitat. The Project may require permits from USFWS and/or NOAA Fisheries and would require permits from CDFW. As part of this process, the County or its agent (with approval from the City) may request technical assistance from USFWS and/or NOAA Fisheries. Through the Lake and Streambed Alteration Agreement permitting process, CDFW may identify additional protective measures for tidewater goby, steelhead, and Pacific lamprey.

OPERATION

Trail operation could result in impacts to Rodeo Gulch and Soquel Creek and the sensitive fish species known to occur in these aquatic features (tidewater goby, steelhead, and Pacific lamprey) through an increase in human traffic and associated trampling, trash, and human/dog excrement and through potential increases in erosion and sedimentation. These impacts would be reduced through the development of an MMP, described in Mitigation Measure BIO-7b, which would protect and enhance sensitive habitats and in Mitigation Measure BIO-8b, which would protect and enhance aquatic features.

As described above under the Project, the construction and operation impacts on sensitive fish species would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1a, BIO-7a, b, c and BIO-8a, b, which are identified and described in detail under Impacts BIO-1 above and BIO-7 and BIO-8 further below, for potential impacts to monarch butterfly, sensitive natural communities and aquatic features.

Therefore, the construction and operation impacts would be **less than significant with mitigation**. Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b are described in detail under Impacts BIO-1, BIO-7, and BIO-8, respectively.

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

2) Demolition of the Interim Trail and Rebuilding the Rail Line

As described above under Part 1 of the Interim Trail, Implementation of Part 2 of the Interim Trail (demolition of the Interim Trail) could also result in the introduction of hazardous materials and sediment into Soquel Creek. During implementation of Part 2, the removal of the trail could result in the additional introduction of sediment, construction debris, or other contaminants.

As described above, the construction impacts on sensitive fish species would be reduced to a less than significant level with implementation of Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c and BIO-8a, BIO-8b, which are identified and described in detail under Impacts BIO-1 above and BIO-7 and BIO-8 further below, for potential impacts to monarch butterfly, sensitive natural communities and aquatic features.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration, constructed as Part 3 of the Optional Interim Trail, would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* for construction and operational impacts. Refer to the discussion for Impact BIO-2, under *Ultimate Trail Configuration (Trail next to Rail Line)*.

These impacts would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Combined Effect of Interim Trail Parts 1, 2, 3

Although over an extended period of time, the combined effect of Parts 1, 2, and 3 of the Interim Trail is that construction activities would be performed three times adjacent to and over Rodeo Gulch and Soquel Creek. Together Parts 1, 2, and 3 could result in the additional introduction of sediment, construction debris, or other contaminants materials to these aquatic features.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would temporarily convert the railroad bridge to trail use by implementing the necessary structural repairs and replacing the ballast, tracks, and ties with FRP deck. If and when the rail line is later reactivated, the Interim Trail would be removed, the rail would be reinstalled, and trail users would be directed through Capitola Village on bicycle lanes and pedestrian sidewalks per the Ultimate Trail Configuration. This design option would have similar impacts to Soquel Creek and sensitive fish species as Part 1 of the Optional Interim Trail.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This design option would not impact sensitive fish or their habitat differentially from the Project.

Comparison of Proposed Project Impact with/without Optional Interim Trail

Whereas the Project has no impacts to Soquel Creek, the Optional Interim Trail would affect Soquel Creek over the course of three separate major construction periods. The Optional Interim Trail would also result in construction impacts to Rodeo Gulch during Parts 1–3 while the Project has only one construction period. In addition, construction of Part 1 involves railbed disturbance which increases the risk of the introduction of debris and other hazardous materials to Rodeo Gulch and Soquel Creek; therefore, the Optional Interim Trail would have potentially greater impacts on sensitive fish species and habitat. However, the impacts would be **less than significant with mitigation** under both scenarios **(**Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c BIO-8a, and BIO-8b**).**

Impact BIO-3 THE PROJECT COULD ADVERSELY AFFECT SANTA CRUZ BLACK SALAMANDER, IF PRESENT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

The Ultimate Trail could have an adverse effect on the Santa Cruz black salamander, if present, from trail construction and operation of the Project.

The Santa Cruz black salamander is a CDFW Species of Special Concern (CDFW 2023d; Thomson et al. 2016). The Santa Cruz black salamander may occur in the moist habitats along the drainages that intersect the study area, including Rodeo Gulch, Tannery Gulch, or the impounded wetlands near Tannery Gulch. The Santa Cruz black salamander is known to occur in Pogonip Park and the University of California Santa Cruz quarry, approximately 3.5 miles northwest of the western terminus of the study area and in Aptos Creek, 2.5 miles north of the eastern terminus (CDFW 2023f, 2023g).

Construction

Construction activities, including tree and vegetation removal and construction of the trail could result in temporary impacts on potential habitat for potential Santa Cruz black salamander in Rodeo Gulch, Tannery Gulch, the impounded wetlands near Tannery Gulch. Construction activities could degrade potential habitat through erosion, sedimentation, increased turbidity, or the discharge of toxic substances into aquatic features.

Construction equipment, grading, earth moving, tree and vegetation removal, trail construction, slope stabilization, and drainage improvements could cause injury or mortality to the Santa Cruz black salamander, if present. Construction would result in the permanent loss of riparian (0.21 acres) and wetland (0.3 acres) habitats as well as temporary disturbance to riparian habitat (0.21 acres) and wetlands (0.08) (**Table 3.3-2** and **Table 3.3-8**). See also **Impact BIO-7** and **Impact BIO-8**.

The Project footprint would be minimized, and all construction would be confined to the work area during Project activities. Erosion and sediment control measures would be installed and maintained which would reduce the introduction of sediment, construction debris, and contaminants (e.g., fuel, hydraulic fluid, concrete) to the waterbodies. These measures would reduce impacts to potential habitat for Santa Cruz black salamander.

Implementation of Mitigation Measure BIO-1a would minimize incidental take (injury or mortality) of potential Santa Cruz black salamander during construction activities through biological monitoring, (including pre-construction surveys, environmental training, and monitoring) and Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b would protect potential habitat for black salamander through protection of sensitive riparian and aquatic habitats and BMPs. Mitigation Measure BIO 1 is described in detail under Impact BIO-1. Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b are described under Impacts BIO-7 and BIO-8, respectively.

Therefore, this impact of the Project would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Operation

Trail operation could result in increased impacts to aquatic features and riparian habitats that provide potential habitat for Santa Cruz black salamander through an increase in human traffic and associated trash, trampling, erosion, and human/dog excrement.

Implementation of Mitigation Measures BIO-7b, and BIO-8b would protect potential habitat for black salamander through the establishment of MMPs that include components to protect and enhance sensitive and aquatic habitats. Mitigation Measures BIO-7b and BIO-8b are described under Impacts BIO-7 and BIO-8, respectively.

Therefore, this impact of the Project would be **less than significant with mitigation** (Mitigation Measures BIO-7b and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

During implementation of Part 1 of the Optional Interim Trail, construction activities could degrade potential habitat through the introduction of debris, other construction materials, or chemicals to Rodeo Gulch, Tannery Gulch, and the impounded wetlands near Tannery Gulch. No work would occur below the break in bank of Rodeo Gulch or Tannery Gulch; however, the removal of the tracks and ballast would generate hazardous materials that could enter riparian habitat and aquatic features through runoff. Because the trail footprint would be centered on the tracks, permanent impacts on riparian would be 0.05 acres (temporary impacts would be 0.21 acres) and 0.01 acres on wetlands (temporary wetland impacts would be 0.01 acres) (**Table 3.3-8**). See also Impact BIO-7 and Impact BIO-8.

Operation (trail use) would increase human traffic near these waterways which could result in increased trash, trampling, erosion, and human/dog excrement into the habitat. The construction and operation impacts would be similar to those described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*.

The mitigation measures described above under the Project would reduce potential impacts. Therefore, this impact of the Project would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

2) Demolition of the Interim Trail and Rebuilding the Rail Line

Implementation of Part 2 of the Interim Trail (demolition of the Interim Trail and rebuilding the rail line) would have similar construction-related effects on potential Santa Cruz black salamander as

described above for Part 1, because construction activities could introduce debris and contaminants into Rodeo Gulch, Tannery Gulch, and the impounded wetlands, which provide potential habitat for this species. There would be no operational impact associated with Part 2 because there would be no trail. As noted above, measures to protect riparian habitat and waterbodies would be employed.

The mitigation measures listed above under the Project would reduce potential impacts. Therefore, this impact of the Project would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

3) Construction of the Ultimate Trail Configuration

Construction and operation impacts of the Ultimate Trail Configuration, constructed as Part 3 of the Optional Interim Trail, would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Permanent impacts on riparian habitat during Part 3 would be 0.20 acres and temporary impacts would be 0.17 acres. Permanent impacts on wetlands would be 0.38 acres and temporary impacts would be 0.04 acres.

These impacts would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Combined Effect of Interim Trail Parts 1, 2, 3

Although over an extended period of time, the combined effect of Parts 1, 2, and 3 of the Interim Trail would result in three construction periods over and near Rodeo Gulch, Tannery Gulch, and the impounded wetlands. Overall, the combined Optional Interim Trail would result in slightly increased tree and vegetation removal which would result in increased habitat modification near the creeks. Combined, the Optional Interim Trail is more likely to result in disturbance of the Santa Cruz black salamander, if present. The impacts would be **less than significant with mitigation.**

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not impact potential Santa Cruz black salamander and its habitat differentially from the Project.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This design option would not impact potential Santa Cruz black salamander and its habitat differentially from the Project.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Proposed Project with the Optional Interim Trail would result in slightly greater impacts than the Project without the Optional Interim Trail because the Optional Interim Trail would affect these waterbodies over the course of three separate major construction periods (instead of one construction period) and thus result in increased habitat modification and disturbance. In addition, together, the three parts of the Optional Interim Trail result in greater combined tree and vegetation removal and a larger impact footprint than the Project (**Table 3.3-8**). The impacts would be **less than significant with mitigation** under both scenarios (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b)**.**

Impact BIO-4 THE PROJECT WOULD ADVERSELY AFFECT SENSITIVE AND NATIVE NESTING AVIAN SPECIES DURING CONSTRUCTION AND OPERATION. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Project construction activities and trail operation could adversely affect sensitive and common nesting avian species. The following sensitive species were observed during field surveys and are likely to nest within the study area for the Project: Allen's hummingbird, olive-sided flycatcher, oak titmouse, wrentit, and Nutall's woodpecker. In addition, the following sensitive avian species: yellow warbler, peregrine falcon, white-tailed kite, and bald eagle, have been documented within the study area during breeding season (eBird 2023) and may use the habitats along the proposed trail corridor for nesting. The nesting activities of these species could be disrupted by trail construction and operation.

The nesting Allen's hummingbird (*Selasphorus sasin*) is a USFWS Bird of Conservation Concern (USFWS 2021). The nesting olive-sided flycatcher is a CDFW Species of Special Concern (CDFW 2023d; Shuford and Gardali 2008) and a USFWS Bird of Conservation Concern (USFWS 2021). The nesting oak titmouse is a USFWS Bird of Conservation Concern (USFWS 2021). The wrentit (*Chamaea fasciata*) is a USFWS Bird of Conservation Concern (USFWS 2021). The Nuttall's woodpecker (*Dryobates nuttallii*) is a USFWS Bird of Conservation Concern (USFWS 2021). The yellow warbler is CDFW Species of Special Concern (CDFW 2023d; Shuford and Gardali 2008) and a USFWS Bird of Conservation Concern (USFWS 2021). The peregrine falcon is a Fully Protected species by CDFW (2023e) and a USFWS Bird of Conservation Concern (USFWS 2021). The white-tailed kite is a is a Fully Protected species by CDFW (2023e). The bald eagle is Endangered under the CESA, a Fully Protected species by CDFW (2023e), and a USFWS Bird of Conservation Concern (USFWS 2021).

Woodlands, non-native forests, and riparian habitats in the study area provide potential nesting habitat for Allen's hummingbird, olive-sided flycatcher, oak titmouse, Nuttall's woodpecker, and wrentit; these species were observed during field surveys. The riparian habitats along the study area provide potential nesting habitat for the yellow warbler, and this species has been observed recently within New Brighton State Beach and along Soquel Creek (eBird 2023). The bluffs south of Park Avenue and west of New Brighton State Beach provide potential breeding habitat for peregrine falcon, where this species has been recently observed (eBird 2023). Large trees (e.g., eucalyptus and mature coast live oak) provide potential nesting habitat for the white-tailed kite and the bald eagle, primarily within New Brighton State Beach and the adjacent Porter-Sesnon open space. Sightings of white-tailed kite in the immediate area are rare and outside breeding season (eBird 2023). eBird (2023) documents bald eagles in the area during breeding season. These species were observed during surveys and have been documented within New Brighton State Beach open space, along Tannery Gulch, and in the adjacent Porter-Sesnon open space.

Construction and operation of the trail could also disrupt the breeding activities of common native avian species. During the 2021–2023 field surveys, numerous native avian species were observed in the habitats within and adjacent to the Project corridor (**Appendix F.4**). Incidental observations of nesting activity were documented, including of mallard*,* band-tailed pigeon, bushtit, pygmy nuthatch, chestnut-backed chickadee, dark-eyed junco, Hutton's vireo, house finch, California quail, Bewick's wren*,* California towhee, northern mockingbird, California scrub jay, American crow, common raven, red-shouldered hawk, red-tailed hawk, and great horned owl. In addition, with the exception of those birds identified as wintering species, the birds listed in **Appendix F.4**, as well as other native birds, are expected to breed within and near the trail alignment. All native birds and their nests are federally protected under the Migratory Bird Treaty Act of 1918 (Title 16 United States Code, Section 703–712 as amended; 50 Code of Federal Regulations Section 21; and 50 CFR Section 13). The CFGC protects the active nests and eggs of birds from take, possession, or needless destruction (3503), and prohibits the take, possession, or destruction of birds of prey (orders Falconiformes and Strigiformes) and their eggs and nests (3503.5).

Construction

Project construction activities during the avian breeding season (from February 1 to September 1) may disrupt breeding activities, cause nest abandonment or failure, or directly harm or cause mortality to nesting birds, eggs, and young located within the Project corridor and surrounding area. The Ultimate Trail Configuration would result in the temporary and permanent impacts on 8.35 acres of potential nesting habitat for birds and requires the removal of 803 trees including 664

Protected and Significant trees (**Table 3.3-6**, **Table 3.3-7**, **Figure 3.3-5**, and **Figures 3.3-5a–v).** Tree removal would occur in coast live oak woodland and forest, riparian forest, mixed evergreen forest, non-native forest, and other habitats (**Table 3.3-6**). See also Impact BIO-8 and **Table 3.3-8** and Impact BIO-10 and **Table 3.3-11**. Impacts associated with tree removal would reduce available habitat for birds, including nesting habitat. Tree removal would also degrade the remaining habitat through increased fragmentation, increased exposure to human activities (including noise and light pollution) and existing infrastructure. In addition, remaining trees would be more exposed and nests would be more vulnerable to predation. Finally, birds that search for and select breeding habitat as a result of habitat loss may cause increased competition for habitat elsewhere. Mitigation such as replacement tree planting and enhancement of remaining habitats cannot completely compensate for this loss of habitat because of the lag time between the Project and when replacement trees would be mature enough to provide suitable habitat for birds.

Table 3.3-6 Estimated Tree Removal (Number of Trees) within Breeding Bird Habitat, Roosting Bat Habitat, and San Francisco Dusky-Footed Woodrat Habitat by Habitat Type

Habitat Types	Ultimate Trail	Interim Trail Part 1	Part 1 + 3	Ultimate Trail Option A[a]	Ultimate Trail Option B
Coast Live Oak Woodland and Forest	125	64	173	125	125
Riparian Forest	21	8	28	21	21
Mixed Evergreen Forest	20	1	21	20	20
Non-native Forest	311	111	370	311	315
Other[b]	326	104	365	326	326
Total	**803**	**288**	**957**	**803**	**807**

For more detail on the species and size of trees to be removed see also Impact BIO-10, including **Table 3.3-11**, **Table 3.3-12**, **Figure 3.3-5**, and **Figures 3.3-5a–v**, which depicts tree removal for the Ultimate Trail, Interim Trail (Parts 1+3), and Options A and B. Quantities of trees to be removed within specific habitat types are estimates because of minor deviations in positional accuracy of trees as mapped in the tree inventory and digitized habitat boundaries.

[a] No additional trees would be removed for Option A.

[b] Trees to removed that are included in "Other" represent trees positioned on boundaries between habitat types or reflect minor deviations in positional accuracy of trees as mapped in the tree inventory and digitized habitat boundaries.

Table 3.3-7 Temporary and Permanent Impacts (Acres) on Breeding Bird Habitat, Roosting Bat Habitat, and San Francisco Dusky-Footed Woodrat Habitat

	Ultimate Trail		Interim Trail Part 1		Part 1 + 3		Option A		Option B	
	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp	Perm
Coast Live Oak Woodland and Forest	0.54	1.37	0.78	0.86	0.78	1.98	0.62	1.51	0.54	1.37
Mixed Evergreen Forest	0.05	0.15	0.05	0.04	0.08	0.18	0.05	0.15	0.05	0.15
Mixed Riparian Forest	0.21	0.21	0.26	0.05	0.38	0.25	0.21	0.21	0.21	0.21
Coastal Scrub	0.03	0.11	0.04	0.01	0.04	0.11	0.03	0.11	0.03	0.11
Palustrine Scrub-Shrub Wetland	0.08	0.30	0.09	0.02	0.11	0.30	0.08	0.30	0.07	0.28
Aquatic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Native Grassland	0.04	0.00	0.04	0.00	0.04	0.00	0.04	0.00	0.04	0.00
Non-Native Forest	1.86	3.40	2.26	2.57	2.64	5.38	1.87	3.44	1.79	3.19
Total	**2.81**	**5.54**	**3.52**	**3.55**	**4.07**	**8.20**	**2.90**	**5.72**	**2.73**	**5.31**
Total Combined Temporary and Permanent	**8.35**		**7.07**		**12.27**		**8.62**		**8.04**	

See also **Table 3.3-2** and **Table 3.3-8**.

As described in Section 2.6.1, to the extent feasible, tree removal activities would be performed between September 1 and January 31 (ideally between September 1 and October 15), outside the breeding bird window, (see also **Table 3.3-8**). As stated in Section 2.7, *Required Permits and Approvals*, the Project would require permits from CDFW. As part of this process, CDFW may identify additional protective measures for sensitive and common native breeding birds.

Other construction activities, such as understory vegetation removal, grubbing and grading may also directly impact nesting birds that use the understory, embankments, or ground for nesting. Noise-producing activities, such as the operation of large equipment, may disrupt nesting birds adjacent to the work area.

Despite the large number of trees to be removed, large acreage of impacts to bird habitat (**Table 3.3-4** and **Table 3.3-5**) and lag time before replacement trees would provide suitable habitat, because birds have the ability to fly and select suitable nesting habitat elsewhere outside the project boundary, construction-related impacts on sensitive and native nesting birds would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a, which is identified and described in detail under Impact BIO-1, requires biological monitoring by an agency-approved biologist for sensitive wildlife species, including sensitive and common nesting birds.

Mitigation Measure BIO-4, which is described in detail below, requires bird surveys and protective buffers for active breeding sites, if trees cannot be removed between September 1 and January 31.

Mitigation Measure BIO-7a, which is identified for and described in detail under Impact BIO-7, would minimize construction activities in and adjacent to sensitive habitats, which provide breeding habitat for birds. In addition, BIO-7a requires that all sensitive biological resources would be identified on Project plans and temporary protective construction fencing would be installed to

minimize and prevent inadvertent disruption of the habitat. As a result, impacts on breeding birds would be minimized.

Mitigation Measure BIO-7b would incorporate breeding bird habitat into the Project-specific Biological Resources MMP. This includes mitigating for the loss of trees along the alignment.

Mitigation Measure BIO-7c, which is identified for and described in detail under Impact BIO-7, would further reduce impacts related to construction activities and timing through additional BMPs to protect sensitive habitats, nesting birds and other sensitive species.

Operation

Trail use may generally degrade nesting bird habitat through trampling and erosion, and the increased deposition of trash and human/dog excrement in and near the Project corridor. Trail use may also deter and disrupt nesting avian species that currently use the habitats associated with the rail cuts and embankments, including mature vegetation with multi-tiered canopy and cover, along the Project corridor. This operation impact would be **less than significant with mitigation** (Mitigation Measure BIO-7b).

Mitigation Measure BIO-7b would incorporate breeding bird habitat into the Project-specific Biological Resources MMP. This includes mitigating for the loss of trees along the alignment.

In summary, therefore, the potential construction and operation impacts to sensitive and native nesting birds would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO 4: Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31

During construction, the County of Santa Cruz (with approval from the City of Capitola and the RTC)) and the construction contractor shall implement the following measures:

- The avian breeding season occurs from February 1 through August 31 with a peak in breeding/nesting activity between April and June for most birds.
- If feasible, Project activities will be initiated outside the breeding season in order to avoid impacts to breeding birds. Should Project activities be initiated between September and February, no avian breeding surveys would be required.
- If Project activities are to be initiated during breeding season, or if Project activities lapse for 1 week or more during breeding bird season, prior to construction/resumption of construction activities, an agency-approved biologist will conduct avian breeding surveys for all birds (and their nests) protected under the MBTA. According to current CDFW permit conditions, the survey area will encompass tree stands and structures within the Project corridor and the following buffers (where accessible):

    - 250 feet for passerines/non-raptors;
    - 500 feet for small raptors such as accipiters; and
    - 1,000 feet for larger raptors such as buteos.

    Per current CDFW permit conditions, surveys will be conducted within 1 week of the initiation or resumption of Project activities including, but not limited to, staging equipment, tree removal, vegetation clearing, and/or ground disturbing activities.

- In the event nesting avian species are observed, postpone Project activities until a qualified biologist has determined young birds have fledged or implement buffers appropriate to the construction activity and the species, such as those recommended in PG&E's Nesting Bird Management Plan (PG&E et al. 2015)[19]:
  - Raptors (platform nesting): 300 feet (90 meters)
  - Cavity-nesters (depending on species): 50 feet (15 meters)
  - Bridge/building, tree, and ground/understory nesters: 75 feet (23 meters)
- Sensitive avian species, if nesting in or near the Project corridor, will be given special consideration and may require additional protective measures as determined through consultation with the relevant agency (USFWS or CDFW). The standard protective buffers recommended in PG&E et al. (2015) for sensitive birds that are known to nest or have potential to nest in or near the corridor are as follows:
  - Allen's hummingbird – standard buffer: 50 feet (15 meters)
  - Wrentit – standard buffer: 75 feet (23 meters)
  - Olive-sided flycatcher – standard buffer: 75 feet (23 meters)
  - Oak titmouse – standard buffer: 50 feet (15 meters)
  - Nuttal's woodpecker – standard buffer: 50 feet (15 meters)
  - Yellow warbler – standard buffer: 75 feet (23 meters)
  - Peregrine falcon – standard buffer: 500 feet (152 meters)
  - White-tailed kite – standard buffer: 300 feet (91 meters)
  - Bald eagle – consultation required [standard buffer: 1,320 feet (402 meters)].
- Protective buffers will be clearly marked for avoidance by construction activities.
- The approved biologist will document pre-construction baseline monitoring of the nest to characterize "normal" behavior. If approved by the agencies, the biologist may have the discretion to reduce the buffer and monitor the nest for disturbance. If the birds show signs of abnormal behaviors (e.g., defensive flights/vocalizations, standing up from brooding, and flying away from the nest) that are associated with construction activity, the biologist will reinstate the larger buffer. Work within the setback will be delayed until after the young have fledged.
- The biologist will have the authority to stop work if breeding birds exhibit behaviors that may cause nest abandonment or failure.
- If postponing Project activities and/or installing buffers are not feasible, further discussions with the appropriate resource agencies (USFWS and/or CDFW) will be necessary to develop alternative requirements.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

[19] PG&E et al.'s Nesting Bird Management Plan (2015) was based on a review of the effects of nest disturbance on reproductive success and consultation with subject experts and takes into account the nesting habits of the bird and the bird's sensitivity to disturbance, as well as the type of activity, duration, and noise level of disturbance (including direct and indirect effects), to develop disturbance categories (low, medium, or high) and associated buffers.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

For Part 1 of the Interim Trail, impacts on sensitive and native nesting avian species would be similar, but less than the Ultimate Trail, including direct and indirect disturbance of nesting birds from construction activities such as tree and vegetation removal, grubbing and grading, and operation of large equipment. These impacts are described in greater detail above. Tree removal associated with Part 1 of the Interim Trail would result in the removal of 288 trees, including 140 Protected and Significant trees, and the permanent loss of 7.07 acres of nesting habitat, including coast live oak woodland, riparian, mixed evergreen, non-native forest and other habitats.

Impacts on sensitive and native nesting birds as a result of trail use for Part 1 of the Interim Trail would be essentially the same as for the Ultimate Trail. Trail use may deter and disrupt nesting avian species that currently use the habitats associated with the rail cuts and embankments, including mature vegetation with multi-tiered canopy and cover, along the Project corridor.

Mitigation for construction and operation impacts would be the same for Part 1 as for the Ultimate Trail and is described in detail above.

In summary, therefore, the potential construction and operation impacts to sensitive and native nesting birds would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO 4: Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Part 2 of the Interim Trail would not result in additional tree removal; however, the operation of large noise-producing equipment could disrupt nesting activities as described in detail above under the Ultimate Trail. No operational impacts would result from Part 2 of the Interim Trail. Mitigation for Part 2 would be the same as for the Ultimate Trail and is described above.

Therefore, the potential construction and operation impacts to sensitive and native nesting birds would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO 4: Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

3) Construction of the Ultimate Trail Configuration

For Part 3 of the Interim Trail, an additional 669 trees, including 581 Protected and Significant Trees, would be removed and an additional 5.2 acres of breeding bird habitat would be permanently or temporarily displaced, including coast live oak woodland, riparian, mixed evergreen, and non-native forest habitats. Impacts associated with construction activities would be similar to those identified above for the Ultimate Trail, including direct and indirect disturbance of nesting birds from construction activities such as tree and vegetation removal, grubbing and grading, and operation of large equipment.

Impacts associated with trail use during Part 3 of the Interim Trail would be the same as for the Ultimate Trail, as described above, although the disturbance footprint would be larger. Operational impacts include general degradation of nesting bird habitat and disturbance to nesting birds that use the habitats along the rail corridor. Mitigation for construction and operation of Part 3 of the Interim Trail would be the same as for the Ultimate Trail and are described in detail above.

Therefore, the potential construction and operation impacts to sensitive and native nesting birds would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO 4: Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

Impacts associated with construction of Parts 1, 2 and 3 of the Interim Trail would be similar to those described above under the Ultimate Trail Configuration; however, multiple stages of construction activities (tree removal, large equipment and noise-producing activities and the

associated disruption of breeding birds) would occur over an anticipated period of 25 years. Ongoing disturbance associated with the additional construction periods may deter shyer avian species from nesting near the Project corridor. The combined effect of the Interim Trail includes tree removal associated with Parts 1 and 3 for a total of 957 trees, including 721 Protected and Significant trees and 12.27 acres of temporary and permanent impacts on breeding bird habitat. Operational impacts from Parts 1, 2, and 3 would generally degrade breeding bird habitat in or near the corridor and disrupt breeding bird activities. These impacts would be similar to the Ultimate Trail Configuration and are described above, although the footprint would be larger overall. The impacts would be **less than significant with mitigation.**

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not result in the removal of trees and therefore would not notably impact breeding bird habitat. Minor impacts from tree limbing or vegetation pruning may occur.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Overall impacts to breeding bird habitat would be reduced by 0.31 acres because Option B is positioned to displace less non-native forest and a larger area that is already disturbed (ruderal) than the Ultimate Trail alignment (**Figure 3.3-2e**). Although there is a reduction in impacts on breeding bird habitat, 4 more trees would be removed for Option B than for the Ultimate Trail, because trees within the Option B alignment are concentrated at a higher density than the Ultimate Trail alignment.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Proposed Project with the Optional Interim Trail would result in greater impacts to nesting birds than the Project alone. The Optional Interim Trail would impact an additional 3.92 acres of breeding bird habitat (12.27 acres overall compared to 8.35 acres for the Ultimate Trail alone), as well as an additional 154 trees (957 trees instead of 803 trees), due to the larger overall footprint resulting from the Optional Interim Trail Part 1 footprint combined with the Ultimate Trail footprint. Construction would occur in multiple stages (albeit over a period of years), resulting in repeated disturbance and disruption of breeding birds. Ongoing disturbance of this nature may deter birds that are more sensitive to disturbance from nesting in the area. Operational impacts associated with the Project and the Optional Interim Trail would be similar, with the footprint of the Optional Interim Trail being larger overall. The impact of the Project would be **less than significant with mitigation** with or without the Optional Interim Trail; however, impacts associated with the Optional Interim Trail would be greater.

Impact BIO-5 PROJECT CONSTRUCTION COULD ADVERSELY AFFECT SENSITIVE AND COMMON ROOSTING BAT SPECIES THAT USE COAST LIVE OAK, RIPARIAN, AND OTHER TREES ALONG THE ALIGNMENT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Project construction activities could adversely affect sensitive and common bat species that use trees in the coast live oak woodland, non-native forest, and riparian habitats located within and adjacent to the Project corridor. There would be no operational impacts to bats from trail use.

The silver-haired bat and the hoary bat are listed as Medium Priority in the California Coast region by the WBWG, and the western red bat is listed as a CDFW Species of Special Concern and High Priority by WBWG (WBWG 2017; Bolster 1998; CDFW 2023d). These species were detected in or near the study area during surveys. Coast live oak woodland and forest habitats along the Project corridor also provide potential habitat for long-legged myotis (Heady 2018), a High Priority species (WBWG 2017).

A number of common bat species were detected during emergence/acoustic surveys including California myotis, big brown bat, and Mexican free-tailed bat (**Figures 3.3-4b**, **g**, and **f**). In addition, one individual bat was identified roosting in a crevice underneath the Rodeo Gulch railway bridge, likely a California myotis or Yuma myotis. These and other common bat species are likely to inhabit the trees, bridges, and culverts within the study area. The CFGC protects non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. These include CFGC Section 86; 2000; 2014; 3007; 4150, along with several sections under Title 14 of CCR.

Project construction would require extensive removal of mature coast live oak trees along the rail corridor as well as numerous other large trees that provide roosting habitat for bats (**Table 3.3-6**, **Table 3.3-7**, **Figure 3.3-5**, and **Figures 3.3-5a–v**). Tree removal would also impact riparian habitat. These activities would result in the destruction and degradation of bat roost habitat and may result in impacts on maternity roosts and/or winter hibernacula, if present, and/or the injury or mortality individual sensitive or common bat species that may roost in these habitats. The Ultimate Trail would require the permanent removal of 803 trees totaling 5.43 acres of permanent impacts to coast live oak woodland and forest, riparian trees, mixed evergreen and non-native forest.

As described in Section 2.6.1, tree removal activities would be best performed between September 1 and January 31 (ideally between September 1 and November 1), outside the bat maternity roosting season (from May 1 to August 31) and typical winter hibernacula (from November 1 to February 15), to the extent feasible (**Table 3.3-8**). These dates conflict with the preferred window for tree removal in monarch habitat but are otherwise consistent with the preferred construction windows identified in Mitigation Measure BIO-7c.

Implementation of Mitigation Measures BIO-1a, BIO-5, and BIO-7c would protect potential roosting bat species from construction-related impacts. Mitigation Measure BIO 1a, which is identified and described in detail under Impact BIO-1, requires biological monitoring by an agency-approved biologist for sensitive wildlife species, including sensitive and common roosting bats.

Mitigation Measure BIO-5, which is described in detail below, requires bat surveys and protective measures for bat maternity roosts and roosting bats.

Mitigation Measure BIO-7a, which is identified for and described in detail under Impact BIO-7, would minimize construction activities in and adjacent to sensitive habitats, which provide roosting

habitat for bats. In addition, BIO-7a requires that all sensitive biological resources would be identified on Project plans and temporary protective construction fencing would be installed to minimize and prevent inadvertent disruption of the habitat. As a result, impacts on roosting bats would be minimized.

Mitigation Measure BIO-7b would incorporate roosting bat habitat into the Project-specific Biological Resources MMP. This includes mitigating for the loss of trees along the alignment.

Mitigation Measure BIO-7c, which is identified for and described in detail under Impact BIO-7, would further reduce impacts related to construction activities and timing through additional BMPs to protect sensitive habitats which bats use for roosting.

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-5, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-5: Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction

The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures. To avoid impacts to individual roosts, winter hibernacula, and maternity roosts, during all months, throughout the Project corridor and especially in mature coast live oak woodland and riparian habitats, prior to limbing/tree removal, an agency-approved biologist shall conduct a pre-construction survey for bats to determine if cavity, crevice or foliage-roosting bats are present, as follows:

- Bat maternity roosting occurs typically between May 1 and August 31, and winter hibernacula (shelter occupied during the winter by a dormant animal) for many bat species are found between November 1 and February 15.
- All trees and limbs proposed for removal, topping or pruning should be marked in the field by the Project proponent in advance of the Project start date.
- A qualified biologist shall determine if bats are using the Project corridor for roosting. For any trees/snags/structures (bridges) that could provide roosting habitat for cavity, crevice, or foliage-roosting bats, potential bat roost features shall be thoroughly evaluated to determine if bats are present. Visual inspection, emergence, and/or acoustic surveys shall be utilized as initial techniques.
    - □ If established maternity colonies are found, in coordination with CDFW, a buffer shall be established around the colony to protect pre-volant young from construction disturbances until the young can fly; or implement other measures acceptable to CDFW.
    - □ If individual roosting bats or winter hibernacula are found, in consultation with CDFW or based on CDFW recommendations, the qualified biologist shall develop and implement acceptable passive exclusion methods. If feasible, exclusion shall take place during the appropriate windows (between September 1 and November 1) (Authorization from CDFW is required to evict winter hibernacula for bats).
- If a tree is determined not to be an active roost site for cavity-roosting bats, it may be immediately limbed or removed as follows:
    - □ If foliage-roosting bats are determined to be present, limbs shall be lowered, inspected for bats by a bat biologist, and chipped immediately or moved to a dump site. Alternately, limbs may be lowered and left on the ground until the following day, when they can be chipped or

moved to a dump site. No logs or tree sections shall be dropped on downed limbs or limb piles that have not been in place since the previous day.

- If the tree is not limbed or removed within 4 days of the survey, the survey efforts shall be repeated.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Impacts to sensitive and common roosting bat species associated with Part 1 of the Optional Interim Trail would be similar to, but less than the Ultimate Trail, whereby tree removal could result in disruption and/or direct injury or mortality of maternity roosts, winter hibernacula and/or individual roosting bats. Operation of large noise-producing equipment could also disrupt maternity roosts, if present, near the Project corridor. Part 1 of the Interim Trail would temporarily and permanently impact 3.54 acres of roosting habitat and 288 trees would be removed.

Mitigation for Part 1 of the Optional Interim Trail would be the same as for the Ultimate Trail and would include implementing protective measures during construction as described above.

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-5, BIO-7a, BIO-7b, BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-5: Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Part 2 of the Interim Trail would not result in additional tree removal; therefore, no injury or mortality of bats as a result of tree removal would occur. Construction activities associated with Part 2, including the operation of large noise-producing equipment, could degrade bat roost habitat adjacent to the Interim Trail and disrupt maternity roosts, if present near the corridor. Mitigation for Part 2 of the Interim Trail would include (but is not limited to) protective measures to ensure bat

maternity roosts are not harmed, minimizing the construction footprint and implementation of BMPs during construction to further protect sensitive habitats that support roosting bats.

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-5, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-5: Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

3) Construction of the Ultimate Trail Configuration

For Part 3 of the Interim Trail, an additional 669 trees, including 581 Protected and Significant Trees, would be removed and an additional 4.55 acres of roosting habitat would be permanently or temporarily displaced, including coast live oak woodland, riparian, mixed evergreen, and non-native forest habitats. These habitats could support bat maternity roosts, winter hibernacula, or individual roosting bats. Tree removal could cause injury or mortality of roosting bats. In addition, noise-producing equipment could disrupt bat maternity roosts, if present near the Project corridor. These construction-related impacts would be similar to those described in greater detail above for the Ultimate Trail. Mitigation for Part 3 of the Interim Trail would be the same as for the Ultimate Trail, as outlined above.

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-5, BIO-7a, BIO-7b, BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-5: Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of Interim Trail Parts 1, 2, and 3 includes tree removal associated with Parts 1 and 3 as well the effects of multiple stages of construction. The combined impacts for Parts 1 and 3 would be the removal of 957 trees, including 721 Protected and Significant trees and 8.09 acres of permanent impacts on roosting bat habitat including coast live oak woodland, riparian, mixed evergreen and non-native forest habitats. Impacts associated with construction activities would be

similar to the Ultimate Trail, as described above, including both direct and indirect disturbance of roosting bats from construction activities such as tree removal and operation of large equipment. For the combined effect of the Interim Trail, however, construction would occur three times over a span of an estimated 25 years, resulting in greater impacts. Mitigation for construction and operation of Part 3 of the Interim Trail would be the same as for the Ultimate Trail and are described in detail above.

Therefore, this impact would be **less than significant with mitigation**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not result in the removal of trees; however, roosting bats may occupy the Capitola Trestle and adjacent habitat.

Mitigation for Design Option A would be the same as for the Ultimate Trail and would include implementing protective measures during construction as described above.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Overall impacts to roosting bat habitat would be reduced by 0.31 acres because Option B is positioned to displace less non-native forest and a larger area that is already disturbed (ruderal) than the Ultimate Trail alignment (**Figure 3.3-2e**). Although there is a reduction in impacts on roosting bat habitat, 4 more trees would be removed for Option B than for the Ultimate Trail, because trees within the Option B alignment are concentrated at a higher density than the Ultimate Trail alignment.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Proposed Project with the Optional Interim Trail would result in greater impacts to bat roost habitat than the Project without the Optional Interim Trail. The combined effect of the Interim Trail includes tree removal associated with Parts 1 and 3 for a total of 957 trees and 8.09 acres of permanent impacts compared to 803 trees and 5.43 acres of permanent impacts on roosting bat habitat for the Project without the Interim Trail. The increase in impacts is due to the larger overall footprint resulting from the Optional Interim Trail Part 1 footprint combined with the Ultimate Trail footprint. Construction would occur in multiple stages (albeit over a period of years), resulting in repeated disturbance and disruption of roosting bats. The impact of the Project would be **less than significant with mitigation** with or without the Optional Interim Trail.

Impact BIO-6 THE PROJECT WOULD ADVERSELY AFFECT SAN FRANCISCO DUSKY-FOOTED WOODRAT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Project construction activities along the Project corridor would adversely affect the San Francisco dusky-footed woodrat through habitat modification and direct impacts to woodrat houses. Impacts from operation (trail use) could occur from degradation of and encroachment into sensitive habitats adjacent to the Project corridor.

The San Francisco dusky-footed woodrat is known to occur at the interface between natural and developed habitat types and is primarily nocturnal. The San Francisco dusky-footed woodrat is a CDFW Species of Special Concern (Bolster 1998; CDFW 2023d). During the 2022 and 2023 field surveys, numerous woodrat houses were observed on the ground and in the trees within coast live oak forest, riparian, and non-native forest habitats along the Project corridor (**Figure 3.3-4e–g**).

The Ultimate Trail Configuration would result in the permanent and temporary impacts on 8.35 acres of occupied and potential San Francisco dusky-footed woodrat habitat through tree removal, vegetation removal and habitat modification (**Table 3.3-6**). Woodrats establish their houses where food sources are abundant and the right conditions of cover, shelter, shade and sun are present. Tree removal, vegetation removal, grubbing, grading could directly impact woodrat houses and degrade woodrat habitat. Noise-producing activities in proximity to woodrat houses could disrupt woodrats and their young.

Potential impacts would be reduced to a less than significant level with mitigation.

Mitigation Measure BIO-6, described below, would protect San Francisco dusky-footed woodrat houses from construction-related impacts and/or provide for relocation. Mitigation Measure BIO-1a, described under Impact BIO-1, and Mitigation Measures BIO-7a, BIO-7b, BIO-7c, described under Impact BIO-7, would provide further protection by minimizing construction-related impacts in the habitats that support woodrat (Mitigation Measure BIO-7a), through implementing BMPs (Mitigation Measure BIO-7c), and through the preservation and enhancement of edge habitats (Mitigation Measure BIO-7b).

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-6, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-6: Implement San Francisco Dusky-Footed Woodrat Protection Measures During Construction

During construction of the Project, the County of Santa Cruz (with approval of the City of Capitola and the RTC) and the construction contractor shall implement the following measures. Prior to construction, a qualified biologist shall conduct a pre-construction survey for woodrat houses, and clearly flag all houses within the construction impact area and immediate surroundings.

The construction contractor shall avoid woodrat houses to the extent feasible by installing a minimum 10-foot (preferably 25-foot) buffer with silt fencing or other material that shall prohibit encroachment. If this buffer and avoidance is not feasible, the qualified biologist shall allow encroachment into the buffer, but preserve microhabitat conditions such as shade, cover and adjacent food sources.

Additionally, if avoidance is not possible, a qualified biologist shall develop and implement a Woodrat Relocation Plan, in consultation with CDFW, that allows for the relocation of woodrats and their houses. The plan shall include the following (or similar and CDFW-approved) criteria:

- Relocation will occur when vulnerable young are least likely to be present in the woodrat houses (ideally between August 1 and October 30).
- During dismantling of woodrat houses, woody debris, food caches, and nesting materials will be retained and relocated to reconstructed or artificial shelters.
- Relocation sites will be in the nearest suitable habitat outside the Project footprint.
- Sites for artificial shelters shall be located in proximity to the original house location and no closer than 20 feet from existing woodrat houses and other artificial shelters. Choose the best available microhabitat, ideally in a location with sun and shade and, if possible, under the same species of tree or shrub as was present at the original house location. Relocation sites shall contain biologically suitable habitat features (e.g., stands of poison oak, coast live oaks, and dense native brush).
- Monitoring shall be conducted for 30 days after relocation is completed and include infrared and motion activated cameras and an occupancy assessment.
- A report on San Francisco dusky-footed woodrat house monitoring shall be provided to CDFW, within 30 days following the end of the monitoring period, and shall include the methods and results of relocation, occupancy determinations, and discussion of any remedies that may be needed.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Part 1 of the Interim Trail could adversely affect the San Francisco dusky-footed woodrat through habitat modification and direct impacts to woodrat houses. During Part 1 of the Interim Trail, 7.07 acres of permanent and temporary impacts would occur in occupied and potential woodrat habitat, including coast live oak woodland, riparian habitat, mixed evergreen forest and non-native forest (**Table 3.3-6**). Tree removal, vegetation removal, grubbing, grading could directly impact woodrat houses and degrade woodrat habitat. Noise-producing activities in proximity to woodrat houses could disrupt woodrats and their young. These impacts are similar to, but less than, those described in greater detail above under the Ultimate Trail Configuration.

Potential impacts would be reduced to a less than significant level with the mitigation described above under the Ultimate Trail. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-6, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-6: Implement Dusky-Footed Woodrat Protection Measures During Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

2) Demolition of the Interim Trail and Rebuilding the Rail Line

Part 2, Demolition of the Interim Trail and Rebuilding of the rail line would not result in additional direct loss of additional woodrat houses or habitat modification of additional woodrat habitat. The operation of large noise-producing equipment during construction could disrupt woodrats in proximity to the work area.

Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-6, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-6: Implement Dusky-Footed Woodrat Protection Measures During Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

3) Construction of the Ultimate Trail Configuration

Part 3 of the Interim Trail could adversely affect the San Francisco dusky-footed woodrat through habitat modification and direct impacts to woodrat houses. During Part 3 of the Interim Trail, an additional 5.2 acres of occupied and potential woodrat habitat would be temporarily or permanently impacted by the Project, including coast live oak woodland, riparian habitat, mixed evergreen, and non-native forest (**Table 3.3-7**). Tree removal, vegetation removal, grubbing, grading could directly impact woodrat houses and degrade woodrat habitat. Noise-producing activities in proximity to woodrat houses could disrupt woodrats and their young. These impacts are similar to those described in greater detail above under the Project.

Potential impacts would be reduced to a less than significant level with the mitigation described above under the Ultimate Trail. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-6, BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-6: Implement Dusky-Footed Woodrat Protection Measures During Construction

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of the Interim Trail Parts 1, 2 and 3 have a combined direct impact on woodrat houses and on modification of woodrat habitat with a larger overall footprint and combined loss of trees and understory vegetation. The combined Interim Trail would result in the permanent displacement of 12.27 acres of woodrat habitat, including coast live oak woodland, riparian habitat, mixed evergreen forest and non-native forest. In addition, construction would occur over three stages, thereby subjecting woodrats to three sets of construction activities and the associated impacts.

Potential impacts would be reduced to a less than significant level with the mitigation described above under the Ultimate Trail. Therefore, this impact would be less than significant with mitigation (Mitigation Measures BIO-1a, BIO-6, BIO-7a, BIO-7b, and BIO-7c).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. No woodrat habitat would be displaced for Option A; temporary impacts may occur.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This would not impact woodrat habitat differentially because the trees proposed for removal in this location provide only marginal potential woodrat habitat.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Proposed Project with the Optional Interim Trail would result in more impacts to woodrat houses and habitat than the Project without the Optional Interim Trail, because the overall footprint of the Interim Trail is larger and would require more tree removal and modification of woodrat habitat. Compared to the Project, the Optional Interim Trail would temporarily and permanently

impact an additional 3.92 acres of occupied and potential woodrat habitat, that would be subject to tree removal and other habitat modifications, including removal of understory vegetation, food sources and important woodrat habitat features. Additionally, the Optional Interim Trail results in two additional construction periods, and associated impacts, albeit over a period of an estimated 25 years. The impact of the Project would be **less than significant with mitigation** with or without the Optional Interim Trail.

Impact BIO-7 THE PROJECT WOULD RESULT IN ADVERSE EFFECTS TO RIPARIAN HABITAT, OTHER SENSITIVE NATURAL COMMUNITIES, AND COASTAL ACT ESHA. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

The Project includes construction of a multipurpose trail system that could result in adverse effects to sensitive natural communities and areas defined as ESHA by the California Coastal Act. Sensitive habitat types and ESHA that may incur impacts from Project implementation are coast live oak woodland and forest, coastal scrub, mixed riparian forest, and monarch roost habitat.

Aquatic features, including palustrine scrub-shrub and forested (willow) wetlands and aquatic/riverine habitats are also considered sensitive habitats and are addressed separately in Impact BIO-8.

The Project corridor is composed of both Segments 10 and 11, and areas defined as ESHA are present in both segments, the majority of which are in Segment 11 east of Capitola Village.

In Segment 10, between 17th Avenue and 47th Avenue, the Project includes a new separated multipurpose trail situated on the north (inland) side of the tracks which will be shifted southward (coastal) to accommodate the new trail.

In Segment 11, between 47th Avenue and State Park Drive the Project includes a new separated multipurpose trail situated on the south (coastal) of the railroad tracks until Mar Vista Avenue, where it shifts back to the north (inland) side. The Project corridor in Segments 10 and 11 comprises sloped, natural embankments with mature vegetation, much of which is narrowly constrained to the corridor by adjacent urbanized lands. In several areas, the corridor passes through open spaces including Rodeo Gulch, Soquel Creek, Escalona Gulch, Tannery Gulch, New Brighton State Beach, and Borregas Creek and its tributaries which contain an array of sensitive habitat types, including occurrences of special-status plants and wildlife.

Ultimate Trail Configuration (Trail next to Rail Line)

The majority of Project impacts to sensitive habitats, including ESHA, reflect partial encroachment into these areas to allow for construction of the trail, such as near Rodeo Gulch, Escalona Gulch, Tannery Gulch, and New Brighton State Beach. Permanent vegetation removal would not occur beyond the areas required for trail construction and minor rail realignment within the rail corridor. In many areas, the trail would be immediately adjacent to sensitive habitat types, such as coast live oak woodland and forest, coastal scrub, coastal prairie grassland, monarch roost sites, and riparian habitats.

The Ultimate Trail Configuration has been designed to minimize encroachment into sensitive habitat to the extent feasible, while still complying with California Public Utilities Commission requirements for trails along a rail corridor and Class 1 trail requirements for an Americans with Disabilities Act multipurpose trail. For example, the trail is located on a viaduct (instead of at grade with retaining walls) in several locations, including near monarch roost habitat along Escalona Gulch and New Brighton Creek, as well as between Borregas Creek and Stream 633 in Aptos. Moreover, the trail will use a clear span bridge over Rodeo Gulch.

The Project and its potential impacts to ESHA would require a CCC Coastal Development Permit. Based on the Commission's ongoing precedent of approving similar paved multi-use trails in or adjacent to ESHA, including wetlands, the City of Capitola and County of Santa Cruz consider the Project, as a coastal trail, to be resource-dependent. Where the trail would pass through an ESHA, it must be designed to prevent "any significant disruption of habitat values." Where the trail is adjacent to ESHA, it must be "designed to prevent impacts which would significantly degrade" the ESHA and "be compatible with the continuance of" the ESHA. Such outcomes can be achieved through a combination of on-site mitigation strategies.

The Project would facilitate pedestrian and bicycle access to coastal recreation areas, and would incorporate nature study of these unique coastal habitats through interpretative signs, as described in Section 2.4, *Project Characteristics*. Fencing and existing dense plantings along the trail would minimize impacts of unpermitted off-trail access into sensitive habitats, while identified mitigation would protect the ecological functions and values of the ESHA.

The Project, like those previously approved, would provide opportunities for public access and recreation; it would also increase public awareness and understanding of sensitive biological resources, benefits that depend on the Project's setting in ESHA and other coastal areas. These objectives are consistent with allowable uses in ESHA, as outlined in Section 30240 of the Coastal Act (1976).

Construction

In general, construction activities would take place within the up to 14-foot-wide trail corridor (typically 12-feet, and narrower at stream crossings) (see also Section 2.4), but there could be temporary disturbance to up to 10 feet on either side of the alignment. In constrained or environmentally sensitive areas, construction activities outside the trail alignment would be minimized and contained to the Project trail alignment to the extent possible.

The quantities of temporary and permanent impacts to sensitive habitat are shown in **Table 3.3-8**. Impacts to sensitive habitats within the construction footprint will displace and/or disrupt habitat, such as through tree/vegetation removal or trimming, soil compaction, and changes in canopy, cover, density, and shading. Where the trail does not displace sensitive habitat, these areas would be revegetated after construction. However, because of the potentially lengthy period of time required for the habitat to successfully reestablish and reach maturity, construction-related impacts would, in some areas, be considered permanent. Impacts to sensitive habitat total 5.10 acres for the Ultimate Trail Configuration.

Implementation of Mitigation Measures BIO-7a, BIO-7b, and BIO-7c, described below, would protect sensitive habitat during construction to the greatest extent feasible, and mitigate permanent and temporary losses where possible through avoidance, minimization, and construction-related BMPs. Mitigation Measure BIO-7b requires development of a Project-specific Biological Resources MMP. Compensatory mitigation outlined in Mitigation Measure BIO-7b, within the study area or on suitable public or private land in proximity to the Project corridor, would address permanent loss of mixed riparian forest, coast live oak woodland and forest, coastal scrub, and monarch roost habitats.

Therefore, the construction-related impact would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Table 3.3-8 Temporary and Permanent Impacts (acres) to Sensitive Habitat from the Proposed Project

	Ultimate Trail Configuration (Trail next to Rail Line)[b]			Optional Interim Trail (Trail on the Rail Line) Part 1 Only			Parts 1, 2, and 3		
Habitat Type[a]	Temporary Impacts	Permanent Impacts	Total	Temporary Impacts	Permanent Impacts	Total	Temporary Impacts	Permanent Impacts	Total
Coast live oak woodland and forest	0.54	1.37	1.91	0.77	0.85	1.62	0.72	1.98	2.70
Mixed riparian forest	0.21	0.21	0.42	0.21	0.05	0.26	0.38	0.25	0.63
Coastal Scrub	0.03	0.11	0.14	0.04	0.01	0.05	0.04	0.11	0.15
Monarch Roost Sites (blue gum eucalyptus groves)	0.59	2.04	2.63	0.90	1.89	2.79	1.32	3.83	5.15
Total	**1.37**	**3.73**	**5.10**	**1.92**	**2.80**	**4.72**	**2.46**	**6.17**	**8.63**

[a] These habitats support sensitive and common nesting birds, roosting bats, as well as San Francisco dusky-footed woodrat.

[b] At the end of this BIO impact, see also Option A, which would result in an additional 0.17-acres of temporary impacts and 0.08-acres of permanent impacts to relictual coast live oak woodland adjacent to the rail line, mostly east of the Capitola Trestle Bridge and Option B, which would result in a reduction of 0.07 acres of temporary impacts and 0.2 acres of permanent impacts to monarch roost habitat at Escalona Gulch.

Operation

Once constructed, trail use could result in adverse effects on sensitive habitats by disturbing vegetation immediately adjacent to the pathway and by directly and indirectly affecting wildlife using these areas for nesting/denning, foraging, dispersal, and movement. Within both Segments 10 and 11 of the Project corridor, the trail would be located within and immediately adjacent to sensitive riparian, coast live oak woodland and forest, coastal scrub, and monarch roost sites. These sensitive habitat areas may be impacted by user activities including, but not limited to, unpermitted off-trail access, transient loitering and encampments, litter, and elevated noise.

As described in Section 2.4.1 under *Trail Features*, the Project includes fencing and/or guardrails along the sides of bridges, viaducts and other areas along the trail for safety and security. The fencing, if present, would discourage trail users from loitering and leaving the trail into adjacent sensitive habitat. The Project also includes trash receptacles at Corcoran Avenue[20], 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Cliff Drive Plaza, Monterey Avenue crossing, Grove Lane, Park Avenue/Coronado Street ramp, Mar Vista Drive, State Park Drive, in addition to the existing receptacles at Jade Street, and informational/educational signage at locations to be determined.

Implementation of Mitigation Measure BIO-7b would reduce permanent impacts on sensitive habitats by developing a Project-specific resource management plan to further deter encroachment into sensitive habitats with fencing, dense vegetative barriers, and interpretative panels, and through the creation and restoration of in-kind habitats with similar or greater ecological functions and values to those displaced by the Project. Mitigation habitats would be located within the study area to the extent feasible and/or on suitable public and private lands in proximity to the alignment. Together with similar mitigation for aquatic features, identified in the discussion below for Impact BIO-10), edge habitats and habitat mosaics would be protected and/or replaced/enhanced.

Therefore, the operational impact would be **less than significant with mitigation** (Mitigation Measures BIO-7b).

Overall, the construction and operation impacts would be **less than significant with mitigation** (Mitigation Measure BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures:

- To the extent feasible, all trail construction activities, including access routes, staging areas, stockpile areas, and equipment maintenance are to be located outside the limits of mapped sensitive habitats. Sensitive habitat areas shall be mapped by a qualified biologist and clearly shown on construction plans. Sensitive habitat areas include, but may not be limited to: monarch butterfly roost habitat near Rodeo Gulch, Escalona Gulch, Tannery Gulch, New Brighton State Beach, and Flatiron Creek; coastal scrub adjacent to the Porter-Sesnon open space element of New Brighton State Beach; mixed riparian forest, and coast live oak woodland and forest along the rail corridor.

[20] Trash receptacles at the Corcoran Avenue trail crossing are not currently shown in the design plans.

- During construction, temporary fencing (e.g., wildlife exclusion fencing[21]) shall be installed at the outermost edge of sensitive habitats and shall not be disturbed except as required for trail construction. Vegetation removal shall be limited to the minimum extent necessary to achieve Project objectives.
- Areas designated as environmentally sensitive (i.e., ESHA, County sensitive habitats, and CDFW sensitive natural communities) will be avoided. No work-related activity including equipment staging, vehicular parking, etc., shall be allowed outside the limits of designated work areas when within or adjacent to sensitive habitats including the dripline of trees to be protected.
- Mature trees will be retained wherever feasible and limbing of trees and shrubs in mixed riparian forest, coast live oak woodland and forest, coastal scrub, and potential and/or known monarch roost habitat should be favored in lieu of removal. When possible, in temporary impact areas, stumps and burls of native coast live oaks, coast redwoods, and arroyo willows shall be retained to allow for re-sprouting following Project completion.
- Limbing and removal of coast live oak trees located in coast live oak woodland and forest habitat shall be minimized to maintain canopy cover, nesting and roosting habitat for bird and bat species, and understory habitat for wildlife, including woodrats and other small mammals.

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures.

A qualified (USFWS- and CDFW-approved) biologist shall prepare a Project-specific Biological Resources Mitigation and Management Plan (MMP) to compensate for direct and indirect impacts to sensitive habitats, including ESHA, and other sensitive biological resources resulting from trail construction and operation. The MMP shall compensate for permanent loss of sensitive habitats, through the creation, restoration, and enhancement of in-kind sensitive habitat, as close to impacted areas as possible. Out-of-kind mitigation will be incorporated into the MMP where it contributes to the overall ecological integrity of mitigation habitat.

The MMP will be prepared based on EIR-certified Design Plans (typically 60% or higher) during Project permitting. The MMP will be implemented during and after Project construction, typically within one year of Project completion.

The Biological Resources MMP shall include the following:

- Description of the trail alignment including as-built acreage of temporary and permanent impacts to mixed riparian forest, coast live oak woodland and forest, coastal scrub, and monarch butterfly roost sites, including the number and type of trees slated for removal with City of Capitola and County status as Protected or Significant trees, respectively.
- Ecological functions and values assessment of sensitive habitats, including monarch butterfly habitat to determine suitable mitigation ratios (at a minimum, no net loss) in consultation with USFWS, CDFW, California Coastal Commission (CCC), the County, and the City.
- Goals of compensatory mitigation, including types and areas of sensitive habitat to be created, restored, enhanced and/or preserved; number and type of trees to be replaced, specific functions and values of mitigation habitat types, mitigation ratios (created/restored/enhanced/preserved: impacted), and performance criteria, including:

[21] See also Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species, Bullet 3, regarding exclusion fencing.

  - □ Conservation of functions and values of monarch autumnal and overwintering roost habitat and nectaring sites (including maintaining suitable grove structure, wind protection, and water sources)[22];
  - □ Conservation of edge habitats; and
  - □ Conservation of functions and values for wildlife movement including habitat mosaics, links between creeks, open spaces and safe passage across the proposed alignment, with perennial water sources, diverse food sources, cover, and shelter.

- Such compensatory mitigation must occur as close to impacted areas as feasible and result in no net loss (minimum 1:1 replacement ratio) of sensitive habitat types, or their functions and values. In the Coastal Zone, mitigation ratios for ESHA typically start at 3:1 (creation/substantial restoration: impact) for ESHA. This ratio is doubled for enhancement (6:1) and tripled for preservation (9:1); however, a minimum of 1:1 must include creation of in-kind ESHA habitat for any mitigation strategy.
- Location and acreage of sensitive habitat, including monarch roost habitat, mitigation areas including ownership status, and existing functions and values of restored and/or enhanced sensitive habitats.
- Project stakeholders including the County, City of Capitola, and RTC shall identify undeveloped public and private properties as potential mitigation areas. Acquisition could include direct purchase or placement of conservation easements on portions of parcels that are in close proximity to the impacted areas, that share similar ecological value with the impacted areas, that are otherwise constrained from development due to existing conditions (such as County aquatic and riparian setbacks, ESHA, steep slopes, etc.) and currently do not but could support native sensitive habitats (habitat creation) or would benefit from restoration, enhancement, or preservation, as needed to fulfill mitigation acreage and proximity requirements.
- All County Significant trees, Capitola Protected trees, and native trees will be replaced at a minimum 1:1 ratio ("in kind" for native trees) at a location and ratio to be determined by the County Environmental Coordinator, City Community Development Department, and/or other responsible regulatory agencies. Wherever feasible, tree replacement plantings will be situated to promote ecosystems benefits and services by replacing displaced habitat functions and values and/or enhancing remaining habitat. Where tree replacement plantings exceed a minimum 1:1 replacement ratio, tree replacement plantings may be situated to enhance the urban streetscape with the design goals of beautifying neighborhoods (especially those with a disproportionate paucity of trees), reducing the urban heat island, and improving carbon sequestration. Urban streetscape features such as public or private greenbelts, medians, parking strips, and/or other similar available spaces with sufficient space may be used for replacement tree planting. Urban streetscape species composition may include coast redwood, coast live oak, tanoak, and buckeye in upland areas and white alder, box elder, blue elderberry, big leaf maple, and western sycamore in riparian habitats.
- Detailed sensitive habitat creation and/or restoration construction and planting techniques.
- Description and design of habitat requirements for sensitive wildlife known to occur in the study area and immediate surroundings (including monarch roost sites, sensitive fish species, potential Santa Cruz black salamander, sensitive and common native nesting avian species, sensitive and common roosting bat species, and/or San Francisco dusky-footed woodrat).
- Maintenance activities during operation shall include replanting native vegetation found within similar habitats within the same watershed and weed eradication that avoids take of sensitive

[22] See also Mitigation Measure BIO-1b: Enhance Monarch Roost Habitat along the Rail Corridor (Escalona Gulch, New Brighton State Beach, and Borregas Creek)

wildlife species (e.g., woodrats, breeding birds). Trail maintenance activities would employ hand-tools only. The use of pesticides or herbicides would be prohibited.

- Strategies to protect remaining sensitive habitats along the trail corridor and surroundings from direct and indirect impacts from trail users and illegal camping, such as:
  - □ Split-rail and wire fencing
  - □ Interpretive signage including specific information about sensitive habitats and species and "leave no trace" content
  - □ "Green fencing" (dense vegetative buffers consisting of woody and plant species that deter human passage such as poison oak, Pacific blackberry, and stinging nettle)
- Strategies to protect wildlife movement, both across and along the trail corridor, as well as north and/or south of the corridor to connect open spaces, supported by complex and mature sensitive habitat mosaics, including perennial water sources.
- Long-term quantitative and qualitative monitoring and reporting, including consideration of carrying capacity analysis and alternative approaches, and documenting the ability to meet or surpass performance criteria.
- Adaptive management strategies to:
  - □ Identify shortcomings in meeting performance standards;
  - □ Ensure long-term viability of existing, enhanced, restored, and/or newly created sensitive biological resources;
  - □ Enhance ecological functions and values of sensitive habitat mitigation areas, including monarch butterfly habitat and habitat for wildlife movement;
  - □ Ascertain the sufficiency of trail access, facilities development and management, and interpretive design features associated with the Project to protect biological resources.

Mitigation area locations and final replacement ratios (e.g., potentially above the minimum "no net loss" ratio set here) shall be determined in consultation with the relevant agencies, as follows.

- **U.S. Fish and Wildlife Service (USFWS).** Monarch butterfly (presently federal ESA Candidate species, likely Threatened or Endangered by 2024).
- **California Department of Fish and Wildlife (CDFW).** Sensitive habitats, work below the break in bank of stream corridors, riparian habitat, CESA Endangered species, Fully Protected species, and Species of Special Concern.
- **California Coastal Commission (CCC).** Environmentally sensitive habitat areas (ESHA).
- **California State Parks.** Sensitive resources and habitats on New Brighton State Beach property.
- **Regional Water Quality Control Board (RWQCB).** Non-wetland riparian habitat.
- **County of Santa Cruz (County).** Sensitive habitats, including ESHA, aquatic features and riparian habitat, and Significant trees.
- **City of Capitola (City).** Riparian habitat and sensitive habitats, including ESHA, and Protected trees.

The Draft MMP shall be submitted to USFWS, CDFW, CCC, California State Parks, County, and City of Capitola for review prior to formal adoption. Monitoring reports will be provided to relevant agencies.

Mitigation Measure BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction

During construction of the Project, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall ensure the following best management practices to protect water quality and biological resources during Project construction activities are included in the construction specifications and implemented during Project construction:

- Minimize removal or disturbance of existing vegetation outside the footprint of Project construction activities.
- Limit site access and parking, equipment storage and stationary construction activities to the designated staging areas.
- Prior to staging any equipment or vehicles within or adjacent to the rail corridor, clean all equipment caked with mud, soils, or debris from off-site sources or previous project sites to avoid introducing or spreading invasive exotic plant species. Remove invasive exotic plants from the Project area. All equipment used on the site should be cleaned prior to leaving the site for other projects.
- Position all stationary equipment such as motors, pumps, generators, and/or compressors over drip pans. At the end of each day, move vehicles and equipment as far away as possible from any water body adjacent to the Project area in a level staging area. Position parked equipment also over drip pans or absorbent material.
- Check under all equipment for wildlife before use. If any listed or special-status wildlife is observed under equipment or in the work area, do not disturb or handle it. Cease Project activities and contact the biological monitor or resource agencies for further guidance if the animal continues to be encountered in the Project area.
- During construction activities, if security fencing is installed around the construction site, allow for passage of wildlife to maintain a link between inland and coastal habitats including stream corridors[23]. Prohibit the use of plastic mesh safety fencing to prevent wildlife entrapment.
- Avoid working at night or during rain events when special-status amphibians and mammals are generally more active. Consult weather forecasts from the National Weather Service at least 72 hours prior to performing work.
- Properly contain and remove all food trash that may attract predators into the work area and construction debris and trash from the work site on a regular basis.
- Refuel and perform all vehicle and/or equipment maintenance off site at a facility approved for such activities.
- Stabilize all exposed or disturbed areas in the Project area. Install erosion control measures as necessary such as silt fences, jute matting, weed-free straw bales, plywood, straw wattles, and water check bars, and broadcasting weed-free straw wherever silt-laden water has the potential to leave the work site and enter the nearby streams. Prohibit the use of monofilament erosion control matting to prevent wildlife entanglement. Modify, repair, and/or replace erosion control measures as needed.
- Revegetate with native vegetation found within similar habitats within the same watershed to minimize erosion, prevent the establishment of invasive weeds, and accelerate the recovery of native vegetation communities.
- Whenever feasible, certain construction activities will be timed to avoid impacts to sensitive habitats and wildlife species, as presented in **Table 3.3-9**. Ideally, most if not all vegetation clearing will be done in the fall.

[23] See also Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species, Bullet 3, regarding exclusion fencing.

Table 3.3-9 Preferred Timing for Construction Activities Listed by Biological Resource

Biological Resource	Preferred Period of Avoidance	Preferred Construction Window	Life Events/Functions/ Values to be Protected	Construction Activity to Be Avoided
Mixed Riparian/ Habitats below the break in bank	Rainy season, approximately October 15–May 31	June 1–October 15	Stable banks, slopes, and soil	All construction
Sensitive Fish Species/ Potential Santa Cruz Black Salamander	Rainy season, approximately October 15–May 31	June 1–October 15	Fish migration/critical habitat functions and values	Work in or near aquatic features and riparian vegetation
Monarch Butterfly	Autumnal and Overwintering roost season, approximately September 15–March 31	April 1–September 15	Autumnal roosting, overwintering and nectaring activities	All construction within designated buffers; cutting, limbing, and tree removal, noise, and vibration within 300 feet of roost sites prior to temperature reaching 55°F
Avian Species	February 1–August 31	September 1–January 31	Nesting activities	All construction within designated buffers from active nest sites
Bat Species	November 1–February 15 and May 1–August 31	February 15–April 30 and September 1–October 31	Roosting, especially maternity roosts and winter hibernacula	Pruning, limbing, and tree removal
San Francisco Dusky-Footed Woodrat	October 15–July 31	August 1–October 15	Houses, especially during breeding and rearing	Vegetation/tree removal and woodrat relocation
Tree Removal	October 15– August 31	Sept 1–Oct 15 (this is during the beginning of the monarch autumnal roost period)	Breeding birds, bats, roosting monarchs, slope stability	Cutting, limbing, tree removal, monarch roost encroachment

[a] Central California coast steelhead, tidewater goby, and Pacific lamprey.

Each "preferred" time frame or construction window indicates the type of construction activity to be avoided, if possible, and not all windows apply to all resources. Ideally, most if not all vegetation clearing and tree removal will be done during the fall, whereas there is more flexibility with the other timeframes.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail (Part 1) includes removing the rail line and constructing the 16-foot-wide Interim Trail on the existing rail bed, extending on either side to include areas with existing unmaintained/de facto walking pathways and drainage ditches, and in some areas sensitive habitat types including coast live oak woodland and forest, coastal scrub, and monarch roost sites (eucalyptus groves). The Optional Interim Trail would not impact arroyo willow riparian and would only minimally impact mixed riparian forest.

Similar to the impacts described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, the majority of impacts to sensitive habitats, including ESHA, reflect partial encroachment into these areas to allow for construction of a Class 1 multi-use (bicycle and pedestrian) trail.

Permanent vegetation removal would not occur beyond the areas required for trail construction along the existing rail bed (Interim Trail Part 1 would not require partial realignment of the rail tracks). Nevertheless, in several areas there would be little to no buffer between the trail edge and adjacent sensitive habitat types (**Figures 3.3-2a** through **3.3-2b**), particularly near Tannery Gulch and in the Porter-Sesnon opens space element of New Brighton State Beach.

CONSTRUCTION

In general, construction activities for Part 1 of the Optional Interim Trail would be within the 16-foot-wide trail alignment, but there could be temporary disturbance of up to 10 feet on either side of the alignment. The majority of construction for the Interim Trail would occur in the existing cut and rail bench that forms the rail corridor.

The amount of temporary and permanent impacts to sensitive habitat is shown in **Table 3.3-4**. Impacts to sensitive habitats within the construction footprint may result in disruption of the habitat, such as vegetation removal or trimming, soil compaction, and changes in canopy, cover, density, and shading. Although these areas will be revegetated after construction to the extent feasible, because of the potentially lengthy period of time required for the habitat to successfully reestablish and reach maturity, construction-related impacts would, in some areas, be considered permanent. Combined impacts to sensitive habitats for Part 1 of the Optional Interim Trail total 4.46 acres.

Implementation of Mitigation Measures BIO-7a, b, c, described above, would protect sensitive habitat during construction to the greatest extent feasible, and mitigate permanent and temporary losses where possible through avoidance and minimization, construction-related BMPs, and compensatory mitigation for permanent loss of arroyo willow and mixed riparian forest, coast live oak woodland and forest, and monarch roost habitats.

Therefore, the construction-related impact would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

OPERATION

Operation (trail use) of the Optional Interim Trail (Part 1) would result in potential impacts to sensitive habitats resulting from trail usage which may include unpermitted off-trail access, transient encampments, litter, and elevated noise. The impacts would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, with less permanent impacts to

sensitive habitat (2.51 acres, instead of 3.73 acres) because the Interim Trail (Part 1) would be located on the existing rail bed. The temporary impacts to sensitive habitat would be slightly greater (1.95 acres, instead of 1.37 acres). The combined impacts to sensitive habitat from Interim Trail (Part 1) would be 4.46 acres, instead of 5.10 acres.

As described in Section 2.4.2 under *Trail Features*, the Project includes fencing and/or guardrails for safety in areas where drop offs are over 30 inches, which would discourage trail users from leaving the trail. The Project also includes trash receptacles,, benches and a bike share station, and informational/educational signage at locations to be determined. The benches could encourage loitering and leaving the trail into sensitive habitat.

Implementation of Mitigation Measure BIO-7b would reduce permanent impacts on sensitive habitats by developing a Project-specific resource management plan to deter encroachment into sensitive habitats with fencing, dense vegetative barriers, and interpretative panels, and through the creation and restoration of in-kind habitats with similar or greater ecological functions and values to those displaced by the Project. Mitigation habitats would be located within the study area to the extent feasible and/or on suitable public and private lands in proximity to the area of impact or where mitigation would improve or restore wildlife movement between open spaces along the corridor. Together with similar mitigation for aquatic features, identified in the discussion below for Impact BIO-8, edge habitats and habitat mosaics would be protected and/or replaced/enhanced.

Therefore, the operational impact would be **less than significant with mitigation** (Mitigation Measure BIO-7b).

Overall, the construction and operation impacts would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation
Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Interim Trail and rebuilding the rail line (Part 2) would not result in additional permanent impacts to sensitive habitats. However, demolition activities could temporarily disturb and/or displace wildlife along the corridor and construction activities during this phase could result in impacts resulting from dust, noise, soil compaction, litter, invasive weed introductions, and stockpiling of soils and debris. These construction-related impacts would be similar to that described above for both the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail (Part 1).

The construction-related impact would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction

3) Construction of the Ultimate Trail Configuration

Construction and operation impacts of the Ultimate Trail Configuration, constructed as Part 3 of the Optional Interim Trail, would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact BIO-7, under *Ultimate Trail Configuration (Trail next to Rail Line)*.

These impacts would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effect of the Interim Trail Parts 1, 2, and 3 would result in 9.13 total acres of potential impacts to sensitive habitats (**Table 3.3-4**). Moreover, the Optional Interim Trail would be constructed during three different periods, thereby subjecting sensitive habitats and wildlife to potential Project-related impacts during each part of the Project. Nevertheless, implementation of Mitigation Measures BIO-7a, b, c will reduce impacts to **less than significant with mitigation** for the Interim Trail.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. Impacts to sensitive habitat, not including aquatic resources, from this design option are limited to an additional 0.17-acres of temporary impacts and 0.08-acres of permanent impacts to relictual coast live oak woodland adjacent to the rail line, mostly east of the Capitola Trestle Bridge.

The impacts from Design Option A would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Design Option B results in 0.02-acres of temporary impacts and 0.16-acres of permanent impacts to monarch roost habitat. This is a reduction of 0.27-acres of total impacts to monarch roost habitat acreage from the Ultimate Trail which has 0.09 acres of temporary impacts and 0.36-acres of permanent impacts to monarch habitat in this segment of the proposed trail.

Despite a reduction in impacts to monarch roost habitat, a substantial amount of monarch habitat will remain impacted by the Ultimate Trail construction and operation. However with mitigation, Design Option B would also result in impacts that would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, and BIO-7c).

Comparison of Proposed Project Impact with/without Optional Interim Trail

Compared to the Ultimate Trail Configuration, Part 1 of the Optional Interim Trail would result in fewer direct impacts to sensitive habitat types because the trail would be primarily centered on the existing developed railbed. However, the overall impacts to sensitive habitats from the Parts 1, 2, and 3 of Proposed Project with the Optional Interim Trail would be higher than the Ultimate Trail Configuration. The Optional Interim Trail subjects coast live oak woodland and forest, riparian, coastal scrub, and monarch roost habitats to three different construction periods with potential to cause direct and indirect harm to these areas, whereas the Ultimate Trail only has one construction period. Additionally, due to the shifted orientation of the trail, some impacts to sensitive habitat for Part 1 of the Interim Trail are not required for the Ultimate Trail Configuration. Completing the Ultimate Trail Configuration as Part 3 of the Interim Trail would thereby result in greater potential (cumulative) impacts to sensitive habitats, than by constructing the Project, without the Optional Interim Trail. The impact of the Project would be **less than significant with mitigation** with or without the Optional Interim Trail.

Impact BIO-8 THE PROJECT WOULD RESULT IN ADVERSE EFFECTS TO PALUSTRINE SCRUB-SHRUB AND FORESTED WETLANDS AND AQUATIC/RIVERINE HABITATS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

The Ultimate Trail Configuration would result in permanent loss of approximately 0.30 acres of palustrine scrub-shrub and forested wetlands with 0.08 acres of additional temporary wetland impacts. These impacted features include impounded wetlands formed by the rail ballast south of Tannery Gulch. These impounded wetlands support an array of woody arborescent arroyo willow and red willow (Salix laevigata) with an understory composed of horsetail (*Equisetum telmateia),* stinging nettle, poison oak, and Pacific blackberry. It is unclear whether these features are underlain by native soils and therefore, may only meet two wetland parameters (e.g., wetland hydrology,

hydrophytic vegetation), and would only be subject to regulation by the CCC under the Coastal Act and City of Capitola LCP.

Construction of the Ultimate Trail Configuration would directly displace portions of the existing impounded palustrine scrub-shrub and forested wetlands and may indirectly disrupt ecological functions and values in Tannery Gulch, by degrading water quality and vegetation through introduction of sediments and pollutants resulting from Project activities.

Aquatic/riverine habitat may be temporarily impacted by replacement or improvement of existing culverts, tunnels, viaduct bents, and slope stabilization activities. Impacts may include erosion, sedimentation, and impacts to habitat for aquatic and amphibian species. The Project will not result in permanent direct impacts to aquatic and/or riverine habitats.

Mitigation Measure BIO-7a would minimize construction in sensitive habitats, including wetlands, and requires installation of temporary protective fencing to protect sensitive resources from construction activities including grading, staging, and materials stockpiling.

Mitigation Measure BIO-7c would require BMPs that protect water quality during construction. In addition, Mitigation Measure BIO-8a, b would minimize construction-related impacts to wetlands, aquatic and riverine features to the extent feasible, mitigate for loss, and address compensation for other sensitive habitats thus protecting the edge habitats and ecological functions and values of adjacent wetlands and aquatic features.

The construction impact would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7c, BIO-8a, and BIO-8b).

Operation

Wetlands and aquatic/riverine habitats may be directly and indirectly affected by trail usage. The trail would be in proximity to the remaining wetlands, lagoons, and creeks in the study area and which could result in encroachment and trampling from unpermitted off-trail encroachment, litter, and alterations to surface and subsurface hydrology and water quality due to increased impervious surfaces. Moreover, wetlands immediately adjacent to active trail corridors are often susceptible to introduction of invasive weeds, which may displace existing native vegetation and degrade wildlife habitat.

Mitigation Measures BIO-7b, in Impact BIO-7, above, and BIO-8b, described below, would reduce this impact by requiring avoidance and minimization and compensatory mitigation for permanent loss of wetland and aquatic/riverine habitat. Therefore, the operational impact would be **less than significant with mitigation** (Mitigation Measures BIO-7b and BIO-8b).

Required Permits

As described in Section 3.3.2, *Regulatory Setting*, the Project would be required to obtain federal and state permits for impacts to palustrine emergent wetland and aquatic/riverine habitat, pursuant to Sections 401 and 404 of the CWA and Section 1602 of the CFGC. The Project would also be required to obtain a Coastal Development Permit from the CCC for impacts to coastal wetland habitats, including one- and two-parameter wetlands. A formal jurisdictional delineation of the study area shall identify all wetlands and non-wetland “other waters” potentially impacted by the Project subject to state and federal regulations and shall be submitted to the agencies listed above for review and Project permitting.

Wetlands and other waters of the U.S. include those areas supporting hydrophytic vegetation, hydric soils, and wetland hydrology and exhibit hydrologic connectivity in the form of a “significant

nexus" with Traditional Navigable Waters (TNW), including the Pacific Ocean. Placement of fill material in wetlands and other waters of the U.S. is subject to permitting authority (jurisdiction) of the Central Coast RWQCB and the U.S. Army Corps of Engineers under Sections 401 and 404 of the CWA (1977), respectively. Depending on the amount of fill material, Section 401 Water Quality Certification issued by the RWQCB and either a Nationwide or Individual 404 permit shall be required by the USACE prior to Project activities. Permits approved under CWA Sections 401 and 404 require projects to minimize impacts to jurisdictional wetlands and waters to the extent feasible and provide mitigation resulting in no net loss of jurisdictional features. This may result in creation of in-kind wetlands in consultation with the regulatory agencies or by purchasing credits at an approved wetland mitigation bank. Presently, there are no mitigation banks with service areas encompassing the Project corridor.

Wetlands meeting all three jurisdictional parameters, but lacking a significant nexus with TNWs, are still regulated by RWQCB under the Porter-Cologne Water Quality Act; and impacts to waters of the state require WDR permit. A WDR permit typically results in similar compensatory mitigation requirements for wetland impacts to Section 401 and 404 permits.

Temporary and permanent impacts to aquatic/riverine habitat would require a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from the CDFW. An approved LSAA requires measures to avoid and minimize impacts to vegetation, wildlife, and aquatic resources below the break in bank of a stream course; and requires development of compensatory mitigation strategies for direct and indirect Project impacts. Impacts to aquatic/riverine habitat, including sedimentation and streambank alteration, are also quantified and compensatory mitigation is identified.

Coastal Act wetlands, including all areas meeting at least one wetland parameter, are regulated by CCC under Section 30233 of the Coastal Act. In these habitats, only resource-dependent uses are permitted where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects (Section 30233(a)). In addition, only certain categories of activities are permitted in wetlands, including "[r]estoration purposes" and "[n]ature study, aquaculture, or similar resource-dependent activities" (see Section 30233, (a)(6), (a)(7) of the Coastal Act).

The City of Capitola and County of Santa Cruz consider the Project, as a coastal trail, to be a "resource dependent activit[y]" involving "nature study" and similar activities. Thus, the filling of wetlands in connection with a proposed coastal trail may be permitted as long as "feasible mitigation measures have been provided to minimize adverse environmental effects," and as long as "there is no feasible less environmentally damaging alternative."

In summary, the construction and operation impacts would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Temporary Install Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

During construction of Segments 10 and 11, the County of Santa Cruz (with approval from the City of Capitola and RTC) and the construction contractor shall minimize construction-related activities including, but not limited to, access routes, staging areas, stockpile areas, and equipment maintenance, within or adjacent to the limits of palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats, to the extent feasible. Wetlands and aquatic/riverine areas shall be clearly shown on construction plans. In coordination with a qualified biologist, temporary fencing (e.g., silt fencing) shall be installed at the outermost edge of all features not directly affected by trail construction.

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures.

A qualified biologist shall be retained to prepare an Aquatic Resources Mitigation and Monitoring Plan (MMP) for all direct and indirect impacts to wetlands and aquatic/riverine habitats resulting from trail construction, resulting in no net loss (minimum 1:1 replacement) of these sensitive habitat types. The mitigation area locations and replacement ratios shall be determined in consultation with the USFWS, USACE, Central Coast RWQCB, California Coastal Commission, and/or California Department of Fish and Wildlife. It is expected that mitigation requirements shall be based on the determination by the California Coastal Commission that the trail is a resource-dependent use by providing safe pedestrian and bicycle access to the recreation (e.g., beaches, open spaces, scenic viewpoints) along the central Santa Cruz coast and based on its capacity for "nature study" pursuant to Section 30233(a)(7) of the Coastal Act.

The Wetland MMP shall include the following:

- Description of the Project including acreage of temporary and permanent impacts to palustrine wetlands, Coastal Act wetlands, and aquatic/riverine features as identified in a forthcoming formal delineation of jurisdictional wetlands and other non-wetland waters of the U.S.
- Ecological functions and values assessment of wetlands, including a determination of regulatory status and permitting requirements to determine suitable mitigation ratios.
- Goals of compensatory mitigation Project including types and areas of wetland and aquatic/riverine habitat to be created, restored, and/or enhanced; specific functions and values of mitigation habitat types; and mitigation ratios (created/restored/enhanced/preserved: impacted). Based on a recent memo by the Coastal Commission for a project at Gleason Beach in Sonoma County, mitigation ratios for permanent wetland impacts will likely begin at 4:1 for creation or substantial restoration. For wetland enhancement, this ratio is doubled (8:1) and tripled for habitat preservation (12:1). For all mitigation strategies, at least 1:1 must include creation of new sensitive habitat.
- Location and acreage of wetland and riparian mitigation areas including size, ownership status, and existing functions and values of restored and/or enhanced sensitive habitats.
- Detailed wetland and aquatic/riverine construction and planting techniques.
- Description and design of habitat requirements for special-status plants and wildlife potentially occupying wetland and aquatic/riverine habitats.
- Maintenance activities during the monitoring period, including replanting native wetland and riparian vegetation and weed removal, that will not result in take of aquatic wildlife species.

- Long-term quantitative and qualitative monitoring and reporting, documenting ability to meet or surpass performance criteria.
- Adaptive management strategies to ensure long-term viability and enhance ecological functions and values of sensitive habitat mitigation areas.
- Strategies to protect remaining wetland and aquatic/riverine habitats along the trail alignment from direct and indirect impacts from trail users. Strategies may include split-rail fencing, interpretive signage, and green fencing (dense vegetative buffers).

The Draft MMP shall be submitted to USACE, USFWS, RWQCB, CDFW, CCC, California State Parks, County, and City of Capitola for review.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail (Part 1) includes removing the rail line and constructing the 16-foot-wide Interim Trail, which would be centered on the existing tracks. The trail would minorly impact two impounded scrub-shrub and/or forested wetlands located south of the tracks between the New Brighton State Beach Oak Trail and Pinetree Lane, and the impact would be less (0.17 acres, instead of 0.38 acres) than that described above for the *Ultimate Trail Configuration (Trail next to Rail Line);* however Part 1 of the Interim would impact 0.10 acres of aquatic/riverine habitat in Tannery Gulch north of the rail line. Temporary impacts to aquatic/riverine habitats would be similar in the two proposed alignments.

CONSTRUCTION

The Optional Interim Trail (Part 1) would result in the permanent loss of 0.08 acres and temporary impacts on 0.09 acres of palustrine scrub-shrub or forested wetland. No impacts to palustrine emergent (herbaceous) wetlands would occur during construction of the Interim Trail. Permanent impacts to 0.10 acres of aquatic/riverine habitat in Tannery Gulch would be impacted, and temporary construction impacts related to fugitive dust, litter, and introduction of pathogens and invasive species during trail construction may also occur. This impact would be **less than significant with mitigation (**Mitigation Measures BIO-7a, BIO-7c, BIO-8a and BIO-8b).

OPERATION

Operation of the Optional Interim Trail (Part 1) would result in reduced impacts to palustrine scrub-shrub and forested wetlands and adjacent sensitive habitat types as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* but increased impacts on aquatic/riverine. Potential impacts to wetlands resulting from trail usage may include trampling from unpermitted off-trail encroachment, litter, alterations to surface and subsurface hydrology and water quality due to increased impervious surfaces, and introduction of invasive weeds. Refer to the discussion above for the Project for additional discussion on the construction and operation impacts.

The operational impact from the Optional Interim Trail would be **less than significant with mitigation**. Mitigation Measures BIO-7b and BIO-8b would reduce this impact by requiring avoidance and minimization and compensatory mitigation for permanent loss of wetland and aquatic/riverine habitat.

In summary, construction and operation would result in adverse effects to palustrine emergent wetlands and aquatic/riverine habitats. The Project would comply with all federal and state permit

conditions as described above. Mitigation Measures BIO-7a and BIO-7b would minimize construction-related impacts in, and address compensation for, other sensitive habitats thus protecting the edge habitats and ecological functions and values of adjacent wetlands and aquatic features. Mitigation Measure BIO-7c would require BMPs that protect water quality during construction. In addition, Mitigation Measures BIO-8a and BIO-8b would minimize construction and operation-related impacts to wetlands, aquatic and riverine features to the extent feasible and compensate for permanent losses.

Therefore, the construction and operation impacts would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Resource Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Interim Trail and rebuilding the rail line (Part 2) could result in direct impacts to the newly constructed drainage swales, which also function as wetland mitigation for construction of Part 1 of the Interim Trail. Efforts should be made to protect these features in place during demolition and situate them in a way that is consistent with Part 3 which includes construction of the Ultimate Trail. There would be no operational impacts because there would be no trail in use. The construction impact would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7c, and BIO-8a)**.**

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Temporary Protective Fencing

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Scrub-Shrub and Forested Wetlands and Aquatic/Riverine Habitats

3) Construction of the Ultimate Trail Configuration

Construction and operation impacts of the Ultimate Trail Configuration, constructed as Part 3 of the Optional Interim Trail, would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact BIO-8, under *Ultimate Trail Configuration (Trail next to Rail Line)*.

Constructing the Ultimate Trail Configuration (Part 3) would result in additional impacts to palustrine scrub-shrub and forested wetlands where the trail needs to be relocated and/or

reconstructed adjacent to the rail line for this phase of the Project. Installation of a retaining walls and fill in four scrub-shrub and forested wetlands south of the rail line near Tannery Gulch would result in impacts to wetlands similar to that of the Ultimate Trail Configuration.

The impacts would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitat Areas and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Resource Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Scrub-Shrub and Forested Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of construction and operation of Parts 1, 2, and 3 of the Interim Trail would result in a minor overall increase in impacts to aquatic resources due to the requirement for two additional construction periods with the potential for direct and indirect impacts to aquatic resources all three parts of the Project and impacts on both sides of the rail line which results in impacts on aquatic/riverine habitat as well as on wetlands. The combined impact would still be **less than significant with mitigation.**

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. No work would occur below the OHWM, and dewatering would not be required.

The impacts from Design Option A would be **less than significant with mitigation** (Mitigation Measures BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Design Option B does results in 0.02 acres fewer impacts to palustrine scrub-shrub wetlands by moving the trail inland, thereby avoiding a Coastal Act willow wetland between the rail line and the New Brighton State Beach parking lot.

Despite a reduction in impacts to palustrine scrub-shrub wetlands, a substantial amount of wetland habitat will remain impacted by the Ultimate Trail construction and operation. However, with mitigation Design Option B would also result in impacts that would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, and BIO-7c).

Comparison of Proposed Project Impact with/without Optional Interim Trail

Overall, the potential impacts to wetland and aquatic habitats from the Project with the Optional Interim Trail would be similar to, but slightly greater than, the Project without the Optional Interim Trail (0.41 instead of 0.38 acres). This is because the Interim Trail subjects these aquatic features to three different construction periods (instead of one construction period) with potential to cause direct and indirect harm to these areas. Additionally, the orientation of the Interim Trail impacts some minor wetland impacts that are not required for the Ultimate Trail as a stand-alone project. The impact of the Project would be **less than significant with mitigation** with or without the Optional Interim Trail.

Impact BIO-9 THE PROJECT WOULD INTERFERE WITH WILDLIFE MOVEMENT. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

The rail corridor is set within the largely urbanized, residential, and light industrial areas of Santa Cruz County and the City of Capitola. Nevertheless, in some locations the rail corridor provides the only east–west movement opportunity for wildlife and serves to connect otherwise disjunct habitat patches and linear habitats, that have already been fragmented by development. The Project would result in increased fragmentation, and degradation of the functions and values of wildlife movement habitat.

Portions of the Project serve as a corridor for local wildlife movement, and the Project would interfere with wildlife movement in the corridor. During the 2022 and 2023 field surveys of the Project corridor, individual wildlife species and/or their trails, tracks, and scat were observed in and adjacent to the trail alignment. These species include coyote, fox, black-tailed deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), and brush rabbit, as well as resident and wintering avian species. Additionally, raptors, including great horned owls were observed foraging over the alignment. Bobcat, opossum, and skunk are likely to use the alignment. Sierran chorus frog, common reptiles and invertebrates were also observed. The Project corridor provides functional connectivity between the surrounding habitat patches and linear habitats, as described in Section 3.3.1, *Existing Conditions*, under *Wildlife Movement*.

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

During construction, Project activities including tree and vegetation removal and construction of the trail would temporarily disrupt wildlife movement along the rail corridor. Construction activities would be limited to the daytime, whereas wildlife movement occurs predominantly at night, particularly in urban settings.

Project construction would result in the permanent loss of 8.35 acres of wildlife movement habitat, including coast live oak woodland, riparian habitat, non-native forest, and understory vegetation (**Table 3.3-4**), and understory vegetation. Over this area, native vegetation, non-native forest, and ornamental plantings would be replaced with the hardscape trail infrastructure, including retaining walls, the trail itself, and the trail shoulders. This impact would degrade the functions and values of

the wildlife corridor and contribute to increased fragmentation of City and County open spaces and linear aquatic features. Additionally, proposed fencing and guardrails may further impede wildlife compared to the existing conditions where wildlife can move freely through and across the corridor.

The permanent loss of 803 trees along the rail corridor would reduce cover, shelter, foraging opportunities, and reduce available resources generally. The loss of tree canopy, especially Protected and Significant trees (see **Table 3.3-6**) would change the microclimate of the corridor through a significant reduction in shade. In this Mediterranean climate, large trees with multi-tiered canopies provide a range of functions, buffering wind, providing a combination of deep shade and dappled sun, insulation from both heat and cold, creating leaf litter, which retains soil moisture, promotes soil micro-organisms and nutrient cycling, and provides habitat for invertebrates, amphibians, reptiles, and small mammals. Understory vegetation, where present, also contributes to the value of the corridor, providing forage and refuge and further affecting the microclimate of the area. These functions are important for wildlife moving between open spaces and linear aquatic features.

The functions and values for wildlife movement of this segment of the corridor vary and, in some locations, are limited as a result of the developed surroundings, lack of cover, and barriers to movement. Between Soquel Creek and Noble Gulch and New Brighton State Beach, the rail corridor provides canopy, cover, shelter, and refuge (in varying degrees), and/or the rail line is depressed relative to the surroundings, providing cover. This section of the rail corridor is limited in its habitat value in that it is surrounded by dense urban and residential development, in some locations the adjacent vegetation consists of only a narrow band of trees (e.g., a portion of the stretch between the City of Capitola's civic/administrative center and Monterey Avenue), or limited vegetation is present and the area is exposed to sun and wind (e.g., a portion of the stretch between Cabrillo and Coronado), and requires wildlife to cross busy roads that are considered barriers to movement. Nevertheless, this stretch of the rail corridor does serve to provide an east–west route, thereby connecting the otherwise disjunct habitats of Soquel Creek, Nobel Gulch, and the open spaces associated with New Brighton State Beach, including Tannery Gulch and the Porter-Sesnon open space (**Table 3.3-10**).

Between 17th Avenue and Rodeo Gulch the rail corridor has limited canopy cover and vegetation (residential fences provide some shelter) but is free of motor vehicle traffic. This section provides a connection between the Twin Lakes open space and Rodeo Gulch with no intervening roads for wildlife to cross. At night especially, this section of the rail corridor provides an east–west movement route for smaller animals traveling locally that is preferable to the developed surroundings.

Southeast of the Porter-Sesnon open space, (between the Porter-Sesnon open space and State Park Drive) the rail corridor has limited canopy cover and vegetation (residential fences provide some shelter), but the rail corridor is free of motor vehicle traffic and provides a connection to the open space around Coastlands Church and further south to Aptos Creek and its tributaries. Terrestrial wildlife would be required to cross Mar Vista Drive to use the corridor for movement. At night especially, this section of the rail corridor provides an east–west movement route for smaller animals traveling locally that is preferable to the developed surroundings.

Table 3.3-10 Wildlife Movement along Segments 10/11 of the Rail Corridor, from West to East, Santa Cruz County, California

Rail Corridor Section	Supports Wildlife Movement[a]	Provides Connectivity[b]	Enhances Habitat Values[c]	Description	Impacts[d]
17th Avenue to Rodeo Gulch	Limited	Limited	None	Sparse trees of varying size, ornamental plantings, and residential fences provide limited refugia for birds and small terrestrial wildlife. This segment is free of motor vehicle cross-traffic and, after 17th Avenue (which is a barrier to movement that is semi-permeable at night), there are no intervening roads for wildlife to cross. This section provides a connection between the Twin Lakes State Beach open space and Rodeo Gulch. At night especially, for animals traveling locally (i.e., within or adjacent to the extent of this section), this section of the rail corridor provides an east–west movement route that is preferable to the developed surroundings.	The Project would result in the removal of most trees along this section of the rail corridor, with only nine trees remaining near 17th Avenue, several at the west approach to Rodeo Gulch and none in between these sections. Trees and vegetation that provide wildlife movement habitat would be replaced with the hardscape trail, thereby leading to increased fragmentation of habitat patches.
Rodeo Gulch to Soquel Creek	Limited	None	None	This section of the rail corridor has similar tree species composition and size, ornamental plantings, and fences as the first section discussed above. However, street crossings at 30th Ave, 38th Ave, 41st Ave, and 47th Ave, as well as the exposed portion with little to no vegetative cover from east of 47th Ave to Opal Street, are significant barriers to wildlife movement. This portion of the rail corridor is unlikely to serve as a connection between Rodeo Gulch and Soquel Creek. However, in the sections between street crossings, wildlife may use the rail corridor for movement. A pair of red-shouldered hawks and Nuttal's woodpeckers (a BCC species) are known to use this segment of the rail corridor and are likely to nest there.	The Project would result in the removal of every tree identified along the rail corridor between 30th Ave and Jade Street Park. Along the boundary between the rail corridor and Jade Street Park, the strip of large, planted redwood trees would be retained. East of 47th Ave, several trees would also be protected in place. No trees would be removed for Option A (which extends from Opal Street across Soquel Creek to Park Avenue). The extensive tree removal along this section of the corridor is unlikely to significantly impact wildlife movement along the alignment but is likely to displace resident wildlife.
Soquel Creek to Noble Gulch	Limited	Limited	None	Between Capitola Avenue and Monterey Avenue/Bay Avenue, the narrow line of trees and other vegetation along the rail corridor provide limited canopy cover, shelter, and refuge for wildlife. However, both streets are barriers to wildlife movement, restricting	No tree removal is proposed along this section of the trail; therefore, there would be no reduction in wildlife movement habitat. Presence of the trail

Table 3.3-10 Wildlife Movement along Segments 10/11 of the Rail Corridor, from West to East, Santa Cruz County, California

Rail Corridor Section	Supports Wildlife Movement[a]	Provides Connectivity[b]	Enhances Habitat Values[c]	Description	Impacts[d]
				connectivity between Soquel Creek and Noble Gulch Park, and Nobel Gulch and/or open spaces further east.	would decrease habitat value through increased noise and trash.
Noble Gulch to New Brighton State Beach	Limited	Limited	Limited	Large eucalyptus and other trees line the corridor between Monterey Avenue and New Brighton State Beach. Between McCormick Avenue and Grove Lane, the corridor is depressed relative to the surroundings. In this segment, the trees, understory, and embankments facilitate wildlife movement between Noble Gulch and Escalona Gulch. Monterey Avenue is a barrier to movement and, just east of Escalona Gulch, the rail corridor is exposed with limited tree canopy and understory. However, this is a short stretch of approximately 550 feet to New Brighton State Beach. Park Avenue to the north is also a barrier to movement. Therefore, wildlife movement is already constrained and limited in the section.	Many mature trees would be removed along this section of the trail resulting in an alteration to wildlife movement habitat, further constraining connectivity to Soquel Creek, Noble Gulch and New Brighton State Beach and diminishing the habitat value of Escalona Gulch. In addition, presence of the trail would decrease habitat value through increased noise and trash.
New Brighton State Beach to Porter-Sesnon open space	Good	Good	Good	Dense eucalyptus, mixed evergreen, oak woodland, riparian habitat, and wetlands are present within New Brighton State Beach and the Porter-Sesnon open space, which support residential wildlife as well as wildlife moving along Tannery Gulch and Porter Gulch to the north, and along the rail corridor to Borregas Creek and its tributaries to the east. This habitat patch is constrained by human activities and infrastructure (campground, roads/Hwy 1, residences) which also reduce habitat value; however, it is the largest open space within the developed footprint of central and northern Santa Cruz County, notably south of Hwy 1. Although fragmented, retaining connectivity from this open space to other habitat patches is important to wildlife movement.	The Project would require the removal of a contiguous band of trees along the entire length of this segment of the rail corridor. Tree removal within the existing open space constricts available wildlife habitat, exposes the remaining habitat to increased human activities and existing infrastructure within and adjacent to the park, and further fragments this habitat patch from other open spaces. Trees and vegetation that provide wildlife movement habitat would be replaced with the hardscape trail. In addition, presence of the trail would decrease habitat value through increased noise and trash.

Table 3.3-10 Wildlife Movement along Segments 10/11 of the Rail Corridor, from West to East, Santa Cruz County, California

Rail Corridor Section	Supports Wildlife Movement[a]	Provides Connectivity[b]	Enhances Habitat Values[c]	Description	Impacts[d]
Porter-Sesnon open space to Coastlands Church and Aptos Creek/Trout Gulch	Limited	Limited	Limited	Between the Porter-Sesnon open space element of New Brighton State Beach and State Park Drive, the rail corridor has varying canopy cover. Just east and southeast of the open space, the corridor is influenced by Borregas Creek and its tributaries (Stream 633 and Flatiron Creek) to the east. Mature vegetation, including canopy cover, understory and hydration points are present in this section. Wildlife are likely to use the rail corridor for movement between these creeks and the adjacent open space. Further southeast, the corridor has a more limited canopy cover as it transitions into the residential neighborhood of Seacliff (residential fences provide some shelter). Apart from the crossings at Mar Vista Drive and State Park Drive (which are semi-permeable barriers to movement), the rail corridor is free of motor vehicle traffic and provides a connection to the open space around Coastlands Church, and further south to Aptos Creek and its tributaries. At night especially, this section of the rail corridor provides an east–west movement route for smaller animals traveling locally that is preferable to the developed surroundings.	Numerous trees would be removed along this section of the alignment, substantially reducing cover and exposing the rail corridor, particularly between the Porter-Sesnon open space and Mar Vista Drive. Although the corridor is set within the suburban residential setting of Seacliff, this section of the rail corridor is the only contiguous route south of Hwy 1 that connects the Porter-Sesnon open space (and New Brighton State Beach) with habitats to the east and north. Trees and vegetation that provide wildlife movement habitat would be replaced with the hardscape trail, thereby leading to increased fragmentation of habitat patches. In addition, presence of the trail would decrease habitat value through increased noise and trash.

[a] Habitat characteristics (cover, shelter, food sources, hydration) are present to support successful wildlife movement. Barriers to movement are absent or semi-permeable.

[b] Connects otherwise disjunct habitats, including linear habitats and/or habitat patches.

[c] Enhances habitat values of adjacent habitat patches/linear habitats by expanding available habitat features or providing supplemental habitat values (e.g., hydration).

The three components of wildlife movement listed in the columns above were assessed based on the following criteria:

None – Lacking functions (movement, connectivity) and habitat values (cover, shelter, forage, hydration).

Limited – Provides at least minimal functions for some wildlife movement but may preclude movement of terrestrial species and/or lacks habitat values.

Good – Provides functions and habitat values.

[d] See also **Figures 3.3-5** and **3.3-5a–v**.

Mitigation Measures BIO-7a and BIO-8a, described under Impacts BIO-7 and BIO-8, would minimize construction-related impacts to sensitive habitats and aquatic features which provide habitat for wildlife movement. Mitigation Measures BIO-1a, BIO-7a and 7c described under Impacts BIO-1 and BIO-7, would protect wildlife moving through the Project area during construction through the protection of sensitive habitats likely to support wildlife movement, biological monitoring and the implementation of BMPs.

Mitigation Measure BIO-7b, described under Impact BIO-7, requires a Project-specific Biological Resources MMP, which would identify specific measures to retain connectivity between drainages and open spaces, where feasible. The MMP would incorporate wildlife movement into management goals through enhancement of existing habitat patches and creation of replacement habitats that would reduce fragmentation and maintain wildlife resources such as shelter, cover, and diversity of habitat types. In order to replace the loss in east–west connectivity between open spaces and linear aquatic features that are a result of the Project, creation of new habitat for wildlife movement would be sited to increase connectivity, wherever feasible. Available land that is positioned to provide connectivity between open spaces and aquatic features near the corridor is limited, so this goal may not be attainable.

Mitigation Measure BIO-8b, described under Impact BIO-8, would compensate for losses to aquatic features including shrub scrub wetlands that provide dense cover for wildlife.

Therefore, the construction-related impacts would be **significant and unavoidable** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Biological Resources Mitigation and Management Monitoring Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan

Operation

Operation of the trail would result in additional impacts on wildlife movement. With formalized access, the trail would bring additional human activity to the area for walking/hiking and bicycle riding along the new trail alignment and accessing the open spaces recreational activities. Other potential effects from human activity include overall increased degradation of habitats through trampling, additional trash, human/dog excrement, and pollution of aquatic features, which may further diminish the ecological value of the movement corridor. These impacts would be permanent.

Pedestrian and bicycle traffic along the trail would be more limited at night when wildlife species are most likely to use the corridor for movement; therefore, some nighttime functions of the

corridor would be retained. Lighting would be wildlife-friendly, directed downward, and consist of light spectrum frequencies that are less disruptive to wildlife.

As noted above, Mitigation Measure BIO-7b, described under Impact BIO-7, requires a Project-specific Biological Resources MMP, which would identify specific measures to retain connectivity between drainages and open spaces, where feasible, and enhance remaining habitat features. Mitigation Measure BIO-8b, described under Impact BIO-8, would compensate for losses to aquatic features including shrub scrub wetlands that provide dense cover for wildlife.

These measures would help to protect wildlife movement from operational impacts.

These mitigation measures would reduce this impact to a less than significant level, therefore, the operational impact would be **less than significant with mitigation** (Mitigation Measures BIO-7b and BIO-8b).

In summary, the construction impacts would be **significant and unavoidable**, but the operational impacts would be less than significant with mitigation. Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b would be required to reduce the impact to the extent feasible, but not to a less than significant level. Therefore, the overall impact would be **significant and unavoidable** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-7b: Develop Project-specific Biological Resources Mitigation and Management Monitoring Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail (Part 1) includes removing the rail line and constructing the Interim Trail. Impacts to wildlife movement associated with the construction and operation of the Interim Trail (Part 1) would be similar to those described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and are described in detail above. However, the construction impacts would be less substantial because the Interim Trail (Part 1) would be located on the railbed, temporarily resulting in less tree loss. Part 1 of the Interim Trail would result in impacts on 7.07 acres of wildlife movement habitat including understory vegetation, and the removal of 288 trees that provide canopy cover and shelter for wildlife moving along the rail corridor.

Because of the reduction in tree removal associated with Part 1 compared to the Ultimate Trail, this impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Biological Resources Mitigation and Management Monitoring Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Wetland Mitigation and Monitoring Plan

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

The impact from Part 2 of the Interim Trail would be largely limited to disturbance of wildlife movement during construction since this part of the Interim Trail would not result in additional permanent vegetation removal.

This impact would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Biological Resources Mitigation and Management Monitoring Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Wetland Mitigation and Monitoring Plan

3) Construction of the Ultimate Trail Configuration

Construction and operation impacts of the Ultimate Trail Configuration, constructed as Part 3 of the Optional Interim Trail, would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Part 3 of the Interim Trail would temporarily and permanently impact an additional 5.02 acres of wildlife movement habitat, including coast live oak woodland, riparian habitat, mixed evergreen forest, and non-native forest.

In summary, the construction impacts would be **significant and unavoidable**, but the operational impacts would be less than significant with mitigation. The Mitigation Measures BIO-1a, BIO-7a, BIO-7b, BIO-7c, BIO-8a, b would be required to reduce the impact to the extent feasible, but not to a less than significant level.

Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-specific Biological Resources Mitigation and Management Monitoring Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Mitigation Measure BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats

Mitigation Measure BIO-8b: Develop and Implement Wetland Mitigation and Monitoring Plan

Combined Effect of Interim Trail Parts 1, 2, 3

Implementation of Interim Trail Parts 1 and 2 would be less than significant with mitigation. However, the combined Interim Trail (Parts 1, 2, and 3) would result in the temporary and permanent impacts on 12.27 acres of wildlife movement habitat. Construction and operation of the Interim Trail is likely to preclude the use of the corridor by wildlife for movement because of the overall loss of cover and shelter and the greater width of the development footprint. Therefore, the combined impact of Parts 1, 2, and 3 of the Interim Trail would be **significant and unavoidable**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not result in the removal trees and would not impact wildlife movement habitat.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Impacts to wildlife movement habitat would be reduced by 0.66 acres. However, this option would result in the removal of 4 more trees than the Project, and the trees proposed for removal under Design Option B are positioned to provide some cover and shelter from Park Avenue. Therefore, this option would have greater impacts on wildlife movement.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Proposed Project with the Optional Interim Trail would result in greater impacts than without the Interim Trail. Specifically, it would result in the loss of 3.92 acres more of wildlife movement habitat. The Project without the Optional Interim Trail would permanently displace 8.35 acres, while

the Project with the Interim Trail would displace 12.27 acres overall. Nonetheless, impacts from the Project, with or without the Optional Interim Trail would be significant and unavoidable.

IMPACT BIO 10 THE PROJECT WOULD CONFLICT WITH POLICIES AND ORDINANCES PROTECTING TREES, INCLUDING THE COUNTY OF SANTA CRUZ SIGNIFICANT TREE ORDINANCE AND CITY OF CAPITOLA COMMUNITY TREE PROTECTION AND MANAGEMENT ORDINANCE. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

Ultimate Trail Configuration (Trail next to Rail Line)

The Project includes construction of a multipurpose trail and minor rail realignment that would result in removal of mature trees along either side of the rail corridor in Segments 10 and 11, from 17th Avenue in Santa Cruz to State Park Avenue in the unincorporated community of Aptos. There are 1883 trees defined as woody vegetation with at least one main stem larger than 4 inches at DBH identified within the rail corridor (**Table 3.3-11**). The *Ultimate Trail Configuration (Trail next to Rail Line)* would result in the removal of 803 trees, as described below. This would conflict with City of Capitola and County plans, policies, and ordinances, which call for tree protection and replacement (described in Section 3.3.2), including but not limited to: County General Plan and LCP, Section 5.10.8 Significant Tree Removal Ordinance (LCP); Santa Cruz Urban Forest Master Plan; County of Santa Cruz Significant Tree Ordinance; Capitola General Plan and LCP, and City of Capitola Community Tree Protection and Management Ordinance.

Construction

The Project would result in the removal of 803 trees composing a portion of the Santa Cruz urban forest, as identified in the County Urban Forest Master Plan (**Table 3.3-11**). Of the trees planned for removal, 400 are regional native species (e.g., coast live oak, California bay laurel, madrone, wax myrtle, arroyo willow, California buckeye, etc.). A total of 344 coast live oak trees would be removed, 264 within the County of Santa Cruz and 80 within the City of Capitola. A total of 584 trees planned for removal are classified as "Protected" by the City of Capitola or County of Santa Cruz "Significant Trees"; and of these, 280 are native Protected or Significant trees. **Table 3.3-12** depicts tree removal within each sensitive habitat type or ESHA present within the rail corridor.

Tree removal is required to construct the Ultimate Trail Configuration, which includes viaducts over several creeks or sections with steep ballast grades, retaining walls to stabilize the adjacent hillslopes, and rail realignment. The Project has been carefully designed to meet the Caltrans Standards for a Class 1 bikeway, as well as California Public Utilities Commission requirements for a trail along the rail, while minimizing tree removal to the extent feasible. For example, the Ultimate Trail Configuration was redesigned to use a clear span bridge, instead of a bridge or viaduct with bent supports over Rodeo Gulch, and viaducts rather than retaining walls over Escalona Gulch and Borregas Creek to reduce required tree removal.

Some of the trees proposed for removal also occur within sensitive habitats including coast live oak woodland and forest, mixed riparian forest, and monarch roost sites (**Table 3.3-12**). Trees removed in these habitats are protected and require mitigation even if they do not meet the City of Capitola Protected Tree or County Significant Tree size thresholds.

The Project would remove less than half (42%) of the existing trees and associated tree canopy within Segments 10 and 11 of the rail corridor. Project construction would remove 49% of the regional native trees that were identified in the Project corridor, 40% of Protected and Significant trees currently present, and 47% of *native* Protected and Significant trees. Due to limited available

space remaining within the corridor after construction of the Ultimate Trail Configuration, only a very limited portion of trees could be replaced on site within the rail corridor. The remaining trees would be planted elsewhere within relatively close proximity to the study area, either as mitigation for sensitive habitats and wildlife movement corridors or as urban street trees, as outlined in Mitigation Measure BIO-7b, described under Impact BIO-7. Mitigation Measure BIO-7b would result in replanting trees at a minimum ratio of 1:1. Higher replacement ratios would likely be required for native, Protected, and Significant trees (which includes all trees in ESHA). The County typically requires 3:1 replacement for Significant trees: tree replacement ratios would be specified during Project permitting in consultation with the County and City. Construction activities could also threaten trees not identified for removal through construction-related disturbance. Mitigation Measures BIO-7a and BIO-7c, described under Impact BIO-7, would minimize construction in sensitive habitats, install temporary protective fencing, and include other BMPs that would protect remaining trees, saplings, and mature trees to the extent feasible.

Compliance with City of Capitola and County of Santa Cruz ordinances, as well as other agency permit requirements for tree replacement and implementation of Mitigation Measure BIO-7b, would result in replanting of trees at a minimum 1:1 ratio (typically 3:1 in the County of Santa Cruz for Significant trees).

Due to the substantial number of trees planned for removal, including a large percentage of trees regulated by City and County ordinances, the inability to mitigate the majority of tree removal on site, and the number of years required for trees to mature, this construction impact would conflict with City and County policies and ordinances that regulate tree removal and thus would be **significant and unavoidable**, even with the identified mitigation (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Table 3.3-11 Tree Removal Required for Construction and Operation of the Proposed Project, including native trees, Protected and Significant trees, and native Protected and Significant trees.

	Existing Trees (>4" DBH)	Ultimate Trail (Trail next to Rail Line)		Optional Interim Trail (Trail on the Rail Line)[a]					
				Part 1		Part 3		Parts 1 + 3	
Tree Type	Total	Number	Percent[f]	Number	Percent	Number	Percent	Number	Percent
All Trees[b]	1883	803	42%	288	15%	669	36%	957	51%
Native Trees[c]	817	400	49%	121	15%	343	42%	464	57%
Protected and Significant Trees[d]	1453	584	40%	207	14%	501	34%	708	49%
Native Protected and Significant Trees[e]	598	280	47%	83	14%	250	42%	333	56%

[a] Part 1 is implementation of the Interim Trail, which includes removal of the rail track and ties and construction of the Interim Trail on the rail bed. Part 2 is demolition of the Interim Trail and rebuilding of the rail line. Part 3 is construction of the Ultimate Trail Configuration, which would be the same as described for the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail.

[b] Total trees identified by the arborist in the Project corridor.

[c] Native trees are those that occur naturally without being introduced directly or indirectly by humans.

[d] City of Capitola Protected Trees and County of Santa Cruz Significant Trees are defined in Section 3.3-2. In general, Protected trees within the City limits are greater than 6 inches in diameter and County Significant Trees are greater than 20 inches in diameter at 4.5 feet above grade or located within a County sensitive habitat as defined by County Code, Chapter 16.34.

[e] Native Protected and Significant trees are both naturalized and of sufficient size to be regulated by the City Community Tree Protection and Management Ordinance or County Significant Tree Ordinance.

[f] The percent of trees removed are expressed for each tree type category (e.g., 400 native trees removed out of 817 native trees within the rail corridor equates to 49% of native trees removed for the Project).

Table 3.3-12 Tree Removal Required for Construction and Operation of the Proposed Project by Sensitive Habitat Type

Tree Type	Existing Trees (>4" DBH)	Ultimate Trail (Trail next to Rail Line)		Part 1		Part 3		Parts 1 + 3	
	Total	Total Removed	Significant/ Protected Removed	Number Removed	Significant/ Protected Removed	Number Removed	Significant/ Protected Removed	Number Removed	Significant/ Protected Removed
All Trees	1883	803 (42%)	583 (31%)	288 (15%)	207 (11%)	669 (36%)	501 (27%)	957 (51%)	708 (38%)
Coast Live Oak Woodland	402	222 (55%)	160 (40%)	78 (19%)	71 (18%)	191 (48%)	135 (34%)	269 (67%)	206 (41%)
Coastal Scrub	15	14 (93%)	14 (93%)	0	0	14 (93%)	14 (93%)	14 (93%)	14 (93%)
Mixed Riparian Forest	92	18 (20%)	10 (9%)	5 (5%)	0	17 (18%)	10 (9%)	23 (25%)	10 (9%)
Potential Monarch Roost Habitat	876	288 (33%)	262 (30%)	66 (8%)	66 (8%)	262 (30%)	237 (27%)	328 (37%)	303 (35%)
Palustrine Emergent Scrub-Shrub Wetlands	37	36 (97%)	32 (86%)	9 (24%)	7 (19%)	27 (73%)	24 (65%)	36 (97%)	31 (84%)

The percent of trees removed are expressed for each tree type category (e.g., 160 Significant/Protected trees removed in Coast Live Oak Woodland out of 402 total trees identified in that habitat type along the rail corridor equates to 39% of Significant/Protected trees removed for the Project in Coast live Oak woodland).

Operation

Trail operation (use) would not result in additional impacts related to tree removal. However, as described in Section 2.5, *Project Operation and Maintenance*, general trail maintenance activities include tree trimming, fallen tree removal, and weed control. The ongoing maintenance of protected and newly planted trees (including pruning, limbing, herbicide application, and other activities within the dripline of the remaining tree canopy) could result in further injury or mortality to remaining trees within the rail corridor. This impact would be reduced by prioritizing regular arboricultural tree care (pruning, root protection), including proper timing of these activities, as part of the ongoing long-term trail maintenance.

Mitigation Measure BIO-7b, described under Impact BIO-7, outlines the development of a Project-specific Biological Resources MMP, which would mitigate temporary disturbance and permanent loss of sensitive habitats and mitigate impacts to other biological resources, including all trees removed within corridor. Due the importance for both habitat and screening from the urban landscape, all trees will be replaced at a minimum 1:1 ratio. All City of Capitola Protected trees, County Significant Trees, and native trees will be replaced "in kind" at a location and ratio to be determined by the City Planning Department, County Environmental Coordinator, and/or other responsible regulatory agencies. The MMP would include provisions to protect and enhance the functions and values the urban forest and the directives of the 1992 County of Santa Cruz Urban Forest Management Plan and the Capitola General Plan (updated 2019) which identifies the enhancement and sustainability of urban forest as a Natural Resource Conservation Goal.

Therefore, the operational impact would be **less than with mitigation** (Mitigation Measure BIO-7b).

In summary, because the identified mitigation measures would not reduce the construction impact to a less than significant level, the overall Project impact would be **significant and unavoidable** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Optional Interim Trail (Trail on the Rail Line)

The Optional Interim Trail would occur in three parts. Part 1 (Implementation of Interim Trail) and Part 3 (Construction of the Ultimate Trail) would require the combined removal of 957 total trees occurring along the rail corridor. For Part 1, 288 trees would be removed to construct the 16-foot-wide Interim Trail with retaining walls and other infrastructure along the center of the rail line. Because the Interim Trail is wider than the existing rail bed, trees would be removed on either side of the trail to accommodate the Project. For Part 3, 669 additional trees would be removed to construct the 12-foot-wide Ultimate Trail Configuration. Part 2 (demolishing the Interim Trail and rebuilding the rail) would not require the removal of any trees.

1) Implementation of Interim Trail

Implementation of the Interim Trail Part 1, which includes removing the rail and constructing the Interim Trail, would result in the removal of 288 trees. Of the 288 trees to be removed, a total of 146 trees are native, 140 are City Protected or County Significant Trees, and 127 are *native* Protected or Significant trees. During Part 1, a total of 126 coast live oak trees would be removed, 89 within the County of Santa Cruz and 37 within the City of Capitola. Tree removal would be mitigated by implementing tree replacement requirements identified in the City and County ordinance, and by implementing Mitigation Measure BIO-7b, described under Impact BIO-7, which outlines the development of a Project-specific Biological Resources MMP, as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Mitigation Measures BIO-7a and BIO-7c, described under Impact BIO-7, would protect remaining trees that could be disturbed by construction activities by minimizing construction in sensitive habitats, installing temporary protective fencing, and implementing BMPs that would protect remaining trees, saplings and mature trees to the extent feasible during construction.

Because implementing Part 1 of the Interim Trail includes removal of 140 Protected and Significant trees which is approximately 9% of all trees in these categories along Segments 10 and 11, this impact would be **significant and unavoidable.** The Mitigation Measures BIO-7a, BIO-7b, and BIO-7c would be required to reduce the impact to the extent feasible, but not to a less than significant level.

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Interim Trail and rebuilding the rail line (Part 2 of the Optional Interim Trail) would not result in additional tree removal. However, remaining trees along the corridor could be disturbed and damaged during the Part 2 construction and demolition activities. This impact would be reduced by implementing the BMPs identified in Mitigation Measure BIO-7c. Therefore, the impact would be **less than significant with mitigation** (Mitigation Measure 7c).

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar, to that described in detail above for the *Ultimate Trail Configuration (Trail next to Rail Line)* for construction and operational impacts. Refer to the discussion for Impact BIO-10. Compliance with City and County ordinances, as well as other agency permit requirements for tree replacement and implementation of Mitigation Measure BIO-7b), would result in replanting of trees at a minimum 1:1 ratio. However, due to limited available space remaining in the corridor following completion of the Ultimate Trail Configuration, the majority of tree replacement will occur off site.

Due to the substantial number of trees planned for removal, including a large percentage of trees regulated by City and County ordinances, the inability to mitigate the majority of tree removal on site, and the number of years required for trees to mature, this construction impact would conflict with City and County policies and ordinances to regulate tree removal, even with the identified mitigation. Therefore, the impact would be **significant and unavoidable** (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Mitigation Measure BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing

Mitigation Measure BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation

Mitigation Measure BIO-7c: Implement Best Management Practices during Construction

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing Parts 1,2,3 of the Optional Interim Trail would result in the loss of 957 (51%) of all trees identified within the rail corridor, including 484 native trees (including 402 coast live oak trees), 721 Protected or Significant trees, and 430 of *native* Protected or Significant trees. Tree removal would also occur over two construction periods (Parts 1 and 3), both of which would have direct and indirect adverse effects to wildlife, nesting birds, and sensitive habitats including monarch butterfly roost sites. The impact would be **significant and unavoidable** (Mitigation Measures BIO-7a, BIO-7b, and BIO-9c).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This segment of trail will not result in the loss of any trees larger than 4 inches at DBH; however, a substantial number of trees will still be removed by the Ultimate Trail construction and operation. Therefore, Design Option A would result in impacts that would be **significant and unavoidable**. (Mitigation Measures BIO-1a BIO-7a, BIO-7b, and BIO-7c).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under Design Option B, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This design option will result in the removal of 4 additional trees within this segment of the Ultimate Trail. A total of four additional trees would be removed for this option for a total of 807 trees, 665 Capitola Protected Trees or County Significant trees, 404 regional native trees, and 360 native Protected or Significant trees.

Similar to the Ultimate Trail, this design option would result in impacts related to tree loss that are **significant and unavoidable** (Mitigation Measures BIO-1a BIO-7a, BIO-7b, and BIO-7c).

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail (Parts 1, 2, 3) would result in 957 trees removed, and the Project without the Interim Trail, would necessitate 803 trees removed. The Project with the Optional Interim Trail requires an additional 154 trees be removed because the Interim Trail results in impacts to trees on both sides of the tracks. Situating the 16-foot-wide Interim Trail (which is wider than the 12-foot-wide Ultimate Trail) on the rail bed requires small retaining walls and other supporting infrastructure, which requires additional tree removal on the side of the tracks opposite the Ultimate Trail orientation.

When comparing only Part 1 of the Optional Interim Trail to the Ultimate Trail, the Interim Trail would remove 288 trees, which would be 27% less than the Ultimate Trail Configuration.

However, *CEQA Guidelines*, Section 15126, requires all parts or the whole of the Project be analyzed. Therefore, all three parts of the Optional Interim Trail, including Part 3 (Construction of the Ultimate Trail) need to be considered. Accordingly, the Proposed Project with the Optional Interim Trail would result in greater tree removal and thus greater conflict with tree protection policies and ordinances, than the Project without the Optional Interim Trail. The impact of the Project would be **significant and unavoidable** with or without the Optional Interim Trail.

3.3.5 Summary Comparison

Comparison of Impacts[a] for Proposed Project with/without Optional Interim Trail

Impacts	Ultimate Trail Configuration (Trail Next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)			
		1) Implementation of Interim Trail	2) Demolition of Interim Trail	3) Rebuilding the Rail Line	Parts 1, 2, 3 Combined
BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.	**SU** MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	**SU** Similar, less	LTS Substantially less	**SU** Substantially similar	**SU** Similar, greater
BIO-2. The Project could adversely affect sensitive fish species.[b]	**LTSM** MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	**LTSM** Substantially similar, greater	**LTSM** Substantially similar, greater	**LTSM** Substantially similar, greater	**LTSM** Substantially similar, greater
BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.	**LTSM** MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTS Substantially similar, less	LTS Substantially similar, less	**LTSM** Substantially similar	**LTSM** Substantially similar
BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	**LTSM** MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	**LTSM** Substantially similar, less	**LTSM** Substantially similar, less	**LTSM** Substantially similar	**LTSM** Substantially similar, greater
BIO-5. Project construction could adversely affect sensitive and common roosting bat species that use coast live oak, riparian, and other trees along the alignment.	**LTSM** MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	**LTSM** Substantially similar, less	**LTSM** Substantially similar, less	**LTSM** Substantially similar	**LTSM** Substantially similar, greater

Comparison of Impacts[a] for Proposed Project with/without Optional Interim Trail

Impacts	Ultimate Trail Configuration (Trail Next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)			
		1) Implementation of Interim Trail	2) Demolition of Interim Trail	3) Rebuilding the Rail Line	Parts 1, 2, 3 Combined
BIO-6. The Project would adversely affect San Francisco Dusky-footed woodrat.	**LTSM** MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	**LTSM** Substantially similar, less	LTS Substantially similar, less	**LTSM** Substantially similar	**LTSM** Substantially similar, greater
BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.	**LTSM** MM BIO-7a, BIO-7b, BIO-7c	**LTSM** Substantially similar, less	LTS Substantially similar	LTS Substantially similar	**LTSM** Similar, greater
BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested weltands and aquatic/riverine habitats.	**LTSM** MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	**LTSM** Substantially similar, less	**LTSM** Substantially similar	**LTSM** Substantially similar	**LTSM** Substantially similar, greater
BIO-9. The Project would interfere with wildlife movement.	**SU** MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	**LTSM** Substantially similar, less	**LTSM** Substantially similar, less	**SU** Substantially similar	**SU** Substantially similar, greater
BIO-10. The Project would conflict with policies and ordinances protecting trees, including the County of Santa Cruz Significant Tree Ordinance and City of Capitola Community Tree Protection and Management Ordinance.	**SU** MM BIO-7a, BIO-7b, BIO-7c	**LTSM** Substantially less	**LTSM** Substantially less	**SU** Substantially similar	**SU** Substantially similar, greater

Comparison of Impacts[a] for Proposed Project with/without Optional Interim Trail

Impacts	Ultimate Trail Configuration (Trail Next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)			
		1) Implementation of Interim Trail	2) Demolition of Interim Trail	3) Rebuilding the Rail Line	Parts 1, 2, 3 Combined

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented in the third column and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail Next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

[b] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

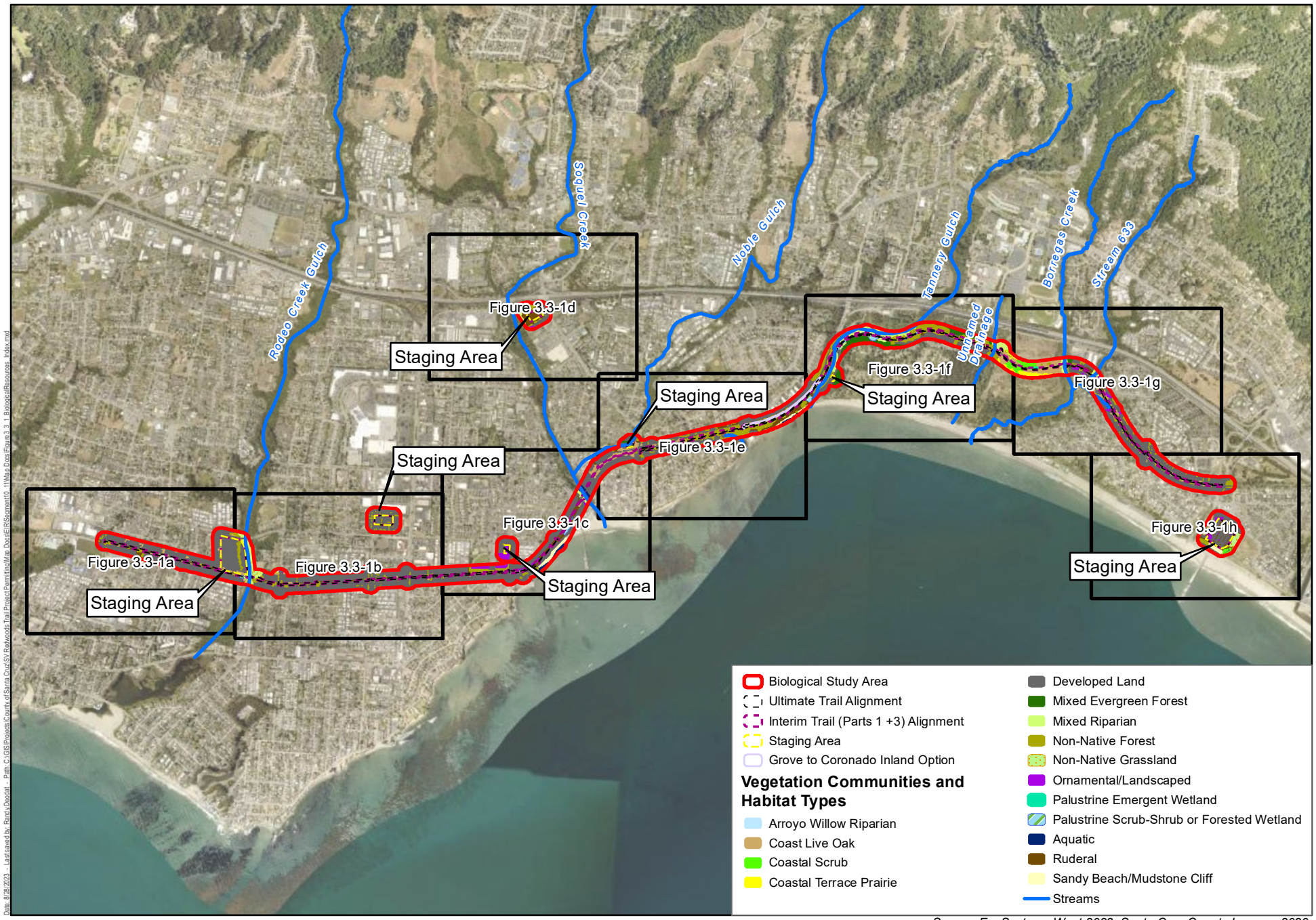
NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

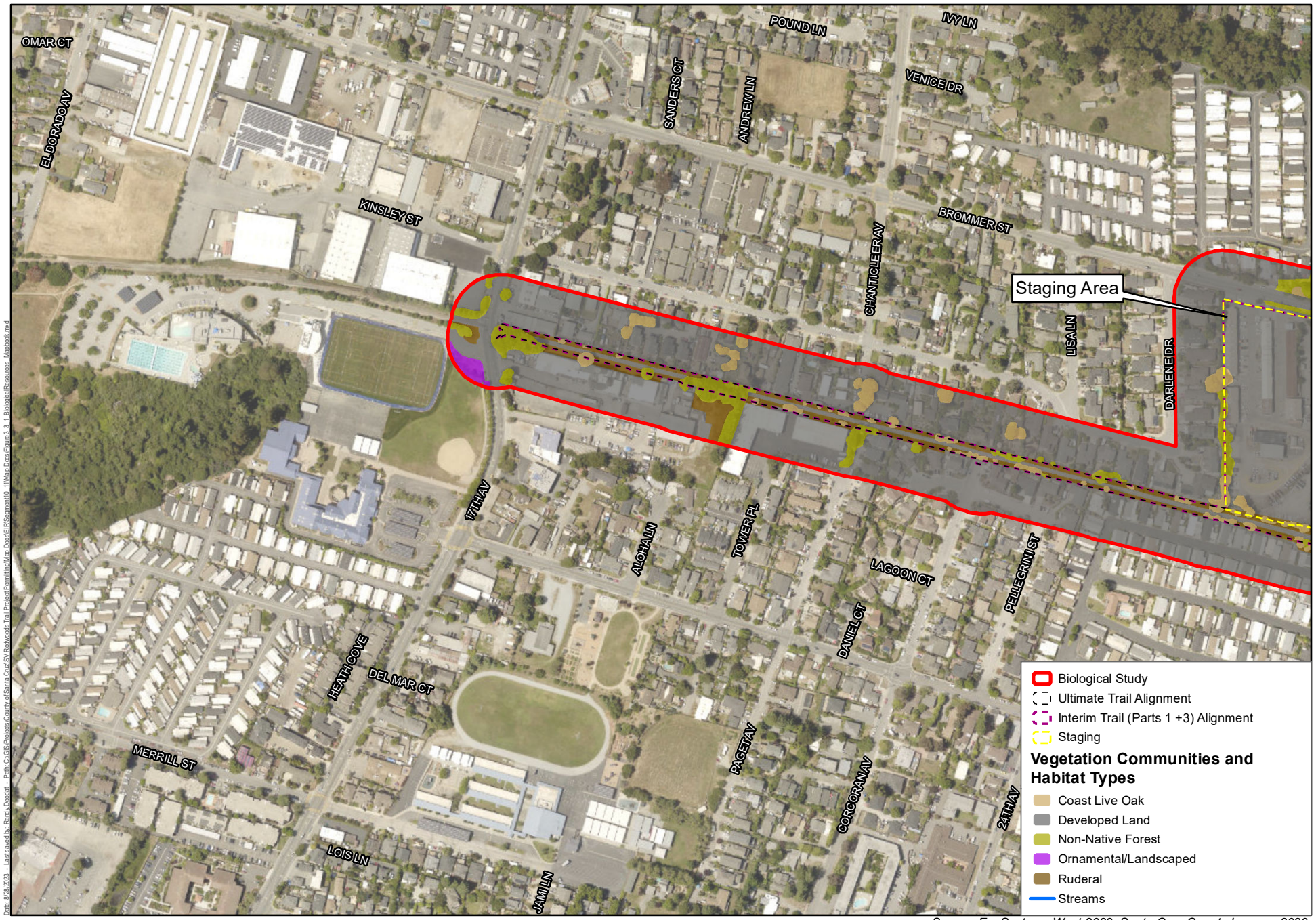
0 1,500 3,000

Feet

Figure 3.3-1

Habitat Types - Index

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

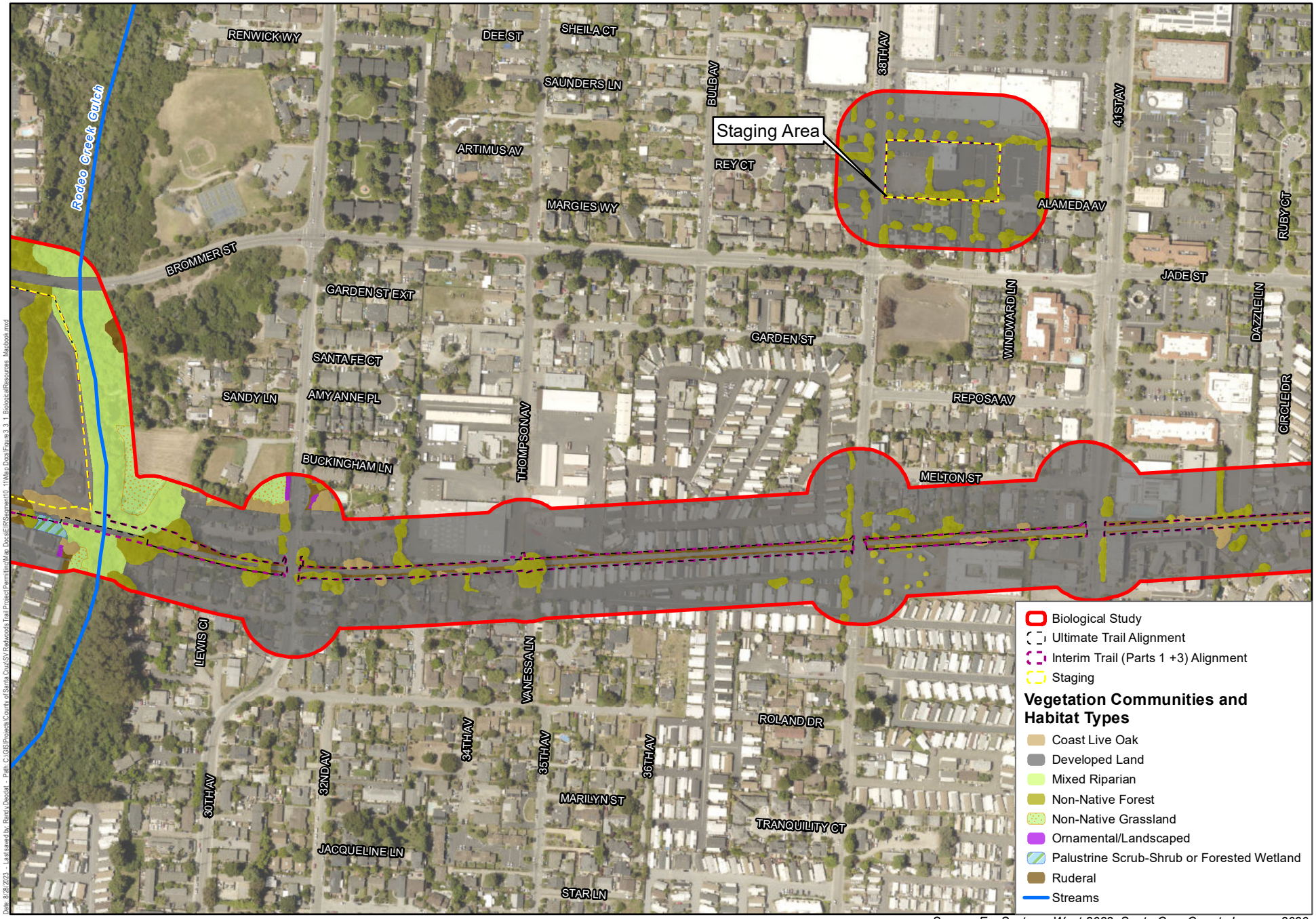
0 200 400

Feet

Figure 3.3-1a

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

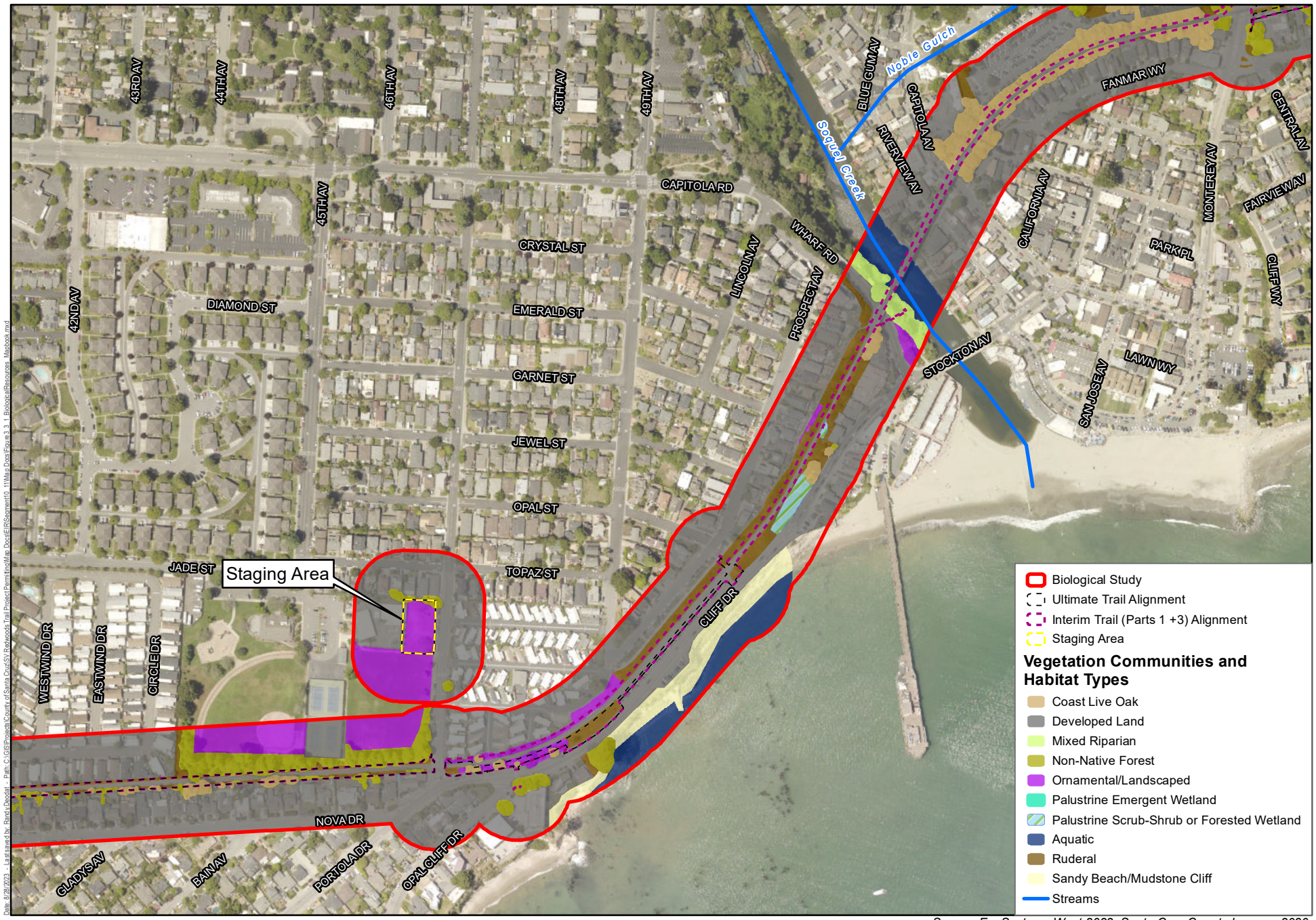
0 200 400

Feet

Figure 3.3-1b

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

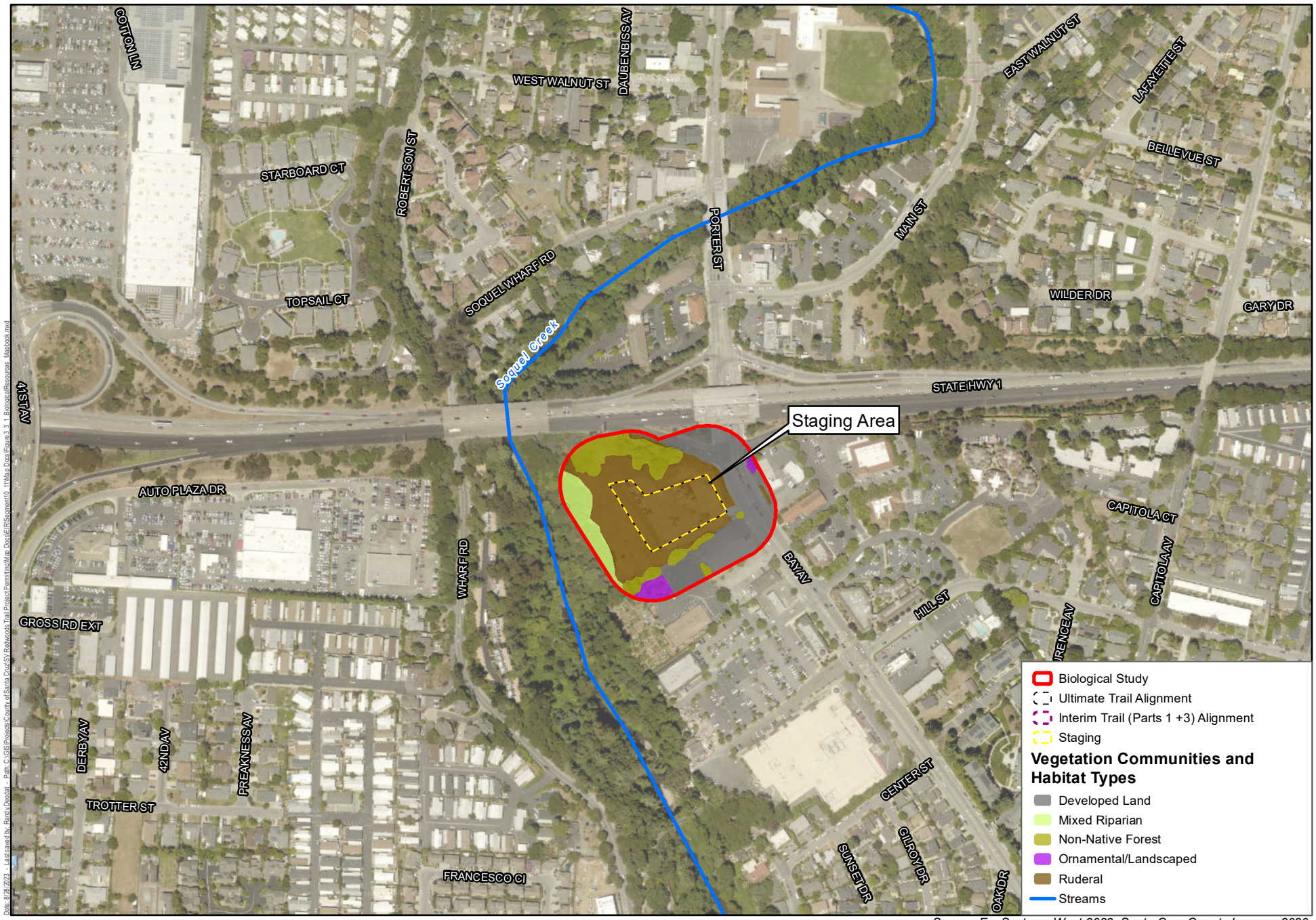
0 200 400

Feet

Figure 3.3-1c

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

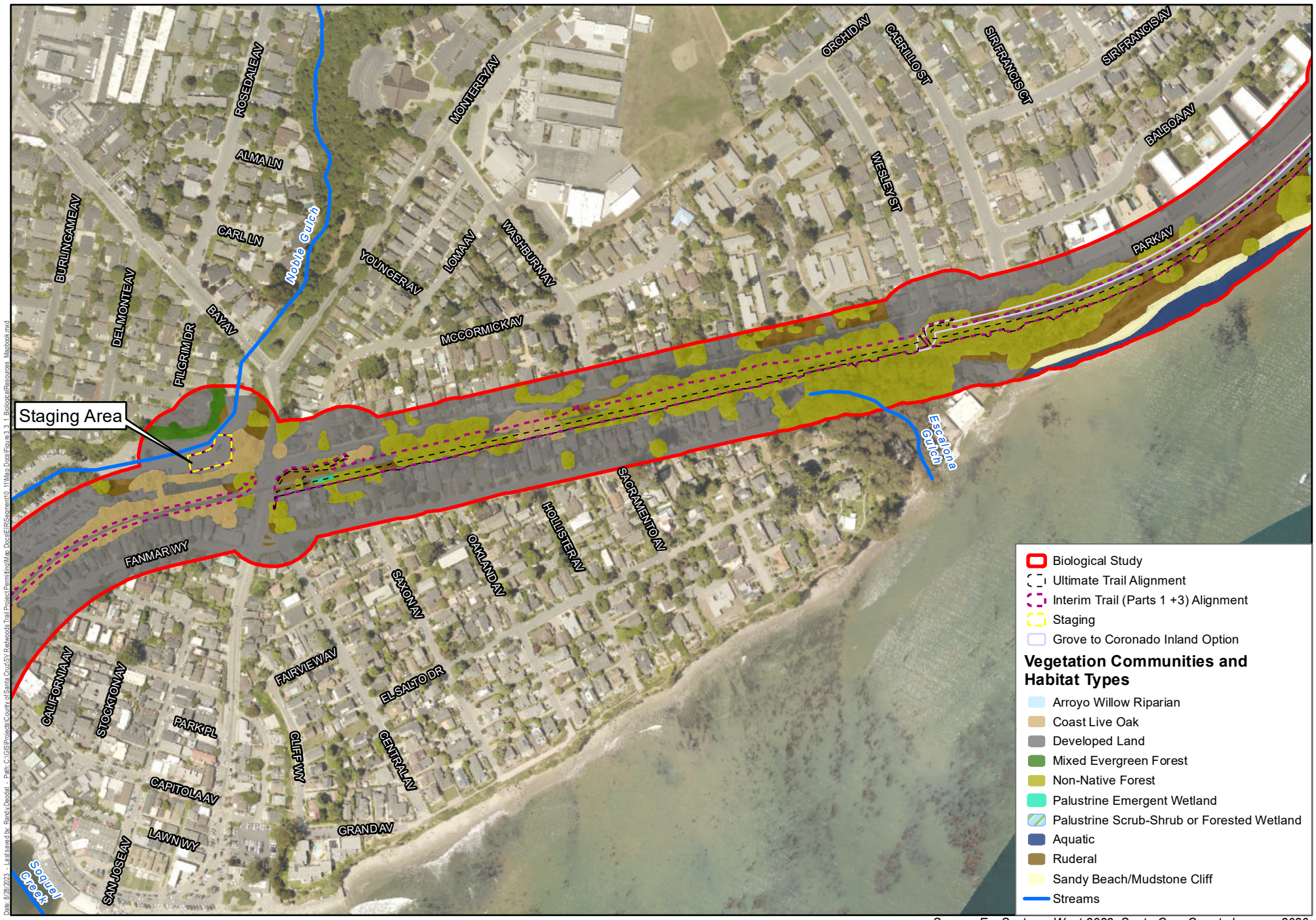
0 200 400

Feet

Figure 3.3-1d

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

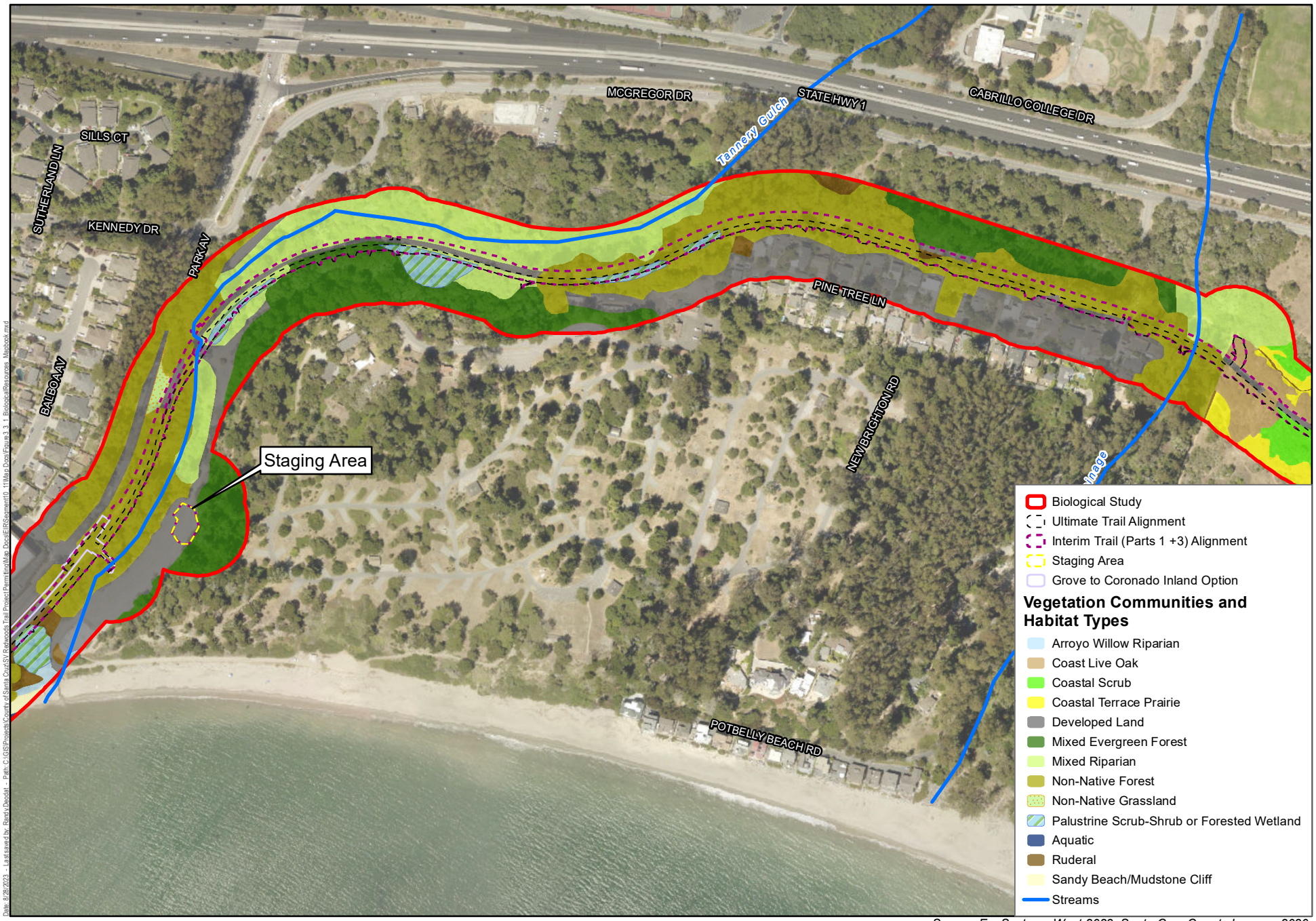
0 200 400

Feet

Figure 3.3-1e

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

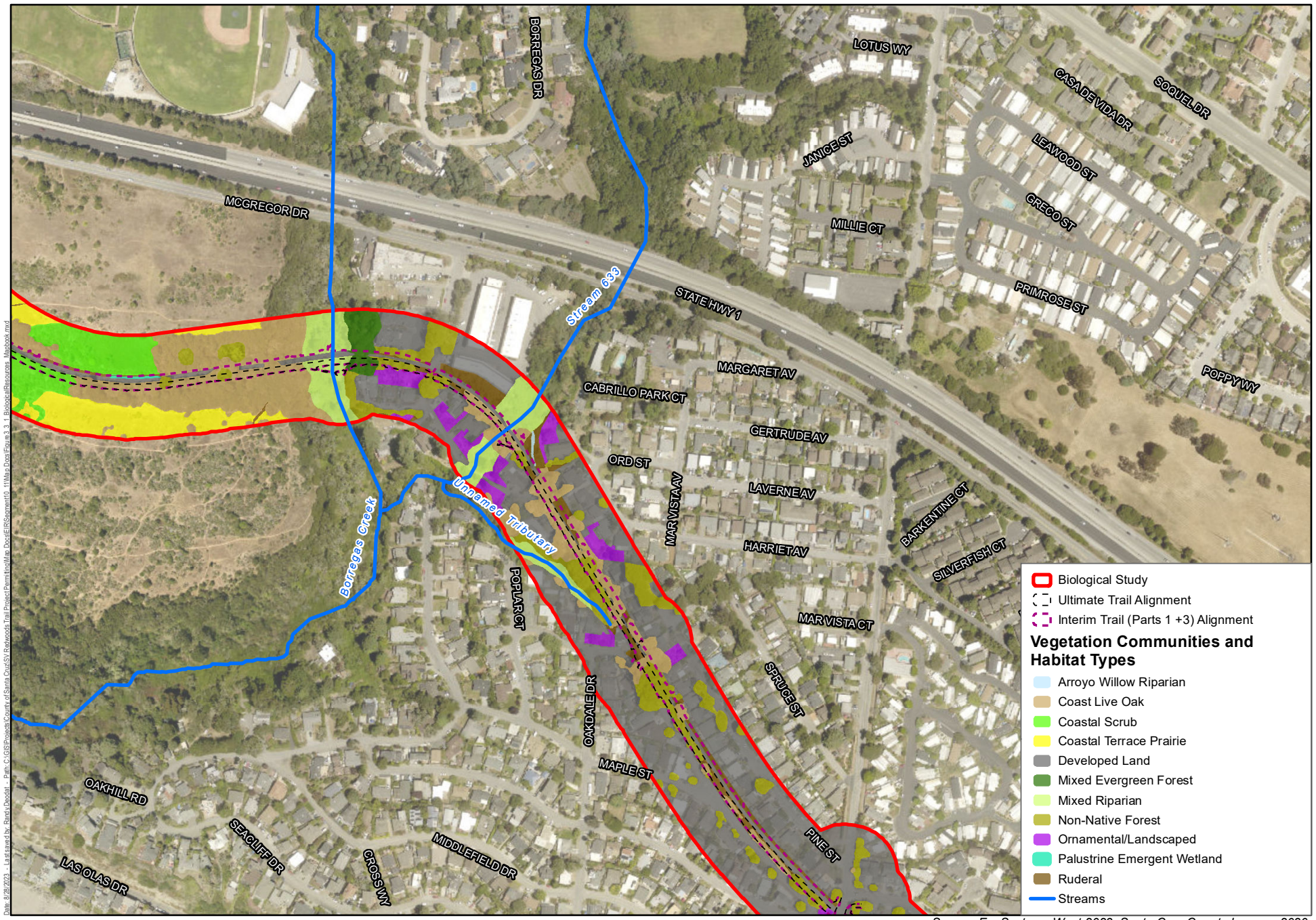
Harris & Associates

N 0 200 400 Feet

Figure 3.3-1f

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

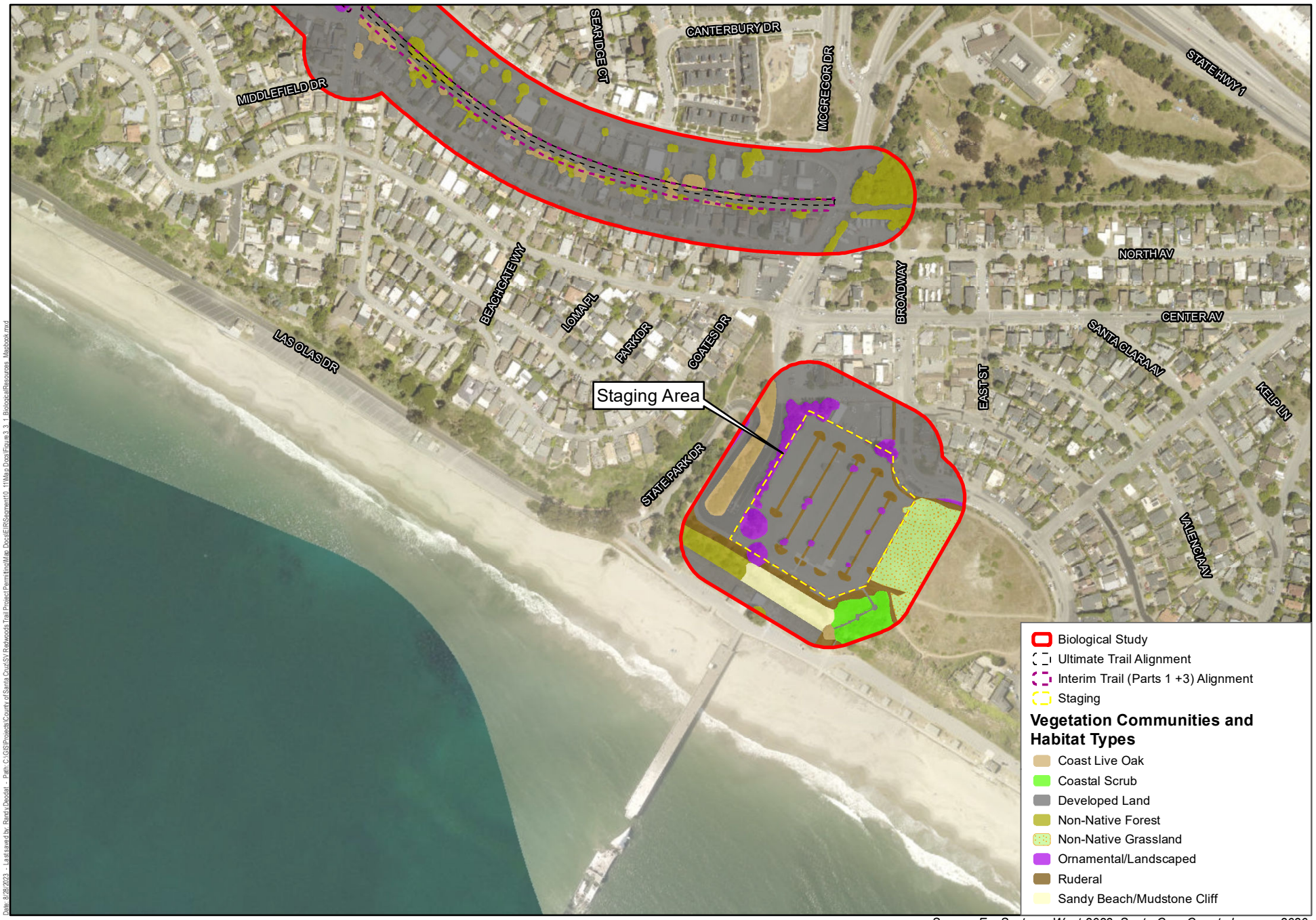
0 200 400

Feet

Figure 3.3-1g

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

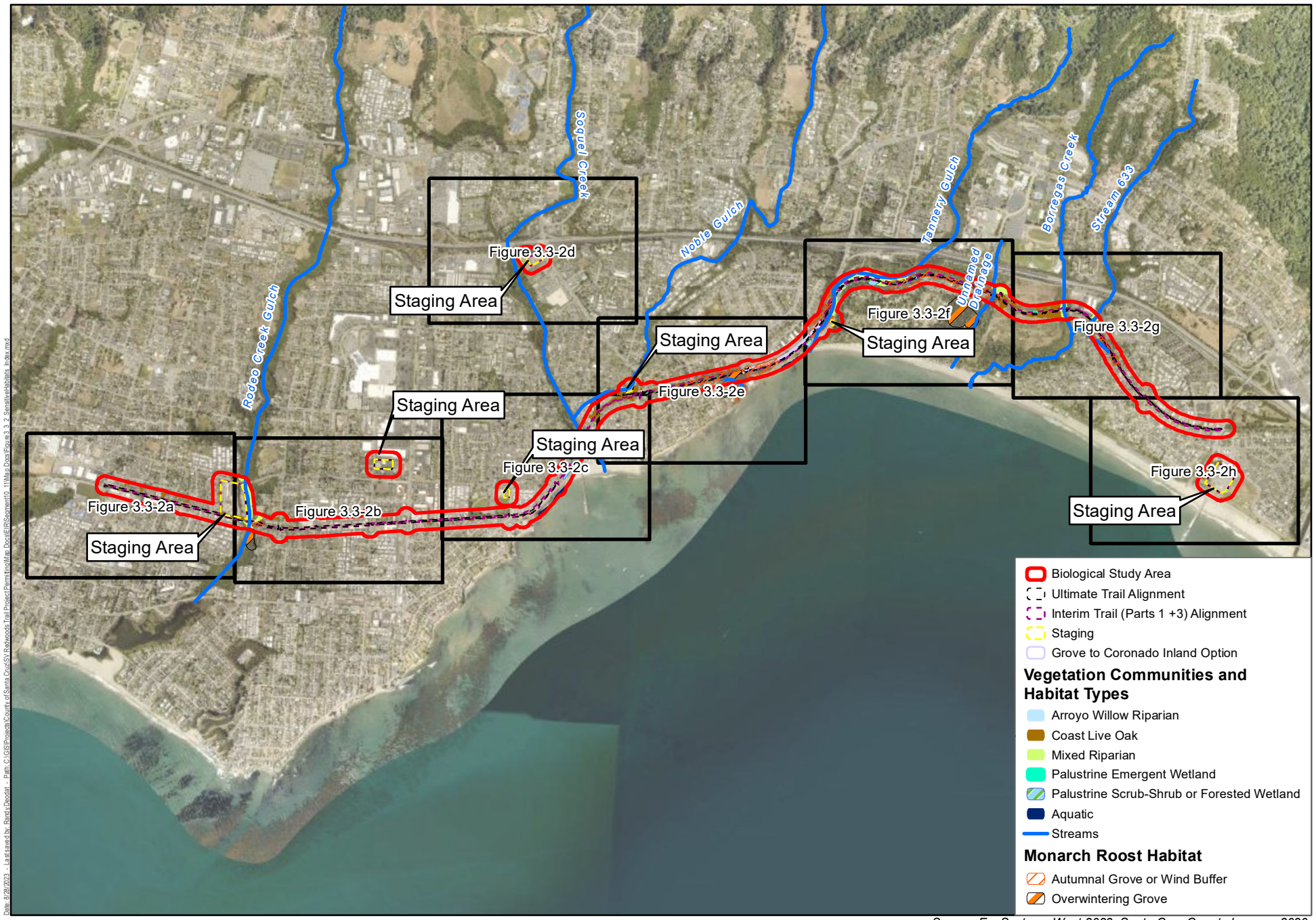
Harris & Associates

N 0 200 400 Feet

Figure 3.3-1h

Habitat Types

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

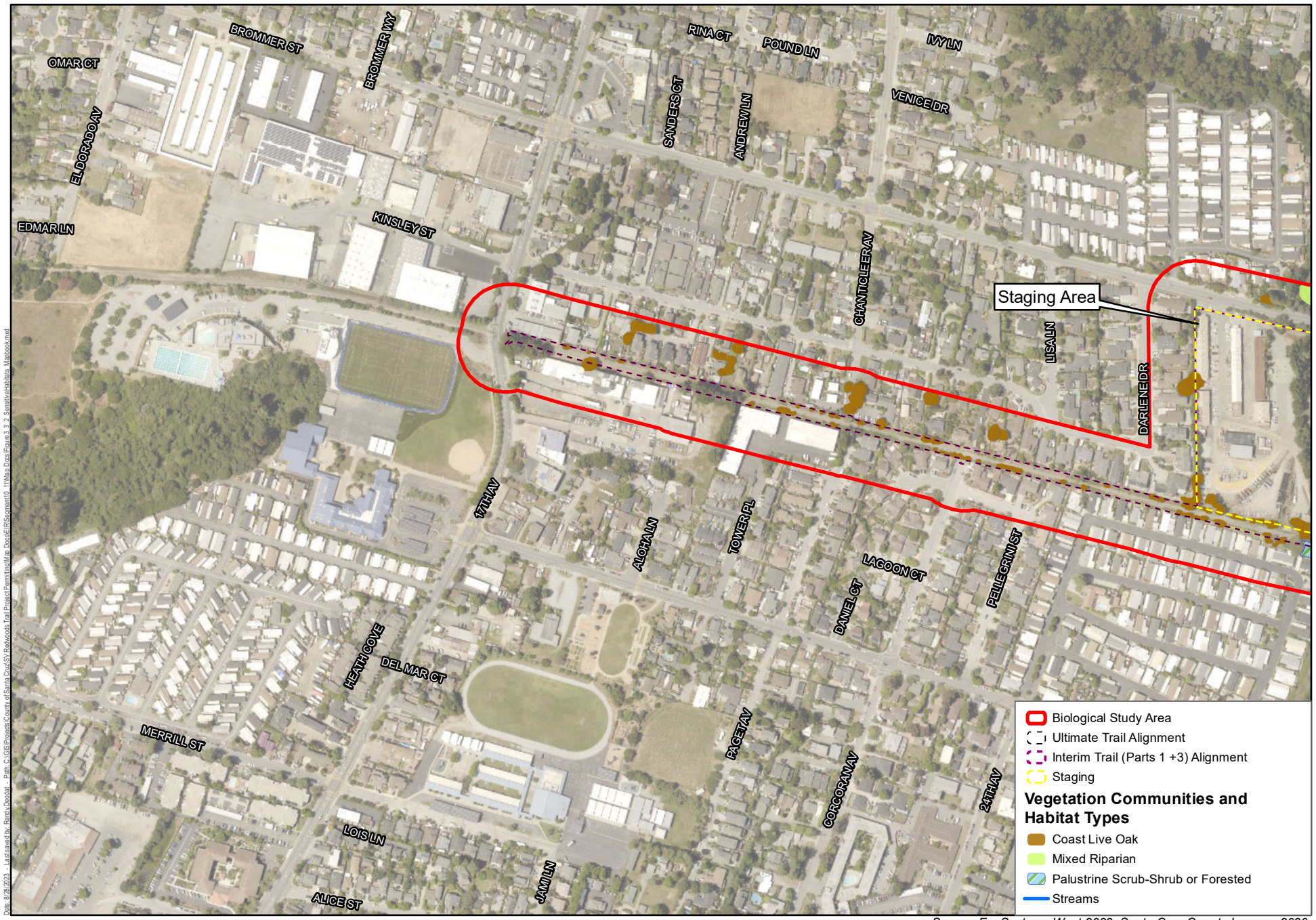
0 1,500 3,000

Feet

Figure 3.3-2

Sensitive Habitat - Index

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

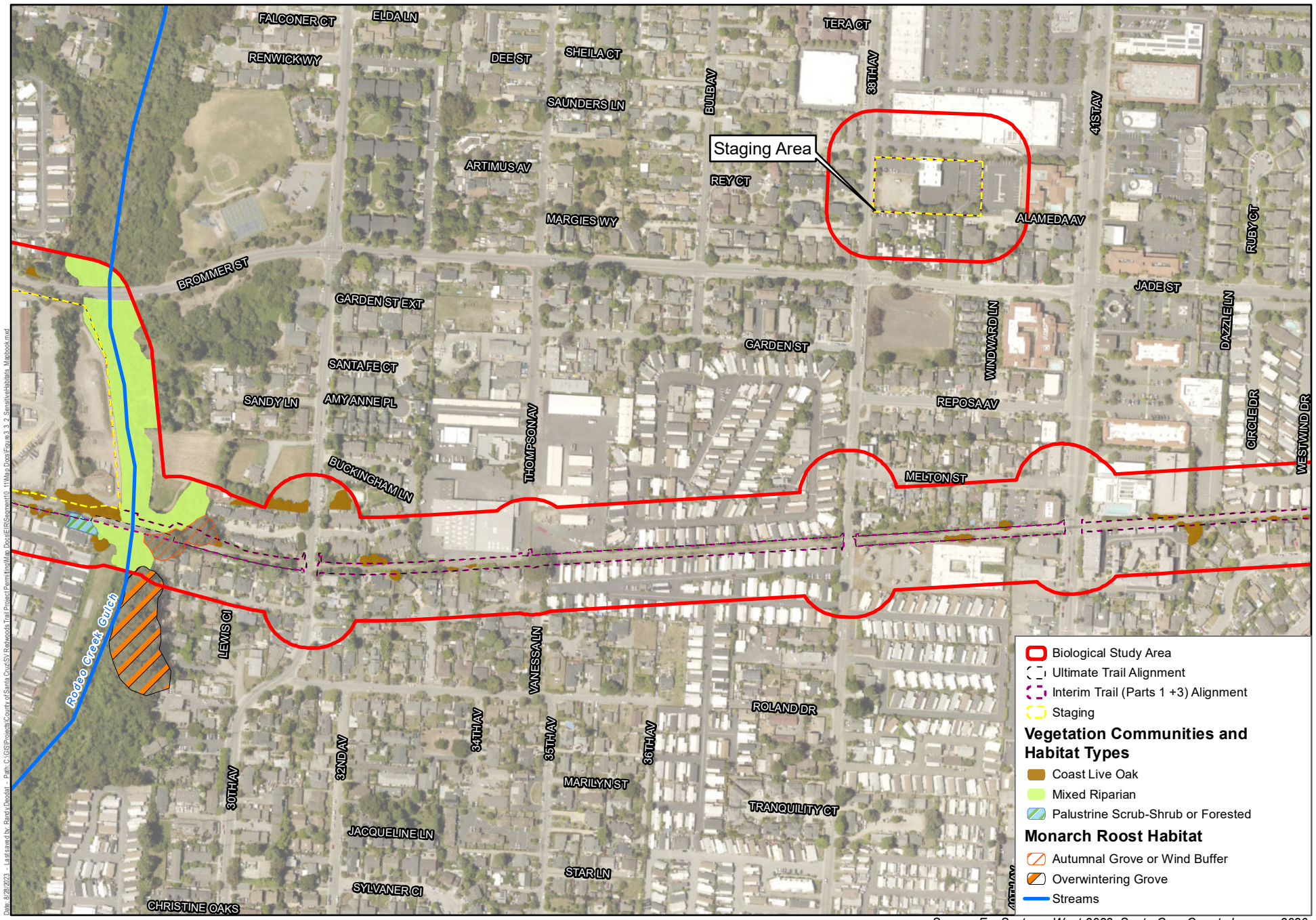
0 200 400

Feet

Figure 3.3-2a

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

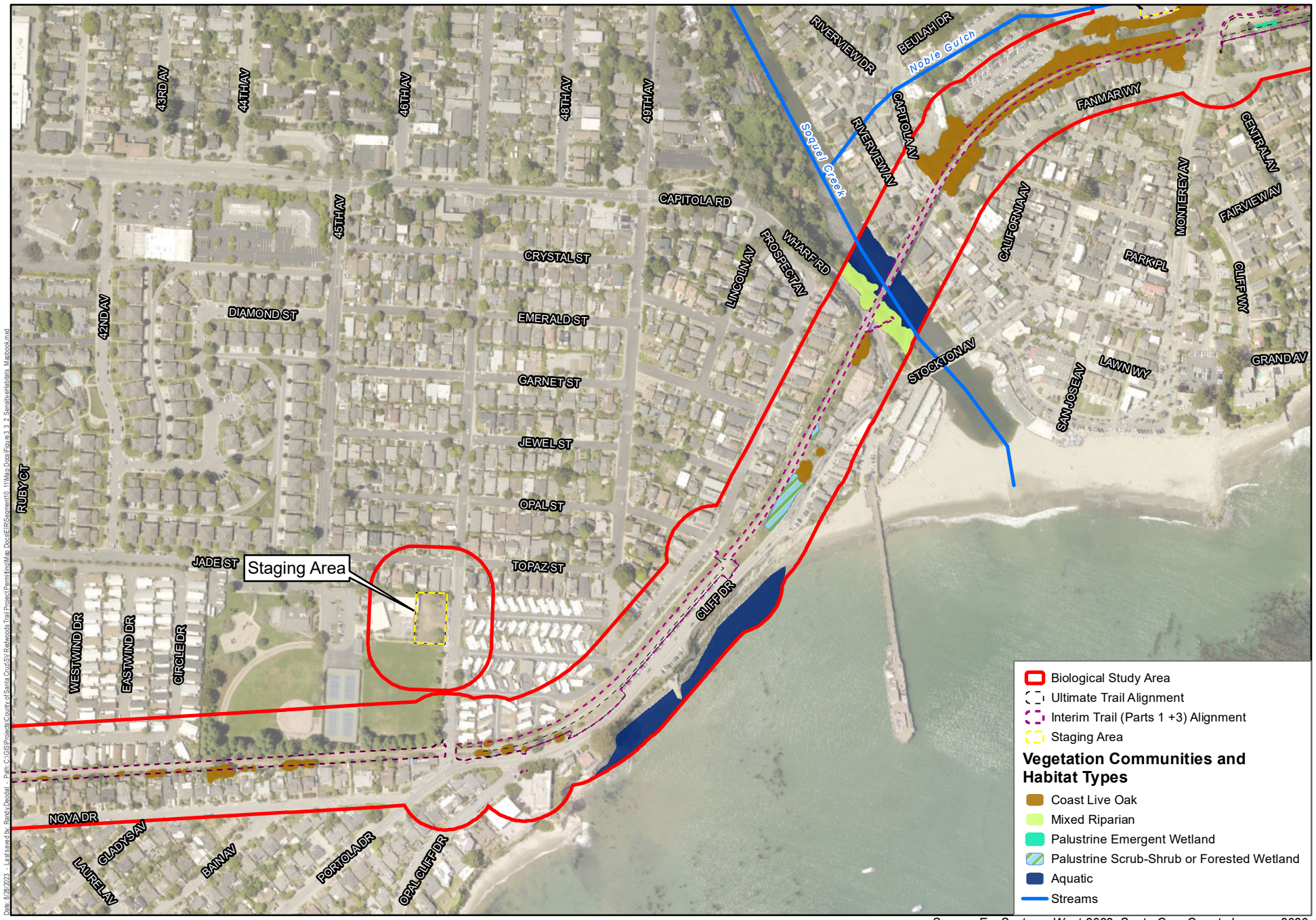
0 200 400

Feet

Figure 3.3-2b

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

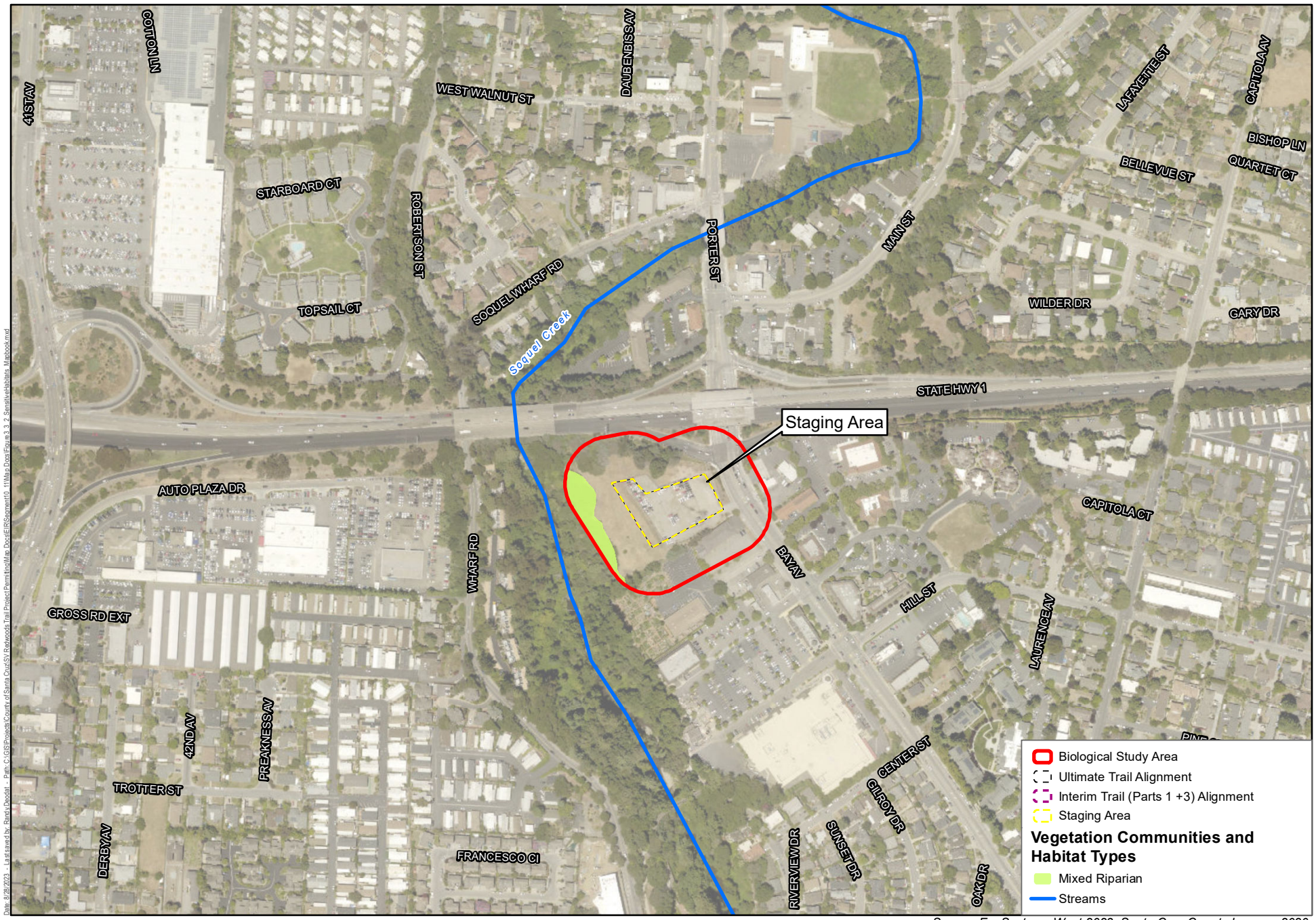
0 200 400

Feet

Figure 3.3-2c

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Figure 3.3-2d

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

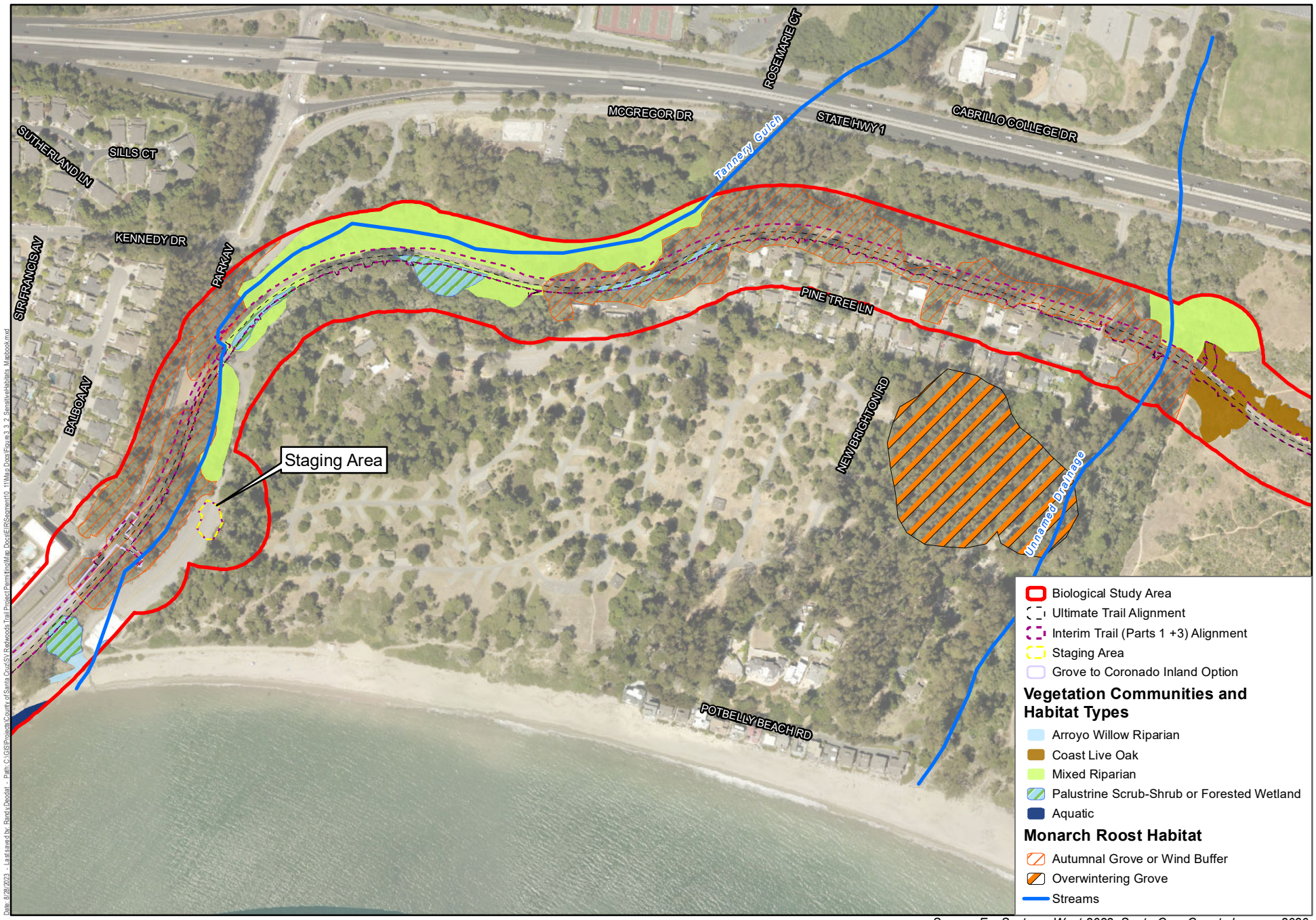
0 200 400

Feet

Figure 3.3-2e

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

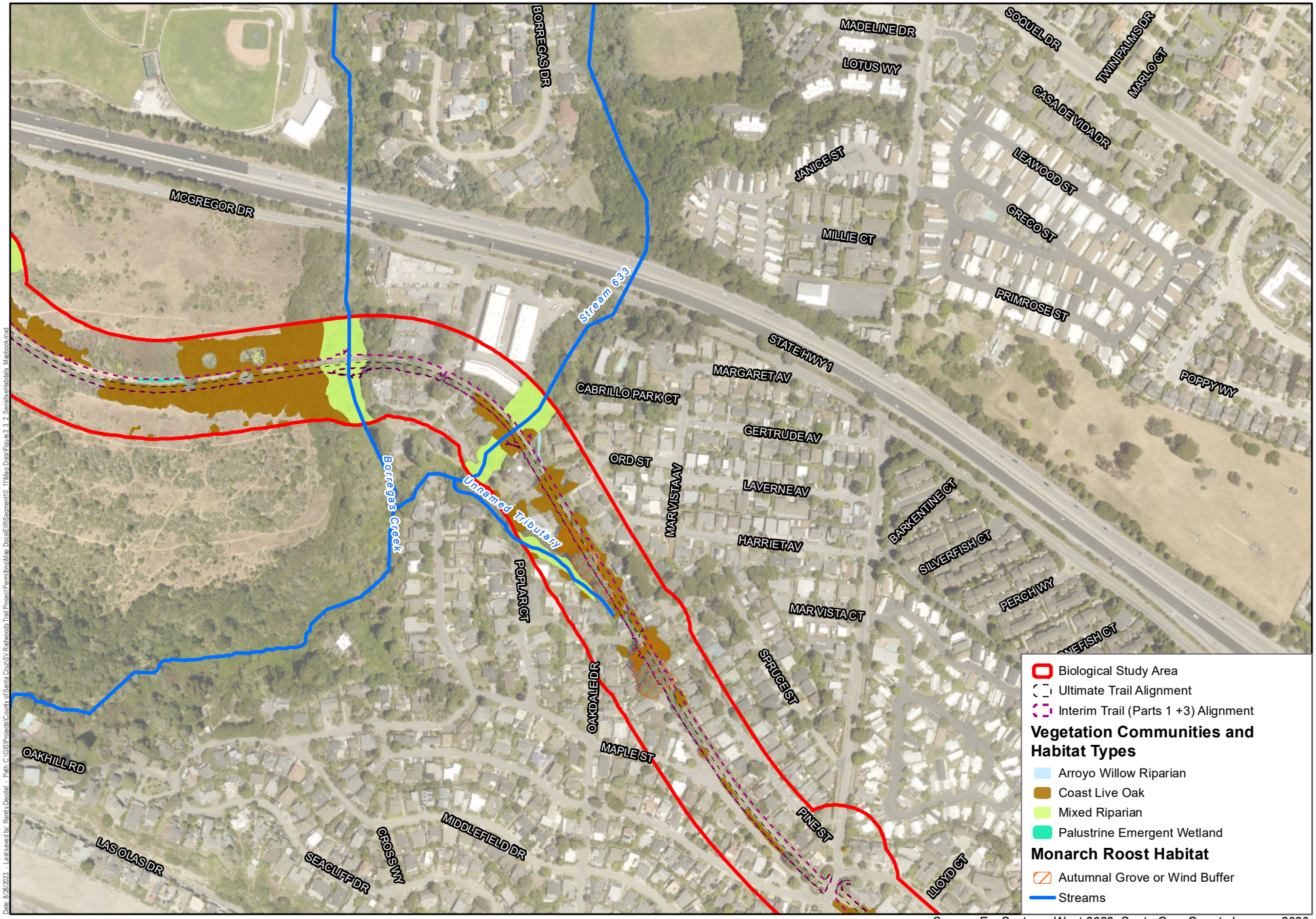
0 200 400

Feet

Figure 3.3-2f

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Figure 3.3-2g

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

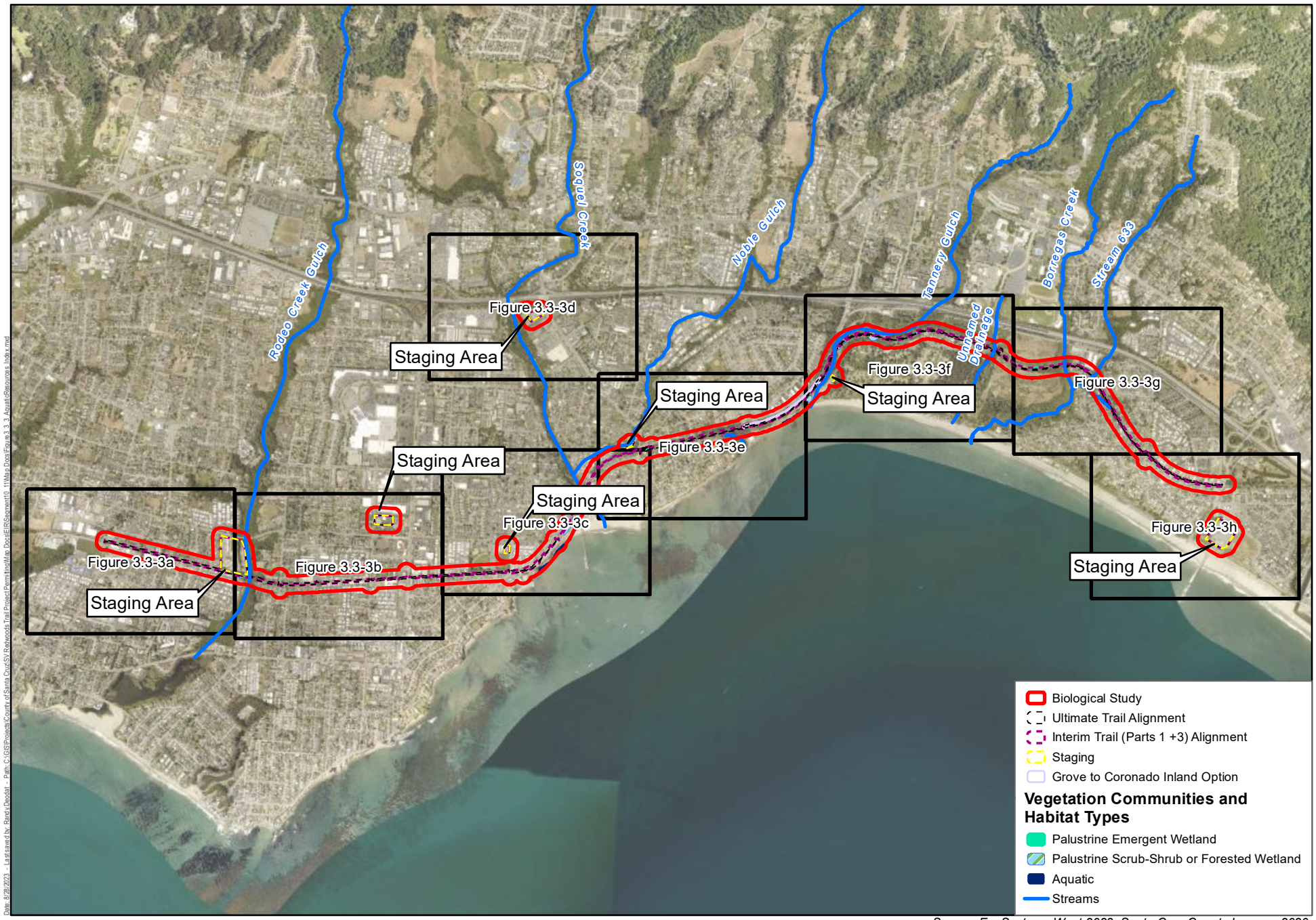
0 200 400

Feet

Figure 3.3-2h

Sensitive Habitat

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

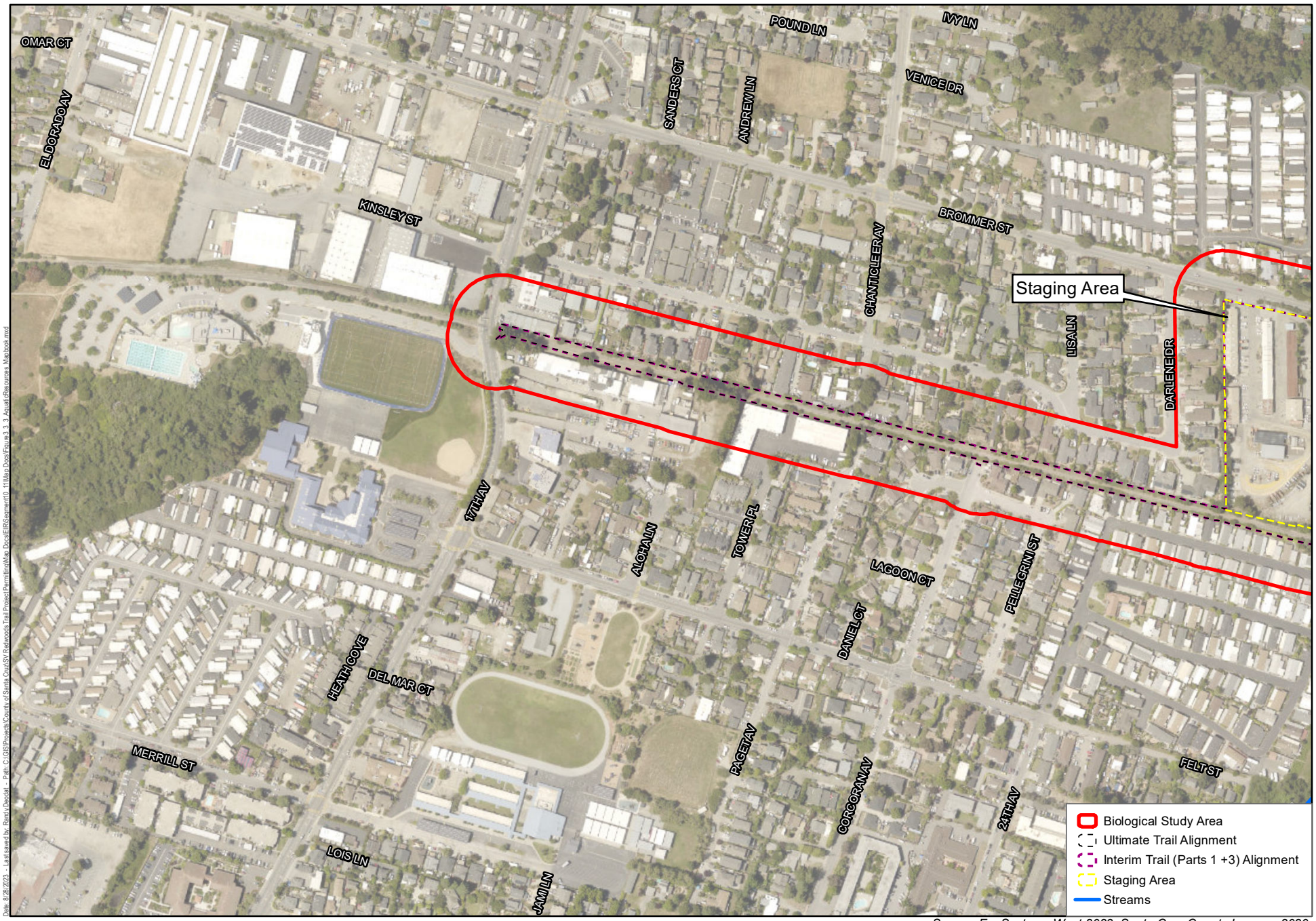
0 1,500 3,000

Feet

Figure 3.3-3

Aquatic Resources - Index

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

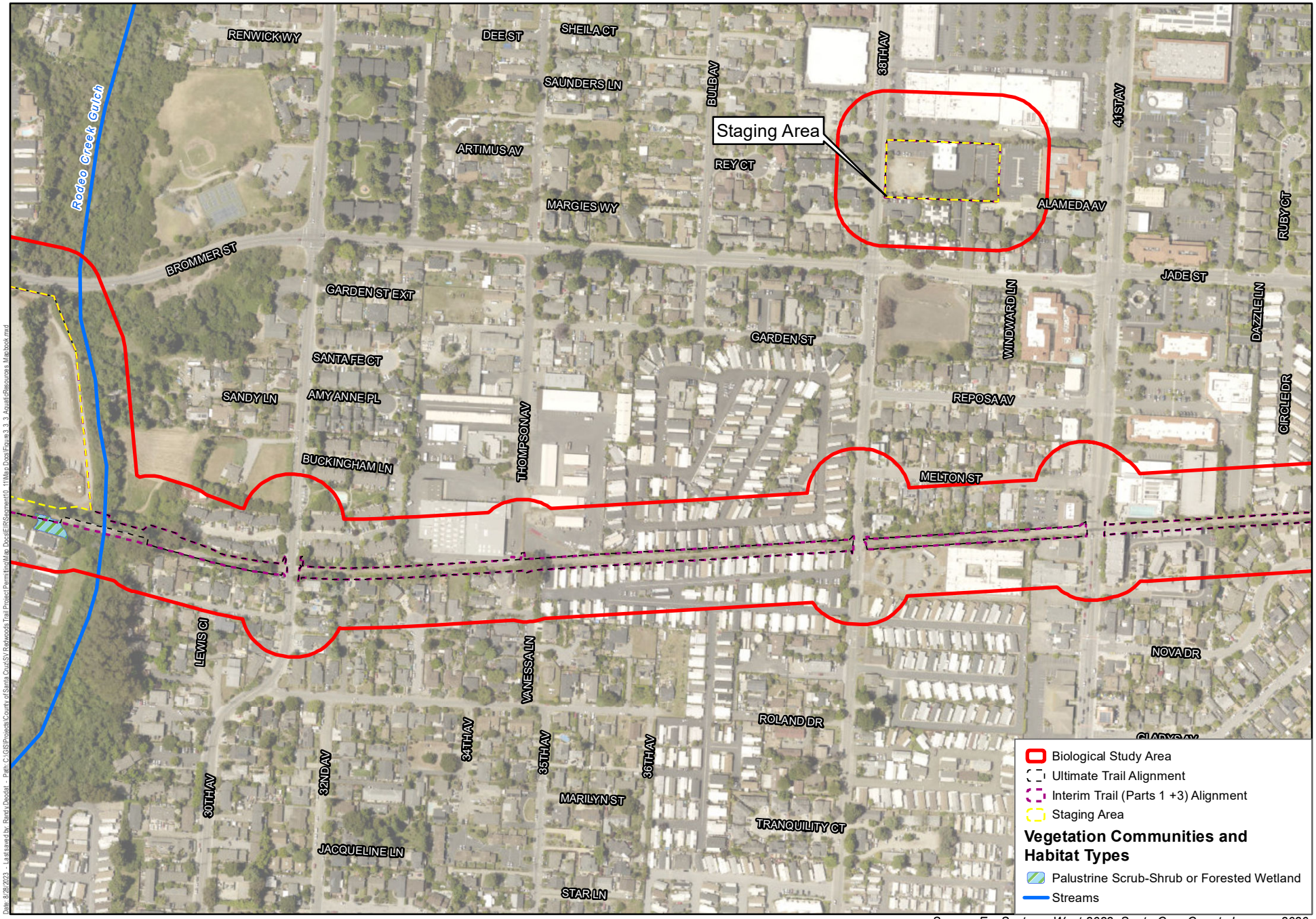
0 200 400

Feet

Figure 3.3-3a

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

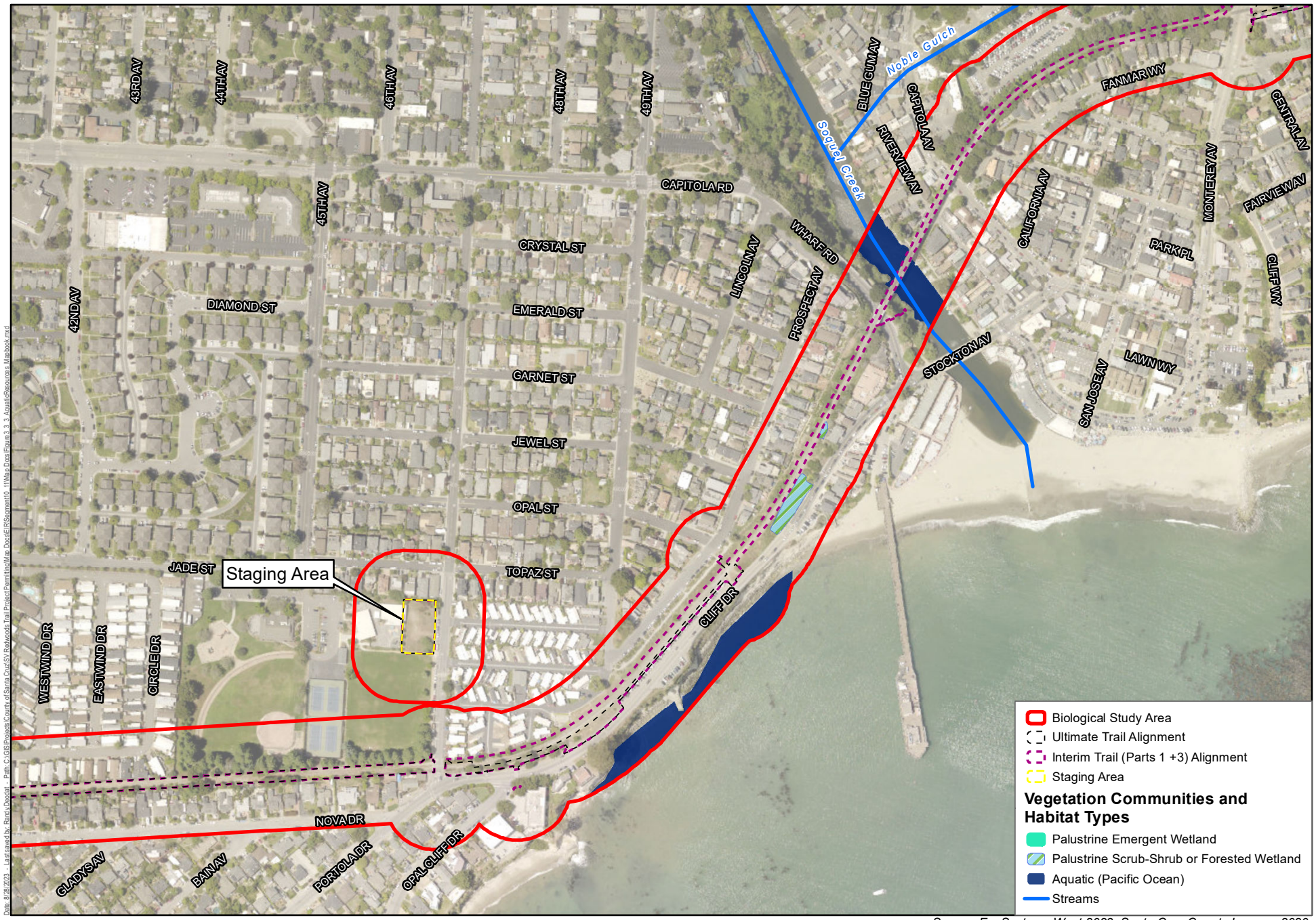
0 200 400

Feet

Figure 3.3-3b

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

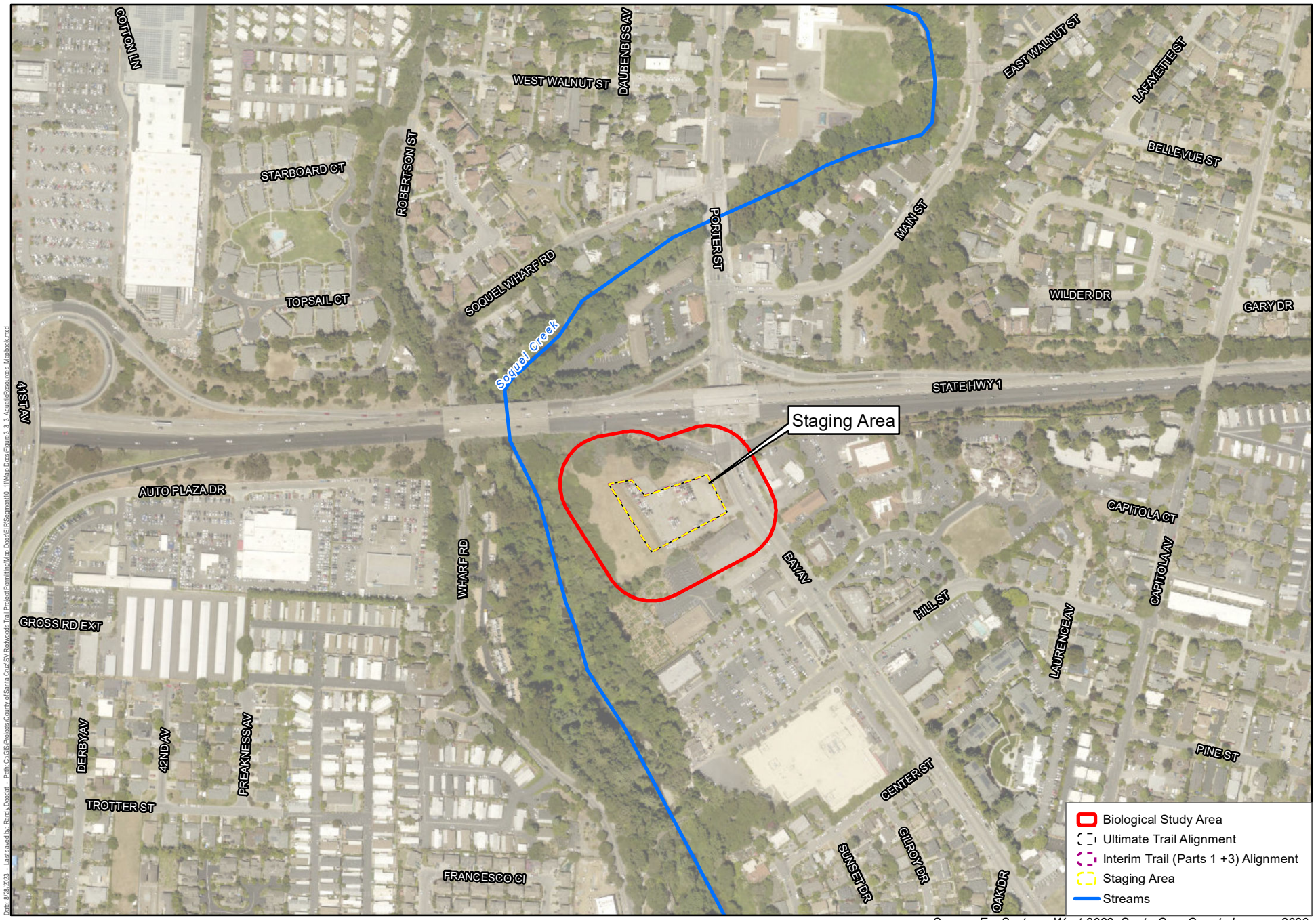
Harris & Associates

N 0 200 400 Feet

Figure 3.3-3c

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Figure 3.3-3d

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

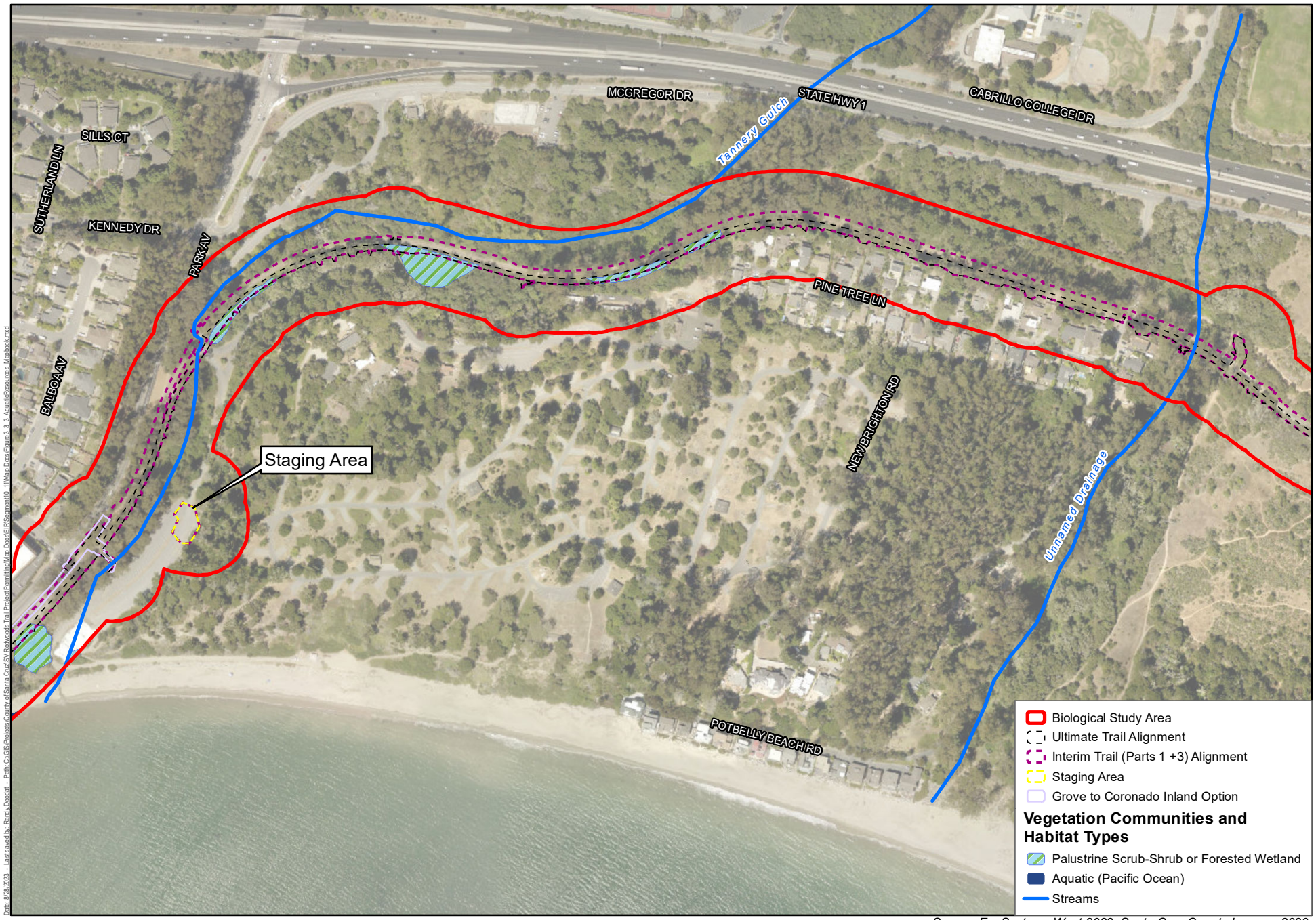
0 200 400

Feet

Figure 3.3-3e

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

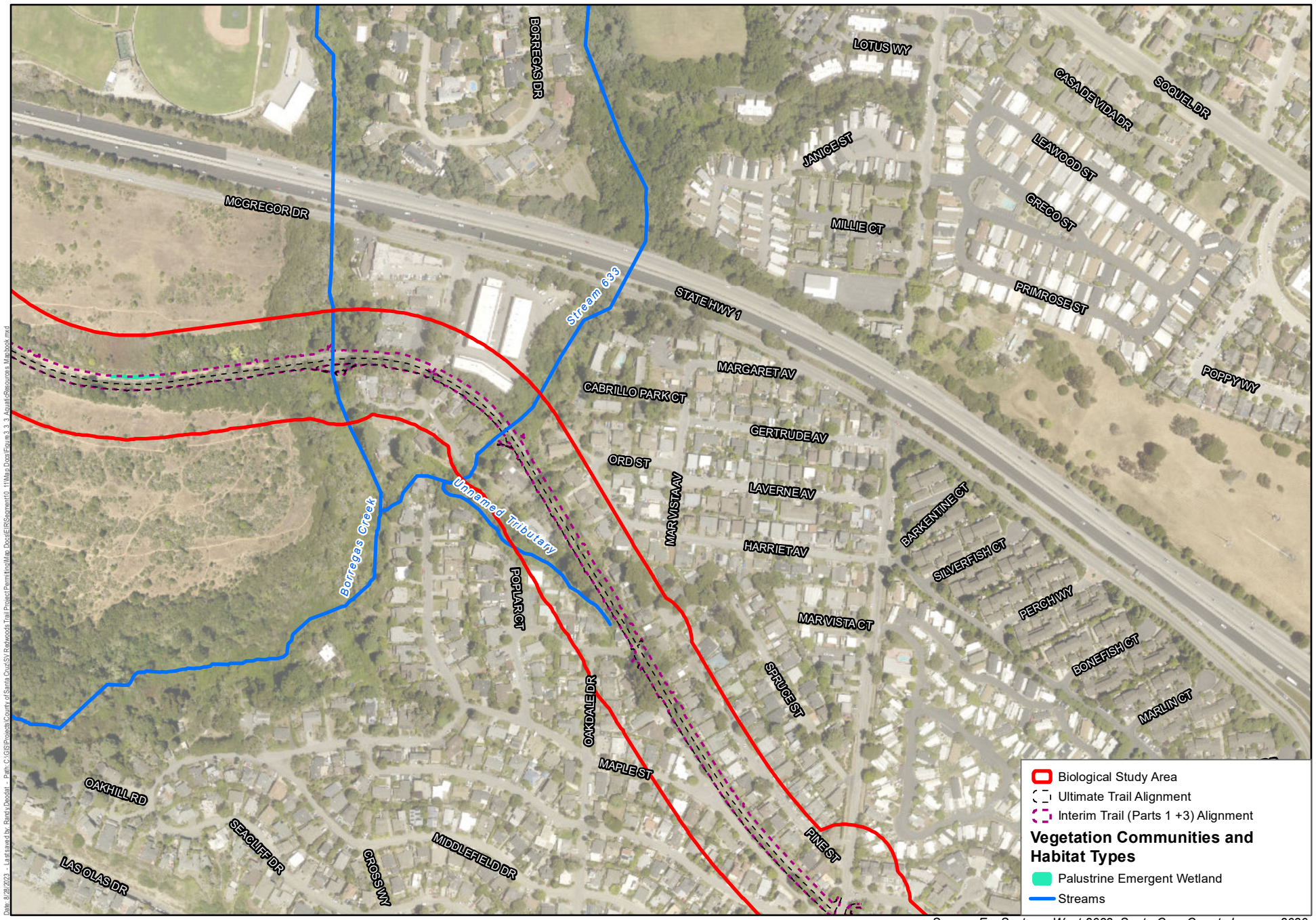
0 200 400

Feet

Figure 3.3-3f

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Figure 3.3-3g

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

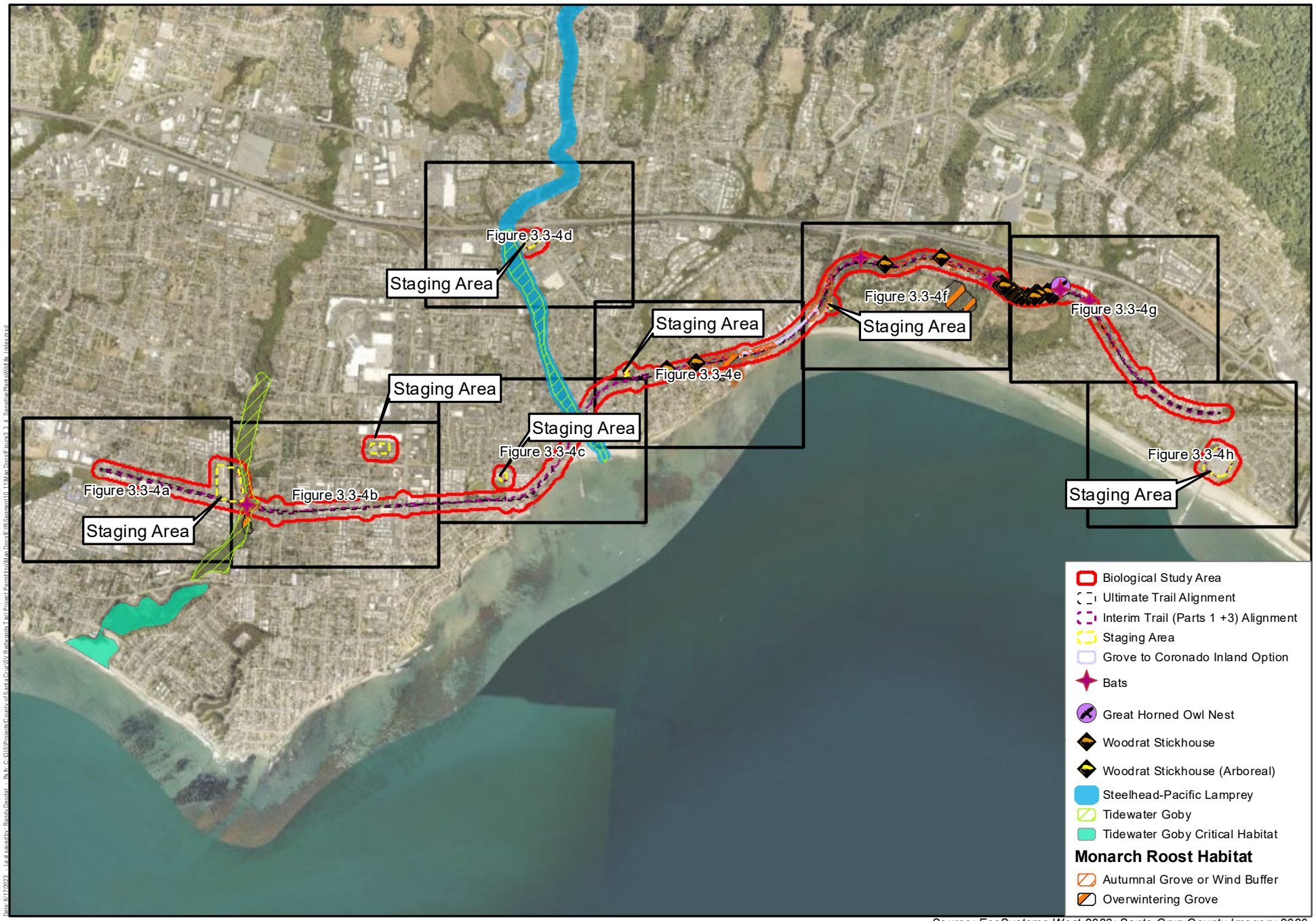
0 200 400

Feet

Figure 3.3-3h

Aquatic Resources

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 1,500 3,000

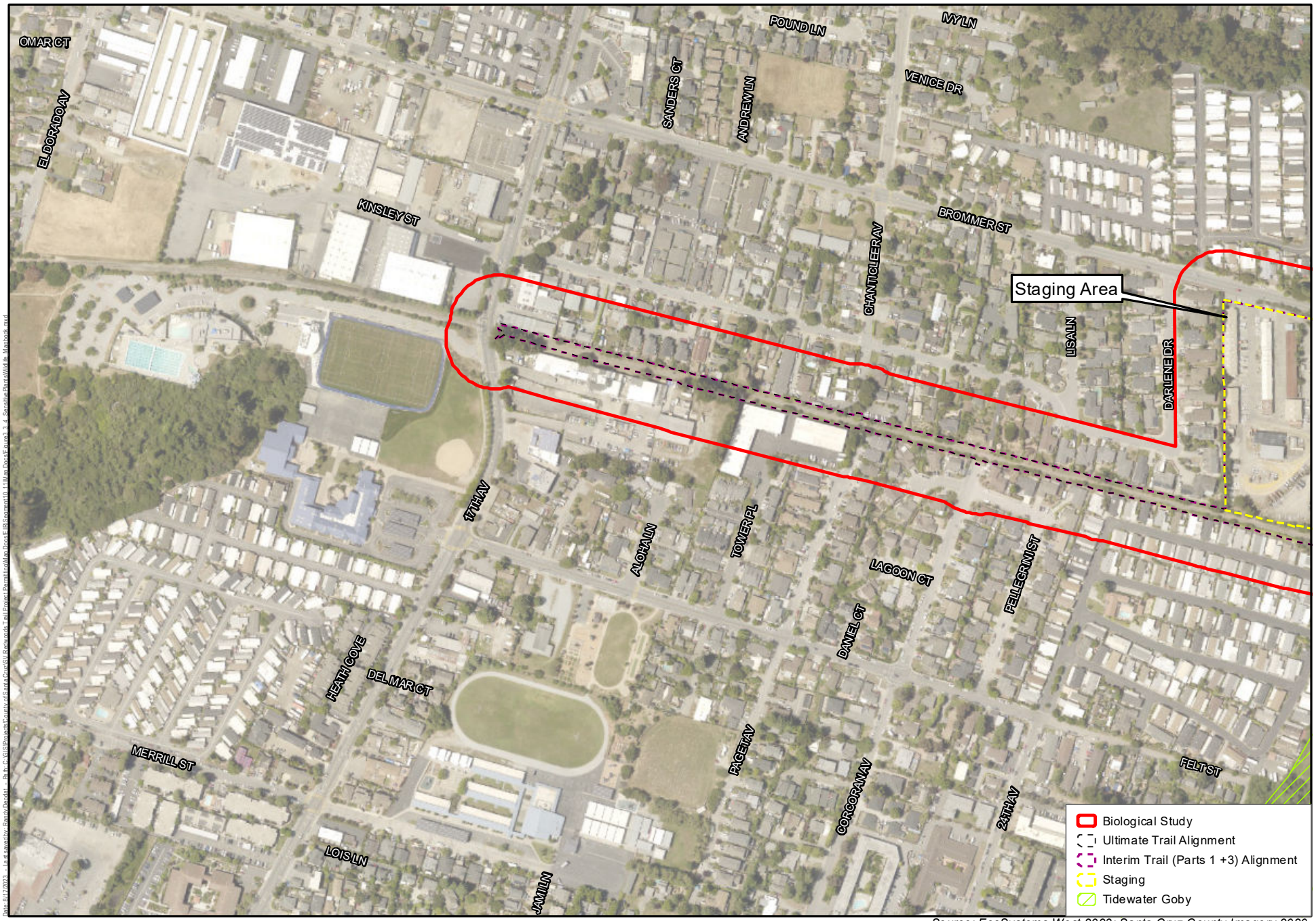
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4

Incidental Observations of Sensitive Wildlife - Index (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

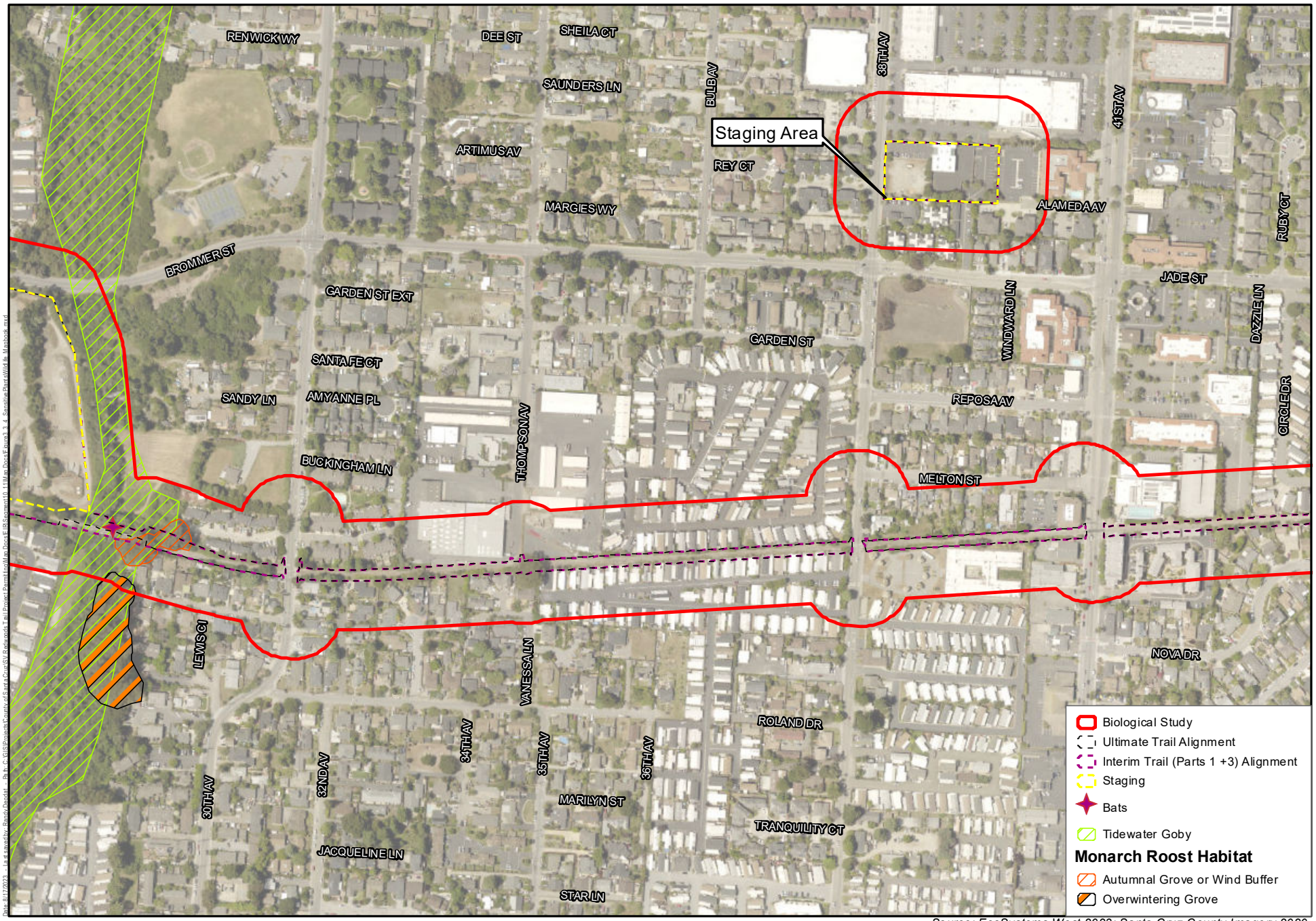
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4a

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

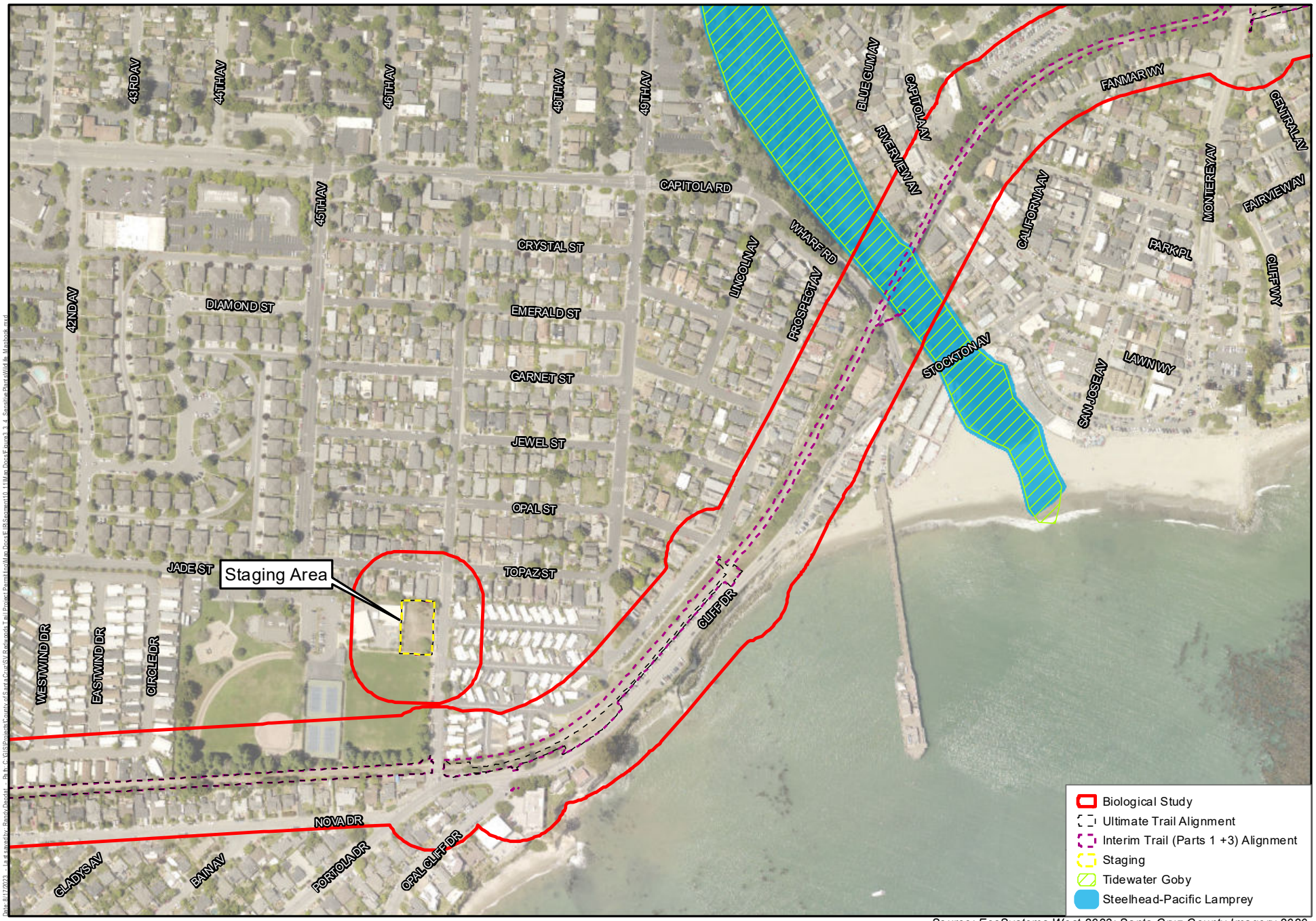
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4b

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

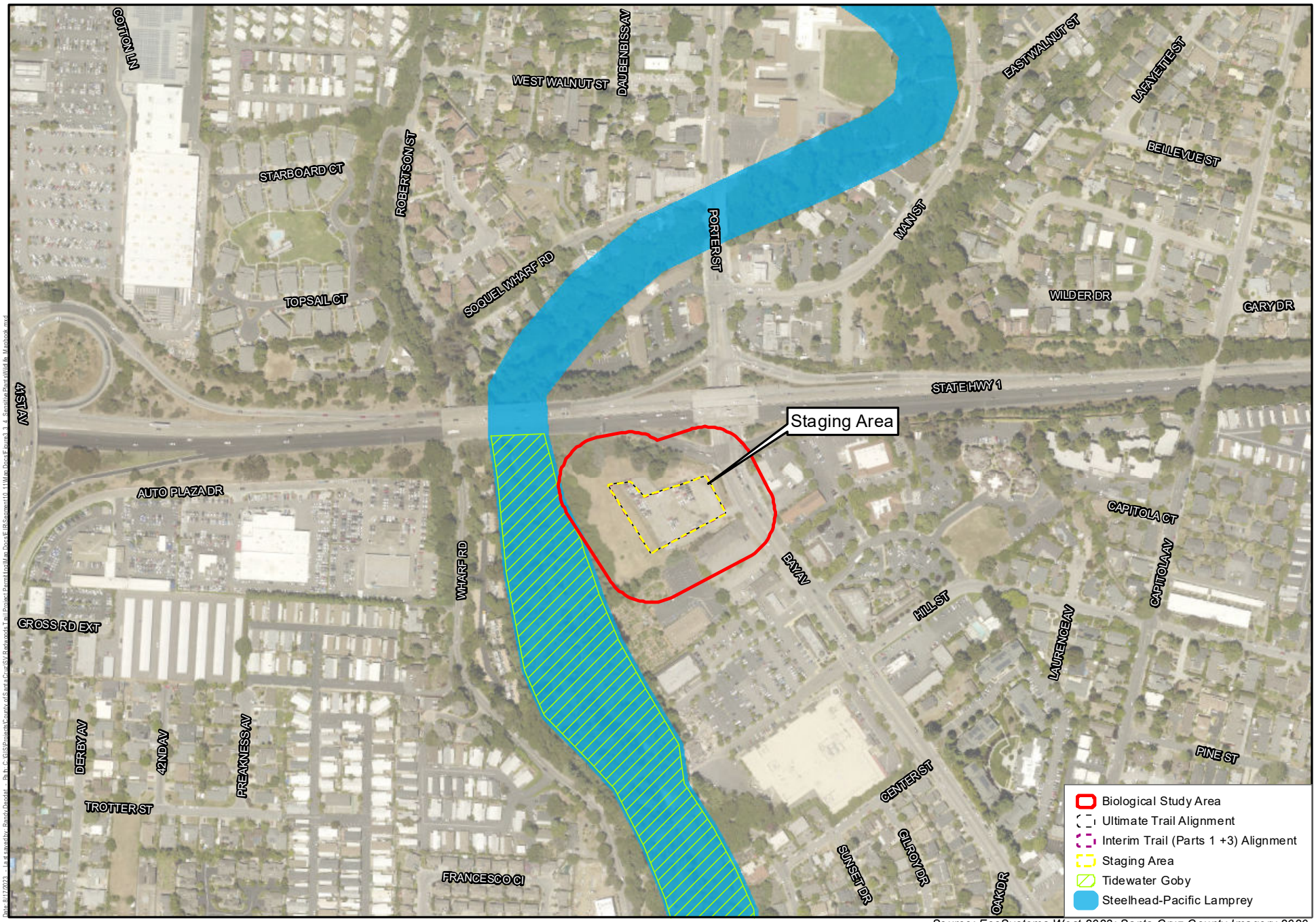
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4c

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4d

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

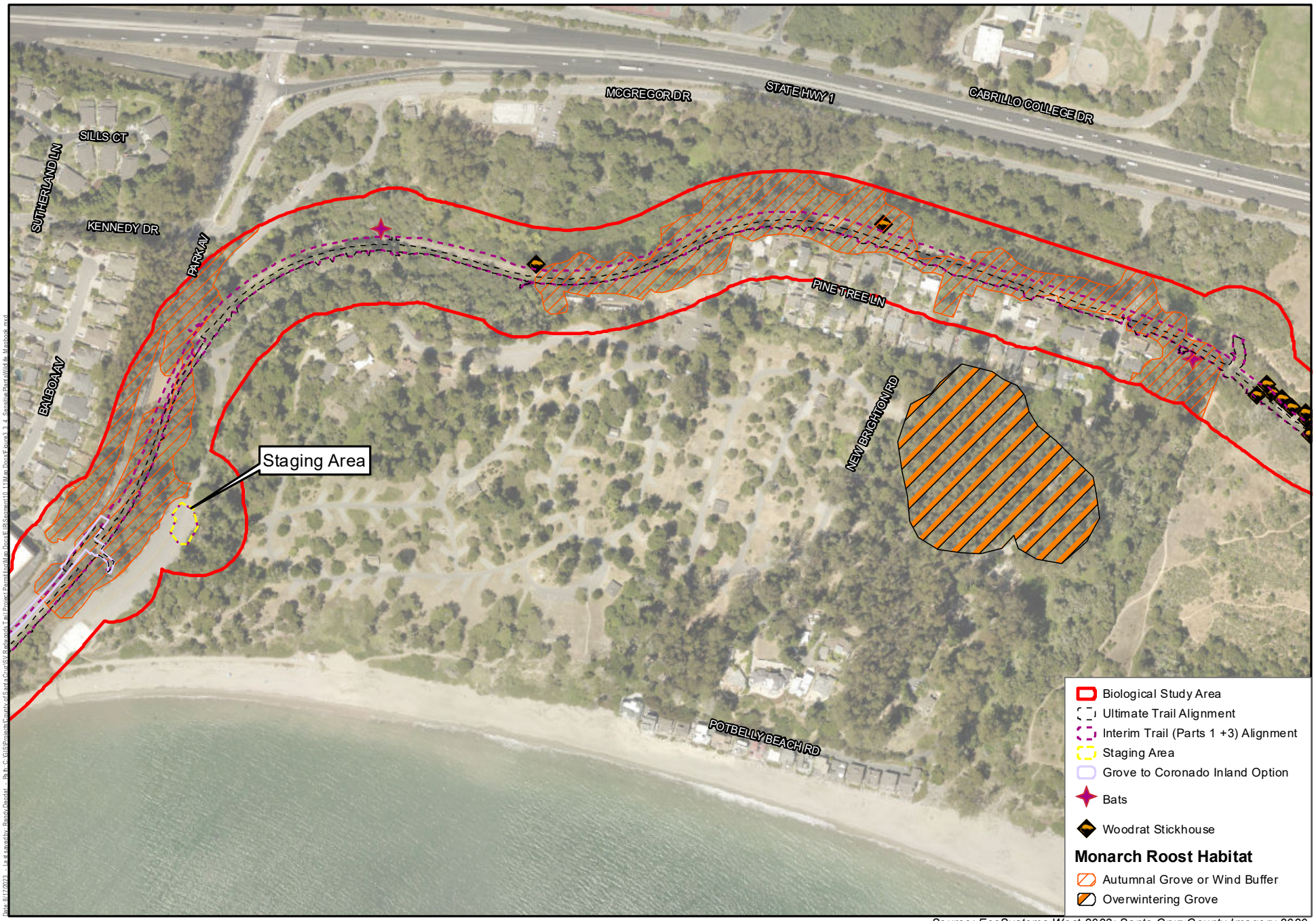
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4e

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

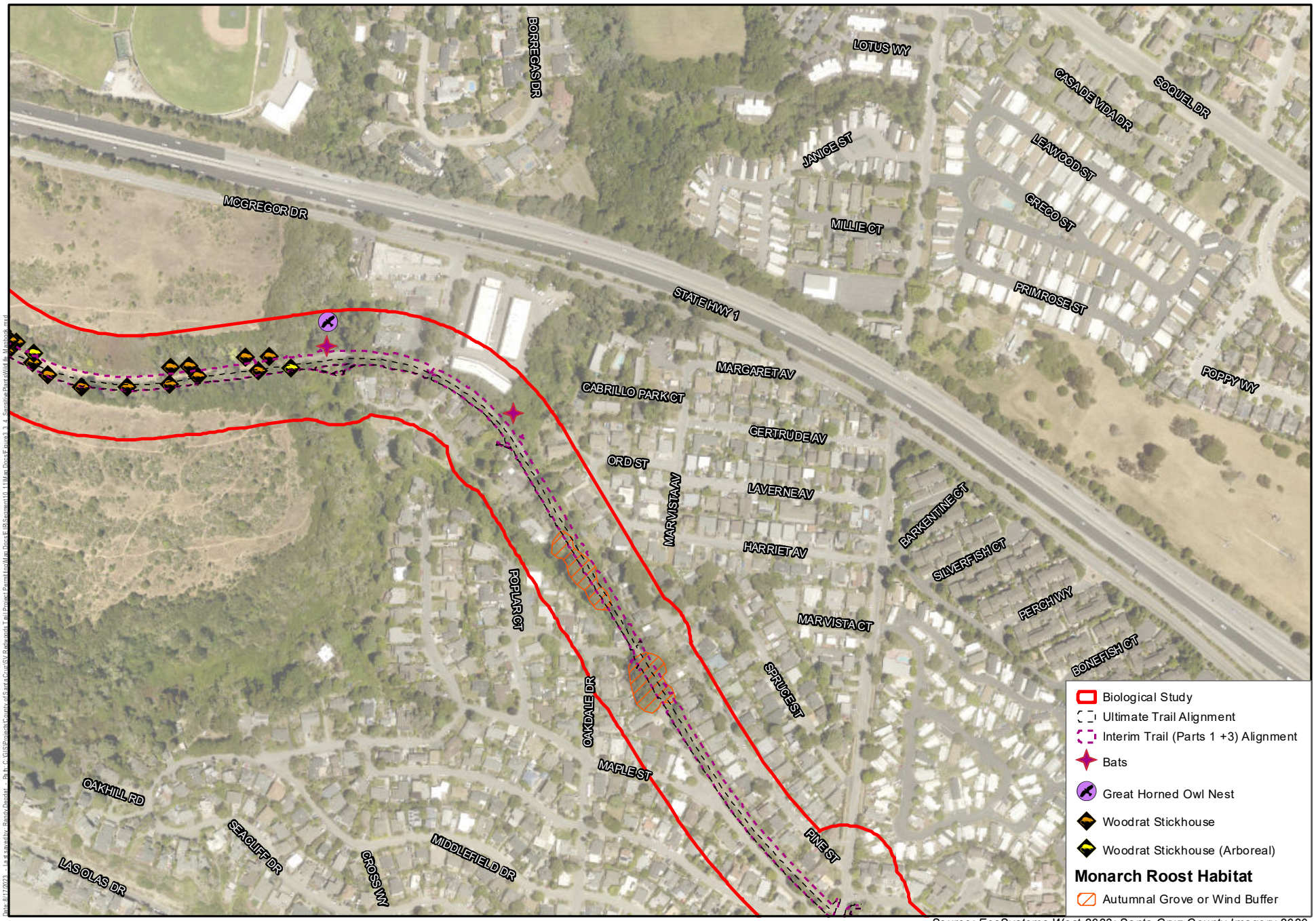
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4f

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4g

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 200 400

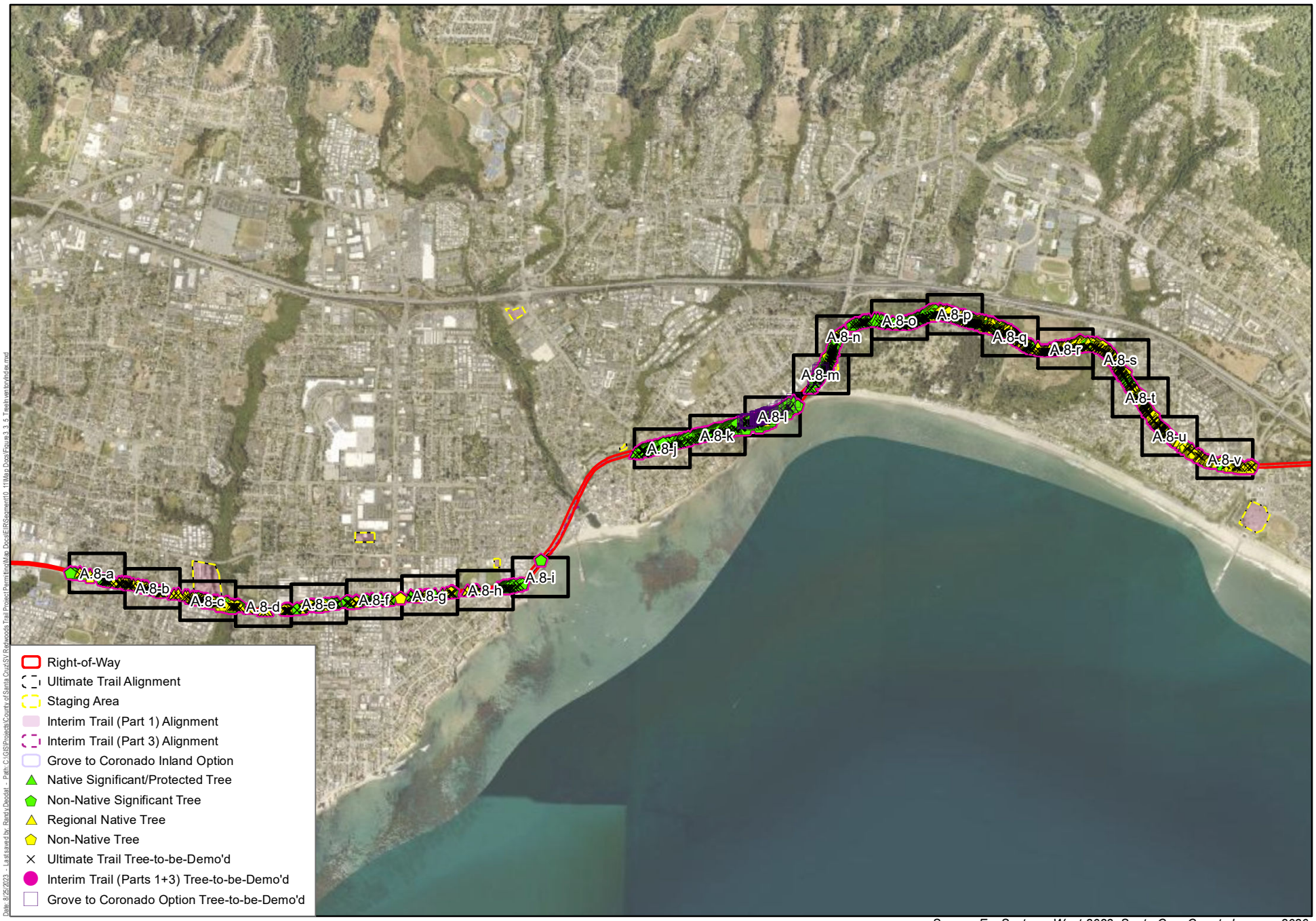
Feet

Note: Also see Figures 3.3-1a-1h Habitat Types and Figures 3.3-3a-3h Sensitive Habitats. Coast live oak woodland/forest, mixed evergreen forest, riparian habitats, non-native forest, coastal scrub, and native and non-native grassland habitats support breeding birds, roosting bats, and SF dusky-footed woodrat.

Figure 3.3-4h

Incidental Observations of Sensitive Wildlife (Including Special-Status Fish Distribution)

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 1,000 2,000

Feet

Figure 3.3-5

Tree Inventory - Index

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5a

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5b

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5c

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5d

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5e

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5f

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5g

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5h

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5i

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5j

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5k

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

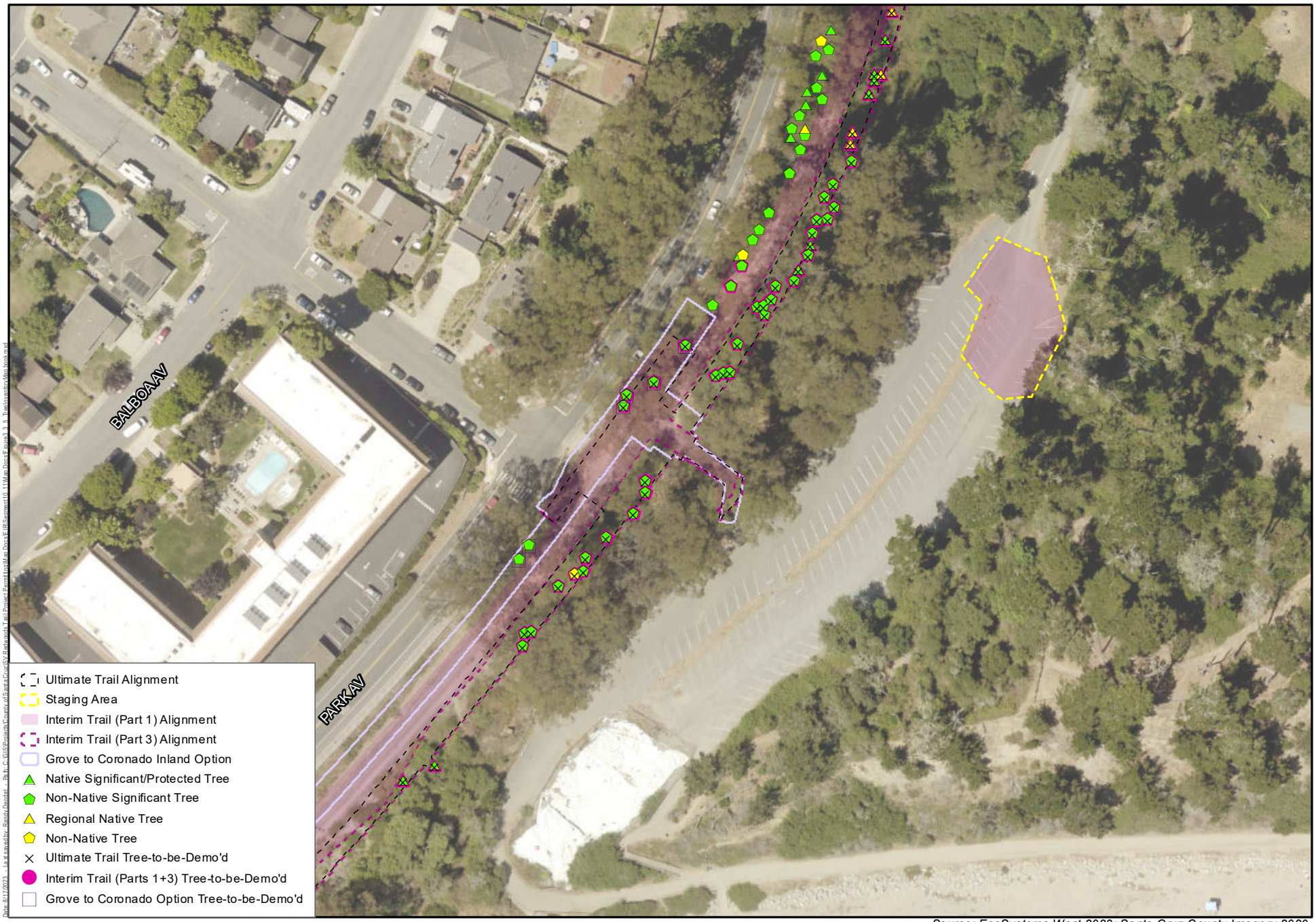
0 50 100

Feet

Figure 3.3-5l

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5m

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5n

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5o

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

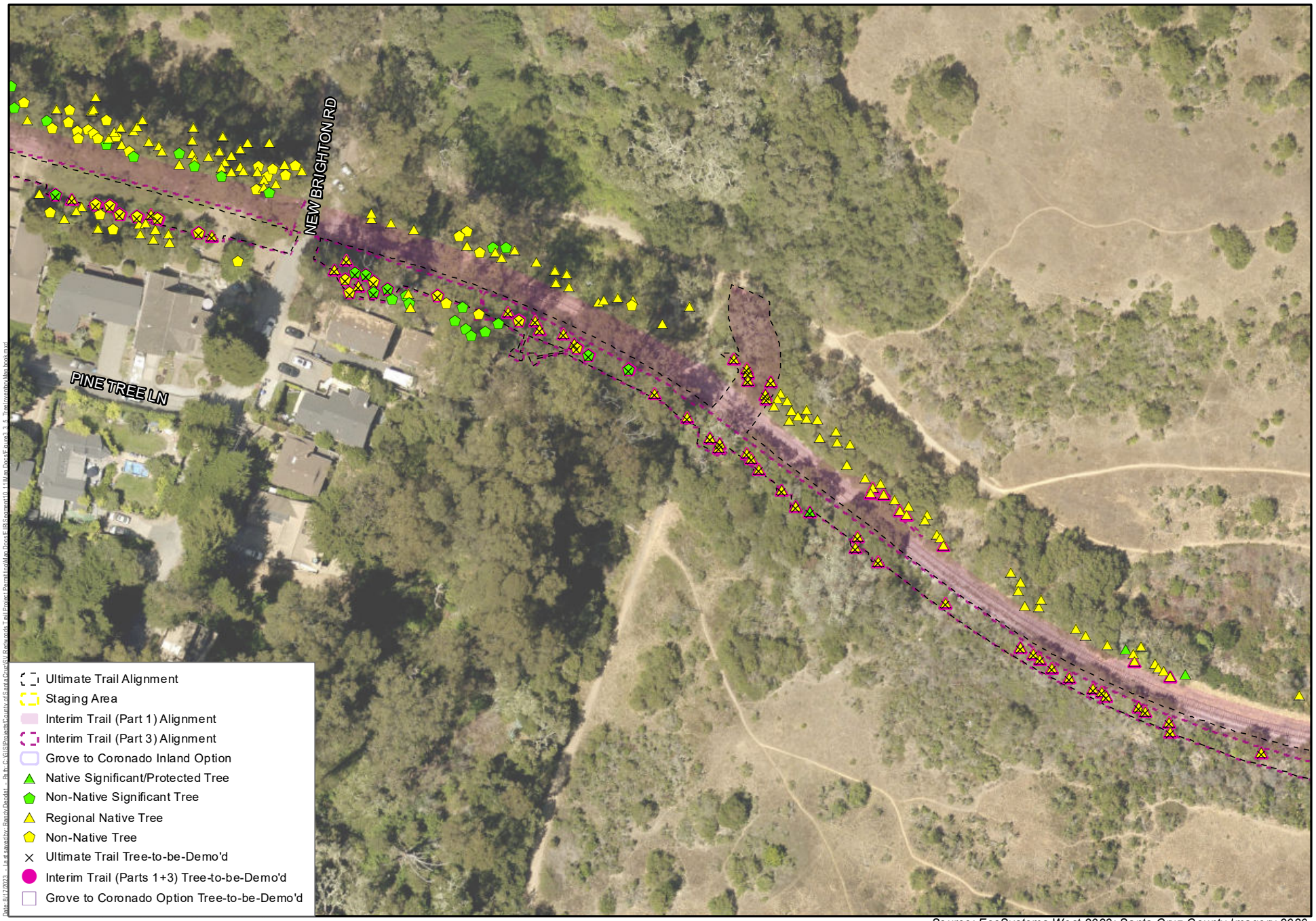
0 50 100

Feet

Figure 3.3-5p

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

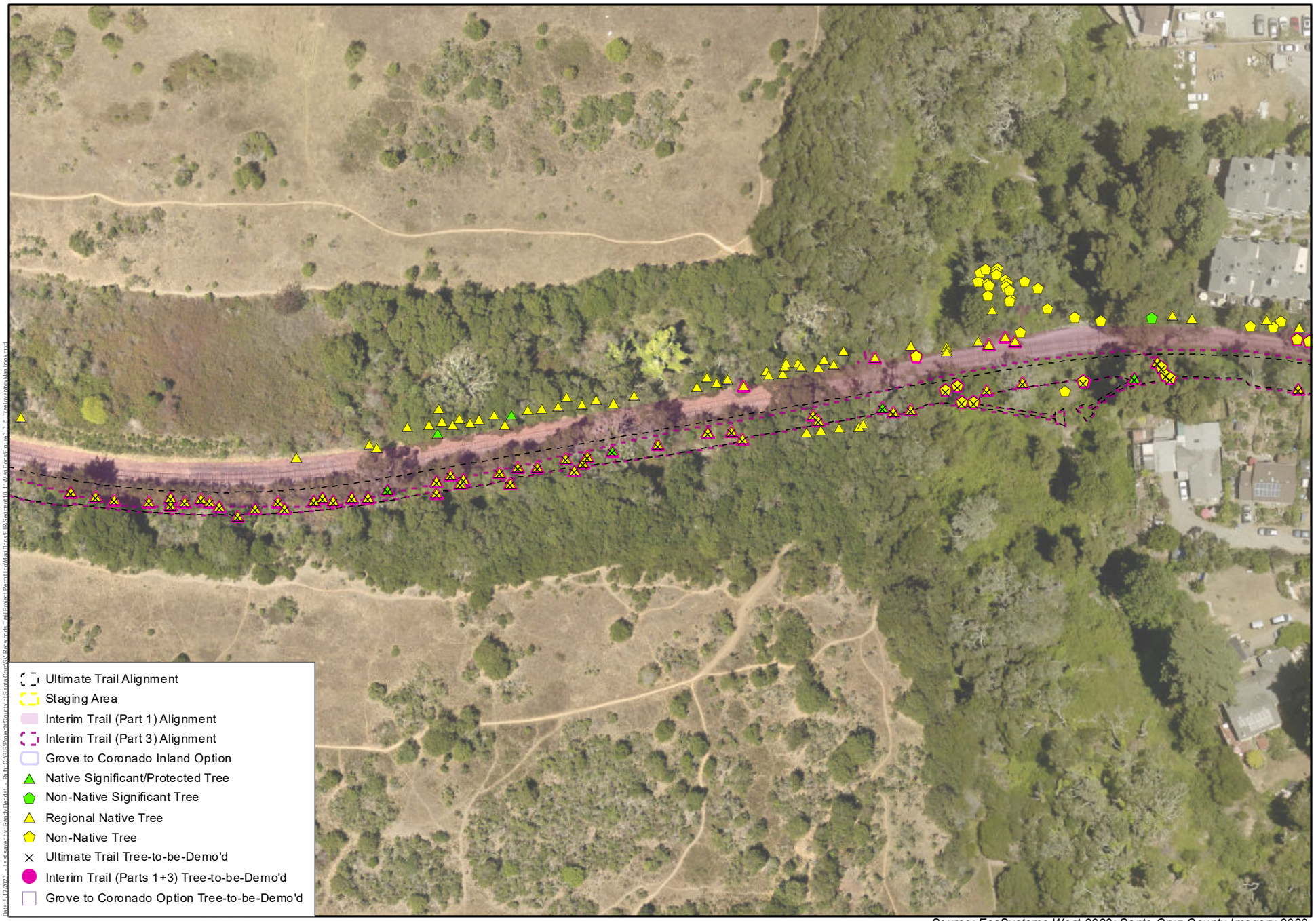
0 50 100

Feet

Figure 3.3-5q

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5r

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5s

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5t

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5u

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure 3.3-5v

Tree Inventory

Coastal Rail Trail Segments 10 and 11

This page intentionally left blank.

3.4 Cultural Resources

This section addresses potential impacts to cultural resources, including historical and archaeological resources, and presents a discussion of known cultural resources along the Project corridor and an evaluation of potential impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* on those resources, as well as potential impacts on unknown or undiscovered resources. A summary of the potential impacts is presented in **Table 3.4-1**.

Table 3.4-1 Summary of Project Impacts on Cultural Resources[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).			
Ultimate Trail Configuration	Less than Significant	None Required	Less than Significant
Optional Interim Trail	Potentially Significant	CR-1	Less than Significant
Ultimate Trail Configuration Design Option A	Less than Significant	None Required	Less than Significant
Ultimate Trail Configuration Design Option B	Potentially Significant	CR-1	Less than Significant
CR-2. Ground-disturbing activities during Project construction may unearth or adversely impact subsurface archaeological resources.	Potentially Significant	CR-2a, CR-2b, CR-2c, CR-2d	Less than Significant
CR-3. Ground-disturbing activities during Project construction may disturb human remains.	Less than significant	None Required	Less than Significant

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail on the Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

SCBRL = Santa Cruz Branch Rail Line

3.4.1 Existing Conditions

Archaeological Context

The archaeological context includes the indigenous (Native American) history prior to contact with European explorers and settlers (i.e., pre-European contact).

The Project corridor lies in the Central Coast archaeological region (Jones et al. 2007; Glassow et al. 2007), which has been defined as extending from south of San Francisco Bay to the northern edge of the Southern California Bight, which is located at Point Conception near Santa Barbara (Jones et al. 2007:125).

Following Jones et al. (2007:137), the prehistoric cultural chronology for the Central Coast can be generally divided into six periods: Paleo-Indian (ca. 10000–8000 before Common Era [BCE]), Millingstone/Early Archaic (8000–3500 BCE), Early (3500–600 BCE), Middle (600 BCE–1000 Common Era [CE]), Middle-Late Transition (1000–1250 CE), and Late (1250 CE–contact [ca. 1769 CE]).

The Project corridor falls within the traditional Tribal territory of the Ohlone (or Costanoan) people. For a description of Ohlone ethnography, refer to Section 3.13, *Tribal Cultural Resources*.

Post-European Contact Setting

Post-European contact history for the State of California is generally divided into three periods: Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823.

Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States and a state with the Compromise of 1850.

By the 1860s, Santa Cruz had grown into a thriving yet isolated community whose economy centered on timber harvesting, lime production, and leather tanning. The development of local railroads beginning in the 1870s created more reliable connections to the outside world and further stimulated local industry. As established industries, especially those dependent on timber harvesting, began to fade around the turn of the twentieth century, the Santa Cruz Branch Rail Line (SCBRL) remained an important passenger route and proved instrumental in the growth of a new Santa Cruz centered on a tourist economy that fueled local growth through the 1950s.

Project Corridor Setting

The description of the Project corridor setting relative to cultural resources is based on the following: a California Historical Resources Information System (CHRIS) records search of the Project corridor and a 0.5-mile radius around the Project corridor at the Northwest Information Center, a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, a review of historical aerial imagery and topographic maps, a pedestrian field survey, and Extended Phase I Study.

Archaeological Resources

The CHRIS records search results identified 34 previously recorded cultural resources within a 0.5-mile radius of the Project corridor. Of these, three archaeological resources are within the Project corridor, and two archaeological resources are adjacent to the Project corridor. All five of these archaeological resources are in/adjacent to Segment 11 in the City of Capitola and are Native American habitation sites, generally consisting of midden, shell, faunal remains, and lithic artifacts. Only one of these five previously recorded resources, which is adjacent but outside the Segment 11 corridor, was able to be located during the pedestrian field survey conducted for the Project. Of the three previously recorded archaeological resources within the Project corridor, two are under pavement where further archaeological investigation would be infeasible. The one remaining previously recorded archaeological resource within the Project corridor was subject to an Extended Phase I Study in August 2023. The Extended Phase I Study consisted of excavation of a series of

shovel test pits and was negative for cultural materials; however, portions of this resource may be present outside the Project corridor. For the purposes of this analysis, all five previously recorded archaeological resources within and adjacent to the Project corridor are considered eligible for the California Register of Historical Resources (CRHR) and are historical resources pursuant to Section 15064.5(a) of the *California Environmental Quality Act (CEQA) Guidelines*. As mentioned above, in addition to the CHRIS records search, an SLF search was also conducted by the NAHC. The results of that search reveal that the Project corridor vicinity is positive for Sacred Lands.

Overall, the CHRIS records search results, SLF results, additional background research, and response from local Native American groups (described in detail in the Tribal Cultural Resources chapter of this document) indicate that the general area of Santa Cruz has high sensitivity for containing subsurface archaeological resources. However, development and excavation associated with the initial construction of the rail line and commercial and residential developments with associated utilities and landscaping efforts have heavily disturbed the entirety of the Project corridor. Aerial imagery and topographic maps confirm that, since the 1970s and 1980s, the area has been subject to major urban developments. As such, while the area is considered highly sensitive, the level of previous disturbance in the Project corridor suggests that it is unlikely to contain intact subsurface archaeological resources.

Built Environment Historical Resources

The CHRIS search also identified one previously recorded built environment resource within the Project corridor, the **Santa Cruz Railroad,** which has also been referred to as the Southern Pacific Railroad (SPRR) and the SCBRL. The record for this resource includes segments of the rail and several related features, including the SPRR La Selva Beach Trestle, SPRR Structure No. 9.09, Harkins Slough Trestle, SPRR Structure No. 4.87, SPRR Structure No. 105.1, Harkin Slough Trestle, SPRR Tracks, Coast Line Railway, Union Pacific Railroad, SPRR Aptos Creek Trestle Footings, and the Davenport Branch Line. In 1998, Chris Morgan of Pacific Legacy recorded the SPRR Aptos Creek Trestle Footings as part of the Archaeological Reconnaissance of the Aptos Creek Bridge Earthquake Retrofit. As recorded in 1998, the resource consists of a concrete trestle footing with a flagstone cap on the western bank of Aptos Creek. No recommendation of eligibility was made. In 1999, A. Ruby of Far Western Anthropological Research Group and S. Mikesell of JRP Historical Consulting recorded a segment of the SPRR tracks for the California Department of Transportation (Caltrans) District 5 Rural Highways Study. The recorded segment is north of the community of Davenport. It was not evaluated for inclusion in any historical register. In 2014, Toni Webb and Garret Root of JRP Historical Consulting recorded SPRR Harkins Slough Bridge and SPRR La Selva Beach Trestle as separate resources (no project was identified) (Webb and Root 2014a, 2014b). Harkins Slough Bridge is a 195-foot-long, 13-span, single-track bridge that crosses Harkin Slough near Watsonville. La Selva Beach Trestle is a 340-foot-long, nine-span, plate girder bridge that carries a single track over Leonard Gulch near the community of La Selva Beach. Harkins Slough Bridge and La Selva Beach Trestle were recommended ineligible for listing in the National Register of Historic Places (NRHP) and CRHR. In 2018, Hannah Haas and Steven Treffers of Rincon Consultants recorded the Davenport Branch Line as part of the Historic Resources Evaluation for the North Coast Rail Trail Project. The 7.4-mile railroad segment was recommended eligible for listing in the NRHP and CRHR and as a Santa Cruz County landmark for its association with the Santa Cruz Portland Cement Company and as the “embodiment of a unique construction method relating to its earthen trestle embankments” (Haas and Treffers 2018).

Although not currently on file with the CHRIS, the Santa Cruz Branch Railroad was most recently recorded in 2022 by Kara Brunzell and Ynez Barber as part of Historical Resources Evaluation Report for the State Route 1 Auxiliary Lanes and Bus-and-Shoulder Improvements – Freedom Boulevard to State Park Drive – and Coastal Rail Trail Segment 12 Project (Brunzell and Barber 2023). That project did not include any portion of the Coastal Rail Trail Segments 10 and 11; however, as part of that effort, the 20.2-mile Santa Cruz Railroad was recorded and evaluated in its entirety. As a result of that study, the rail line was found eligible for listing in the NRHP at the local level under Criterion A for its association with the transportation history and economic development of Santa Cruz County. This finding received concurrence from the California State Historic Preservation Officer on May 15, 2023; therefore, it qualifies as a historical resource pursuant to Section 15064.5(a) of the *CEQA Guidelines*. Approximately 4.7 miles of the 20.2-mile railroad alignment is within the current Project corridor. Contributing elements within the current Project corridor include the Capitola Depot at 250 Monterey Avenue, a concrete arch culvert (located just east of the rail right-of-way's [ROW's] intersection with Estates Drive), and the Capitola Trestle Bridge (also known as the Capitola Avenue/Soquel Creek/Wharf Road bridge), which is also designated locally and discussed further below.

The **Capitola Trestle Bridge** was constructed in 1876 as part of the development of the Santa Cruz Railroad, later the SPRR, through the City of Capitola and the surrounding area. The bridge is constructed of timber spans, and the extant metal truss replaced an original wood truss section at the turn of the century (Brunzell and Barber 2023). The resource was documented in the 1986 City of Capitola Historic Survey and identified as a building of interest (Rowe & Associates 1986). In 1999, it was designated as a historic feature in the City of Capitola's local register and, in 2022, was recorded as a contributor to the Santa Cruz Railroad, recorded and evaluated by Kara Brunzell and Ynez Barber as eligible for listing in the NRHP and CRHR under Criterion A/1. In addition, the Capitola Trestle Bridge is also individually designated in the City of Capitola's local register. Therefore, it qualifies as a historical resource under CEQA.

A review of other historic inventories and historical resources documentation provided by the City also identified one additional historical resource within the Project corridor: **Stockton Avenue Bridge** (Bridge No. 36C0110). The Stockton Avenue Bridge was constructed in 1934 as a Works Progress Administration project and is a reinforced concrete bridge that spans Soquel Creek just north of Capitola State Beach and south of the SPRR Trestle Bridge (Rowe & Associates 1986). The bridge was designed with elements of the Art Deco style and features concrete railings and four concrete lamp posts with decorative metal globes. The bridge was recorded in the 1986 City of Capitola Historic Survey, designated in the City of Capitola's local register as a historic feature in 1999, and identified in Caltrans' Local Bridge Inventory as a Category 2 bridge, meaning it is eligible for listing in the NRHP and therefore is a historical resource under CEQA (Rowe & Associates 1986; City of Capitola 1999; Caltrans 2021).

The architectural history pedestrian survey identified 11 additional built environment resources that required evaluation: Department of Public Works Brommer Yard at 2700 Brommer Street (Assessor's Parcel Number [APN] 029-213-19), 1074 30th Avenue (APN 032-011-20), 300 Vanessa Lane (APN 032-011-55), Blue and Gold Star Mobile Home Park at 1255 38th Avenue (APN 031-161-24), Castle Mobile Estates at 1099 38th Avenue (APN 034-171-06), Jade Street Park at 4510 Jade Street (APN 034-551-02), Surf and Sand Mobile Home Park at 750 47th Avenue (APN 034-761-17), 214 Poplar Street (APN 038-101-29), 225 Sea Ridge Road (APN 038-242-03), 76 Gas Station at 201 Sea Ridge Road (APN 038-081-11), and The Coastlands Church at 280 State Park Drive (APN 042-011-06). These resources were found to be ineligible for listing in the NRHP or CRHR and, therefore, do not qualify as historical resources pursuant to Section 15064.5(a) of the *CEQA Guidelines*.

3.4.2 Regulatory Setting

This section describes the applicable federal, state, and local laws, ordinances, regulations, and standards governing cultural resources.

Federal

National Register of Historic Places

Authorized by Section 106 of the National Historic Preservation Act, the NRHP is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history; architecture; archaeology; engineering; and culture present in districts, sites, buildings, structures, and objects. Per the Code of Federal Regulations, Title 36, Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: Are associated with the lives of persons significant in our past.

Criterion C: Embody the distinctive characteristics of a type, period, or method of installation, 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.

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which include location, design, setting, materials, workmanship, feeling, and association.

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to be evaluated for significance (NPS 1997:41). Properties that are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

State

California Register of Historical Resources

CEQA requires that a lead agency determine whether a project could have a significant effect on historical resources and Tribal Cultural Resources (California Public Resources Code, Section 21074 [a][1][A]–[B]). A historical resource is a resource listed in or determined to be eligible for listing in the CRHR (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

The California Public Resources Code, Section 5024.1, requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state's historical resources and to indicate which properties are to be protected from

substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, as enumerated according to CEQA below:

> 15064.5(a)(3) […] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code, Section 5024.1, Title 14 CCR, Section 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 a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
> (4) Has yielded, or may be likely to yield, information important in prehistory or history
>
> 15064.5(a)(4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.
>
> 15064.5(b) A project with an effect 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.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (California Public Resources Code, Section 21083.2[a], [b], and [c]).

California Public Resources Code, Section 21083.2(g), defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it does one or more of the following:

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

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired *(CEQA Guidelines*, Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner of those characteristics of a historical resource that convey its historical significance and that justify its inclusion or eligibility for inclusion in the CRHR (*CEQA Guidelines*, Section 15064.5[b][2][A]).

Impacts to a historical resource are considered mitigated below a level of significance when the project conforms to the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (*CEQA Guidelines*, Section 15126.4 [b][1]). The goal of the standards serves to preserve the historic materials and distinctive character of a historical resource. Character-defining features are the tangible, visual elements of a building—including its setting, shape, materials, construction, interior spaces, and details—that collectively creates its historic identity and conveys its historic significance.

California Public Resources Code

California Public Resources Code, Sections 5024 and 5024.5, requires state agencies to take action to ensure preservation of state-owned historical resources, defined as those eligible for or listed in the NRHP or as California Landmarks, under their jurisdictions. Under California Public Resources Code, Section 5024, state agencies must provide notification to the State Historic Preservation Office for any project having the potential to affect state-owned historical resources to request their comments and concurrence on the project. If a project may adversely affect state-owned historical resources, the State Historic Preservation Office and the head of the state agency with jurisdiction over the resource will consult on measures to avoid or eliminate adverse effects on the resource.

Section 5097.5 of the California Public Resources Code states:

> A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. . . . Violation of this section is a misdemeanor.

As used in this California Public Resources Code section, "public lands" means lands owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, local agencies are required to comply with California Public Resources Code, Section 5097.5, for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

Codes Governing Human Remains

The disposition of human remains is governed by California Health and Safety Code, Section 7050.5, and California Public Resources Code, Sections 5097.94 and 5097.98, and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours, and no further disturbance to the site where the remains were found should occur. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to California Public Resources Code, Section 5097.98, will immediately notify the people it believes to be most likely descended from the deceased Native American so they can inspect the burial site and make recommendations for treatment or disposal.

Any human remains found on California State Parks land must be treated in accordance with California State Parks policies, including the involvement of the California State Parks District Tribal Liaison in Native American notification and consultation.

Coastal Act

The Project corridor is located in the Coastal Zone. According to California Public Resources Code, Section 30244, "where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required."

Local

Santa Cruz County General Plan

The Conservation and Open Space Element of the County General Plan includes objectives and policies to protect archaeological and historical resources. Key policies from the County General Plan pertaining to cultural resources are listed below (County of Santa Cruz 1994):

- **Policy 5.19.1, Evaluation of Native American Sites.** Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites without an appropriate permit. Maintain the Native American Cultural Sites ordinance.
- **Policy 5.19.2, Site Surveys.** Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological Sensitive Areas, as designated on General Plan and LCP [Local Coastal Program] Resources and Constraints Maps filed in the Planning Department.
- **Policy 5.19.3, Development Around Archaeological Resources.** Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earth fill to a depth that ensures the site will not be disturbed by development, as determined by a professional archaeologist.
- **Policy 5.19.4, Archaeological Evaluations.** Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.
- **Policy 5.19.5, Native American Cultural Sites.** Prohibit any disturbance of Native American Cultural Sites without an archaeological permit which requires, but is not limited to, the following:
    (a) A statement of the goals, methods, and techniques to be employed in the excavation and analysis of the data, and the reasons why the excavation will be of value.
    (b) A plan to ensure that artifacts and records will be properly preserved for scholarly research and public education.
    (c) A plan for disposing of human remains in a manner satisfactory to local Native American Indian groups.
- **Policy 5.20.3, Development Activities.** For development activities on property containing historic resources, require protection, enhancement, and/or preservation of the historic, cultural, architectural, engineering or aesthetic values of the resources as determined by the Historic Resources Commission. Immediate or substantial hardship to a project applicant shall be considered in establishing project requirements.

- **Policy 5.20.4, Historic Resources Commission Review.** Require that applicants for development proposals on property containing a designated historic resource submit plans for the protection and preservation of the historic resource values to the Historic Resources Commission for their review and approval; require an evaluation and report by a professional historian or a cultural resources consultant when required by the Commission.
- **Policy 5.20.5, Encourage Protection of Historic Structures**. Encourage and support public and private efforts to protect and restore historic structures and continue their use as an integral part of the community.

Santa Cruz County Code

Title 16, *Environmental and Resource Protection*, of the County Code outlines criteria for cultural studies (Chapter 16.40) and historic preservation (Chapter 16.42). These criteria also serve as the implementing ordinance of the LCP.

Chapter 16.40 defines when archaeological surveys and reports are required and the necessary actions when Native American cultural sites or human remains are discovered during the review of a proposed project or during excavation or other ground-disturbing activities. Chapter 16.42 defines the significance and designation of protected historic resources on the County's Inventory of Historic Resources and development procedures for designated historical resources.

City of Capitola General Plan

The Land Use Element of the Capitola General Plan includes the following goals, policies, and actions related to the protection and preservation of archaeological and historical resources (City of Capitola 2019):

- **Goal LU-1**, Maintain and enhance Capitola's Distinctive identity and unique sense of place.
  - **Policy LU-1.1, Community Character.** Ensure that historic and cultural resources are maintained and that all new development enhances Capitola's neighborly fee, coastal village charm, and welcoming character.
- **Goal LU-2**, Preserve historic and cultural resources in Capitola.
  - **Policy LU-2.1, Historic Structures.** Encourage the preservation, restoration, rehabilitation, maintenance, and adaptive reuse of important historic structures in Capitola.
  - **Policy LU-2.2, Modification Standards.** Use the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties as a guide for exterior modifications to identified historic resources.
  - **Policy LU-2.3, Preservation Incentives.** Promote the maintenance, restoration, and rehabilitation of historical resources through the use of Federal Rehabilitation Tax Credits, State incentives including the Mills Act and the California Cultural and Historical Endowment, and the California State Historical Building Code and other incentives as they arise.
  - **Policy LU-2.4, Public Awareness.** Work with the Capitola Museum Curator to encourage public education and awareness of Capitola's history and historical and cultural resources through public outreach, promotional materials, and other similar initiatives.
  - **Action LU-2.1, Historic Structures List.** Make regular updates to the City of Capitola Historic Structures List as new information becomes available, for example, during project review or if historic research yields additional information.

- **Action LU-2.2, Public Outreach.** Continue to work with schools, public agencies, and community organizations through contacts with Capitola Historical Museum Curator and the museum archives.
- **Action LU-2.3, Historic Preservation Guidelines**. Develop Historic Preservation Guidelines to enhance and protect Capitola's historic resources. Guidelines will clarify:
  - Process and criteria to determine the historic significance of properties.
  - Permits and approvals needed to make modifications to identified historic resources.
  - Design standards and guidelines for modifications to a historic resource.
  - Incentives for historic preservation such as the federal/State Certified Local Government.
- **Program Action LU-2.4, Local Register.** Establish a local register of historic resources and a historic district on Depot Hill. Action LU-2.5 Historic Preservation Program. Develop a comprehensive historic preservation program to strengthen the tools and resources available to protect historic resources in Capitola.

- **Goal LU-12,** Utilize key public facilities and properties in a manner that enhances the quality of life of Capitola's residents.
  - **Action LU-12.2, Wharf Improvements.** Prepare a feasibility study to evaluate potential improvements for the long-term viability of the historic Capitola Wharf, including issues related to access, restrooms, public safety, maintenance, parking, signage, and sea-level rise.

City of Capitola Municipal Code

Chapter 17.84, *Historic Preservation*, of the Capitola Municipal Code contains provisions that pertain to the protection of historical resources. This chapter establishes two types of historical resources, designated and potential resources, and includes standards and procedures to preserve and enhance Capitola's historic character while maintaining the ability of property owners to reasonably improve and modify historic homes and structures in Capitola. Section 17.84.050 outlines maintenance of potential historical resources, and Section 17.84.060 establishes criteria for designating historical resources. Section 17.84.070 establishes the requirement for a historic alteration permit and specifies that archaeological resources must be protected and preserved in place, and that mitigation is required if such resources must be disturbed.

Chapter 17.56, *Archaeological and Paleontological Resources,* of the Capitola Municipal Code contains provisions that pertain to the protection of archaeological resources. This chapter states that new land uses and development, both public and private, shall be considered compatible with this chapter only when they incorporate all feasible site planning and design features necessary to avoid or mitigate impacts to archaeological resources. Section 17.56.020 requires the preparation of an archaeological survey report when a proposed development is located within property known to contain archaeological resources, property within 100 feet of a bluff edge, or property with a probability of containing archaeological resources as determined through the City's on-site investigation or other available information. Section 17.56.020 also outlines required mitigation when construction impacts to an archaeological resource cannot be avoided.

3.4.3 Methodology and Significance Thresholds

Methodology

The investigation to determine potential impacts to cultural resources consisted of the following: a CHRIS records search of the Project corridor and a 0.5-mile radius of the Project corridor at the Northwest Information Center, an NAHC SLF search, a review of historical aerial imagery and topographic maps, and a pedestrian field survey to identify eligible historical and archaeological resources.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of cultural resources and the other environmental topics. Thus, the thresholds presented below correspond with the questions in the Appendix G Initial Study checklist. They also reflect the operative language of pertinent provisions of CEQA and the *CEQA Guidelines* (i.e., California Public Resources Code, Sections 21083.2 and 21084.1, and *CEQA Guidelines*, Section 15064.5).

For the purposes of this Environmental Impact Report, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

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

Direct impacts can be assessed by identifying the types and locations of proposed development, determining the exact locations of cultural resources within a project vicinity, assessing the significance of the resources that may be affected, and determining the appropriate mitigation. Removal, demolition, or alteration of historical resources can permanently impact the historic significance of an archaeological site, structure, or historic district.

The State Legislature, in enacting the CRHR, amended CEQA to clarify which properties are significant and which project impacts are considered significantly adverse. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have significant effect on the environment (*CEQA Guidelines*, Section 150645[b]). A substantial adverse change in the significance of a historical resource means demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (*CEQA Guidelines*, Section 150645[b][1]).

The *CEQA Guidelines*, Section 150645, further states that "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 the California Register . . . local register of historic resources . . . or its identification in an historic resources survey." As such, the Project would have a significant impact on identified historical resources if it would materially impair physical integrity of the historical resource such that it could no longer be listed in the CRHR or a local landmark program.

3.4.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

Impact CR-1 THE PROJECT MAY ADVERSELY AFFECT HISTORICAL RESOURCES, INCLUDING THE SCBRL (ULTIMATE TRAIL CONFIGURATION AND OPTIONAL INTERIM TRAIL) AND THE CAPITOLA TRESTLE BRIDGE (OPTIONAL INTERIM TRAIL AND DESIGN OPTION A). (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Two built environment historical resources are within the Project corridor for the Ultimate Trail Configuration: the Santa Cruz Railroad and the Stockton Avenue Bridge. Under the Ultimate Trail Configuration, trail users would be diverted through Capitola Village; therefore, no changes are proposed to the Capitola Trestle Bridge. As detailed below, impacts to the two historical resources would be less than significant for the Ultimate Trail Configuration.

Santa Cruz Railroad

The Santa Cruz Railroad is a historic-era railroad that is eligible for listing in the CRHR under Criterion 1 for its association with the development of Santa Cruz County. Approximately 4.2 miles of the Santa Cruz County Regional Transportation Commission (RTC)-owned 20.2-mile railroad alignment is within the Project corridor. The primary character-defining feature of the resource is its alignment, which is unique given it predates much of the surrounding development and extends through commercial and residential neighborhoods rather than industrial zones. The alignment is also unique because it features sharp turns, which are representative of its initial development as a narrow-gauge line in the 1870s. The ballast, rails, earthen embankments, and wood railroad ties may also be considered secondary character-defining features because while largely replaced and not original historic fabric, they contribute to the sense of feeling and association of the property (Brunzell and Barber 2023).

Under CEQA, a substantial adverse change in the significance of a historical resource is defined as the physical demolition, destruction, or alteration of the resource or its immediate surroundings such that it no longer conveys the reasons for its significance. As detailed below, proposed improvements within Segment 10 would result in physical changes to portions of the Santa Cruz Railroad, which would be partially realigned and would introduce new visual elements. However, the Ultimate Trail Configuration would not result in changes that would diminish the historically significant features of the rail line as a whole or result in the material impairment of the resource as defined in Section 15064.5(b) of the *CEQA Guidelines*. A bicycle and pedestrian trail would be constructed parallel to the tracks for the entirety of Segment 10. Although this would introduce a new visual element to the rail corridor, it would be differentiated and reversible and would not result in the substantial adverse change of the resource.

Construction of the trail would require the realignment of almost the entire track in Segment 10 between 17th Avenue and 47th Avenue (equal to nearly 1.5 miles) a maximum of 8 feet southward within the RTC-owned rail corridor. Although the existing rails, crossties, and ballast would be removed for this small segment, they would be constructed in their new location using in-kind materials. The realignment of the tracks would not affect the overall alignment of the rail corridor, which is the primary character-defining feature of the historic property. The tracks would remain within the confines of the historic rail corridor, be consistent with historical modifications to the track alignment, and affect only approximately 32% of the length of the historic property within the Project corridor, or 7% of the entire length of the 20.2-mile length railroad. Altogether, the direct alterations to the tracks would preserve the majority of the existing fabric of the tracks and would not affect the overall alignment of the rail corridor. These changes would be minimal within the Project corridor and would be of even less consequence when considered in the context of the wider 20.2-mile route of the Santa Cruz Railroad.

Within Segment 11, a bicycle and pedestrian trail would be constructed parallel to the tracks and would not require the relocation or any other physical alteration of the rail corridor alignment, rail, crossties, or ballast. Although the Ultimate Trail Configuration would introduce new visual elements within and immediately adjacent to this portion of the rail corridor, the new uses introduced to the corridor would be transportation related and, therefore, would be consistent with the railroad's historically significant associations with local transportation development.

In addition to direct changes to the tracks, construction of the trail, along with retaining walls, bridges, viaducts, and other comparatively minor features, would involve physical alterations outside the tracks but within the historic corridor. Specifically, these changes would modify the terrain within the corridor but would not alter the overall route of the rail corridor. In this respect, these changes would not diminish the integrity of any significant historic features.

Project implementation may require a small sliver take of the northern portion of the Capitola Depot property at 250 Monterey Avenue, which is a contributing element of the Santa Cruz Railroad. The existing parking lot, northern boundary fence, and ancillary structure currently encroach into the RTC-owned ROW. Thus, Project work would slightly alter the existing parking lot, remove the fence along the northern boundary of the property, and relocate an ancillary structure east of the primary Capitola Depot building. However, the parking lot, fence, and the ancillary structure do not date to the historic period or contribute to the significance of the Capitola Depot or Santa Cruz Railroad. Further, the setting of the Capitola Depot building has substantially changed since the period of significance of the railroad, which ended in 1938. The Capitola Depot building was previously relocated within its parcel, with building alterations and site changes implemented during the modern era as part of its conversion to a hotel. The Capitola Depot's setting has changed; therefore, this analysis has determined it does not contribute to the significance of the property or railroad. As such, no portions of the property that are considered character-defining would be physically destroyed or demolished as part of the Ultimate Trail Configuration.

The Ultimate Trail Configuration would not impact the other two identified contributing elements of the Santa Cruz Railroad: the Capitola Trestle Bridge or concrete arch culvert. For the reasons discussed above, the Project would not result in the substantial adverse change of the Santa Cruz Railroad as defined by Section 15064.5(b) of the *CEQA Guidelines*.

Stockton Avenue Bridge

The Stockton Avenue Bridge is listed on the City of Capitola's Register of Historic Features and has also been identified as eligible for the NRHP by Caltrans. Its character-defining features broadly

include a central shallow arch with half segmental arches on either side, a two-lane width with adjacent sidewalks, concrete construction exhibiting rough aggregate finish, and Art Deco elements, specifically the pointed arched barrier walls, pylons with shar-edge beveled detailing, and single standard lamp posts with decorative metal globes.

Under the Ultimate Trail Configuration, two signs would be installed, one on either side of the Stockton Avenue Bridge, to direct trail users. The exact location of these signs has yet to be determined; however, they are anticipated to be on new poles. The addition of signs would not result in a significant impact. Only two signs would be added to the bridge, and they would not physically alter, demolish, or obscure the physical characteristics that convey the historical significance of the bridge. The signs would be clearly differentiated from the historic materials and would be able to be removed at a future date if needed without any permanent impact to the bridge. Striping modifications are also proposed on the Stockton Avenue Bridge to improve the visibility of the existing delineated bicycle lanes—specifically, adding green pavement paint to the Class II bike lanes. This Project features would be limited to the application of paint on the concrete bridge deck, which has been previously restriped and is not considered a character-defining feature aside from its two-lane width and adjacent sidewalks. The paint would not alter the width of the bridge or result in any permanent physical changes to its design or other character-defining features. As such, the Project would not result in the substantial adverse change of the Stockton Avenue Bridge.

Summary

The Ultimate Trail Configuration would involve changes to two identified historical resources, the Santa Cruz Railroad and the Stockton Avenue Bridge. However, as detailed above, the Project elements would not result in the material impairment of either resource such that it would no longer convey their significance. Therefore, impacts to historical resources would be **less than significant** under the Ultimate Trail Configuration.

Optional Interim Trail (Trail on the Rail Line)

Three built environment historical resources are within the Project corridor for the Optional Interim Trail: the Santa Cruz Railroad, the Capitola Trestle Bridge, and the Stockton Avenue Bridge. As detailed below, impacts to these three historical resources would be **less than significant** under the Project with the implementation of mitigation.

1) Implementation of Interim Trail

SANTA CRUZ RAILROAD

As described previously under the Ultimate Trail, the Santa Cruz Railroad is significant for its association with the early transportation of Santa Cruz County. Because the ballast, rails, ties, and earthen embankments are secondary character-defining features and not original historic fabric, their removal would not in and of itself result in the rail line's inability to convey its historic significance. The 4.7 miles of track within the Project corridor constitutes approximately 23% of the full length of the rail line. The alignment of the rail line is its primary character-defining feature due to its unique turns and surrounding development. This physical feature of the resource would remain, and it would visually appear and operate as a transportation corridor as it did historically. As a result, the removal of the ballast, rails, ties, and earthen embankments would not constitute a substantial adverse change to the Santa Cruz Railroad. The Capitola Depot building and a concrete arch culvert, both of which are

contributing elements of the Santa Cruz Railroad but not individually eligible resources, also would not be impacted by the implementation of the Optional Interim Trail Part 1, because no direct changes would occur to either contributing element. Impacts to the Capitola Trestle Bridge, which is a contributing element to the railroad but also individually eligible, are detailed below.

CAPITOLA TRESTLE BRIDGE

The implementation of the Optional Interim Trail would require structural repairs to the Capitola Trestle Bridge, which in addition to being a contributing element of the Santa Cruz Railroad, is an individual resource listed in the City of Capitola's local register. The bridge is composed of five distinct sections, including the CIP PTU-Girder Wharf Bridge (MP 18.89E); two sections of trestle timber bridge (MP 15.89B and 15.89D), the Wrought Iron Truss Bridge (MP 15.89C), and the Concrete Box Girder Capitola Avenue Bridge (MP 15.89A). As described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, all bracings would be replaced, and approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges (MP 15.89B and 15.89D). Minor rehabilitation would also occur on the wrought iron bridge (MP 15.89C), including replacement of the bridge's bearings. The section at U-girder Wharf Road bridge (MP 48.89E) also requires lightweight, load-bearing filler material, and the section at box girder Capitola Avenue Bridge (MP 15.89 A) requires lightweight, load-bearing filler material and hot mix asphalt paving.

The character-defining features of the Capitola Trestle Bridge, which is composed of five distinct sections, are limited to the Trestle Timber Bridge and the Wrought Iron Truss and include the timber and wrought iron construction, the general configuration of the structural members and deck, and the masonry abutments. The Wharf Road bridge and the Capitola Avenue Bridge were built in 1970 and do not date back to the historic period. The rail atop the bridge also does not date back to the historic period since it was presumably replaced as part of the 1970 improvements.

The Secretary of the Interior's Standards generally encourage the repair over replacement of historic materials. However, they recognize that repair may not always be a feasible approach and, in these instances, recommend that materials be replaced in kind to maintain the historical integrity of the property. A Conceptual Study was prepared on behalf of the RTC in 2021 to analyze the potential conversion of the Capitola Trestle Bridge to a bicycle and pedestrian trail bridge (RailPros 2021). That study determined that portions of the bridge are over 100 years old and that significant renovation would be required to safely convert the bridge to a trail use. To support this objective as part of the Optional Interim Trail, all bracings would be replaced, approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges, and all bearings would be replaced on the wrought iron bridge. For the replacement of vertical posts and bearings, new materials for the repairs would be "in kind," that is of similar dimension, location, configuration, color, and appearance as the original materials, for aesthetic continuity. Therefore, this Project element is consistent with the Secretary of the Interior's Standards, which recognize that limited replacement may be necessary for deteriorated portions of historic features and structural reinforcement.

Additional work proposed for the Capitola Trestle Bridge includes the replacement of the existing deck with a fiberglass reinforced polymer (FRP) deck and guard rails. The current deck is presumed to be constructed in part with non-original materials stemming from the general ongoing maintenance of the bridge during its active rail use, as well as from the construction of the two concrete portions in 1970. However, historical images indicate that the deck has remained generally consistent in its configuration since the historic period. The 2021 Conceptual Study determined the FRP deck to be the best decking system to convert the trestle bridge to a trail bridge. While the FRP deck and steel supports would be composed of different materials than the existing rail line, they

would be designed to match the existing aesthetics of the Capitola Trestle Bridge. The Secretary of the Interior's Standards recognize that the use of modern materials may be acceptable in certain instances as long as the features are compatible with the general characteristics of the resource. The design of the FRP deck has not been finalized, but it is planned to be consistent with the general size and configuration of the current and historic decks. As such, it is anticipated this Project element would comply with the Secretary of the Interior's Standards. These Project elements remain conceptual in nature; however, and the exact location, materials, and installation of replacement features have to be identified. The introduction of a new deck, which destroyed historic materials, features, and spatial relationships that characterize the property, would not comply with the Secretary of the Interior's Standards and, therefore, could result in the substantial adverse change of a historical resource. To ensure that these Project elements would not impact the Capitola Trestle Bridge and would remain consistent with the Secretary of the Interior's Standards, design input from a qualified historic preservation professional would be required as mitigation to make certain the material, size, and configuration of the new deck are consistent with the historic design of the bridge.

SUMMARY

The Optional Interim Trail Part 1 would result in a less than significant impact to the Santa Cruz Railroad and Capitola Depot, and no impact would occur to the concrete arch culvert or Stockton Avenue Bridge. Although the rehabilitation activities and new deck proposed for the Capitola Trestle Bridge conceptually comply with the Secretary of the Interior's Standards, the plans have not been finalized and would be subject to further refinement. To ensure that these elements remain consistent with the Secretary of the Interior's Standards as the design plans are finalized, future design input from a qualified historic preservation professional would be required. Therefore, impacts to historical resources would be **less than significant with mitigation** (Mitigation Measure CR-1).

Mitigation Measure CR-1: Standards Design Review for Capitola Trestle Bridge Rehabilitation (Only Required for Optional Interim Trail and Design Option A)

During design of the Capitola Trestle Bridge rehabilitation and improvements for the Optional Interim Trail, as well as Design Option A of the Ultimate Trail Configuration, the County of Santa Cruz, City of Capitola, and/or RTC shall retain a qualified historic preservation professional, who meets the Secretary of the Interior's Professional Qualifications Standards in Architecture or Architectural History, to provide input on Project plans specifically related to the Capitola Trestle Bridge. The input from the qualified historic preservation professional shall take place from conceptual and schematic phases through design development to identify and implement design elements for the Capitola Trestle Bridge that shall facilitate compliance with the Secretary of the Interior's Standards. The qualified historic preservation professional shall consider the character-defining features as outlined in the National Park Service's Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character and provide treatment recommendations as appropriate. The qualified historic preservation professional shall review the 60% and 90% plans for the Capitola Trestle Bridge and provide recommendations as needed, which shall be incorporated into the final design. Prior to the issuance of construction permits, the qualified historic preservation professional shall prepare a Secretary of the Interior's Standards Project Review Memorandum to document the rehabilitation and Interim Trail improvement's compliance with the standards. This memorandum shall be submitted to the County, City, and/or RTC for review and approval and included in the administrative record upon acceptance.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not impact the historical alignment, the primary character-defining feature, of the Santa Cruz Railroad. Further, the rebuilding of the rail line, while using modern materials, would reintroduce the historic use of the resource. As such, impacts to the Santa Cruz Railroad would be less than significant. Impacts would not occur to the Capitola Depot, concrete arch culvert, or Stockton Avenue Bridge because none of the character-defining features of these three properties would be physically altered by the Project.

The rebuilding of the rail line would also require changes to the Capitola Trestle Bridge. Conceptually, this work would be limited to the changes to the superstructure of the bridge, which would involve removal of the FRP deck added during Part 1 of the Optional Interim Trail. Because the superstructure of the bridge would be non-original, modification to this element of the bridge is not anticipated to alter the historic materials of the bridge. Because the rebuilding of the rail line would reintroduce the historic use of the rail line to the resource and would be limited to the superstructure, it is unlikely to result any alterations that would constitute material impairment of the Capitola Trestle Bridge. However, because this aspect of the Project remains conceptual at this time, further input from a qualified historic preservation professional would be needed to ensure that the rebuilding of the rail line on the Capitola Trestle Bridge would not affect the character-defining features of the bridge and would comply with the Secretary of the Interior's Standards. Therefore, impacts resulting from the demolition of the Optional Interim Trail and rebuilding of the rail line would be **less than significant with mitigation** (Mitigation Measure CR-1).

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would result in the construction of a new trail within the ROW of the Santa Cruz Branch Railroad alongside the tracks reconstructed as Part 2 of the Optional Interim Trail. Construction of the trail within the ROW would introduce a new visual feature to the rail corridor. Directing trail users outside the rail corridor through Capitola Village would also require the installation of two signs and striping modifications on the Stockton Avenue Bridge. However, as discussed above for the Ultimate Trail Configuration, these Project elements would not result in the substantial adverse change of the Santa Cruz Railroad or Stockton Avenue Bridge. Therefore, impacts would be **less than significant**.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would involve the removal of some historic materials of the Santa Cruz Railroad and the Capitola Trestle Bridge, both of which are historical resources under CEQA, during Part 1. Part 2 would reintroduce a railroad to the Project corridor, with construction of the Ultimate Trail Configuration occurring during Part 3, which would result in a less than significant impact to the Stockton Avenue Bridge. Impacts to the Capitola Trestle Bridge could occur through activities during Parts 1 and 2; however, they would be reduced by obtaining design input from a qualified historic preservation professional. Therefore, impacts to historical resources would be **less than significant with mitigation** (Mitigation Measure CR-1).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Therefore, additional signage and striping modifications on Stockton Avenue Bridge would not be required. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. As detailed in the Optional Interim Trail impacts discussion above, the rehabilitation activities and new deck conceptually comply with the Secretary of the Interior's Standards; however, the plans for these activities have not been finalized. To ensure that these elements remain consistent with the Secretary of the Interior's Standards as the design plans are refined and finalized, future design input from a qualified historic preservation professional would be required to be incorporated into the final design. Therefore, impacts to historical resources would be **less than significant with mitigation** (Mitigation Measure CR-1).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Like the Ultimate Trail Configuration, this would introduce a new visual element to the Santa Cruz Railroad; however, it would not materially impair the resource such that it can no longer convey its significance. Therefore, the impact would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have a greater level of impact on a historical resource than the Project without the Optional Interim Trail. As summarized below, impacts to historical resources would be less than significant for the Project without the Optional Interim Trail, and no mitigation would be required. Impacts to historical resources would be potentially significant for the Project with the Optional Interim Trail, and Mitigation Measure CR-1 would be required to reduce impacts to a less than significant level.

The Optional Interim Trail would involve the demolition and removal of the ballast, rails, ties, and earthen embankments of the Santa Cruz Railroad. This would impact the historical resource; however, it would not result in material impairment because the rail line would still retain the essential physical features to convey its historic significance. The Optional Interim Trail would also require rehabilitation activities to the Capitola Trestle Bridge and the replacement of the deck. This has the potential to result in impacts to the bridge; however, impacts would be reduced by obtaining design input from a qualified historic preservation professional. Therefore, the impact would be **less than significant with mitigation** (Mitigation Measure CR-1).

In comparison, the Ultimate Trail Configuration (the Project without the Optional Interim Trail) would not result in the removal of the ballast, rails, ties, and earthen embankments of the Santa Cruz Railroad. Rather, it would construct the trail adjacent to the SCBRL and would preserve the rail line. Although the Project would realign a portion of the rail, which involves removal of the rail and installation of new Class III rail consistent with the existing rail, it would be a relatively small portion

of the overall rail and would not change the overall physical characteristics of the resource, as described for the Ultimate Trail Configuration above. Further, potential impacts to the Stockton Avenue Bridge would not result in material impairment because the two proposed signs and striping modifications would not alter or demolish the physical features that convey the significance of the bridge. As such, impacts to historical resources from the Project without the Optional Interim Trail would be **less than significant**, and mitigation is not required.

Threshold B:	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact CR-2 GROUND-DISTURBING ACTIVITIES DURING PROJECT CONSTRUCTION MAY UNEARTH OR ADVERSELY IMPACT SUBSURFACE ARCHAEOLOGICAL RESOURCES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Pursuant to Section 15064.5 of the *CEQA Guidelines*, significant archaeological resources may be considered historical resources (those which are eligible for the CRHR) or unique archaeological resources. As such, archaeological resources that qualify as historical resources are discussed here rather than Threshold A above.

The CHRIS records search results, SLF results, additional background research, and response from local Native American groups (described in detail in Section 3.13, *Tribal Cultural Resources*) indicate that the Project vicinity is highly sensitive for subsurface archaeological resources. However, development and excavation associated with the initial construction of the rail line and commercial and residential developments, installation of associated utilities, and landscaping have heavily disturbed the entire Project corridor. As such, while the area is considered highly sensitive, the level of previous disturbance in the Project corridor suggests it is unlikely to contain intact subsurface archaeological resources.

Three previously recorded archaeological resources were identified within the Project corridor, and two were identified adjacent to it. All five of the previously recorded archaeological resources are presumed eligible for the CRHR and are considered historical resources pursuant to Section 15064.5(a) of the *CEQA Guidelines* for the purposes of this analysis.

No Project activities would occur within the boundaries of the two resources recorded adjacent to the Project corridor. Of the resources within the Project corridor, two are in an urbanized area where no ground disturbance for the Project would occur. Project activities within and adjacent to these resources would consist of signage attached to existing poles. The remaining archaeological resource within the Project corridor has been heavily disturbed by construction of the existing rail line, and no surface evidence of the resource was identified during the pedestrian survey. An Extended Phase I Study conducted within the boundaries of this resource was negative for subsurface deposits.

There is potential for these previously recorded resources, as well as previously unknown archaeological resources, to be unearthed and impacted during the ground-disturbing activities associated with construction related to the Ultimate Trail Configuration. Excavation necessary for construction of the Ultimate Trail Configuration would extend to a maximum of 6 feet below current ground surface. Pilings required for the viaducts and bridge abutments would be drilled up to 20 feet below current ground surface.

Both the County of Santa Cruz and the City of Capitola have requirements regarding the unanticipated discovery of archaeological resources in their respective Municipal Codes, which are discussed below.

For the County, the unanticipated discovery of archaeological resources has specific provisions for treatment in Chapter 16.40 of the County Code. Specifically, Section 16.40.040 states that any property owner who, at any time in the preparation for or process of excavating or otherwise disturbing the ground, discovers any artifact or other evidence of a Native American cultural site that reasonably appears to exceed 100 years of age, shall immediately cease and desist from all further excavations and disturbances within 200 feet of the discovery; arrange for staking completely around the area of discovery by visible stakes no more than 10 feet apart, forming a circle having a radius of no less than 100 feet from the point of discovery; notify the planning director; and grant the planning director permission to enter onto the property and to take action.

For the City, the unanticipated discovery of archaeological resources has specific provisions for treatment in Chapter 17.56 of the Capitola Municipal Code. Specifically, Section 17.56.020 states an archaeological survey report is required when proposed development is located within property known to contain archaeological resources, property within 100 feet of a bluff edge, or property with a probability of containing archaeological resources as determined through the City's on-site investigation or other available information. Section 17.56.020 also outlines required mitigation when construction impacts to an archaeological resource cannot be avoided and states that the mitigation plan must include preservation measures in accordance with the guidelines of the State Office of Historic Preservation and/or the NAHC. The recommended mitigation measures contained in the archaeological survey report and mitigation plan shall be made a condition of approval.

Compliance with Chapter 16.40 of the County Code and Chapter 17.56 of the Capitola Municipal Code, depending on where resources are discovered, would reduce impacts to archaeological resources. However, while the ordinances address actions to be taken if archaeological resources are encountered during ground disturbance and the potential development of a mitigation plan, there is still the potential for the Project to impact unanticipated cultural resources because the ordinances do not address the evaluation of these resources. Therefore, mitigation is necessary to properly implement protocol for the unanticipated discovery of archaeological resources.

To reduce impacts to known and unknown archaeological resources, the Project is required to comply with the mitigation measures included below, as well as the requirements outlined in the Capitola and County Codes. In addition to a Worker's Environmental Awareness Program, these measures include monitoring by an archaeologist and Native American monitor because the known resources are of Native American origin, as well as protocols for the unanticipated discovery of cultural resources. With adherence to these measures and the codes outlined above, the impact would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Mitigation Measure CR-2a: Worker's Environmental Awareness Program

The County of Santa Cruz shall retain a qualified archaeologist to conduct Worker's Environmental Awareness Program training on archaeological sensitivity for all construction personnel prior to the commencement of any ground-disturbing activities. Training shall be provided periodically throughout ground-disturbing activities as new construction personnel are added to the Project. The training shall be conducted by an archaeologist who meets or exceeds the Secretary of Interior's Professional Qualifications Standards for Archeology. Archaeological sensitivity training shall include a description of the types of cultural material that may be encountered, cultural sensitivity issues,

regulatory issues, and the proper protocol for treatment of the materials in the event of a find. Training shall be documented on a sign-in sheet to be provided to the County.

Mitigation Measure CR-2b: Archaeological Monitoring

For construction activities occurring within the boundaries of previously recorded archaeological resources and a 300-foot buffer around each resource, the County of Santa Cruz shall retain a qualified archaeologist to delineate these locations and monitor Project-related ground-disturbing activities. Archaeological monitoring shall be performed under the direction of an archaeologist meeting or exceeding the Secretary of the Interior's Professional Qualifications Standards for Archeology. Monitors shall have the authority to halt and redirect work should any archaeological resources be identified during monitoring. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt, and Mitigation Measure CR-2d, Implementation of Protocol for Unanticipated Discovery of Cultural Resources, shall be implemented. Archaeological monitoring may be reduced or halted at the discretion of the monitor, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments that are planned to be excavated are composed of fill, or negative findings during the first 50% of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground disturbance moves to a new location within the Project corridor and when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock). Furthermore, monitoring may be terminated in the event that it is determined that the soils within the Project corridor do not have the potential to contain cultural resources. The monitor shall submit a report within 30 days of completion of all ground-disturbing activities to the County to document compliance.

Mitigation Measure CR-2c: Native American Monitoring

For construction activities occurring within the boundaries of previously recorded archaeological resources and a 300-foot buffer around each resource, the County of Santa Cruz shall retain a Native American monitor from a locally affiliated Tribal member(s). Native American monitor(s) shall have the authority to halt and redirect work should any archaeological or Tribal Cultural Resources be identified during monitoring. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt, and Mitigation Measure CR-2d, Implementation of Protocol for Unanticipated Discovery of Cultural Resources, shall be implemented. Native American monitoring may be reduced or halted at the discretion of the monitors, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments that are planned to be excavated are composed of fill, or negative findings during the first 50% of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground disturbance moves to a new location in the Project corridor and when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock). Furthermore, monitoring may be terminated in the event that it is determined that the soils within the Project corridor do not have the potential to contain cultural resources.

Mitigation Measure CR-2d: Implementation of Protocol for Unanticipated Discovery of Cultural Resources

In the event that archaeological resources are unexpectedly encountered during ground-disturbing construction activities, the construction contractor shall halt work within 200 feet of the find, and the County of Santa Cruz shall contact an archaeologist meeting the Secretary of the Interior's

Professional Qualifications Standards for Archeology to immediately evaluate the find if an archaeological monitor is not already present. If the find is determined by the qualified archaeologist to be prehistoric and a Native American monitor is not already present, then the County shall contact a Native American representative to participate in the evaluation of the find. If necessary, archaeological testing for California Register of Historical Resources eligibility shall be completed by the qualified archaeologist. If the discovery proves to be eligible for the California Register of Historical Resources and impacts to the resource cannot be avoided via Project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the deposit, per the requirements of California Public Resources Code, Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The County, in coordination with the City, shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Public Resources Code, Section 15126.4(b)(3)(C).

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Excavation for removal of the rail and construction of the Optional Interim Trail (Part 1) would be up to 6 feet deep. Impacts to both known archaeological resources and unanticipated archaeological resources as a result of implementation of the Optional Interim Trail would therefore be similar to the impacts described above for the Ultimate Trail Configuration. Compliance with Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code and implementation of Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d would reduce impacts to known and unknown archaeological resources. Therefore, impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would disturb only previously disturbed sediments within the RTC ROW. There would be no excavation of previously undisturbed soils. Therefore, demolition of the Optional Interim Trail would have a **less than significant impact** to archaeological resources. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Impacts from the construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration. Construction of the Ultimate Trail Configuration involve excavation up to 6 feet deep and drilling piles up to 20 feet deep and therefore would have the potential to disturbed known archaeological resources and/or unearth previously undiscovered archaeological resources. Adherence to Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code and implementation of Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d would reduce impacts to known and unknown archaeological resources. Therefore, impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing Optional Interim Trail Parts 1, 2, and 3 would involve three instances of ground disturbance. There are five known archaeological resources located within or adjacent to the Project corridor. Additionally, there is always the possibility of unearthing previously unknown archaeological sites during ground-disturbing activities for construction. With multiple phases of ground-disturbing work involved with the Optional Interim Trail, the likelihood of disturbing a known resource or unearthing previously unknown archaeological resources would increase, and impacts would be potentially significant. During each construction period, compliance with Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code, and implementation of Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d would reduce impacts to known and unknown archaeological resources. Therefore, impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. Pile installation typically does not allow for monitoring or recovery of archaeological resources. Regardless, grading and excavation activities associated with the Project with this design option would be similar to the Project without the design option and would have the potential to encounter archaeological resources, if present. Adherence to Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code and implementation of Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d would reduce impacts to known and unknown archaeological resources. Therefore, impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Grading and excavation activities associated with this design option would be similar to the proposed Project. Due to ground-disturbing work, this design option would have the potential to unearth unknown archaeological resources. This impact would be reduced to less than significant with compliance with Chapter 17.56 of the Capitola Municipal Code, Chapter 16.40 of the County Code, and implementation of the mitigation measures outlined above. Impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts on archaeological resources. Both scenarios would require ground-disturbing activities that have the possibility of disturbing previously known resources and/or unearthing previously unknown archaeological resources. However, the Optional Interim Trail would involve two additional phases of construction and ground-disturbing activity compared to the Ultimate Trail Configuration (the Project without the

Optional Interim Trail). Therefore, impacts from the Project with the Optional Interim Trail would be greater compared to the Project without the Optional Interim Trail. Under either scenario, the impacts would be reduced to a less than significant level by complying with Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code and implementing Mitigation CR-2a, CR-2b, CR-2c, and CR-2d. Therefore, impacts would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Threshold C:	Disturb any human remains, including those interred outside of formal cemeteries.

Impact CR-3 GROUND-DISTURBING ACTIVITIES DURING PROJECT CONSTRUCTION MAY DISTURB HUMAN REMAINS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Human burials outside formal cemeteries can occur in prehistoric archaeological contexts and are known to be present within the vicinity of the Project corridor. It is estimated that excavation necessary for construction of the Project and as-needed utility trench work would extend to a maximum of 6 feet below the current ground surface. Pilings required for the retaining walls and viaducts would be up to 20 feet deep. As such, construction activities associated with the Project could have the potential to disturb these resources, which could include Native American burial sites.

Human burials have specific provisions for treatment in Chapter 17.56 of the Capitola Municipal Code, Chapter 16.40 of the County Code, and California Public Resources Code, Section 5097. Additionally, California Health and Safety Code, Sections 7050.5, 7051, and 7054, contain specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains and protects them from disturbance, vandalism, or destruction. California Public Resources Code, Section 5097.98, also addresses the disposition of Native American burials, protects such remains, and establishes the NAHC as the entity to resolve any related disputes.

If human remains are found, California Health and Safety Code, Section 7050.5, states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California Public Resources Code, Section 5097.98. In the event of an unanticipated discovery of human remains, Section 16.40.040 of the County Code requires that all excavation cease within 200 feet of the find. The County Coroner must be notified immediately. If the human remains are determined to be Native American, the coroner must notify the NAHC, which would determine and notify a most likely descendant. The most likely descendant must complete the inspection of the site within 48 hours of being granted access to the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, would ensure that impacts to unknown human remains would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

It is estimated that excavation necessary for removal of the rail and construction of the Optional Interim Trail and as-needed utility trench work (Part 1) would be up to 6 feet deep. Human remains are known to be present within the vicinity of the Project corridor. With compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, impacts to previously unidentified human remains would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would disturb only previously disturbed sediments within the RTC ROW. There would be no excavation of previously undisturbed soils; therefore, unanticipated discoveries of human remains are unlikely. While unlikely, the discovery of human remains is a possibility. Compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, would ensure that potential impacts to previously unidentified human remains would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Impacts from the construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for *Ultimate Trail Configuration (Trail next to Rail Line)* in its entirety. Human remains are known to be present within the vicinity of the Project corridor. With compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, impacts to previously unidentified human remains would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing the Optional Interim Trail would involve three instances of ground disturbance. Human remains are known to be present within the vicinity of the Project corridor. All three phases of the Optional Interim Trail would be required to comply with the Capitola Municipal Code, the County Code, California Public Resources Code, Section 5097.98, and California Health and Safety Code, Section 7050.5, to ensure impacts to previously unidentified human remains would be **less than significant**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. Pile installation typically does not allow for monitoring or recovery of cultural resources, including human remains. Regardless, grading and excavation activities associated with the Project with this design option would be

similar to the Project without the design option and would have the potential to unearth and disturb human remains, if present. Compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, is required for the protection of previously unidentified human remains. The impact would be less than significant. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Grading and excavation activities associated with this design option would be similar to the Project and would have the potential to unearth and disturb previously unidentified human remains, if present. Compliance with the Capitola Municipal Code; County Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, is required for the protection of human remains. The impact would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar potential impacts to human remains. Both scenarios would require ground-disturbing activities that have the possibility of unearthing previously unknown human remains. However, the Optional Interim Trail would involve two additional phases of construction and ground-disturbing activity compared to the Project. Therefore, impacts from the Project with the Optional Interim Trail would be greater compared to the Project without the Optional Interim Trail. However, under either scenario, the construction contractor is required to comply with the County Code; Capitola Municipal Code; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5, for the protection of human remains. Therefore, impacts to unknown human remains are **less than significant**.

3.4.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)			
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line	3) Construction of the Ultimate Trail Configuration[b]
CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).	**LTS**	**LTSM** Slightly greater	**LTSM** Slightly greater	**LTSM** Slightly greater	**LTSM** Similar
CR-2. Ground-disturbing activities during Project construction may unearth or adversely impact subsurface archaeological resources.	**LTSM**	**LTSM** Similar	**LTS** Less because ground disturbance would occur in previously disturbed areas	**LTS** Less because ground disturbance would occur in previously disturbed areas	**LTSM** Similar
CR-3. Ground-disturbing activities during Project construction may disturb human remains.	LTS	LTS Similar	LTS Less because ground disturbance would occur in previously disturbed areas	LTS Less because ground disturbance would occur in previously disturbed areas	LTS Similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

[b] The Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would have a slightly lesser impact on historical resources than the Project (Ultimate Trail Configuration) without the Optional Interim Trail because the rail (the historical resource) would already be removed.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

This page intentionally left blank.

3.5 Geology and Soils

This section analyzes the temporary and long-term impacts on the geologic stability of the Project corridor and the exposure of trail users to seismic and geologic hazards as a result of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* construction and operation. The potential impacts of the Project related to existing geologic, seismic, and soil conditions and paleontological resources are evaluated in this section. **Table 3.5-1** presents a summary of potential impacts related to geology and soils.

Table 3.5-1 Summary of Project Impacts on Geology and Soils[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
GEO-1. The Project would not exacerbate the existing exposure of people or structures to risks from strong seismic ground shaking.	Less than Significant	None Required	Less than Significant
GEO-2. The Project may exacerbate exposure of the public to liquefaction or landslide hazards and may be located on a geological unit or soil that would become unstable as a result of lateral spreading, landslides, and liquefaction.	Less than Significant	None Required	Less than Significant
GEO-3. The Project may result in substantial soil erosion or loss of topsoil.	Less than Significant	None Required	Less than Significant
GEO-4. The Project would not exacerbate the existing risk to life or property resulting from expansive soils.	Less than Significant	None Required	Less than Significant
GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant	GEO-5	Less than Significant

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.5.1 Existing Conditions

Regional Setting

Santa Cruz County (County) is located in the Coast Range Geomorphic Province. This province is characterized by parallel northwest-trending mountain ranges formed over the past 10 million years or less by active uplift as a result of the complex tectonics of the San Andreas fault/plate boundary system (CGS 2002). The County is bounded to the north by San Mateo County, to the east by the crest of the Santa Cruz Mountains, to the south by the Pajaro River (Monterey County line), and to the west by the Pacific Ocean (Monterey Bay). Steep coastal bluffs, deep mountain canyons, and river valleys characterize the County. The following discussion describes existing geologic formations, seismicity, and soil stability in the region. Corridor-specific geology is described under *Paleontological Resources*.

Geologic Formations and Seismicity

The Santa Cruz Mountains consist predominantly of marine sedimentary rocks of Paleocene to Pliocene age and nonmarine sediments of Pleistocene and Holocene age that overlay a granitic and metamorphic basement from the Cretaceous period or older (RTC 2013). Southwest of the San Andreas fault and northeast of the San Gregorio fault in Santa Cruz and San Mateo Counties is one of the most complete Tertiary rock sections in the California Coast Ranges (Clark 1981). A succession of sandstone and mudstone units overlays a Salinian basement complex of granitic and older metasedimentary rocks and ranges in age from Paleocene to Pliocene and has a composite thickness of as much as 7,390 meters. This Tertiary section is divisible into four sedimentary rock sequences that are virtually continuous, each of which is bounded by unconformities of regional extent. Resting on the basement complex, the oldest sequence consists of erosional remnants of the Locatelli Formation of Paleocene age. The next younger sequence ranges from early Eocene to early Miocene age and consists of the Butano Sandstone, San Lorenzo Formation, Zayante Sandstone, Vaqueros Sandstone, and Lambert Shale.

The two younger sequences are the products of two separate and successive marine cycles of sedimentation (Clark 1981). The older cycle was a middle Miocene event that produced a widely transgressive basal sandstone unit, the Lompico Sandstone, and an overlying organic mudstone unit, the Monterey Formation. The younger cycle was initiated in late Miocene time and likewise produced a transgressive basal sandstone unit, the Santa Margarita Sandstone, and an overlying siliceous mudstone unit, the Santa Cruz Mudstone. The basal sandstone beds of each of these two sequences were deposited in a near-shore, shallow-marine environment, whereas the overlying mudstone beds were laid down in deeper water. A later and shallower phase of the younger cycle is recorded by the Purisima Formation of Pliocene age.

The San Andreas fault, the Zayante-Vergeles fault, the San Gregorio fault zone, and the Monterey Bay-Tularcitos fault zone are the major faults in the County. These faults are associated with Holocene activity (movement in the last 11,000 years) and are considered to be active (Pacific Crest Engineering 2021). Locations of major regional faults are shown on **Figure 3.5-1**, Major Faults. Southwest of the San Andreas fault, the older sedimentary rocks in the California Coast Ranges are moderately to strongly deformed, with steep-limbed folds and several generations of faults associated with uplift of the Santa Cruz Mountains. Along the coast, the ongoing tectonic activity is most evident in the gradual uplift of the coastline as indicated by the series of uplifted marine terraces that have been cut along coastline (City of Santa Cruz 2011).

The County Local Hazard Mitigation Plan 2021–2026 states that, based on historical evidence, the entire County is vulnerable to ground shaking from earthquakes (Santa Cruz County 2021). The epicenter of the Loma Prieta earthquake in October 1989, the most intense to strike California since 1906, was associated with the San Andreas fault, approximately 10 miles east-northeast of Santa Cruz.

Soils and Soil Conditions

Almost all soils in the County are classified in the Mollisols soil order. The Mollisols soil order is characterized by a thick, dark surface horizon and is the most extensive soil order in the United States (Global Rangelands 2018). The soils are base-rich throughout and therefore are fertile agricultural soils (NRCS 2018). Mollisols soils characteristically form under grass in climates with a moderate to pronounced seasonal moisture deficit.

Expansive soils are associated with clay-rich sediment deposits on alluvial floodplains and generally occur in the southern portion of the County and along the coast, especially in the Cities of Santa Cruz and Capitola (Santa Cruz County 2021).

The County does not have areas with a high susceptibility to subsidence. The estimated potential for areas in the County that are at a low susceptibility to subsidence include the coastal areas of the County and inland areas toward the middle of the County (DWR 2014).

Liquefaction and Slope Stability

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Lateral spreading can occur when a liquefied soil moves toward a free slope face during the cyclic earthquake loading. Liquefaction-induced lateral spreading can also occur on mild slopes (flatter than 5%) underlain by loose sands and a shallow water table. If liquefaction occurs, the unsaturated overburden soil can slide as intact blocks over the lower, liquefied deposit, creating fissures and scarps.

Liquefaction and lateral spreading potential in the County is high in lowland areas of Santa Cruz, the Soquel Valley, and the Pajaro River Valley (Santa Cruz County 2021). Liquefaction can cause serious damage to foundations and bases of structures (USGS 2017). Landslides and other forms of mass wasting, including mud flows, debris flows, soil slips, and rock falls, occur as soil or rock moves downslope under the influence of gravity. Intense rainfall or seismic shaking could trigger landslides. Areas subject to landslide hazards are widely dispersed across inland portions of the County (Santa Cruz County 2021). The most concentrated areas of past landslide activity in the County are the western foothills of Ben Lomond Mountain and the foothills that border the County, southeast of State Route 17 (Roberts et al. 1988).

Project Corridor Setting

This discussion of geology and soils in the Project corridor is based primarily on the Geotechnical Investigative Report – Monterey Bay Sanctuary Scenic Trail Segments 10 and 11 (Pacific Crest Engineering 2021). Additional background data was obtained from online databases maintained by the California Geological Survey.

Geologic Formations

The Project corridor transects five distinct geologic units: basin deposits, lowest emergent coastal terrace deposits, alluvial deposits, alluvial fan, and Purisima Formation bedrock. Basin deposits are mapped within the base of the drainage at Rodeo Gulch, with Purisima Formation underlying the sides of the gulch. Basin deposits typically consist of unconsolidated, plastic clay and silty clay that are rich in organic materials and can locally contain thin interbedded layers of silt and silty sand (Brabb 1997).

Lowest emergent coastal terrace deposits are mapped between Rodeo Gulch and the end of Segment 10, just before Capitola Village. Coastal terrace deposits and Purisima Formation are mapped from the beginning of Segment 11, located at Monterey Avenue, and extend to the entrance of New Brighton State Beach.

Alluvial deposits are mapped near the entrance to New Brighton State Beach and at the base of the drainage east of the entrance to the park. Alluvial deposits typically consist of unconsolidated, heterogeneous, moderately sorted silt and sand containing discontinuous lenses of clay and silty

clay. Locally, these deposits include large amounts of gravel and may be equal to both younger and older flood-plain deposits in areas where these were not differentiated (Brabb 1997).

East of these alluvial deposits, alternating sections of lowest emergent coastal terrace deposits and Purisima Formation bedrock are mapped as underlying the trail segment from New Brighton State Beach to the eastern terminus of Segment 11 at State Park Drive.

Soils and Soil Conditions

The near-surface soil in the Project corridor varied from firm to stiff clays, loose to medium dense sand, and very dense Purisima Bedrock. Human-made fill was encountered in several borings. The Project corridor is underlain by varying areas of low to moderately expansive clay soils. Portions of Segments 10 and 11, including areas around the New Brighton State Beach entrance road and the base of the basin at Rodeo Gulch, are mapped with a "very high" susceptibility for liquefaction (**Figure 3.5-2**, Liquefaction Zones). No mapped landslide hazards are within the Project corridor.

Coastal Bluff Erosion

In Segment 11, a portion of the rail corridor passes near the coastal bluffs. Specifically, the section along Park Avenue in Capitola, between Grove Lane and New Brighton State Beach (**Figure 2-1b**), may be at future risk from bluff recession, which could damage or breach the corridor over time. In this location, the railroad track and proposed multi-use trail alignment are atop the 80-foot-high coastal bluffs with a sandy beach at the bottom. In coordination with the California Coastal Commission, the RTC is analyzing the potential risk of bluff erosion, including consideration of sea level rise, in this area. The information would be used to inform the final project alignment during the Coastal Development Permit review process.

Paleontological Resources

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows). Paleontological resources occur within bedrock geologic deposits that underly the soil layer and are almost exclusively preserved in sedimentary rocks; however, in rare cases, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions. The Society of Vertebrate Paleontology (SVP) (SVP 2010) has defined fossils as remains or traces of plants and animals greater than 5,000 years old (i.e., older than middle Holocene in age). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors.

As shown on **Figure 3.5-3a** through **Figure 3.5-3d** and described in **Table 3.5-2**, the Project corridor is underlain by five geologic units mapped at the surface by Brabb (1997) and Wagner et al. (2002): Holocene basin deposits, Holocene alluvium (Q), Pleistocene alluvial fan deposits, Pleistocene marine terrace deposits, and late Miocene to Pliocene Purisima Formation.

Table 3.5-2 Geologic Unit Sensitivity

Geologic Unit	Segment	Paleontological Sensitivity
Quaternary basin deposits (Qb)	Segment 10	Low
Quaternary alluvium (Q)	Segment 11	Low
Quaternary alluvial fan deposits (Qf)	Segment 11	High
Quaternary marine terrace deposits (Qmt)	Segments 10 and 11	High
Purisima Formation (Ppu)	Segments 10 and 11	High

Holocene-aged Quaternary basin deposits underlie Corcoran Lagoon along Segment 10 (**Figure 3.5-3a**, Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity). Quaternary basin deposits consist of unconsolidated, organic-rich, silty clay or clay with local, thin, silt, and silty sand interbeds (Brabb 1997). Quaternary basin deposits represent deposition within estuaries, lagoons, sloughs, flood basins, and lakes and are up to 90 feet thick. Quaternary basin deposits are generally considered too young (i.e., less than 5,000 years old) to preserve paleontological resources.

Holocene-aged Quaternary alluvium underlies parts of Segment 11 along Soquel Creek and Aptos Creek (**Figures 3.5-3b** and **3.5-3c**). Quaternary alluvium consists of unconsolidated, moderately sorted silt and sand with lenses of clay and silty clay and, in some areas, gravel (Brabb 1997). Quaternary alluvium is generally considered too young (i.e., less than 5,000 years old) to preserve paleontological resources.

Pleistocene-aged Quaternary alluvial fan deposits underlie part of Segment 11 just east of Soquel Creek (**Figure 3.5-3b).** These sediments consist of moderately consolidated, moderately to poorly sorted silt, sand, and gravel (Brabb 1997). Pleistocene-aged alluvial sediments have produced significant paleontological resources throughout California, including in the County, yielding taxa such as camel (Camelidae), horse (Equidae), bison (Bison), ground sloth (Pilosa), mammoth (Mammuthus), whale (Cetacea), shark, and bony fish (Jefferson 2010; PBDB 2023; UCMP 2023).

Pleistocene-aged Quaternary marine terrace deposits underlie the majority of Segments 10 and 11 (**Figures 3.5-3a–d**). Quaternary marine terrace deposits consist of semi-consolidated, well-sorted sand with a few, thin, continuous gravel interbeds (Brabb 1997). Quaternary marine terrace deposits represent Pleistocene-aged, near-shore marine environments. Quaternary marine terrace deposits have produced significant terrestrial and marine vertebrate and invertebrate fossils throughout California, including in the County (Bradley and Addicott 1968; Woodring et al. 1946). These deposits have yielded taxa such as camel, horse, bison, ground sloth, mammoth, whale, shark, and bony fish (Jefferson 2010; PBDB 2023; UCMP 2023).

The Miocene to late Pliocene-aged Purisima Formation underlies portions of Segments 10 and 11. Specifically, this deposit is exposed on slopes along the edges of Corcoran Lagoon, Soquel Creek, Tannery Gulch, Borregas Creek, and Aptos Creek (**Figures 3.5-3a–d**). The Purisima Formation is composed of thick-bedded, yellow-gray tuffaceous and diatomaceous siltstone with thick interbeds of blue-gray, semi-friable, fine sandstone (Brabb 1997). The Purisima Formation is up to 3,000 feet thick and underlies Quaternary surficial deposits. The Purisima Formation has yielded many marine vertebrate and invertebrate fossil taxa, including whales (Cetacea), sea cows (Sirenia), walruses (Odobenidae), fur seals (Otariidae), birds, bony fish, and sharks (Boessenecker et al. 2014; PBDB 2023; UCMP 2023).

Paleontological resources have recently been discovered in the County. For example, in May 2023, a 12-inch fossilized molar belonging to a mastodon, an extinct mammal from the last ice age similar

in appearance to the woolly mammoth, was discovered on the beach in the unincorporated community of Rio Del Mar, approximately 1 mile southeast from the easternmost terminus of the Project corridor. The molar is estimated to be less than 1 million years old, which is relatively young compared to the marine fossils that have been discovered along the County's coastline, some of which have been traced back 2 to 4 million years (Santa Cruz Sentinel 2023).

3.5.2 Regulatory Setting

This section describes the federal, state, and local plans, policies, and laws relevant to geology and soils for the Project.

Federal

Clean Water Act

Stormwater-related erosion is one major source of soil-related impacts. Stormwater discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb 1 or more acres, or smaller sites that are part of a larger common plan of development or sale, are regulated under the Clean Water Act through the National Pollutant Discharge Elimination System (NPDES) Stormwater Program. Prior to discharging stormwater, construction operators must obtain coverage under an NPDES permit. In California, the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (NPDES Construction General Permit) is promulgated by the State Water Resources Control Board and administered through the local Regional Water Quality Control Board, which for this area, is the Central Coast Regional Water Quality Control Board.

The NPDES Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography before and after construction, and drainage patterns across the Project area. The SWPPP must list best management practices (BMPs) the discharger will use to protect stormwater runoff and indicate the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if BMPs fail, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the NPDES Construction General Permit describes the elements that must be contained in a SWPPP.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (PRC 2621 et seq.) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults, and strictly regulates construction in the corridors along active faults (i.e., earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands show evidence of surface

displacement during Holocene time (defined as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist using standard professional techniques, criteria, and judgment at the ground surface or in the shallow subsurface (CDMG 1997).

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage from earthquakes. 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: the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

California Coastal Act

The California Coastal Commission was established in 1972 and is responsible for protecting, conserving, and restoring water quality in coastal environments as detailed in Sections 30230 and 30231 of the California Coastal Act. The California Coastal Commission establishes policies that address shoreline public access and recreation, habitat protection, aesthetic resources, public works, and other uses. The California Coastal Act provides long-term protection of California's coastline for the benefit of the public. New development and redevelopment projects located in a Coastal Zone are required to apply for a Coastal Development Permit prior to construction. The Coastal Development Permit requires projects to demonstrate water quality protection, including minimization of erosion and soil loss, through the implementation of appropriate BMPs. The California Coastal Commission will also consider relevant technical studies, such as the coastal bluff erosion study prepared by the RTC during the Coastal Development Permit review process.

California Public Resources Code

Section 5097.5 of the California Public Resources Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here "public lands" means those owned by or under the jurisdiction of the state or any city, county, district, authority, or public corporation or any agency thereof. Consequently, public agencies are required to comply with California Public Resources Code, Section 5097.5, for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits)

California Environmental Quality Act

The California Environmental Quality Act (CEQA) does not define "a unique paleontological resource or site." However, the SVP defines a "significant paleontological resource" in the context of environmental review as follows (SVP 2010:11):

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic

information. Paleontological resources are generally older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

Local

Santa Cruz County General Plan and Local Coastal Program

The Public Safety Element of the County General Plan and Local Coastal Program (Santa Cruz County 1994) contains objectives and policies related to seismic hazards. Goal 6.1 is to "reduce the potential for loss of life, injury, and property damage resulting from earthquakes by: regulating the siting and design of development in seismic hazard areas; encouraging open space, agricultural or low density land use in the fault zones; and increasing public information and awareness of seismic hazards." Policies in the County General Plan to implement this objective include geological review for development in designated fault zones (Policy 6.1.1), site investigation regarding liquefaction hazard (Policy 6.1.4), and location of new development away from potentially hazardous areas (Policy 6.1.5).

Objective 5.9 of the Conservation and Open Space Element of the County General Plan explains the County's goal to "protect hydrological, geological and paleontological resources which stand out as rare or unique and representative in Santa Cruz County because of their scarcity, scientific or educational value, aesthetic quality or cultural significance." The following policies and programs address paleontological resources:

- **Policy 5.9.1, Protection and Designation of Significant Resources**. Protect significant geological features such as caves, large rock outcrops, inland cliffs and special formations of scenic or scientific value, hydrological features such as major waterfalls or springs, and paleontological features, through the environmental review process. Designate such sites on the General Plan and LCP [Local Coastal Program] Resources and Constraints Maps where identified. Currently identified sites of Significant Hydrological, Geological and Paleontological Features are as follows:
    - **Program A**. Continue to identify hydrological, geological and paleontological features in the County, in addition to those currently identified, and continue to develop and maintain a countywide inventory for these resources. (Responsibility: Planning Department)
    - **Program B**. Develop a program to protect unique hydrological, geological and paleontological resources through the negotiation of Open Space Easements, other deed restrictions, and purchase as necessary. (Responsibility: Planning Department, Board of Supervisors)

Santa Cruz County Code

County Code, Chapter 16.10, sets forth regulations and review procedures for development and construction activities throughout the County and particularly within mapped geologic hazards areas and areas of special flood hazard. Chapter 16.22 is designed to prevent accelerated erosion. Under Section 16.22.040 of the County Code, no personnel shall allow the continued existence of accelerated erosion. Chapter 16.22 requires projects to have an Erosion Control Plan, runoff control, and land clearing approval.

Chapter 16.44 describes requirements for paleontological assessments and reports, permitting requirements for projects on the site of paleontological resources, and required actions when paleontological resources are discovered during excavation or other groundbreaking activities.

City of Capitola General Plan

The Safety and Noise Element of the Capitola General Plan contains goals and policies related to seismic and geologic hazards. Capitola General Plan Goal SN-2 is to "minimize loss of life, injury, and property damage due to seismic and geologic hazards." Policies in the Capitola General Plan to implement this goal include the following (City of Capitola 2019):

- **Policy SN-2-1, Development Restrictions.** Prohibit structural development in areas where seismic and geological hazards cannot be mitigated, e.g., unstable bluff edges.
- **Policy SN-2.2, Mitigation**. Monitor and enforce mitigation measures to reduce risk for projects where geological and seismic hazards can be mitigated.
- **Policy SN-2.4, Bluff Erosion**. Ensure that new development is located, designed, and maintained in a manner that reduces hazards resulting from bluff erosion.
- **Policy SN-2.8, Critical Facilities and Services.** Ensure that seismic hazards are mitigated to the greatest extent possible for critical public facilities, infrastructure, and emergency services.
- **Policy SN-2.9, State Standards.** Continue to enforce all applicable requirements of the current California Building Code and the California Building Standards to minimize public exposure to seismic and geologic hazards.

The Capitola General Plan considers paleontological resources a type of cultural resource, which are addressed in the Land Use Element (City of Capitola 2019). The following goals and policies address paleontological cultural resources:

- **Goal LU-1.** Maintain and enhance Capitola's distinctive identity and unique sense of place.
    - **Policy LU-1.1, Community Character.** Ensure that historic and cultural resources are maintained and that all new development enhances Capitola's neighborly feel, coastal village charm, and welcoming character.
- **Goal LU-2.** Preserve historic and cultural resources in Capitola.
    - **Policy LU-2.4, Public Awareness.** Work with the Capitola Museum Curator to encourage public education and awareness of Capitola's history and historical and cultural resources through public outreach, promotional materials, and other similar initiatives.

City of Capitola Municipal Code

Chapter 15.28 of the Capitola Municipal Code includes regulations for excavation and grading, which address hazardous conditions, erosion control, and requirements for inspection reports.

Chapter 17.56 of the Capitola Municipal Code describes requirements for paleontological assessments and reports, permitting requirements for projects on the site of paleontological resources, and required actions when paleontological resources are discovered during excavation or other groundbreaking activities. This chapter requires a paleontological survey report for any development located within the following:

- A known paleontological site
- 100 feet of a bluff edge
- An area with a probability of containing paleontological resources, as determined through the City's on-site investigation or other available information

3.5.3 Methodology and Significance Thresholds

Methodology

This section describes the potential environmental impacts of the Project relevant to geology and soils, including paleontological resources. The impact analysis is based on an assessment of baseline conditions for the Project corridor, including topography, geologic formations, seismicity, soils, and soil conditions, as described in Section 3.5.1, *Existing Conditions*. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction and operation of the Project and recommends mitigation measures, when necessary, to avoid or minimize impacts.

The paleontological sensitivity of the geologic units that underlie the Project corridor were evaluated to assess the Project's potential for significant impacts to scientifically important paleontological resources. The evaluation considered existing information in scientific literature regarding known fossils within geologic units mapped in the Project corridor. According to the SVP classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources (SVP 2010). Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the Project corridor. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. On May 18 and 19, 2023, Rincon Consultants, Inc., archaeologists completed a paleontological resources field survey of the entire Project alignment along the railroad line, paved streets, and staging areas and conducted spot checks for all accessible locations outside the direct Project footprint. All accessible exposed ground surfaces were visually inspected for paleontological resources. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units.

Significance Thresholds

As described in the introduction in Chapter 3, *Environmental Impact Analysis*, the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which is a sample Initial Study checklist that includes a number of factual inquiries related to the subject of geology and soils, as well as the other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For the purposes of this Environmental Impact Report (EIR), a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

    1. 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.
    2. Strong seismic ground shaking.
    3. Seismic-related ground failure, including liquefaction.
    4. Landslides.

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

C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

D. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

E. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

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

The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. CEQA does not define "a unique paleontological resource or site." However, the SVP broadly defines significant paleontological resources as follows (SVP 2010):

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

Therefore, the loss of paleontological resources that meet the criteria outlined above (i.e., considered a significant paleontological resource) would be considered a significant impact under CEQA.

Through preliminary analysis, it was determined that some of the questions and thresholds are not applicable to the Project, including location in a known earthquake fault zone as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (Threshold A1) and the use of septic tanks or alternative wastewater disposal systems (Threshold E). Therefore, impacts related to Thresholds A1 and E are included in Section 3.15, *Effects Found to be Less than Significant.*

It is noteworthy that, in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 377, the California Supreme Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents." For this reason, the court found the following language from *CEQA Guidelines*, Section 15126.2(a), to be invalid: "An EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there." (*California Building Industry Association*, p. 390.)

The court did not hold that CEQA never requires consideration of the effects of existing environmental conditions on the future occupants or users of a proposed project. However, the circumstances in which such conditions may be considered are narrow: "when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions" (*California Building Industry Association,* pp. 377–378). Because this exception to the general rule would presumably not apply to existing seismic hazards, the court concluded that this particular topic was outside the ambit of CEQA (*California Building Industry*

Association, p. 390). The court also recognized that, within the entirety of CEQA, certain very specific statutes require consideration of existing conditions on project occupants, and the court treated these statutes as exceptions to the general rule it announced (*California Building Industry Association,* pp. 391–392).

In light of the *California Building Industry Association v. Bay Area Air Quality Management District* decision, the County is not required by CEQA to address the extent to which existing coastal bluff erosion hazards and seismic hazards—in the form of possible earthquakes, ground shaking, liquefaction, or subsidence—could affect future trail users. Instead, the discussions below (with the exception of the discussion of Impact GEO-3) focus on the extent to which the Project and trail users may exacerbate existing environmental hazards or risks.

3.5.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A.2:	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Impact GEO-1 THE PROJECT WOULD NOT EXACERBATE THE EXISTING EXPOSURE OF PEOPLE OR STRUCTURES TO RISKS FROM STRONG SEISMIC GROUND SHAKING. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The Project does not include housing or other structures that would result in long-term exposure of people or structures to the risk of loss, injury, or death involving strong seismic ground shaking.

The Project corridor is in a seismically active area that would experience strong seismic ground shaking following an earthquake along any one of several nearby faults, including the Ben Lomond fault, Monterey Bay-Tularcitos fault, Zayante-Vergeles fault, San Andreas (Santa Cruz Mountains) fault, and Sargent fault located approximately 5 miles, 6.5 miles, 5.5 miles, 8.5 mile, and 10.5 miles, respectively, from the Project area (Pacific Crest Engineering 2021). This strong seismic ground shaking could damage structures and result in a risk of loss, injury, or death. However, implementation of the Project would not include construction of habitable structures and therefore would not expose residents to a risk of injury or death following strong seismic ground shaking.

Although implementation of the Project would result in an increase in the number of recreational users in the Project corridor, those visitors would be transient (with short-term exposure), would be located generally in open spaces that support the Project alignment, and would not be exposed to overhead hazards, such as collapsing buildings, that could cause injury or death following strong seismic ground shaking. Trail construction and operation (trail users) would not exacerbate existing seismic ground shaking hazards in that they would not increase the likelihood or strength of future earthquakes. Proposed trail infrastructure (e.g., retaining walls, viaducts, bridges) would incorporate seismic design parameters developed from the California Department of Transportation (Caltrans)

Seismic Design Criteria, Version 2.0, dated April 2019, as stated on the design plans included in **Appendix A.1** (sheet BP-1.01).

Based on the lack of habitable structures and compliance with existing regulations for construction of trail infrastructure, the degree to which implementation of the Project would exacerbate the existing risk of loss, injury, or death involving strong seismic ground shaking would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Similar to the *Ultimate Trail Configuration (Trail next to Rail Line)*, Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) does not include housing or other structures that would result in long-term exposure of people or structures to the risk of loss, injury, or death involving strong seismic ground shaking.

Similar to Ultimate Trail Configuration, the Optional Interim Trail alignment is in a seismically active area, and trail construction and operation (trail users) would not exacerbate existing ground shaking hazards in that the likelihood or strength of future earthquakes would not increase as a result of the Project. Refer to the discussion for Impact GEO-1 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The Optional Interim Trail has fewer improvements required for waterway crossings than the Ultimate Trail Configuration. The Optional Interim Trail would use existing bridges at Rodeo Gulch, Soquel Creek (Capitola Trestle), and New Brighton State Beach. No additional viaducts or bridges would be needed. However, similar to the Ultimate Trail Configuration, the Optional Interim Trail would require the construction of fencing, guardrails, and retaining walls, which would incorporate seismic design parameters developed from the Caltrans Seismic Design Criteria, Version 2.0, dated April 2019, and would be designed to withstand adverse effects from strong seismic ground shaking.

Based on the lack of habitable structures and compliance with existing regulations for construction of trail infrastructure, implementation of Optional Interim Trail Part 1 would not exacerbate the existing risk of loss, injury, or death involving strong seismic ground shaking. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to construction of the Ultimate Trail Configuration and implementation of Optional Interim Trail Part 1, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) does not include housing or other structures that would result in long-term exposure of people or structures to the risk of loss, injury, or death involving strong seismic ground shaking. Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would occur in a seismically active area. The rail line would be built in accordance with American Railway Engineering and Maintenance-of-Way Association, Federal Railroad Administration, and California Public Utility Commission requirements, as applicable, and would be designed to withstand adverse effects from strong seismic ground shaking.

Based on the lack of habitable structures and compliance with existing regulations for construction of rail lines, demolition of the Optional Interim Trail and rebuilding of the rail line would not exacerbate the existing risk of loss, injury, or death involving strong seismic ground shaking. The impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact GEO-1, under *Ultimate Trail Configuration (Trail next to Rail Line)*. The impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would not exacerbate the existing risk of loss, injury, or death involving strong seismic ground shaking because the proposed improvement would incorporate seismic design parameters developed from the Caltrans Seismic Design Criteria, Version 2.0, dated April 2019, and would be designed to withstand adverse effects from strong seismic ground shaking. Therefore, these combined impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village (**Appendix A.3**). The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line),* as well as for the *Optional Interim Trail (Trail on the Rail Line)*. Trail construction and operation (trail users) would not exacerbate existing ground shaking hazards in that they would not increase the likelihood or strength of future earthquakes. This design option would temporarily convert the Capitola Trestle Bridge to trail use by implementing the necessary structural repairs as described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*. In addition, under this design option, the ballast, tracks, and ties would be replaced with fiberglass-reinforced polymer deck for the trail. The impact would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola (**Appendix A.4**). The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line),* as well as for the *Optional Interim Trail (Trail on the Rail Line)*. Trail construction and operation (trail users) would not exacerbate existing ground shaking hazards in that they would not increase the likelihood or strength of future earthquakes. This design option would require approximately twice as many retaining walls and an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. The design option has a traditional ramp at Coronado in lieu of the elevated pier support ramp shown for the coastal side. The required retaining walls would incorporate seismic design parameters developed from the Caltrans Seismic Design Criteria, Version 2.0, dated April 2019, as stated on the design plans included in **Appendix A.2**, and would be designed to withstand adverse effects from strong seismic ground shaking. The impact would still be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts related to risk of loss, injury, or death involving strong seismic ground shaking. Under either scenario, the Project would require construction of trail improvement including fencing, guardrails, and retaining walls that would be incorporate seismic design parameters developed from the Caltrans Seismic Design Criteria, Version 2.0, dated April 2019, as stated on the design plans included in **Appendix A.2**, and would be designed to withstand adverse effects from strong seismic ground shaking. However, for the reasons described in the analysis above for Impact GEO-1, implementation would not exacerbate the existing risk of loss, injury, or death involving strong seismic ground shaking. Overall, this impact of the Project with or without the Optional Interim Trail would be **less than significant**.

Threshold A.3:	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.
Threshold A.4:	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.
Threshold C:	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact GEO-2 THE PROJECT MAY EXACERBATE EXPOSURE OF THE PUBLIC TO LIQUEFACTION OR LANDSLIDE HAZARDS AND MAY BE LOCATED ON A GEOLOGICAL UNIT OR SOIL THAT WOULD BECOME UNSTABLE AS A RESULT OF LATERAL SPREADING, LANDSLIDES, AND LIQUEFACTION. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The Project would not include habitable structures and therefore would not expose residents to a risk of injury or death from landslides or seismic-related ground failure, including liquefaction.

Liquefaction tends to occur in loose, saturated, and fine-grained cohesionless sands, coarse silts, or clays with a low plasticity. In order for liquefaction to occur there must be the proper soil type, soil saturation, and cyclic accelerations of sufficient magnitude to progressively increase the water pressures within the soil mass. Portions of the trail alignment are mapped as an area with very high susceptibility for liquefaction including the areas around the New Brighton State Beach entrance road and the base of the basin at Rodeo Gulch. The basin deposits mapped within the base of the drainage at Rodeo Gulch typically consist of unconsolidated plastic clay and silty clay that is rich in organic materials and can locally contain thin interbedded layers of silt and silty sand (Brabb 1997). Alluvial deposits are mapped near the entrance to New Brighton State Beach and at the base of the drainage east of the entrance to the park. Alluvial deposits typically consist of unconsolidated, heterogeneous, moderately sorted silt and sand containing discontinuous lenses of clay and silty clay.

Liquefaction-induced lateral spreading occurs when a liquefied soil mass fails toward an open slope face or fails on an inclined topographic slope. Lateral spreading with accompanying lateral displacements could occur within sloping areas around the trail alignment that have been subject to liquefaction during strong seismic shaking.

The majority of the Project corridor would be situated within areas of relatively level to gently sloping topography, and there are no mapped landslide hazards within the proposed trail route.

However, portions of the trail would cross infilled drainages, especially in the area of New Brighton State Beach, and the infilled drainages at Borregas Creek and Stream 633 east and west of Estates Drive. The outer slopes of these fills are moderately steep and do not appear to be composed of compacted engineered fill. Therefore, these slopes are subject to a landslide hazard that could potentially undermine the trail. Portions of the pathway within sloping areas can also become undermined if surface runoff is not adequately controlled.

Implementation of the Project would include construction of a paved trail and associated infrastructure (e.g., trail viaducts/bridges, fencing, guardrails, and retaining walls). Construction of the Project would introduce uninhabited built features that could be damaged from liquefaction, landslides, and/or lateral spreading. In addition, implementation of the Project would increase the number of recreational users in the Project corridor, and those users could be exposed to an increased risk of injury or death from liquefaction or lateral spreading. Steep slopes located along the Project corridor would be subject to a landslide hazard that could potentially undermine the trail.

In compliance with applicable regulations, the Geotechnical Investigation Report prepared for the Project recommends that bridges and other structures be supported by pile foundations (Pacific Crest Engineering 2021). As described in Section 2.6, *Project Construction*, the Project would be constructed in accordance with the recommendations included in the Project Draft Geotechnical Investigation Report (Pacific Crest Engineering 2021) and any additional recommendations identified in the final Geotechnical Investigation to be prepared upon final Project design. Accordingly, pilings required for the viaducts would be embedded at a minimum of 20 feet. In accordance with the recommendations of the Geotechnical Investigation Report, piles would have a minimum diameter of 24 inches. Additionally, piles would derive their capacity through friction resistance between the concrete and surrounding soil.

Retaining walls typically consist of steel soldier piles set into concrete-filled drilled footings. Wood or concrete lagging would be used to retain the soil where the wall is above and below the trail. If the wall is below and supports the trail, concrete lagging may be preferred to retain the soil. Walls taller than 10 feet typically use drilled and grouted tie-back anchors into the soil. The design would incorporate integral tie-back anchorages into the soldier piles to eliminate the need for protruding, horizontal walers. Other retaining wall types included and/or under consideration for design include 6-inch retaining curb, 8-inch retaining curb, and current Caltrans Standard Plans (basis of design Caltrans 2022 Standard Plans) Retaining Walls (Type 1, Type 1A, Type 5, and Type 6).

In addition, surface water runoff along infilled drainage areas would be controlled through the installation of catch basins, sidewalk underdrains, V ditches, and/or swales to reduce the potential for undermining of the trail once constructed.

With implementation of these recommendations from the Project Geotechnical Investigation Report impacts associated with lateral spreading, liquefaction, and landsliding would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) would result in similar impacts related to geological hazards as described above under Impact GEO-2 for the *Ultimate Trail Configuration (Trail next to Rail Line)*. The Optional Interim Trail alignment would traverse the same geologic units and soil formations as the Project.

Construction of the Optional Interim Trail has fewer improvements required for waterway crossings than the Ultimate Trail Configuration; therefore, the damage from liquefaction, landslides, and/or lateral spreading would be slightly reduced because no pilings for viaduct construction would be required. However, the Optional Interim Trail would require the construction of retaining walls but fewer than the Ultimate Trail Configuration, which may require them to be founded on piles or ground anchors, as described in Impact GEO-2. In addition, surface water runoff along infilled drainage areas along the Optional Interim Trail alignment would be similarly controlled by the installation of catch basins, sidewalk underdrains, V ditches, and/or swales to reduce the potential for undermining of the trail once constructed. With implementation of these recommendations from the Project Geotechnical Investigation Reports, impacts associated with lateral spreading and liquefaction would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would require additional construction and demolition phases compared to the *Ultimate Trail Configuration (Trail next to Rail Line).* The rail line would be constructed in generally the same location as the existing alignment (prior to Part 1 removal) and would transverse the same amount of liquefiable soil, as described above for the Ultimate Trail Configuration. The rail line would be built in accordance with American Railway Engineering and Maintenance-of-Way Association, Federal Railroad Administration, and California Public Utility Commission requirements, as applicable, and would be designed to withstand adverse effects associated with lateral spreading and liquefaction. Compliance would ensure that impacts associated with lateral spreading and liquefaction would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact GEO-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would not expose residents to a risk of injury or death from landslides or seismic-related ground failure, including liquefaction, as no habitable structures are proposed. However, implementing the Optional Interim Trail requires construction activities in areas mapped with very high susceptibility for liquefaction. Implementation of recommendations from the Project Geotechnical Investigation Reports would ensure that these combined impacts would be **less than significant.** No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as for the *Optional Interim Trail (Trail*

on the Rail Line). This design option would temporarily convert the Capitola Trestle Bridge to trail use by implementing the necessary structural repairs as described in Section 2.6.2. Impacts associated with lateral spreading and liquefaction would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line),* as well as for the *Optional Interim Trail (Trail on the Rail Line).* This design option would require approximately twice as many retaining walls and an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. The design option has a traditional ramp at Coronado in lieu of the elevated pier support ramp shown for the coastal side. The retaining walls would similarly require the construction of soldier piles as described in Impact GEO-2. The impact would still be less than significant. No mitigation is required. Surface water runoff along infilled drainage areas would be similarly controlled by the installation of catch basins, sidewalk underdrains, V ditches, and/or swales to reduce the potential for undermining of the trail once constructed. Impacts associated with lateral spreading and liquefaction would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts related to landslides, liquefaction, and lateral spreading. Under either scenario, the Project would require construction of trail improvement in areas mapped with very high susceptibility for liquefaction. However, for the reasons described in the analysis above for Impact GEO-2, impacts would be reduced with the implementation of recommendations from the Geotechnical Investigation Reports. Overall, this impact of the Project with or without the Optional Interim Trail would be **less than significant**.

Threshold B:	Result in substantial soil erosion or the loss of topsoil.

Impact GEO-3 THE PROJECT MAY RESULT IN SUBSTANTIAL SOIL EROSION OR LOSS OF TOPSOIL. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

The subsurface soils identified along the Project corridor have a moderate potential for erosion. Construction of the Project could result in soil erosion or the loss of topsoil due to earthmoving activities such as excavation, grading, soil compaction and moving, soil stockpiling, slope modification, and culvert installation. Project construction would involve cut-and-fill slopes up to a maximum of 2:1. As described in **Table 2-2**, preliminary estimates include 6,025 cubic yards of cut (excavation) volume and 8,835 cubic yards of embankment (fill); therefore, an earthwork balance of cut and fill is unlikely. Although the Project corridor is generally flat, runoff during a large storm event can occur as sheet flow across the Project alignment. This runoff has the potential to result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater.

Because construction of the Project would disturb over 1 acre, it would be subject to the NPDES Construction General Permit (Order No. 2012-0006-DWQ) adopted by the State Water Resources Control Board. Compliance with the permit requires each qualifying development project to file a Notice of Intent with the State Water Resources Control Board. Permit conditions require development of a SWPPP, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Additionally, inspection of construction sites before and after storms is required to identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary. Compliance with the NPDES-required SWPPP would reduce the risk of soil erosion.

As described in Section 2.6, the Project includes BMPs to be implemented during construction including but not limited to the following:

- Limit grading activities during periods of high wind (over 15 miles per hour) or water for dust suppression.
- Water active construction areas as needed based on the activity, soil, and wind exposure.
- Apply soil stabilizers on inactive construction areas (disturbed lands unused for 4 consecutive days).
- Apply native hydro-seed or non-toxic binders to exposed areas after cut/fill operations.
- Maintain at least 2-foot freeboard in haul trucks and cover all trucks hauling dirt, sand, or other loose materials.
- Cover inactive storage piles.
- Install perimeter protection (e.g., silt fence, fiber rolls) to prevent contaminated construction runoff from leaving the construction site and to protect adjacent waterways.
- Install Project storm drain catch basin and inlet protection (e.g., inlet filters, fiber rolls, gravel bags).
- Implement additional measures in the Soil Management Plan to be prepared by the City, County, or their construction contractor.
- Install a debris containment system under the new prefabricated, clear-span bridge to be installed over Rodeo Gulch to ensure construction debris and materials do not enter Rodeo Gulch. The debris containment device shall be secured to the new bridge prior to lifting above and over the gulch for placement on the north side of the existing railroad bridge. A debris containment system would also be used under the existing Capitola Trestle Bridge if *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* or the *Optional Interim Trail (Trail on the Rail Line)* is selected and implemented.

Operation

After construction, stormwater runoff would surface flow from the new and replaced impervious surfaces into the existing drainage system, proposed drainage system, and/or natural material swale included in the trail design. All off-site flows would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the trail surfaces. General trail maintenance activities would include regular inspection for damage and signs of excessive erosion and necessary maintenance practices to continue appropriate erosion control. Section 3.8, *Hydrology and Water Quality*, provides a comprehensive analysis of the existing and proposed hydrology and drainage features of the Project.

In addition, a portion of the trail in Segment 11 along Park Way, between Grove Lane and New Brighton State Beach, would be within 100 feet of the top of a coastal bluff. As described in Section 3.5.1, Existing Conditions, the coastal bluff in this area may be susceptible to coastal erosion. The

recession of coastal bluffs happens naturally due to a series of mechanisms that can be interrelated. Bluffs recede as the soils at the face fail and are deposited at the base of the bluff. There are several reasons a bluff can fail, which include wave action, groundwater that discharges at the bluff face, natural weathering, vegetation degradation, and seismic factors. The proposed trail would be located above and approximately 60–100 feet inland from the top of the 80-foot-high coastal bluffs and not near the bluff face. Implementation of the trail would not impact the strength of the soils at the bluff face due to its location atop the bluff. In addition, as discussed above, stormwater runoff would surface flow from the new and replaced impervious surfaces to the existing drainage system, proposed drainage system, and/or natural material swale included in the trail design. All off-site flows would be similar to existing condition drainage patterns and would not result in water discharging at the face of the bluff. Therefore, the proposed trail would not exacerbate the rate of coastal erosion in this area.

As discussed in Section 3.8, with implementation of the proposed drainage facilities, impacts related to runoff and erosion would be reduced to a less than significant level.

In summary, construction and operational impacts associated with soil erosion and loss of topsoil would be less than significant. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) would result in slightly more impacts related to erosion and soil loss than implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* because it would require additional construction and demolition activities associated with removing the rail. Runoff during a large storm event could result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater during construction and demolition activities. However, similar to the Ultimate Trail Configuration, because construction would disturb over 1 acre, implementation of Optional Interim Trail Part 1 would be subject to the NPDES Construction General Permit and would require the development of a SWPPP. In addition, BMPs would be implemented during construction activities to reduce the potential for erosion and loss of topsoil, as described in Impact GEO-3.

Optional Interim Trail Part 1 would be constructed on the existing rail line. It would be located farther from the coastal bluff adjacent to Park Avenue and just west of New Brighton State Beach compared to the Project. This portion of the trail would be less susceptible to erosion than the *Ultimate Trail Configuration (Trail next to Rail Line)* and similarly would not exacerbate the rate of coastal bluff erosion in this area.

Similar to the Ultimate Trail Configuration, post-construction stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swale included in the trail design. All off-site flows would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the trail surfaces, as described in Impact GEO-3 for the *Ultimate Trail Configuration (Trail next to Rail Line)*. In addition, general trail maintenance activities would include regular inspection for damage and signs of excessive erosion and necessary maintenance practices to continue appropriate erosion control. Therefore, the impact would be **less than significant.** No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to construction of the *Ultimate Trail Configuration (Trail next to Rail Line)* and implementation of Optional Interim Trail Part 1, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would result in construction and demolition activities that could result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater during demolition and construction activities. Similarly, BMPs would be implemented during construction to reduce the risk of soil erosion and/or loss of topsoil. After construction, stormwater would flow from the rail to the existing drainage system or natural material swales that were added for the Optional Interim Trail (Part 1), which would be modified as necessary to retain similar drainage pattern. Similar to the Project, all off-site flows would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the rail line and would not exacerbate the rate of coastal bluff erosion in the portion of Segment 11 along Park Way, between Grove Lane and New Brighton State Beach. The potential impacts would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact GEO-3, under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant.** No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2 and 3) would result in more impacts related to erosion and loss of topsoil because of the additional construction activities associated with Parts 2 and 3. However, Parts 1, 2, and 3 would not be implemented concurrently, and implementation of each part would require compliance with the NPDES Construction General Permit, which requires the development of a SWPPP and implementation of BMPs during construction and demolition activities to reduce the potential for erosion and loss of topsoil. After construction, off-site flows along the Optional Interim Trail (Parts 1, 2, and 3) would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the trail surfaces. Therefore, these combined impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Implementation of the Design Option A would result in slightly more impacts related to erosion and soil loss than the Ultimate Trail Configuration because it requires additional construction activities to construct additional trail segments on each side of the Capitola Trestle Bridge. As stated in Section 2.6, Project Construction, BMPs would be implemented during construction to reduce the risk of soil erosion and/or loss of topsoil.

During construction, the impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as for the *Optional Interim Trail (Trail on the Rail Line)*, because runoff during a large storm event could occur as sheet flow across the trail alignment. This runoff has the potential to result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater, and there would be slightly more runoff from the additional at-grade trail sections on either side of the Capitola Trestle Bridge. The design of the additional at-grade trail sections would include features to channel runoff (e.g., swales, V ditches, pipes) like the rest of the Project. Therefore, during operation of this design option, stormwater would surface flow from the new paved trail into proposed storm drain infrastructure or flow off the side(s) of the bridge. Any proposed storm drain infrastructure (pipes, catch basins, inlets, swales) would ultimately discharge with energy dissipator rock into stream, matching existing drainage patterns. Point of discharge and energy dissipation may be above OHWM and above/below break in bank, and off-site flows would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the trail surfaces. Impacts associated with soil erosion and/or loss of topsoil would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. During construction, the impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as for the *Optional Interim Trail (Trail on the Rail Line)*. BMPs would be implemented during construction to reduce the risk of soil erosion and/or loss of topsoil.

Similar to the post-construction *Ultimate Trail Configuration (Trail next to Rail Line),* as well as for the *Optional Interim Trail (Trail on the Rail Line),* runoff during a large storm event could occur as sheet flow across the trail alignment. This runoff has the potential to result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater. The trail design would include features to channel runoff (e.g., swales, V ditches, pipes) like the rest of the Project. Therefore, during operation of the Inland Side of Track between Grove Lane and Coronado Street, stormwater would surface flow from the new paved trail into the existing drainage system, and off-site flows would be similar to existing condition drainage patterns, which would minimize the potential for soil erosion from the trail surfaces and would not exacerbate coastal bluff erosion.

However, under Design Option B, the trail would be moved to the inland side of the rail line and would not be located as close to the coastal bluff as the *Ultimate Trail Configuration (Trail next to Rail Line)*. Therefore, the potential for coastal bluff erosion to damage the trail in the future would be slightly reduced or postponed compared to a trail on the coastal side of the tracks. Impacts associated with soil erosion and/or loss of topsoil would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts related to erosion and loss of topsoil. Under either scenario, the runoff during a large storm event can occur as sheet flow and has the potential to result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater during construction and demolition activities. In addition, with and without the Optional Interim Trail, post-construction stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swale included in the trail design, which would minimize the potential for soil erosion from the trail

surfaces. However, the Project with the Optional Interim Trail would result in slightly increased construction and demolition activities compared to the Project without the Optional Interim Trail because the Optional Interim Trail has two additional construction phases. The optional Interim Trail would be located farther from the coastal bluff adjacent to Park Avenue and just west of New Brighton State Beach than the Project. This portion of the trail would be less susceptible to erosion than the *Ultimate Trail Configuration (Trail next to Rail Line)*. However, as discussed above, compliance with the NPDES Construction General Permit and implementation of BMPs would reduce the potential for erosion and loss of topsoil. Overall, the impact of the Project with or without the Optional Interim Trail would be **less than significant**.

Threshold D:	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.

Impact GEO-4 THE PROJECT WOULD NOT EXACERBATE THE EXISTING RISK TO LIFE OR PROPERTY RESULTING FROM EXPANSIVE SOILS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Expansive soils are associated with clay-rich sediment deposits on alluvial floodplains. The Project corridor is underlain by varying areas of low to moderately expansive clay. Implementation of the Project would include construction of a paved trail and associated infrastructure (e.g., trail viaducts/bridges, fencing, guardrails, and retaining walls). The Project would not include habitable structures and, therefore, would not expose residents to a risk of injury or death from expansive soils. However, seasonal shrinking and swelling of expansive clay soils could result in heave or settlement and damage to proposed improvements.

As stated in Section 2.6, the Project would be constructed in accordance with the recommendations included in the Project Geotechnical Investigation Reports, such as placing pavement and structural foundations upon non-expansive engineering fill (Pacific Crest Engineering 2021). In addition, in areas of human-made fill which such soils underlie, shallow structural foundations, vehicular pavement sections, or retaining wall footings would be completely excavated to undisturbed native material. Any voids or excavations created by fill removal would be backfilled with properly compacted non-expansive native soils that are free of organic and other deleterious materials or with approved imported fill. Exposed soils in pavement and/or pathway areas would be removed to a minimum depth of 8 inches below finished subgrade or as designated by a registered engineer. Areas to support concrete pavement, structural foundations, and retaining walls would be subexcavated to a minimum of 12 inches below finished subgrade or bottom of the footing, whichever is greater. Recompacted sections would extend 2 feet horizontally beyond the pavement perimeter and 3 feet beyond concrete slabs and retaining wall foundations.

With implementation of the recommendations in the Project Geotechnical Investigation Reports, impacts associated with expansive soils would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) would result in similar impacts related to expansive soils as described above under Impact GEO-4 for the *Ultimate Trail Configuration (Trail next to Rail Line).* Like the Ultimate Trail Configuration, the Optional Interim Trail alignment is underlain by the same varying areas of low to moderately expansive clay, and the trail would not include the construction of habitable structures; therefore, residents would not be exposed to a risk of injury or death from expansive soils. Additionally, Optional Interim Trail Part 1 would be constructed in accordance with the Geotechnical Investigation Report recommendations for expansive soils as described in Impact GEO-4. With implementation of the recommendations in the Project Geotechnical Investigation Reports, impacts associated with expansive soils would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would occur in the Project corridor and thus transverse expansive soil, similar to the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail. The rail line would be built in accordance with American Railway Engineering and Maintenance-of-Way Association, Federal Railroad Administration, and California Public Utility Commission requirements, as applicable, and would include recommendations for construction in areas of expansive soils. Compliance would ensure that impacts associated with expansive soils would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion for Impact GEO-4 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant.** No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would result in similar impacts related to expansive soils. Implementation of the Optional Interim Trail would follow the recommendations in the Project Geotechnical Investigation Reports. Therefore, these combined impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as for the *Optional Interim Trail (Trail on the Rail Line)*, due to the presence of underlying low to moderately expansive clay. Similar to the Project, the Optional Interim Trail on the Capitola Trestle Bridge would be constructed in

accordance with the recommendations included in the Project Geotechnical Investigation Reports. Impacts associated with expansive soils would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would be similar to the impact described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as for the *Optional Interim Trail (Trail on the Rail Line)*, due to the presence of underlying moderately expansive clay. Similar to the Project, this design option would be constructed in accordance with the recommendations included in the Project Geotechnical Investigation Reports. Impacts associated with expansive soils would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts related to expansive soils. Under either scenario, the Project would construct trail improvement in areas underlain by varying areas of low to moderately expansive clay. However, for the reasons described in the analysis above for Impact GEO-4, impacts would be reduced with the implementation of recommendations from the Geotechnical Investigation Reports. Overall, the impact of the Project with or without the Optional Interim Trail would be **less than significant**.

Threshold F:	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact GEO-5 GROUND-DISTURBING ACTIVITIES DURING PROJECT CONSTRUCTION MAY DIRECTLY OR INDIRECTLY DESTROY A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGIC FEATURE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

The Project corridor consists of an existing railroad; thus, no undisturbed sediments exist at the surface within the Project corridor. Therefore, it was determined that a paleontological field survey was unlikely to yield information pertinent to the analysis. However, given that a portion of the Project alignment is within 100 feet of a bluff edge, pursuant to Chapter 17.56 of the Capitola Municipal Code, Rincon Consultants, Inc., archaeologists searched for paleontological resources within the Project corridor during the cultural resources field survey in May 2023. None were identified.

Based on the record search and literature review, the paleontological sensitivity of the geologic units underlying the Project corridor was determined in accordance with criteria set forth by the SVP (SVP 2010). As shown on **Figures 3.5-3a–d** and discussed in Section 3.5.1, five geologic units underlie the Project corridor. Quaternary basin deposits and Quaternary alluvium have low paleontological sensitivity because, due to their Holocene age, they are likely too young to preserve paleontological resources. Quaternary alluvial fan deposits, Quaternary marine terrace deposits, and the Purisima Formation have high paleontological sensitivity because these geologic units are known to yield significant paleontological resources in the County and throughout California

(Boessenecker et al. 2014; Bradley and Addicott 1968; Jefferson 2010; PBDB 2023; UCMP 2023). Paleontological sensitivity of the five geologic units underlying the Project corridor is shown in **Table 3.5-2**.

Ground-disturbing activities within previously undisturbed sediments with high paleontological sensitivity could result in significant impacts to paleontological resources (**Table 3.5-2**). Impacts would be significant if construction activities resulted in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data.

The Geotechnical Investigation Report prepared for the Project is based on an analysis of 26 borings along the Project corridor (Pacific Crest Engineering 2021). The borings identify areas along the corridor that have been overlain with artificial fill, which does not have potential to include fossils. These borings generally encountered between 1 and 6 feet of artificial fill except for certain areas of Segment 11 associated with infilled drainages, such as the New Brighton State Beach roadway crossing, Borregas Creek, and Stream 633, which contained up to 40 feet of artificial fill. Excavations for the Project, including cut and fill for slope building, storm drain installation, and as-needed utility trench work, are anticipated to reach up to 6 feet below the surface. Such excavations in sediments with high paleontological sensitivity could significantly impact paleontological resources. Pilings for viaducts and clear-span bridges would be drilled up to 20 feet deep; however, these activities are only anticipated to occur in areas underlain by low-sensitivity sediments (**Figures 3.5-3a–d**) or artificial fill (Pacific Crest Engineering 2021) and, therefore, do not have the potential to significantly impact paleontological resources. Overall, because there is the potential for direct and indirect impacts to paleontological resources from excavations during Project construction in Segments 10 and 11, this impact would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Mitigation Measure GEO-5 Implement Paleontological Resources Protection Measures during Construction in High Sensitivity Areas

The following measures shall be implemented by the County of Santa Cruz during Project excavation activities exceeding 1 foot in depth in Segments 10 and 11 in areas mapped as geologic units with high paleontological sensitivity (i.e., Quaternary marine terrace deposits, Quaternary alluvial fan deposits, and Purisima Formation). Areas along Segments 10 and 11 that do not have high sensitivity for paleontological resources, including the areas mapped as geologic units with low paleontological sensitivity, do not require the following measures.

1. **Retain a Qualified Professional Paleontologist.** Prior to excavation, the County shall retain a qualified professional paleontologist who is defined by the Society of Vertebrate Paleontology (2010) as an individual, preferably with an MS or PhD in paleontology or geology, who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for at least 2 years. The qualified professional paleontologist shall direct all mitigation measures related to paleontological resources.
2. **Prepare a Paleontological Worker Environmental Awareness Program.** Prior to the start of construction, the qualified professional paleontologist or their designee shall conduct a paleontological Worker Environmental Awareness Program training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.
3. **Monitor for Paleontological Resources during Construction.** As determined appropriate by the qualified professional paleontologist, paleontological monitoring shall be conducted during initial

excavations within sediments assigned high paleontological sensitivity (i.e., Quaternary marine terrace deposits, Quaternary alluvial fan deposits, and Purisima Formation). Paleontological monitoring shall be conducted by a paleontological monitor with experience with collection and salvage of paleontological resources and who meets the minimum standards of the Society of Vertebrate Paleontology (2010) for a paleontological resources monitor. The duration and timing of the monitoring shall be determined by the qualified professional paleontologist based on the observation of the geologic setting from initial ground disturbance and subject to the review and approval by the County. The qualified professional paleontologist may determine that full-time monitoring is not warranted based on the specific geologic conditions once the full depth of excavations has been reached and may recommend that monitoring be reduced to periodic spot-checking or ceased entirely. The qualified professional paleontologist may determine that monitoring shall be reinstated if any new ground disturbances are required, and reduction or suspension shall be reconsidered by the qualified professional paleontologist at that time.

In the event of a fossil discovery by the paleontological monitor or construction personnel, all work in the immediate vicinity of the find shall cease, and a qualified professional paleontologist shall evaluate the find before construction activity in the area resumes. If it is determined that the fossil is scientifically significant, the qualified professional paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources:

A. **Fossil Salvage.** If fossils are discovered, the paleontological monitor shall have the authority to halt or temporarily divert construction equipment within 50 feet of the find until the paleontological monitor and/or qualified professional paleontologist evaluate the discovery and determine if the fossil may be considered significant. Typically, fossils can be safely salvaged quickly by a single paleontological monitor and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically sensitive deposits.

B. **Fossil Preparation and Curation**. Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection along with all pertinent field notes, photographs, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the qualified professional paleontologist.

4. **Prepare a Final Paleontological Mitigation Report.** Upon completion of ground-disturbing activity (and curation of fossils if necessary), the qualified professional paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts associated with the Project. The report shall include a summary of the field and laboratory methods, an overview of the Project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the County. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

Operation

Operation of the Project would not disturb paleontological resources because trail users would not disturb paleontological resources, and there would be no ground-disturbing activities during operation. **No impact** would occur. No mitigation is required.

In summary, this impact would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The Optional Interim Trail alignment encompasses the same geologic units with the same paleontological sensitivity as the *Ultimate Trail Configuration (Trail next to Rail Line)*. Although the alignments vary slightly, with the Optional Interim Trail being located on top of the existing rail line, the underlying geology and associated paleontological sensitivity are the same for both alignments. Implementation of Optional Interim Trail (Part 1) includes demolition of the existing rail and construction of the Optional Interim Trail in generally the same location. Excavations for construction of the Optional Interim Trail would reach depths of 6 feet, similar to the *Ultimate Trail Configuration (Trail next to Rail Line)*. However, since the Optional Interim Trail would be built along the existing rail line, 1 to 6 feet of fill would be expected beneath the surface before native sediments would occur per the boring results of the Geotechnical Investigation Report (Pacific Crest Engineering 2021). However, because excavation would still occur down to 6 feet for the Optional Interim Trail, there would be the potential to disturb paleontological resources beneath the artificial fill. Therefore, Mitigation Measure GEO-5 would be required for the Optional Interim Trail. This impact would be **less than significant with mitigation** (Mitigation Measure GEO-5).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would disturb only previously disturbed sediments within the Santa Cruz County Regional Transportation Commission right-of-way. There would be no excavation of previously undisturbed soils. Therefore, demolition of the Optional Interim Trail would have a **less than significant impact** to paleontological resources. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Potential impacts to paleontological resources for the construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration. Refer to the discussion under Impact GEO-5 for the *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Combined Effect of Interim Trail Parts 1, 2, 3

Combined effects of the Optional Interim Trail (Parts 1, 2, and 3) on paleontological resources would **be less than significant with mitigation** (Mitigation Measure GEO-5). There would be the potential to unearth paleontological resources during ground-disturbing activities, and implementation of Mitigation Measure GEO-5 would be required during Parts 1 and 3 to reduce impacts to paleontological resources.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would

be replaced on the timber bridges of the Capitola Trestle Bridge. Pile installation typically does not allow for monitoring or recovery of paleontological resources. Regardless, grading and excavation activities associated with the proposed Project with this design option would be similar to the proposed Project without the design option and would have the potential to encounter paleontological resources, if present. Mitigation Measure GEO-5 would be implemented under this design option, which would require monitoring, reporting, and, if necessary, salvaging and curation for paleontological resources. Impacts would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Grading and excavation activities associated with this design option would be similar to the proposed Project and would have the potential to encounter paleontological resources, because the geologic units on each side of the track would be identical. Mitigation Measure GEO-5 would be implemented under this design option, which would require monitoring, reporting, and, if necessary, salvaging and curation for paleontological resources. Impacts would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would cross the same geologic units, and excavation would occur to similar depths. However, the Optional Interim Trail would include two additional phases of Project construction and ground-disturbing activities. Therefore, the potential to significantly impact paleontological resources would be greater for the Project with the Optional Interim Trail compared to the Project without the Optional Interim Trail. Mitigation Measure GEO-5 would be required for the Project with and without the Optional Interim Trail to monitor, report, and, if necessary, salvage and curate for paleontological resources. Impacts would be **less than significant with mitigation** (Mitigation Measure GEO-5).

3.5.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
GEO-1. The Project would not exacerbate the existing exposure of people or structures to risks from strong seismic ground shaking.	LTS	LTS Similar	LTS Similar	LTS Similar
GEO-2. The Project may exacerbate exposure of the public to liquefaction or landslide hazards and may be located on a geological unit or soil that would become unstable as a result of lateral spreading, landslides, and liquefaction.	LTS	LTS Similar but slightly less because fewer water crossing structures would be required	LTS Less because no structures would be constructed	LTS Similar
GEO-3. The Project may result in substantial soil erosion or loss of topsoil.	LTS	LTS Similar, slightly more severe due to the required rail demolition activities but slightly less due to the location away from the coastal bluffs	LTS Similar but slightly more severe due to the required Optional Interim Trail demolition activities	LTS Similar
GEO-4. The Project would not exacerbate the existing risk to life or property resulting from expansive soils.	LTS	LTS Similar	LTS Similar	LTS Similar
GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**LTSM**	**LTSM** Substantially similar	NI Less	**LTSM** Less

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

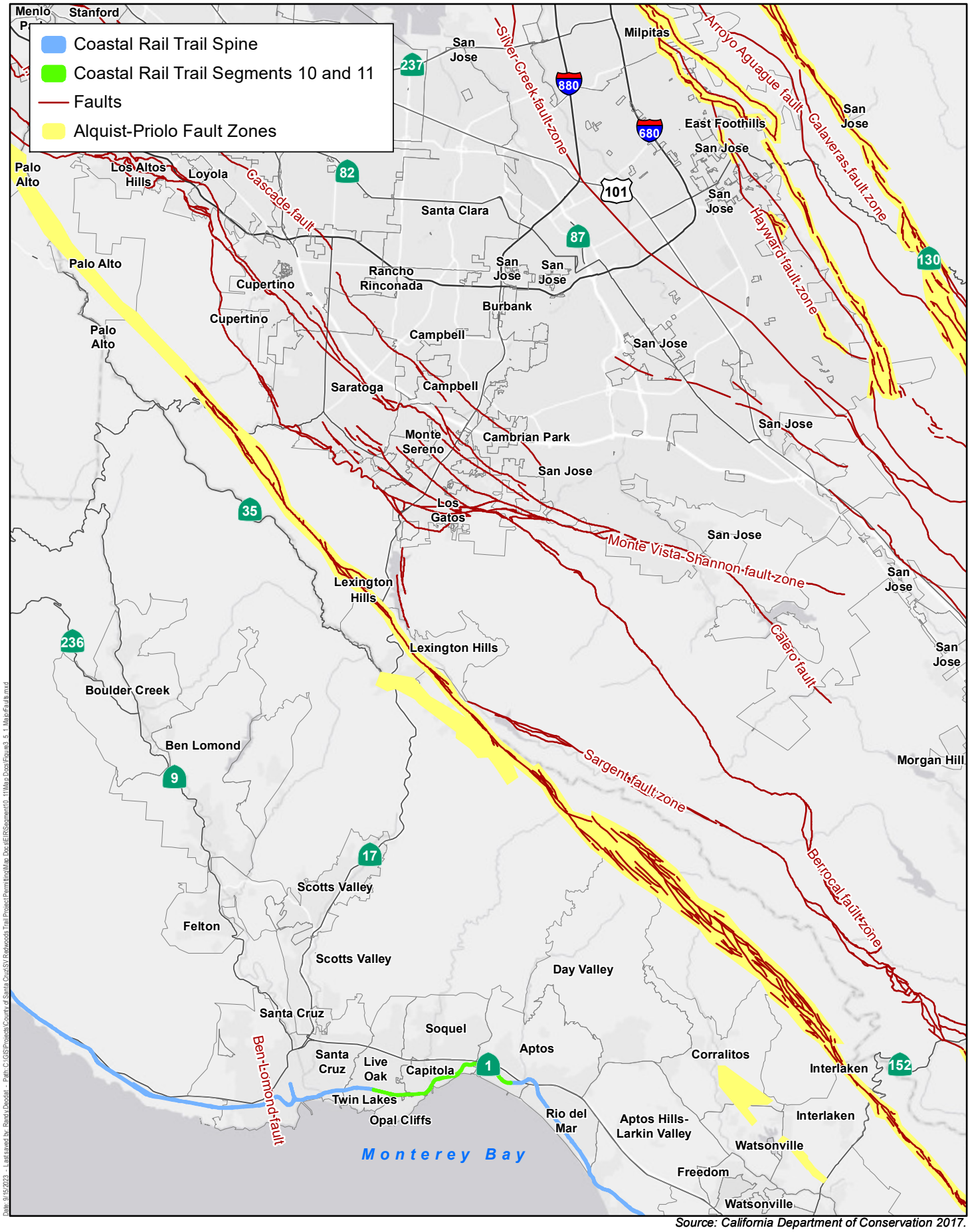
NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure



Source: California Department of Conservation 2017.

Harris & Associates

N

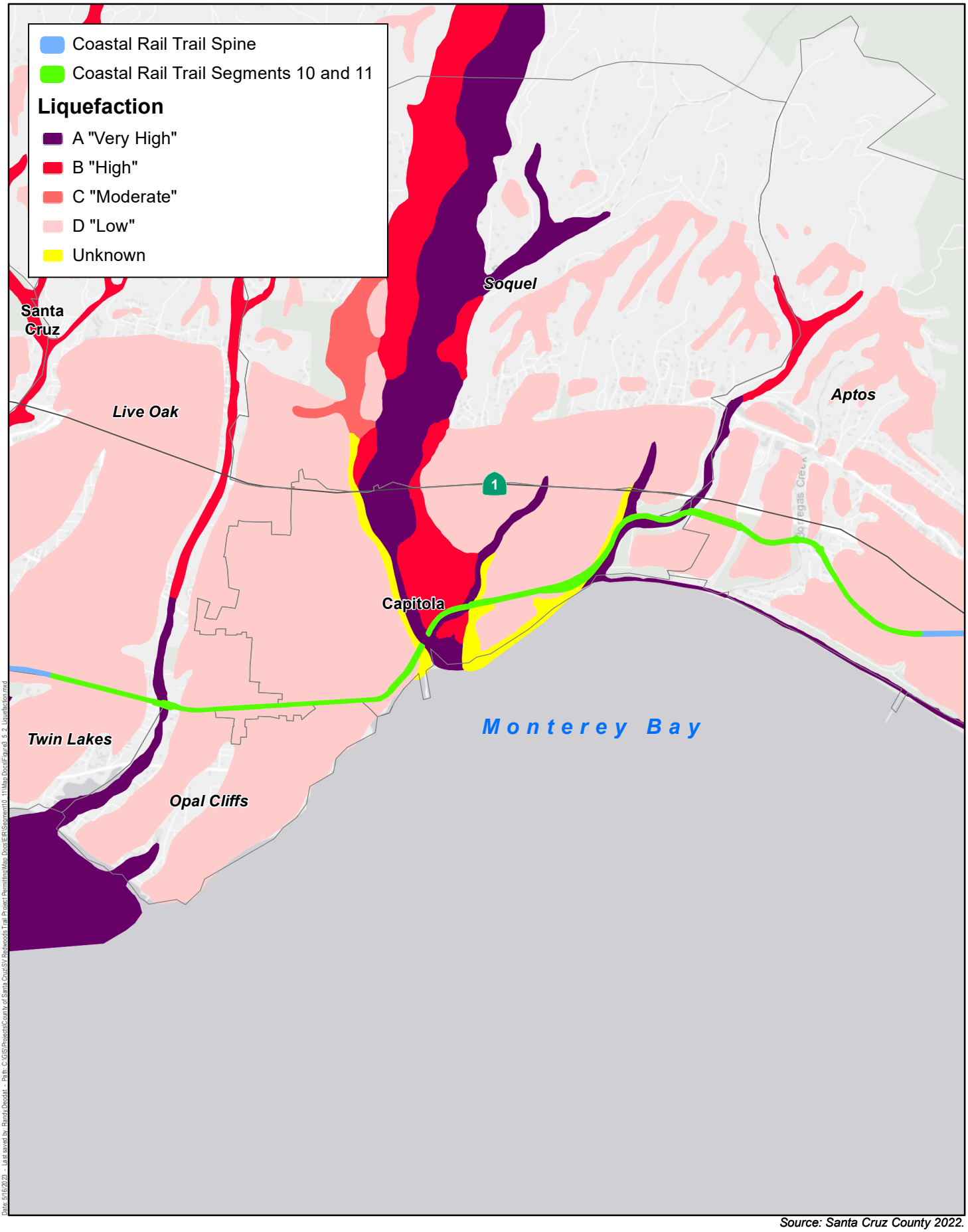
0 2.5 5

Miles

Figure 3.5-1

Major Faults

Coastal Rail Trail Segments 10 and 11



Source: Santa Cruz County 2022.

Harris & Associates

N

0 0.5 1

Miles

Figure 3.5-2

Liquefaction Zones

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

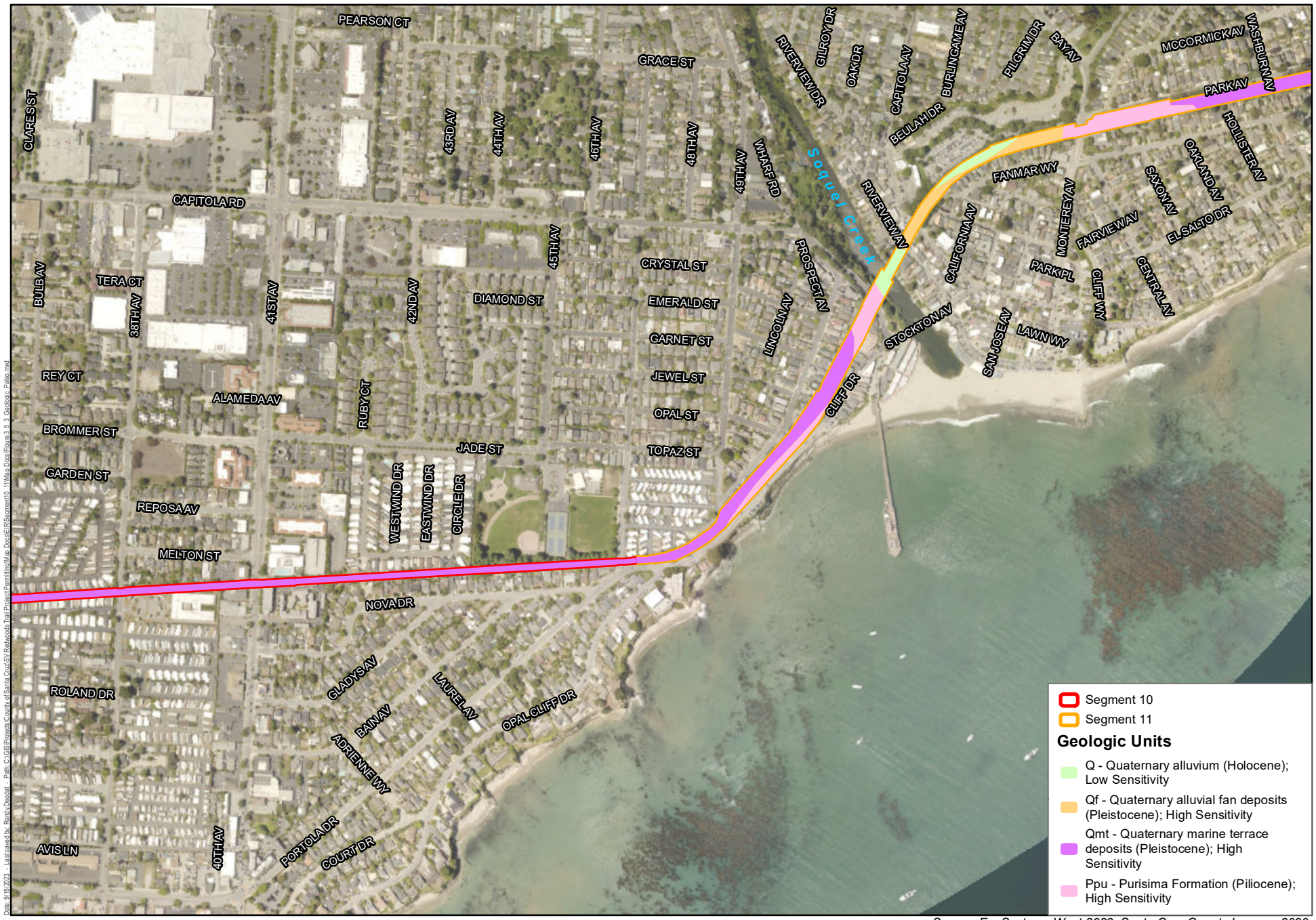
N

0 400 800

Feet

Figure 3.5-3a

Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 400 800

Feet

Figure 3.5-3b

Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

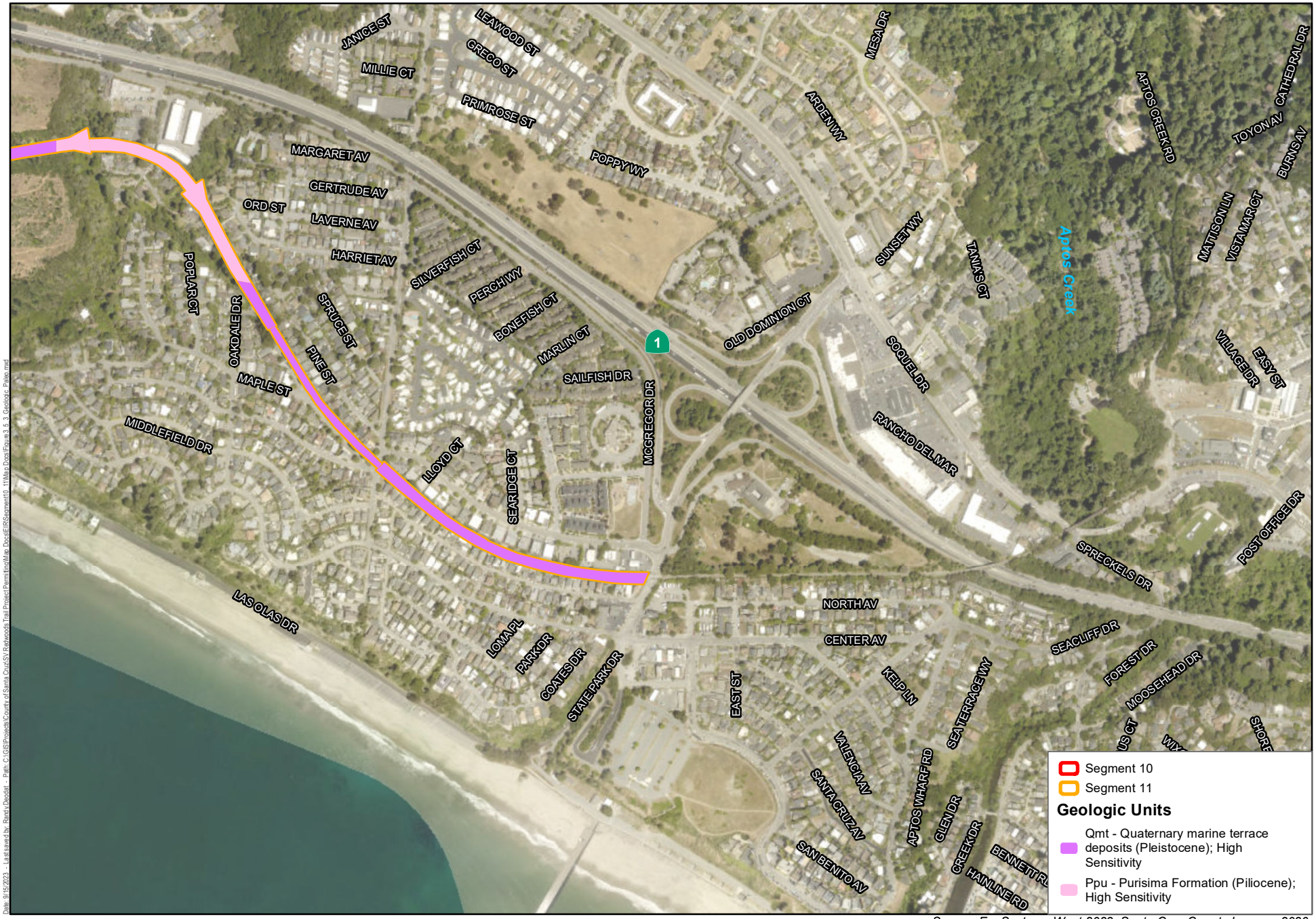
N

0 400 800

Feet

Figure 3.5-3c

Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity



Date: 9/15/2023 - Last saved by: Randy Diedat - Path: C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project\Permitting\Map Docs\EIR\Segment10_11\Map Docs\Figure3_5_3_Geologic_Paleo.mxd

Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 400 800

Feet

Figure 3.5-3d

Segments 10 and 11 Geologic Map and Paleontological Resources Sensitivity

3.6 Greenhouse Gas Emissions/Climate Change

This section describes regional greenhouse gas (GHG) emission sources and inventories and the regulatory framework applicable to GHG emissions and evaluates impacts related to GHG emissions resulting from the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* construction and operation. **Table 3.6-1** summarizes identified Project impacts related to GHG emissions/climate change.

Table 3.6-1 Summary of Project Impacts Related to Greenhouse Gas Emissions/ Climate Change[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
GHG-1. The Project would not result in GHG emissions that would have a significant impact on the environment.	Less than Significant	None Required	Less than Significant
GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.[b]	Potentially Significant	BIO-7a, BIO-7b, BIO-7c	Significant and Unavoidable
GHG-3. The Project would not expose people or structures to substantial risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.	Less than Significant	None Required	Less than Significant
Beneficial Effect: The Project would provide an alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.			

[a] The impacts and mitigation measures apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Tral (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[b] The impact was determined Potentially Significant, pending the assessment of feasible mitigation to reduce the impact to a less than significant level. Mitigation has been identified to reduce the impact, but it cannot be reduced to a less than significant level. Therefore, the impact is determined Significant and Unavoidable after mitigation.

GHG = greenhouse gas

3.6.1 Existing Conditions

Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans, along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years, and the prevailing scientific opinion on climate change is that most of the observed increase in global average temperatures since the mid-20th

century is likely due to the observed increase in anthropogenic (human-induced) GHG concentrations (IPCC 2013).

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. They are present in the atmosphere naturally and are released by natural sources or formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. The following discusses the primary GHGs of concern.

Carbon Dioxide

The global carbon cycle is made up of large carbon flows and reservoirs. Billions of tons of carbon in the form of CO_2 are absorbed by oceans and living biomass (i.e., sinks) and are emitted to the atmosphere annually through natural processes (i.e., sources). When in equilibrium, carbon fluxes among these various reservoirs are roughly balanced (USEPA 2023a). CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration, with the first conclusive measurements being made in the last half of the 20th century. Currently, CO_2 represents an estimated 65% of total GHG emissions (USEPA 2023b). The largest source of CO_2 and of overall GHG emissions is fossil fuel combustion.

Methane

Methane (CH_4) is an effective absorber of radiation, although its atmospheric concentration is less than that of CO_2 and its lifetime in the atmosphere is limited to 10 to 12 years. Since 1750 (pre-industrial years), the concentration of CH_4 in the atmosphere has increased by 150%, although emissions have declined from 1990 levels (IPCC 2013). Anthropogenic sources of CH_4 include agricultural activities, waste management, energy use, and biomass burning (USEPA 2023b).

Nitrous Oxides

Concentrations of N_2O began to rise at the beginning of the industrial revolution and continue to increase at a relatively uniform growth rate (NOAA 2023). N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Use of these fertilizers has increased over the last century. Agricultural soil management and mobile source fossil fuel combustion are the major sources of N_2O emissions.

Fluorinated Gases

Fluorinated gases are powerful GHGs that are emitted from a variety of industrial processes. Fluorinated gases are used as substitutes for ozone-depleting substances such as chlorofluorocarbons, hydrochlorofluorocarbons, and halons, which have been regulated since the mid-1980s because of their ozone-destroying potential and were phased out under the Montreal Protocol (1987) and Clean Air Act Amendments of 1990. Electrical transmission and distribution systems account for most SF_6 emissions, while perfluorocarbon emissions result from semiconductor manufacturing and as a by-product of primary aluminum production. The Project does not propose any new sources of fluorinated gases, and these gases are not included in the analysis below.

Global Warming Potential

Different types of GHGs have varying global warming potential (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). The carbon dioxide equivalent (CO_2e) metric is a consistent methodology used for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure. CO_2e is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of 1. By contrast, CH_4 has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule-per-molecule basis. Therefore, 1 metric ton (MT) of CH_4 is equal to 25 MT CO_2e. The GWP of N_2O is approximately 298 times that of CO_2. Fluorinated gases are typically emitted in smaller quantities than CO_2, CH_4, and N_2O, but these compounds have much higher GWPs. SF_6 is the most potent GHG the Intergovernmental Panel on Climate Change (IPCC) has evaluated, with a GWP of 23,500 (CAPCOA 2022). The total emissions of the pollutants of concern for the Project (CO_2, CH_4, and N_2O) are reported together using the CO_2e metric in this analysis.

Greenhouse Gas Emissions Inventories

Worldwide anthropogenic emissions of GHG were approximately 49,000 million metric tons (MMT) CO_2e in 2010. CO_2 emissions from fossil fuel use accounts for 32,000 MMT. CO_2 emissions from all sources account for 76% of the total. Methane emissions account for 16% of GHGs, and N_2O emissions account for 6% (IPCC 2014).

Total U.S. GHG emissions were 6,340 MMT CO_2e in 2021. Emissions increased by 6% in 2021. The increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion. This increase in fossil fuel consumption emissions was due primarily to economic activity rebounding after the height of the COVID-19 pandemic. Relative to 2005, gross emissions in 2021 have decreased by 17%. CO_2 emissions from fossil fuel combustion continue to be the largest source of U.S. GHG emissions, accounting for 92% of emissions in 2021. Transportation was the largest emitter of CO_2 in 2020 followed by electric power generation (USEPA 2023c).

Based on the California Air Resources Board (CARB) California Greenhouse Gas Inventory for 2000–2020, California produced 369.2 MMT CO_2e in 2020 (CARB 2022a). Transportation is the major source of GHG in California, contributing approximately 37% of the state's total GHG emissions. This is a smaller share than in prior years, as the transportation sector saw a significant decrease in 2020, most likely as a result of the COVID-19 pandemic. Industrial operations are the second largest source, contributing 20% of the state's GHG emissions. California's GHG emissions have followed a declining trend since 2007. Specifically, emissions from the electricity sector continue to decline due to growing zero GHG energy generation sources.

An inventory of GHG emissions in the City of Capitola (City) was prepared as part of the City's Climate Action Plan (CAP). In 2010, the community emitted approximately 88,091 MT CO_2e. Transportation was the highest contributor to City emissions, accounting for 65% of emissions. Residential and commercial energy accounted for another 33% of emissions (City of Capitola 2015).

An inventory of GHG emissions in the County of Santa Cruz (County) was prepared as part of the County's Climate Action and Adaptation Plan (CAAP). In 2019, total emissions for community activities were approximately 691,262 MT CO_2e. The 2019 inventory indicates that 51% of the community emissions were generated by passenger vehicles (County of Santa Cruz 2022). Residential natural gas was the second largest contributor, with approximately 16% of community emissions.

Potential Effects of Climate Change

Potential impacts of climate change in California may include sea level rise, loss of water supply and snow pack, more numerous large forest fires, damage to agriculture, public health impacts, and habitat destruction (OAG 2022). The Santa Cruz County and City of Capitola Coastal Climate Change Vulnerability Reports were prepared for the County and City to provide greater detail on the risks to resources and assets from coastal climate change (Central Coast Wetlands Group 2017a, 2017b). The trail alignment is included in the study area for both vulnerability reports. The most relevant effects of climate change to the Project corridor are those that could result in potential damage to a trail located in coastal communities: sea level rise, storm flooding, and coastal bluff erosion. Sea level rise and storm flooding are described below. Coastal bluff erosion is addressed in Section 3.5, *Geology and Soils*. The area most at risk for future sea level rise and storm flooding is based on data from the Coastal Resilience Program web mapping tool for year 2100 and the Santa Cruz County and City of Capitola Coastal Climate Change Vulnerability Reports. The Coastal Resilience Program is led by The Nature Conservancy in partnership with practitioners around the world who are applying spatial planning innovations to coastal hazard risk, resilience, and adaptation issues (Nature Conservancy 2023).

Sea Level Rise

The sea level along California's coasts has risen nearly 8 inches in the past century and is projected to rise by a total of 20 to 55 inches by the end of the century (OAG 2022). A rise in sea level could result in coastal flooding and bluff erosion and jeopardize California's water supply due to saltwater intrusion. In Santa Cruz County, areas below 3 meters in elevation are most at risk, including roads along Cliff Drive (Central Coast Wetlands Group 2017a). Coastal properties currently at risk for flooding would continue to be most at risk for coastal flooding, but risks to inland areas would increase due to rising riverine waters (Central Coast Wetlands Group 2017b). Portions of Segment 11 from Jade Street Park to New Brighton State Beach are in the potential sea level rise hazard area, as shown on **Figure 3.6-1***, Potential Future Tidal Inundation Area* (Nature Conservancy 2023).

Storm Flooding

Higher sea levels could worsen existing flood hazards by increasing the frequency of flooding during storms, increasing the extent of storm flooding inland, and preventing drainage of stormwaters (DWR 2016). The Coastal Climate Change Vulnerability Reports identified over 400 residential properties at risk for coastal storm flooding and bluff erosion in Santa Cruz County, and the downtown area of the City is a high risk for flooding (Central Coast Wetlands Group 2017a, 2017b). Portions of Segment 11 from Jade Street Park to New Brighton State Beach are adjacent to the potential future storm flooding hazard areas, as shown on **Figure 3.6-2**, *Potential Future Storm Flooding Hazard Area* (Nature Conservancy 2023).



Source: Nature Conservancy 2022; ESRI Basemap 2022

Harris & Associates

N

0 1,500 3,000

Feet

Figure 3.6-1

Potential Future Tidal Inundation Area

Coastal Rail Trail Segments 10 and 11



Source: Nature Conservancy 2022; ESRI Basemap 2022

Harris & Associates

N

0 2,000 4,000

Feet

Figure 3.6-2

Potential Future Storm Flooding Hazard Area

Coastal Rail Trail Segments 10 and 11

3.6.2 Regulatory Setting

This section describes the international, federal, state, regional, and local plans, policies, and laws relevant to GHG emissions/climate change for the Project.

International

Intergovernmental Panel on Climate Change

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent IPCC reports emphasized the scientific consensus that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

Federal

U.S. Environmental Protection Agency Endangerment Finding and Cause or Contribute Finding

In the Endangerment Finding, signed in December 2009, the administrator of the U.S. Environmental Protection Agency (USEPA) found that GHGs in the atmosphere threaten the public health and welfare of current and future generations. Although the Endangerment Finding does not place requirements on industry, it is an important step in the USEPA's process to develop regulations. This action was a prerequisite to finalizing the USEPA's proposed GHG emission standards for light-duty vehicles. In the USEPA's Cause or Contribute Finding, the administrator found that the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare (NRDC 2017).

State

Executive Order S-3-05

On June 1, 2005, California's Governor announced, through Executive Order (EO) S-3-05, the following GHG emissions reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels.
- By 2020, California shall reduce GHG emissions to 1990 levels.
- By 2050, California shall reduce GHG emissions to 80% below 1990 levels.

EO S-3-05 directed the Secretary of the California Environmental Protection Agency to coordinate efforts to meet the targets with the heads of other state agencies (the Secretary of the California Business, Transportation and Housing Agency; Secretary of the California Department of Food and Agriculture; Secretary of the California Resources Agency; Chairperson of CARB; Chairperson of the California Energy Commission; and the President of the California Public Utilities Commission). This group became the California Climate Action Team. In 2006, the State Legislature passed the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which created a comprehensive, multiyear program to reduce GHG emissions in California, as described below. In 2016, the State Legislature passed Senate Bill (SB) 32, which codifies a 2030 GHG emissions reduction target of 40% below 1990 levels.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, the State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California. GHGs as defined under AB 32 include CO_2, CH_4, N_2O, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, and SF_6. Under AB 32, CARB has the primary responsibility for reducing GHG emissions and continues with the Climate Change Action Team to coordinate statewide efforts and promote strategies that can be undertaken by many other California agencies. AB 32 required CARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020.

In general, AB 32 directed CARB to do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020 and update the Scoping Plan every 5 years
- Maintain and continue reductions in emissions of GHG beyond 2020
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010
- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions
- Convene an Environmental Justice Advisory Committee to advise CARB in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emissions reduction measures

Regarding the first bulleted item above, the initial 2008 Scoping Plan was approved by CARB on December 11, 2008, and included measures to address GHG emissions reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures (CARB 2008).

The 2017 Scoping Plan was adopted in November 2017. The 2017 Scoping Plan incorporates the 2030 target set by EO B-30-15 and codified by SB 32. It identifies how the state can reach the 2030 climate target and substantially advance toward our 2050 climate goal to reduce GHG emissions by 80% below 1990 levels (CARB 2017).

A Draft 2022 Scoping Plan has been made available for public review but has not yet been adopted. The 2022 Scoping Plan assesses progress toward the statutory 2030 target and identifies a path to achieving carbon neutrality by 2045 (CARB 2022b).

Executive Order B-55-18

Governor Brown signed EO B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net-negative emissions thereafter (CARB 2022b). Policies and programs undertaken to achieve this goal include the following:

- Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities.
- Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water quality, and native plants and animals.

As described above, a Draft 2022 Scoping Plan has been prepared to identify and recommend measures to achieve the carbon neutrality goal.

Senate Bill 32

Effective January 1, 2017, SB 32 (Stats. 2016, Ch. 249) added a new Section 38566 to the California Health and Safety Code. It states that "in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the California Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by the year 2030, to reduce its statewide GHG emissions so that they are 40% below those that occurred in 1990.

Executive Order S-13-08

On November 14, 2008, the Governor issued EO S-13-08, the Climate Adaptation and Sea Level Rise Planning Directive that provides clear direction for how the state should plan for future climate impacts. EO S-13-08 identifies the following four key actions to reduce the vulnerability of California to climate change:

1. Initiate California's first statewide Climate Change Adaptation Strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies
2. Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California in order to inform state planning and development efforts
3. Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new and existing projects
4. Initiate studies on critical infrastructure projects and land use policies vulnerable to sea level rise

In accordance with EO S-13-08, the Climate Change Adaptation Strategy was developed by the California Natural Resources Agency, in coordination with the California Environmental Protection Agency; Climate Change Action Team; the Business, Transportation, and Housing Agency; California Department of Public Health; and other key stakeholders. Adopted in 2009, the Climate Change Adaptation Strategy synthesizes the most up-to-date information on expected climate change impacts to California for policy makers and resource managers, provides strategies to promote resiliency to these impacts, and develops implementation plans for short- and long-term actions (CNRA 2009).

In 2021, the California Natural Resources Agency released an update to the Climate Change Adaptation Strategy. The update provides recommendations and a framework for policy initiatives in response to the impacts of climate change, with additional considerations for fully integrating equity into California's climate resilience programs (CNRA 2021).

Assembly Bill 1279

AB 1279, the California Climate Crisis Act, enacted in September 2022, updates the goals of AB 32. The bill established a statewide goal to achieve net-zero GHG emissions by 2045 and achieve and maintain net-negative GHG emissions thereafter. Additionally, the bill established a specific target for statewide anthropogenic GHG emissions to be reduced to at least 85% below the 1990 levels by 2045. The bill requires CARB to work with relevant state agencies to ensure that updates to the Scoping Plan identify and recommend measures to achieve these policy goals and to identify and

implement a variety of policies and strategies that enable CO_2 removal solutions and carbon capture, utilization, and storage technologies in California, as specified. The bill also requires CARB to submit an annual progress report. The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85% below 1990 levels no later than 2045, as directed by Assembly Bill 1279 (CARB 2022b).

Regional

Association of Monterey Bay Area Governments Metropolitan Transportation Plan and the Sustainable Communities Strategy

The 2045 Metropolitan Transportation Plan and Sustainable Communities Strategy (2045 MTP/SCS) was adopted in June 2022 (AMBAG 2022a). The MTP/SCS provides a comprehensive planning document that coordinates land use patterns and transportation investments across the region with the objective of developing an integrated, multi-modal transportation system. The plan seeks to reduce regional GHG emissions by providing coordinated transit and alternative transportation corridors. The Monterey Bay Sanctuary Scenic Trail (MBSST), including the Project corridor, is identified as a regional pedestrian and bicycle facility in the 2045 MTP/SCS.

Local

Santa Cruz County Climate Action and Adaptation Plan

The County CAAP, approved in 2022, strives to meet the SB 32 target of reducing GHG emissions by 40% below 1990 levels before 2030 while simultaneously establishing a policy framework to achieve the longer-term target of net-negative GHG emissions by 2045 (AB 1279). The CAAP includes 29 strategies in seven sectors to achieve these goals. Relevant strategies include increasing the use of public transportation, walking, or bicycling for commute trips by 15%. Natural and working lands strategies include conservation of natural habitat and increasing the urban canopy.

Santa Cruz County General Plan and Local Coastal Program

Several elements of the County General Plan include objectives and policies that would reduce community GHG emissions by encouraging reduced use of resources, including fuel, energy, and water. As described in greater detail in Section 3.9, *Land Use and Planning*, the County General Plan was updated as part of the County's Sustainability Update to make the County General Plan and County Code consistent with new state laws and new regional and local plans related to sustainable development. The Sustainability Update involves revisions to several County General Plan goals and policies that encourage or address the Project. The Sustainability Update revised Policy PPF-2.7.1, Trails Master Plan, which encourages implementation of the MBSST, and Implementation Policy PPF-2.7f, which encourages incorporation of the MBSST into a trails system and future County Trails Master Plan. Additional objectives and policies pertinent to GHG emissions are listed by element below (County of Santa Cruz 1994).

CIRCULATION ELEMENT

- **Objective 3.2 – Vehicle Occupancy.** To increase the average number of persons per commute vehicle to 1.35 persons per vehicle, while pursuing a goal of reducing automobile trips to a maximum of 60 percent of all trips through encouragement of alternative transportation by transit, bicycles, and walking.
- **Objective 3.6 – Transit Promotion.** To promote opportunities for regular transit use to commute to school, shopping, employment, and recreational resources.
- **Transit Promotion Policy 3.6.1 – Transit-Friendly Design.** Locate and design public facilities and new developments to facilitate transit access, both within the development and outside it.

CONSERVATION AND OPEN SPACE ELEMENT

- **Objective 5.18 – Air Resources.** To improve the air quality of Santa Cruz County by meeting or exceeding state and federal ambient air quality standards, protect County residents from the health hazards of air pollution, protect agriculture from air pollution induced crop losses and prevent degradation of the scenic character of the area.
- **Air Resources Policy 5.18.7 – Alternatives to the Automobile.** Emphasize transit, bicycles, and pedestrian modes of transportation rather than automobiles.
- **Air Resources Policy 5.18.8 – Encouraging Landscaping.** Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.
- **Air Resources Policy 5.18.9 – Greenhouse Gas Reduction.** Implement state and federal legislation promoting the national goal of 35 percent reduction of carbon dioxide and other GHGs by 2000.

City of Capitola Climate Action Plan

The City adopted a CAP in 2015 with the GHG reduction goal of reducing community-wide GHG emissions by 5% from 2010 levels by 2020 and by 81% from 2010 levels by 2050 (City of Capitola 2015). Programs to achieve this goal include vehicle miles traveled (VMT) reduction measures that include increased bicycle ridership. Although the plan did not identify quantifiable GHG reductions from open space measures, enhancing urban forests is identified as a CAP measure.

City of Capitola General Plan

The Land Use and Conservation and Open Space Elements of the Capitola General Plan include objectives and policies that would reduce community GHG emissions by encouraging reduced use of resources, including fuel, energy, and water. Key objectives and policies pertinent to reducing GHG emissions are listed by element below (City of Capitola 2019).

LAND USE ELEMENT

- **Goal LU-3.** Promote sustainable land use patterns that encourage transportation alternatives and reduce greenhouse gas emissions.
    - **Policy LU-3.5, Pedestrian and Bicycle Connections.** Require new development to provide for pedestrian and bicycle connections between residential and commercial areas.

CONSERVATION AND OPEN SPACE ELEMENT

- **Goal OSC-2.** Reduce greenhouse gas emissions in Capitola as called for by Capitola's Climate Action Plan.
  - **Policy OSC-2.1, Climate Action Plan.** Ensure that all City policies, programs, and actions are consistent with the Capitola Climate Action Plan.
  - **Policy OSC-2.2, Regional Collaboration.** Participate fully in regional, State, and federal efforts to reduce greenhouse gas emissions and mitigate the impacts resulting from climate change.
  - **Policy OSC-2.3, Regional, State, and Federal Expertise.** Utilize the expertise of regional, State, and federal agencies when developing, revising, and implementing greenhouse gas reduction strategies.
  - **Policy OSC-2.4, Cost-Benefit Considerations.** Ensure that greenhouse gas reduction strategies optimize benefits relative to costs. Prior to adopting any greenhouse gas reduction strategy, consider the cost of implementation to the City and the private sector.
  - **Policy OSC-2.5, Consistency with Other Directives.** Monitor federal, State, and regional policies and directives relating to climate change, and adjust City policies and programs as appropriate to maintain consistency.

3.6.3 Methodology and Significance Thresholds

Methodology

The Project's construction-related GHG emissions are estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.12, based on construction assumptions summarized in Section 2.6, *Project Construction*, and consistent with the modeling assumptions described in Section 3.2, *Air Quality*. The analysis focuses on CO_2, CH_4, and N_2O because these represent most of the Project's GHG emissions. The remaining GHG emissions are associated with industrial processes; and the potential for such emissions from construction and operation of the proposed recreation trail is minimal. Detailed construction modeling assumptions, including construction fleet for each activity, are available in **Appendix E**, *Air Quality and GHG Modeling Assumptions*.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of GHG emissions and other environmental topics. The letters and thresholds presented below (A and B) correspond with the questions in the Appendix G of CEQA *Guidelines* Initial Study checklist. The *CEQA Guidelines* do not quantify the amount of GHG emissions that would constitute a significant impact on the environment. Determination of the significance of GHG emissions is at the discretion of the lead agency, who may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts (*CEQA Guidelines*, Sections 15064.4[a], 15064.7[c]).

In addition to the two thresholds from the CEQA *Guidelines* Appendix G Initial Study checklist, this analysis includes a third threshold (Threshold C) from the MBSST Network Master Plan Environmental Impact Report (EIR). Threshold C addresses the potential for the Project to expose people or structures to risks related to climate change, specifically flooding related to sea level rise

or storms. The potential for coastal bluff erosion is addressed under Threshold B in Section 3.5. Therefore, for the purposes of this EIR, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

C. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.

Threshold A. Threshold A is focused on the generation of anthropogenic emissions. Neither the Monterey Bay Air Resources District nor the County has adopted an evidence-based numeric threshold consistent with the 2022 Scoping Plan and the state's long-term GHG reduction goals. The City and County have adopted CAPs, but these plans do not include a threshold or project-specific requirements for determining whether project emissions are cumulatively considerable. Therefore, they are not considered "qualified" to determine the significance of a project according to *CEQA Guidelines*, Section 15183.5.

The Monterey Bay Air Resources District in the past has recommended use of the Bay Area Air Quality Management District (BAAQMD) adopted thresholds. The BAAQMD has recently released CEQA thresholds that address the state's long-term goal of carbon neutrality; however, the thresholds are specific to land use development projects and consist of project-specific design features that do not apply to active transportation projects (BAAQMD 2022).

GHG analysis guidance published by the state, Monterey Bay Air Resources District, County, and City was reviewed and considered in determining an applicable standard for the Project. As described below, existing thresholds generally fall into three categories: bright-line thresholds, service population or per-capita thresholds, or net-zero anthropogenic emissions.

Bright-Line Thresholds

Numeric thresholds adopted by other agencies were considered as an option, including a threshold of 1,100 MT CO_2e (annual emissions) adopted by the Sacramento Metropolitan Air Quality Management District and referenced in the 2017 Scoping Plan (CARB 2017). These so-called bright-line thresholds[1] address the state's long-term emissions reduction goals by determining a screening level under which a project would not be considered to hinder the state's ability to meet long-term goals. Bright-line thresholds are typically intended to screen out smaller projects with relatively minimal emissions so that the vast majority (typically 90%) of total future development would be subject to mitigation or project features that would reduce GHG emissions compared to business-as-usual emissions and consistency with GHG reduction goals (CAPCOA 2008). These thresholds were ultimately rejected for the Threshold A analysis because they do not specifically address the contribution of emissions in Santa Cruz County to the statewide goals.

[1] A bright-line threshold is a numeric threshold that provides a clearly defined rule to determine whether emissions are significant or less than significant and does not vary based on the size of type of project.

Service Population or Per-Capita Thresholds

Numeric thresholds based on service population (defined as residents and employees) or per-capita thresholds are also acceptable per the 2017 Scoping Plan. However, the Project would not generate any residents or employees. Therefore, a service population threshold would not be appropriate for a trail project.

Net-Zero Anthropogenic Emissions

A screening level of zero increase in anthropogenic emissions for ongoing, annual operational emissions compared to existing conditions is consistent with the Association of Monterey Bay Area Governments (AMBAG) methodology for the 2045 MTP/SCS. A project that does not generate a net increase in anthropogenic GHG emissions would also be consistent with the overall goal of the 2022 Scoping Plan, which outlines a path for statewide carbon neutrality. Appendix D of the 2022 Scoping Plan, Local Actions, acknowledges that net-zero GHG emissions can be an appropriate target. The 2022 Scoping Plan encourages local jurisdictions to focus on transportation, VMT reduction, and building decarbonization.

Due to the nature of the project and based on the review of existing thresholds related to GHG emissions, the significance of the Project's GHG emissions under Threshold A is based on screening level of net-zero anthropogenic operational emissions and consistency with the 2022 Scoping Plan's focus on alternative transportation and VMT reduction.

Threshold A is related to generation of GHG emissions and does not address carbon sequestration. This is consistent with the local guidance and priority actions in Appendix D of the 2022 Scoping Plan, which focus on the generation of anthropogenic emissions. Guidance in Appendix D of the 2022 Scoping Plan related to carbon sequestration is limited to encouraging infill development rather than greenfield development to encourage VMT reduction, and the discussion of use of a net-zero GHG emissions thresholds does not include accounting for loss of sequestration. Similarly, consistent with state and industry guidance, Threshold A does not include upstream embedded emissions, such as emissions from production of materials required for trail construction, or downstream emissions.[2]

Additionally, Section 15064.4 of the CEQA Guidelines, Determining the Significance of Impacts from Greenhouse Gas Emissions, requires only consideration of the net change in emission from project implementation; it does not suggest consideration of gains or losses of sequestration because of project implementation. As such, Threshold A focuses on generation of anthropogenic emissions.

Threshold B. Threshold B addresses the Project's consistency with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Loss of carbon sequestration from tree removal is addressed related to plan consistency.

Threshold C. Threshold C is related to exposure of people or structures to risks from climate change, specifically flooding from sea level rise and storms. Coastal bluff erosion is addressed under Threshold B in Section 3.5.

[2] Statewide emissions inventories are primarily production and activity based, generally counting emissions where they enter the atmosphere, rather than consumption based, which would include lifecycle emissions regardless of where in the supply chain the emissions were produced. These inventories are the basis for statewide emissions reduction targets, and as such it is appropriate for project-level analysis to only include emissions sources consistent with statewide inventories. The state inventories do not include embedded emission of goods consumed in California, or downstream emissions such as transportation of California goods outside the state (AEP 2017). Similarly, the Governor's Office of Planning and Research General Plan Guidelines note that CEQA and General Plan emissions inventories are traditionally production-based rather than consumption based (OPR 2017).

3.6.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact GHG-1 THE PROJECT WOULD NOT RESULT IN GHG EMISSIONS THAT WOULD HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The potential for the Ultimate Trail Configuration to generate GHG emissions during construction and operation is addressed separately below.

Construction Emissions

Temporary impacts related to construction activities would result in the temporary generation of GHG emissions from operation of heavy construction equipment and generation of truck and vehicle trips. The total GHG emissions estimated for construction of the Ultimate Trail Configuration were estimated using CalEEMod, as described in the methodology above and presented in **Appendix E**. The estimated total emissions for the Project's 48-month construction period are 7,363 MT CO_2e.

For comparison, in 2020, counties within the AMBAG region, including Santa Cruz County, emitted 4,749,617 MT CO_2e of GHGs (AMBAG 2022b). In 2019, the County of Santa Cruz community emissions were approximately 691,262 MT CO_2e (County of Santa Cruz 2022).

Project construction would result in the one-time contribution of approximately 0.2% of the annual regional GHG emissions and 1% of annual County emissions. Additionally, construction of the Ultimate Trail Configuration would take place over 4 years; therefore, that actual proportion of a given year's GHG emissions would be even less.

Construction emissions are necessary in order to implement this planned active transportation facility that would support regional VMT reduction goals, as discussed for operational emissions below. Similarly, the BAAQMD CEQA thresholds for GHG emissions, intended to support the statewide carbon neutrality goal, do not include a threshold for construction emissions (BAAQMD 2022). As such, construction of the Ultimate Trail Configuration would result in a nominal one-time contribution to regional GHG emissions, and the impact would be **less than significant.**

Operational Emissions

Following construction, operation of the Ultimate Trail Configuration would result in a new active transportation corridor. It would increase the feasibility and safety of non-motorized transportation and would contribute to a regional net decrease in VMT. As described in Section 2.4, *Project Characteristics*, the Project includes new low-level lighting, which would be solar powered where

feasible, and trash receptacles in several locations. Trash collection would be incorporated into existing area public facility maintenance schedules. The electrical emissions from new lighting and net vehicular emissions from solid waste disposal would result in negligible GHG emissions. The Ultimate Trail Configuration would not result in new sources of water use.

As stated in the 2022 Scoping Plan, emissions from transportation (primarily on-road travel) make up the single largest source of CO_2 emissions in the state, and although GHG emissions are declining due to cleaner vehicles and fuels, rising VMT can offset the effective benefits of adopted regulations (CARB 2022b). New alternative transportation options such as the Project are an important component to reducing VMT, particularly because the Project is part of a planned regional alternative transportation network, as described below. The VMT reduction impact of the Project is anticipated to increase over time as additional MBSST segments are completed and trail use overall increases.

The 2045 MTP/SCS is the regional planning document to reduce GHG emissions related to transportation in the region. The 2045 MTP/SCS includes active transportation as a key element to reduce GHGs, reduce roadway congestion, and increase health and the quality of life of residents. These planning documents specifically reference the MBSST Network, including the Project, as a regional walking and biking facility. Therefore, the Ultimate Trail Configuration would implement a planned active transportation facility that would assist in the implementation of the 2045 MTP/SCS, including GHG reductions. Therefore, operation of the Ultimate Trail Configuration would not result in new, ongoing GHG emissions that would have a significant impact on the environment, and would instead reduce VMT, leading to lower GHG emissions.

In summary, the Ultimate Trail Configuration would result in a temporary one-time contribution of 7,363 MT CO_2e during construction, but it would not result in a net increase in ongoing annual GHG emissions compared to existing site conditions. Further, the Ultimate Trail Configuration implements a goal of the 2045 MTP/SCS to increase active transportation opportunities. GHG emissions are ultimately anticipated to decrease with operation of the Ultimate Trail Configuration as area vehicle trips are replaced by active transportation and use of the trail. Therefore, GHG emissions from the Ultimate Trail Configuration would be **less than significant**. No mitigation is necessary.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail includes removing the rail and constructing the trail (Part 1), which would result in a temporary one-time contribution of GHGs from construction activities. The estimated total emissions for the 24-month[3] active construction period for this part of the Optional Interim Trail are 4,003 MT CO_2e. Similar to the Ultimate Trail Configuration, construction emissions are generally considered to represent a small portion of the Project's lifetime GHG impact and do not contribute to the significance of GHG impacts from the Optional Interim Trail. Following construction, operation of the Optional Interim Trail would be similar to the Ultimate Trail Configuration. Refer to the discussion above for the Ultimate Trail Configuration. As such, GHG emissions from implementation of the Optional Interim Trail (Part 1) would be **less than significant**. No mitigation is necessary.

[3] Construction of the Optional Interim Trail Part 1 is anticipated to take approximately 48 months. The first 24 months of the construction period would consist of completing the environmental review, design, and right-of-way process and are not included in construction modeling.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would also result in a temporary one-time contribution of GHGs from construction activities. The estimated total emissions for the 48-month construction period are 2,950 MT CO_2e. The decrease in emissions of demolition and rebuilding of Optional Interim Trail (Part 1) compared to the Ultimate Trail Configuration is primarily due to the later start date, when increased emissions standards and zero-emissions vehicle requirements would be in effect. Similar to the Ultimate Trail Configuration, construction emissions do not contribute to the significance of GHG impacts from the Optional Interim Trail. Following construction, this part of the Optional Interim Trail implementation would not operate as an active transportation corridor and thus would not include any sources of GHG emissions. As such, GHG emissions from implementation of the Optional Interim Trail (Part 2) would be **less than significant**. No mitigation is necessary.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to those described above for the Ultimate Trail Configuration. However, similar to demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2), emissions would be reduced due to increased emissions standards. Refer to the discussion above for Impact GHG-1 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is necessary.

Combined Effect of Interim Trail Parts 1, 2, 3

Parts 1 and 2 of implementing the Optional Interim Trail could occur decades apart, so the construction-related GHG emissions would not occur at the same time. However, for informational purposes, the total construction emissions from implementing all three parts would be 14,316 MT CO_2e, which is less than 1% of regional and less than 3% of County GHG emissions compared to 2020 and 2019 inventories, respectively. Similar to the Ultimate Trail Configuration, construction emissions do not contribute to the significance of GHG impacts from the Optional Interim Trail.

Following construction, operation of the Optional Interim Trail (Part 1) and operation of the Ultimate Trail Configuration (Part 3) would not generate GHG emissions. Therefore, even when considered together, GHG emissions from implementing all three parts of the Optional Interim Trail would be **less than significant**. No mitigation is necessary.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would require additional construction compared to the Ultimate Trail Configuration described above. Construction of the Ultimate Trail Configuration with this design option, as well as Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola (as described below for a conservative estimate) would result in total construction emissions of 8,450 MT CO_2e, which is greater than the construction emissions without the design option (7,363 MT CO_2e) but a negligible difference. Once constructed,

the operation would be similar to the Ultimate Trail Configuration without the design option. Therefore, the impact of the Ultimate Trail Configuration with this design option would still be a **less than significant** impact with no mitigation required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the Ultimate Trail Configuration would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City. This design option would require additional construction compared to the Ultimate Trail Configuration, because it requires approximately twice as much retaining wall and an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. Construction of the Ultimate Trail Configuration with this design option, as well as Design Option A (as described above for a conservative estimate), would result in total construction emissions of 8,450 MT CO_2e, which is greater than the construction emissions without the design option (7,363 MT CO_2e). Once constructed, the operation would be similar to the Ultimate Trail Configuration without the design option. The impact would still be a **less than significant** impact with no mitigation required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The GHG emissions from the Project without the Optional Interim Trail (7,363 MT CO_2e) would be less than the Project with the Optional Interim Trail when considering construction of all three parts (14,316 MT CO_2e), but they would be incrementally more when considering each part individually (4,003 MT CO_2e for Part 1; 2,950 MT CO_2e for Part 2; and <7,363 MT CO_2e for Part 3). However, one-time construction emissions of the Project with or without the Optional Interim Trail do not contribute to the significance of GHG impacts. Following construction, operation of the Project with or without the Optional Interim Trail would be similar and would result in a net GHG benefit. Refer to the discussion above for the Ultimate Trail Configuration. As such, GHG emissions from implementation of the Project with or without the Optional Interim Trail would be **less than significant**. No mitigation is necessary.

Threshold B:	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact GHG-2 THE PROJECT WOULD NOT BE CONSISTENT WITH APPLICABLE GHG REDUCTION PLANS RELATED TO TREE REMOVAL. (ULTIMATE TRAIL CONFIGURATION: SIGNIFICANT AND UNAVOIDABLE; OPTIONAL INTERIM TRAIL: SIGNIFICANT AND UNAVOIDABLE)

Ultimate Trail Configuration (Trail next to Rail Line)

The 2022 Scoping Plan outlines a statewide path to achieve carbon neutrality (CARB 2022b). The County CAAP, approved in 2022, strives to meet the SB 32 target of reducing GHG emissions by 40% below 1990 levels before 2030, while simultaneously establishing a policy framework to achieve the longer-term target of net-negative GHG emissions by 2045 (AB 1279). The City adopted a CAP in 2015 with the GHG reduction goal of reducing community-wide GHG emissions by 5% from 2010 levels by 2020 and by 81% from 2010 levels by 2050 (City of Capitola 2015).

As discussed for Impact GHG-1, following construction, the Ultimate Trail Configuration would result in a net decrease in anthropogenic GHG emissions by implementing alternative transportation infrastructure to decrease regional VMT. The temporary construction emissions are necessary to

implement the Project and achieve alternative transportation goals. Decreasing fossil fuel use from transportation (the region and County's primary source of GHG emissions) is a key goal in all applicable GHG reduction plans, including through an increase in active transportation and bicycle infrastructure. The Project is part of the MBSST Network, which is specifically identified as an alternative transportation route in the AMBAG 2045 MTP/SCS. The Ultimate Trail Configuration would contribute to an ongoing net decrease in GHG emissions and would be an investment in bicycle and pedestrian infrastructure in the County and City by implementing two segments (Segments 10 and 11) necessary for the completion of the MBSST Network.

However, the 2022 Scoping Plan and County CAAP also include carbon sequestration components as part of achieving statewide carbon neutrality. Specifically, the CAAP includes Natural/Working Lands Strategies 17 and 18 that include enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy. As described in Section 2.6 (**Table 2-2**), implementation of the Ultimate Trail Configuration would result in the removal of approximately 803 trees. Therefore, although the Project would support implementation of the VMT Reduction goals of the 2022 Scoping Plan and County and City CAPs, the Project also includes tree removal that would potentially interfere with implementation of the County CAAP Natural/Working Lands strategies.

Therefore, although the Ultimate Trail Configuration would be consistent with applicable GHG reduction plans by decreasing GHG emissions through investment in bicycle and pedestrian infrastructure, it would be inconsistent with applicable GHG reduction plans by resulting in tree removal. As discussed in Section 3.3, *Biological Resources*, Impact BIO-12, due to the substantial number of trees planned for removal, including a large percentage of trees regulated by City and County ordinances, the inability to mitigate the majority of tree removal on site, and the number of years required for trees to mature, this tree loss would be a **significant and unavoidable** impact, even with the identified mitigation (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c).

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

As discussed above under Impact GHG-1, construction of the Optional Interim Trail would result in reduced one-time GHG emissions from construction compared to the Ultimate Trail Configuration due to the reduced construction period. However, these emissions do not contribute to the significance of GHG impacts and are necessary to implement infrastructure to meet alternative transportation goals. Once the Optional Interim Trail is constructed, operation of the Optional Interim Trail would be similar to the Ultimate Trail Configuration. Refer to the discussion above for Impact GHG-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. As such, the Optional Interim Trail would be consistent with applicable GHG reduction plans related to VMT reduction. However, the Optional Interim Trail would result in the removal of 288 trees, which would be inconsistent with applicable GHG reduction plans related to tree removal. Therefore, although tree removal would be reduced compared to the Ultimate Trail Configuration (288 trees instead of 803 trees), this impact would also be **significant and unavoidable**, even with the identified mitigation, because of the inability to mitigate the majority of tree removal on site and the number of years required for trees to mature.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Like implementation of the Optional Interim Trail, demolition would result in reduced one-time GHG emissions from construction compared to the Ultimate Trail Configuration due to a shorter

construction period and because material would not be imported for construction. However, these emissions do not contribute to the significance of GHG impacts. Following construction, which includes removing the trail and rebuilding the rail line, this part of Optional Interim Trail implementation would not operate as an active transportation corridor and would not include any sources of GHG emissions. However, it would not preclude implementation of planned active transportation. Additionally, this part of the Optional Interim Trail would not result in additional tree removal. Therefore, Part 2 would not result in a conflict with applicable GHG reduction plans, and the impact would be **less than significant**.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as part of the Optional Interim Trail would be similar to that described above. Refer to the discussion above for Impact GHG-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. Construction of the Ultimate Trail Configuration following Parts 1 and 2 of the Optional Interim Trail would require removal of 699 trees, which would be inconsistent with applicable GHG reduction plans related to tree removal. Therefore, this impact would be **significant and unavoidable**, even with the identified mitigation (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c) because of the inability to mitigate the majority of tree removal on site and the number of years required for trees to mature.

Combined Effect of Interim Trail Parts 1, 2, 3

Implementation of the Optional Interim Trail, including all three parts, would provide an active transportation corridor, consistent with applicable GHG reduction plans. Although no tree removal would occur in Part 2, total tree removal from all three parts would total 987 trees. The loss would be staggered over 25 years so that replacement trees planted during Part 1 would have time to mature prior to tree removal in Part 3; however, total tree loss would still be a conflict with applicable GHG reduction plans. This impact would be **significant and unavoidable.**

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. his requires a minor amount of additional construction associated with construction of the additional trail along the rail line, instead of transitioning to existing facilities, and implementing necessary structural repairs and replacing the existing rail components with a deck for the trail. However, no change in operation would occur because of this design option. This design option would not require any additional tree removal compared to the Ultimate Trail Configuration described above. The impact of the Ultimate Trail Configuration with this design option would still be **significant and unavoidable**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This would result in additional construction emissions and the removal of four additional trees, because the inland side

requires approximately twice as much retaining wall and an additional staircase. Once constructed, the operation would be similar to the Ultimate Trail Configuration without this design option. The impact would still be **significant and unavoidable**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The potential impact regarding consistency with applicable GHG reduction plans of the Project, with and without the Optional Interim Trail, would be similar; but there would be more tree removal overall with the Optional Interim Trail. The project without the Optional Interim Trail would result in the loss of 803 trees. The project with the Optional Interim Trail would result in the loss of 987 trees (288 trees during Part 1, zero tree during Part 2, 699 trees during Part 3). Although the loss would be staggered over 25 years so that replacement trees planted during Part 1 would have time to mature prior to tree removal in Part 3, the total loss of trees would be greater with the Optional Interim Trail. The impact related to tree removal would be **significant and unavoidable** with or without the Optional Interim Trail.

Threshold C:	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death as a result of flooding from projected sea level rise and storms

Impact GHG-3 THE PROJECT WOULD NOT EXPOSE PEOPLE OR STRUCTURES TO SUBSTANTIAL RISK OF LOSS, INJURY, OR DEATH AS A RESULT OF FLOODING FROM PROJECTED SEA LEVEL RISE AND STORMS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The potential for the Project to expose people or structures to substantial adverse effects from the impacts of climate change related to sea level rise and extreme storm events is addressed below. As previously noted, coastal bluff erosion is addressed in Section 3.5.

The predicted area at risk from these hazards is based on data from the Coastal Resilience Program web mapping tool (Nature Conservancy 2023) and County and City Coastal Climate Change Vulnerability Reports (Central Coast Wetlands Group 2017a, 2017b). The predicted risks are mapped by The Nature Conservancy based on best available prediction tools and data. However, modeling cannot definitively predict the future effects of climate change. This analysis presents the most conservative (highest risk) prediction of the effects of climate change, but actual future sea level rise and storm flooding may differ from mapped conditions.

The trail, including portions of Segment 11 from Jade Street Park to New Brighton State Beach, is in the potential sea level rise and storm flooding hazard areas, as shown on **Figure 3.6-1** and **Figure 3.6-2** (Nature Conservancy 2023). Although the trail includes new waterway crossings (described in Sections 2.4 and 2.6), the trail would not introduce any new structures for human occupancy (i.e., enclosed structures wherein humans principally live or sleep or are used for commercial occupation on a regular basis [e.g., residences]) that would potentially require protection from flooding as part of climate adaptation efforts or that would result in displacement of residents in the event of flooding. Additionally, the new trail, including viaducts and bridges, would be constructed at approximately the same elevation as the existing rail line, elevated above existing water bodies. New retaining walls constructed as part of the Project would support slopes along the rail line to provide distance between the rail and trail alignment. These walls would not provide additional coastal armoring that would potentially exacerbate coastal flooding.

Additionally, as discussed in Section 2.5, *Project Operation and Maintenance*, the Project would be subject to routine maintenance. Through routine maintenance and inspections, it is anticipated that any areas of the trail that are experiencing excessive inundation would be identified. If necessary, appropriate actions would be taken to minimize the risk to trail users. Such actions could include trail segment closure and detour, structural improvements, or trail relocation, for which appropriate environmental review would be conducted.

Therefore, impacts related to sea level rise and storm flooding would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The potential for future exposure to tidal inundation and storm flooding would be similar on the Optional Interim Trail as that on the Ultimate Trail Configuration. Instead of directing users to bicycle lanes and sidewalks through Capitola Village, which is at risk for flooding, the Optional Interim Trail would continue on the rail line for a 0.5-mile section including the Capitola Trestle Bridge. This would move a portion of the trail inland and elevated over Soquel Creek; however, portions of Segment 11 would continue to be located in potential future tidal inundation, flood, and coastal bluff erosion hazard areas. However, the Optional Interim Trail would not introduce any new structures that would require protection from flooding or result in displacement of people during a flood event. Therefore, impacts related to sea level rise and storm flooding would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

During this part of Optional Interim Trail implementation, there would be no trail available for transportation and recreation use along the rail corridor. Therefore, no users would be exposed to potential flooding, and there would be **no impact** related to sea level rise and storm flooding from implementing Part 2 of the Optional Interim Trail. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to those described above for the Ultimate Trail Configuration. Refer to the discussion above for Impact GHG-3 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

When considering all three parts together, the risk of exposure to climate related hazards would be similar to considering the parts individually, as described above. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a

0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This would move a portion of the trail inland and elevated over Soquel Creek, rather than through Capitola Village, which is in the potential hazard area. Thus, this impact of the Ultimate Trail Configuration would be reduced with implementation of this design option. However, portions of Segment 11 would still be within potential hazard areas. Additionally, the impact would be the same because no structures for human occupancy would be introduced with or without this design option. The impact would still be **less than significant** with no mitigation required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City. This design option would move a portion of the trail inland. Thus, this impact of the Ultimate Trail Configuration would be reduced with implementation of this design option. However, portions of the Segment 11 would still be within potential hazard areas. Additionally, the impact would be the same because no structures for human occupancy would be introduced with or without this design option. The impact would still be **less than significant** with no mitigation required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project impacts related to the risk of exposure to climate hazards would be similar with or without the Optional Interim Trail, with only minor differences in location during Optional Interim Trail operation (Part 1). Exposure to flood hazards in Part 1 would be slightly reduced because trail users would be routed along the rail line to the Capitola Trestle Bridge instead of through Capitola Village, which is in the potential hazard area. With and without the Optional Interim Trail, this impact would be **less than significant**. No mitigation is required.

3.6.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
GHG-1. The Project would not result in GHG emissions that would have a significant impact on the environment.	LTS	LTS Similar, slightly greater	LTS Similar, slightly greater	LTS Similar, slightly greater
GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.	SU	SU Similar, slightly reduced	LTS Reduced	SU Similar, slightly greater
GHG-3. The Project would not expose people or structures to substantial risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.	LTS	LTS Similar, slightly reduced	LTS Similar, slightly reduced	LTS Substantially similar

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

3.7 Hazards and Hazardous Materials

This section analyzes the impacts associated with exposure to hazards and hazardous materials, including those related to hazardous materials use, transportation, and development on contaminated sites. **Table 3.7-1** presents a summary of *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* impacts regarding hazards and hazardous materials.

Analysis throughout this section is based on the various site assessments conducted for the Project corridor. Phase I site assessments evaluate the potential for hazardous materials to be present based on historical land use, regulatory records, and site reconnaissance. Phase II site assessments verify the presence or absence of hazardous materials through subsurface sampling. A Phase I Environmental Site Assessment (ESA) was conducted for the entire length of the Southern Pacific Transportation Company's Davenport and Santa Cruz Beach Lines in 1996, which include the entirety of the Project corridor. A follow-up Phase II Soil Sampling of shallow soils was conducted to support the Santa Cruz County Regional Transportation Commission's (RTC's) purchase of the Santa Cruz Branch Rail Line in 2009. An additional Phase I Initial Site Assessment (ISA) for Segments 10 and 11 was conducted by Weber, Hayes & Associates in 2023.

Table 3.7-1 Summary of Project Impacts on Hazards and Hazardous Materials[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.			
Ultimate Trail Configuration	Potentially Significant	HAZ-1a, HAZ-1b	Less than Significant
Optional Interim Trail	Potentially Significant	HAZ-1a, HAZ-1b, HAZ-1c	Less than Significant
Ultimate Trail Configuration Design Option A	Potentially Significant	HAZ-1a, HAZ-1b, HAZ-1c	Less than Significant
Ultimate Trail Configuration Design Option B	Potentially Significant	HAZ-1a, HAZ-1b	Less than Significant

[a] The impacts apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.7.1 Existing Conditions

Definitions

Hazardous Waste

The U.S. Environmental Protection Agency (USEPA) defines a "hazardous waste" as a substance that (1) may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating reversible illness, and (2) poses a substantial present or potential future hazard to human health or the environment when it is improperly treated, stored, transported, disposed of, or

otherwise managed (40 CFR 261.10). Hazardous waste is also defined as ignitable, corrosive, explosive, or reactive and is identified by the USEPA by its form: solids, semi-solids, liquids, and gases. Producers of such wastes include private businesses and federal, state, and local government agencies. A material may also be classified as hazardous if it contains defined amounts of toxic chemicals. USEPA regulates the production and distribution of commercial and industrial chemicals to protect human health and the environment. USEPA also prepares and distributes information to inform the public about these chemicals and their effects and provides guidance to manufacturers in pollution prevention measures, such as more efficient manufacturing processes and recycling of used materials.

Hazard versus Risk

Public health is potentially at risk whenever hazardous materials have been used or where there could be exposure to such materials. Important to the setting and analyses presented in this section are the concepts of the "hazard" of these materials and the "risk" they pose to human health.

Exposure to some chemical substances may harm internal organs or systems in the human body, ranging from temporary effects to permanent disability or death. However, chemical materials may be corrosive or react with other substances to form other hazardous materials, but they are not considered toxic because organs or systems are not affected. Because toxic materials can result in adverse health effects, they are considered hazardous materials, but not all hazardous materials are necessarily "toxic." For purposes of the information and analyses presented in this section, the terms hazardous substances and hazardous materials are used interchangeably and include materials that are considered toxic.

The risk to human health is determined by the probability of exposure to a hazardous material and the severity of harm such exposure would pose. The likelihood and means of exposure, along with the inherent toxicity of a material, are used to determine the degree of risk to human health or the ecosystem. For example, a high probability of exposure to a low toxicity chemical would not necessarily pose an unacceptable human health or ecological risk, whereas a low probability of exposure to a very high toxicity chemical might. Various regulatory agencies, such as USEPA, California Environmental Protection Agency (CalEPA), State Water Resources Control Board, California Department of Toxic Substances Control (DTSC), and federal and state Occupational Safety and Health Administration (OSHA) are responsible for developing and/or enforcing risk-based standards to protect the public and the environment. Key regulations from each of these agencies are described in Section 3.7.2, *Regulatory Setting*.

Project Corridor Setting

Sensitive Receptors

The Project corridor is in an urbanized area of unincorporated Santa Cruz County and the City of Capitola. As described in the Monterey Bay Air Resources District's (MBARD's) 2008 California Environmental Quality Act (CEQA) Air Quality Guidelines and in Section 3.2.1, *Existing Conditions*, in Section 3.2, *Air Quality*, a sensitive receptor is defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade 12 (K–12) schools; daycare centers; and healthcare facilities such as hospitals or retirement and nursing homes. Residences are located throughout the Project corridor.

There are several schools located within a 0.25 mile of the Project corridor. The western terminus of Segment 10 is located approximately 150 feet northeast of Shoreline Middle School and approximately 1,000 feet north of Del Mar Elementary School and Cypress High School. Additionally, Early Learning Preschool is located approximately 750 feet north of Segment 10 where it passes Chanticleer Avenue. At the joining of Segment 10 and Segment 11, Opal Cliff Elementary School is adjacent to the Project

corridor to the north. New Brighton Middle School is 500 feet north of Segment 11 where it crosses Washburn Avenue. Additionally, there are several schools on the northern side of State Route 1 (SR-1 or Highway 1) that are within 0.25 mile of the Project alignment, including Wavecrest Junior High School off Park Avenue (approximately 1,000 feet north of Segment 11 where it turns east into New Brighton State Beach), Twin Lakes Christian School and Cabrillo College athletic fields (approximately 1,000 feet north of Segment 11 where it crosses New Brighton Road), and Mar Vista Elementary School field (approximately 1,000 feet north of Segment 11 where it crosses Estates Drive).

Hazards Associated with Historical Rail Uses

The Project corridor aligns with the Santa Cruz Branch Rail Line (SCBRL) corridor. As described in Section 3.4.1, *Existing Conditions*, in Section 3.4, *Cultural Resources*, the SCBRL was developed and operated by Southern Pacific Railroad, which later merged with Union Pacific Railroad. The line provided both freight and passenger service by November 1883, connecting Watsonville, Aptos, Santa Cruz, and San Francisco. Potential hazards associated with historical rail uses include the presence of residual chemicals and the potential presence of asbestos and lead.

RESIDUAL CHEMICALS

Some historical railroad operations involved the use of chemicals that may result in present-day contamination. The most commonly reported contamination along rail lines comes from heavy metals, herbicides, pesticides (e.g., lead arsenate), and constituents of oil or fuel (petroleum products). These chemicals have been associated with railroad operations. Arsenic in the soil along a rail right-of-way may come from old railroad ties dipped in an arsenic solution, arsenic weed-control sprays, and arsenic-laced slag used as railroad bed fill. However, arsenic is also a naturally occurring substance, so arsenic present in the soil may be partially or entirely resulting from background concentrations.[1] Lubricating oil and diesel that dripped from the trains are likely sources of the petroleum product contaminants found along rail lines.

Soil sampling was conducted by AMEC Geomatrix in 2009 as part of the Phase II Soil Sampling. The soil sampling included drilling of 21 exploratory borings within the Segment 10 and 11 footprint and laboratory analysis of 55 discrete soil samples from those borings. The sampling revealed elevated concentrations of arsenic attributed to arsenical herbicides to control weed growth. The 2023 Phase I ISA concurred with the persistence of elevated concentrations of arsenic and did not find evidence of any additional Recognized Environmental Conditions or Activity and Use Limitations. Additionally, the creosote used to protect the wooden railroad ties from decay is known to contain polynuclear aromatic hydrocarbons (PAHs). Some PAHs are known to be human carcinogens. Regarding the potential for creosote to leach into adjacent soil and groundwater, creosote is generally not a mobile compound. Therefore, the likelihood of creosote traveling far from a source area is considered low.

ASBESTOS AND LEAD

Existing structures along the rail line, such as crossing gates, switch boxes, and other small supporting enclosures or appurtenances, were constructed between 1903 and 1977 (RTC 2012). Due to their age, many structures may have been built with materials containing friable asbestos and lead-based paint (LBP).

[1] Naturally occurring arsenic is typically present at concentrations greater than risk-based screening criteria, which are derived based on an excess cancer risk level of $1x10^{-6}$. As such, it is appropriate to evaluate the presence of arsenic based on its background concentration and estimate the incremental risk for exposure to arsenic from concentrations greater than the background. Due to the range of arsenic concentrations along the rail line reflected in the Phase II ESA, it was uncertain what arsenic concentrations represented naturally occurring conditions or arsenic concentrations attributable to an impact. Therefore, additional samples were collected during the 2009 Phase II investigation.

Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials (ACM) are damaged or disturbed. When these fibers get into the air they may be inhaled into the lungs, where they can cause significant health problems (USEPA 2023). Beginning in the late 1970s, asbestos was phased out for building and construction purposes.

Lead is a highly toxic metal that was used for many years as a component of consumer products. Lead is one of the most common hazards that humans are exposed to in their daily lives and may be present in hazardous concentrations in food, water, and air. Sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, urban dust, and secondary lead smelters. Excessive exposure can result in the accumulation of lead in the bloodstream, soft tissues, and bones. Children are particularly susceptible to lead-related health problems as it is easily absorbed into developing systems and organs. Lead poisoning is the leading environmentally induced illness in children and continues to pose a potential public health risk. In 1978, the federal government required the reduction of lead in house paint to less than 0.06% lead. Lead paint used on older structures continues to pose a public health hazard unless and until it is abated. Inspection, testing, and removal (abatement) of lead-containing building materials must be performed by state-certified contractors required to comply with applicable hazardous materials and health and safety regulations.

Hazardous Materials Sites

A Radius Report was completed for the Project corridor by Environmental Data Resources on May 9, 2022, to identify features, historical uses, or activities that could be associated with environmental impairment of soil and groundwater along the Project corridor (WHA 2023). The Radius Report included review of historical topographical maps, historical aerial photographs, and publicly maintained and available records pertaining to on-site and nearby environmental investigations, chemical use, and the possible presence of underground storage tanks (USTs).

As shown in **Table 3.7-2,** the Radius Report identified eight potentially hazardous material sites on federal and state listings within a 1/8-mile radius of the Project corridor. An additional three sites were identified within a 0.25-mile radius of the Project corridor. No USEPA National Priority List or Superfund sites were identified in the Radius Report. An additional search of California GeoTracker by Weber, Hayes & Associates in September 2022 did not reveal any additional sites (WHA 2023). The eight sites within an 1/8-mile radius are listed in **Table 3.7-2** and discussed further below:

- **Unocal Service Station (Leaking Underground Storage Tank [LUST]): Closed.** This gasoline station and former automotive repair facility underwent groundwater monitoring from 2000 to 2004 before being provided closure in 2004 from the Central Coast Regional Water Quality Control Board. Primary constituents of concern appeared to be benzene and methyl tert-butyl ether (MTBE). Maximum concentrations of MTBE at closure were detected in one of the three wells at 0.78 microgram per liter. This property also underwent a remedial excavation at the location of the former waste oil UST in 2004.
- **New Brighton State Beach (LUST): Closed.** In 1993 an approximate 1,000-gallon gasoline tank was removed as it was found to have a reported slow leak (0.05 gallon per hour) in the piping. Little documentation was available via GeoTracker and/or Santa Cruz County Environmental Health records. The site was provided official closure as of November 1998. Soil and groundwater were cleaned up to the satisfaction of the Santa Cruz County Environmental Health.
- **Ledyard (LUST): Closed.** At this location is the Ledyard cold storage and distribution operation. During the removal of two 10,000-gallon gasoline USTs in 1992 contamination was encountered in soil and groundwater. Free floating product was observed in groundwater. Several groundwater and

soil remediations were conducted between 1997 and 2011, including multiple groundwater monitoring events over 16 years. The two groundwater monitoring wells closest to the rail corridor, which were downgradient of the former tank locations, never contained any detectable concentrations of total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene and xylene; or MTBE. The site was provided closure via Low Threat Closure Policy in April 2014.

- **Seacliff State Beach (LUST): Closed.** In 1999 two USTs were removed at this California Department of Parks and Recreation maintenance yard. One 250-gallon diesel and one 550-gallon gasoline tank were removed from a common tank pit which was underlain by two separate concrete pads. Two fuel dispensers were also removed. Primarily soils were impacted with TPH diesel and gasoline. This location also had a reported 200-gallon release of diesel fuel from a truck in a public parking lot in 2009. Cleanup, followed by sampling, was conducted under Santa Cruz County Environmental Health oversight. Diesel fuel did not appear to impact soils deeper than 2 feet. This property is downgradient and has no potential to impact the Project corridor.
- **McGregor Property (Cleanup Program Site): Open Site Assessment as of October 21, 2014.** During the redevelopment of McGregor Park, impacted soil fill was encountered which contained elevated lead and arsenic. Soils were remediated via excavation and protective cap for this recreational property. No groundwater was reported impacted. The site is technically open; however, the project was completed in 2016, and the listing is waiting on official closure.
- **El Dorado Meat Company (LUST): Closed.** In December 1989, two leaking gasoline USTs (one 550-gallon and one 1,000-gallon tank) were removed from the site. Shallow groundwater and soil were impacted with gasoline and benzene, toluene, ethylbenzene, and xylene, all above state regulated thresholds. Later indoor and outdoor air testing revealed similar compounds detected above health-based screening thresholds. A No Further Action letter was issued in December 2014 following environmental investigation.
- **El Dorado Meat Company (Cleanup Program Site): Open Site Assessment as of March 11, 2011.** Perchloroethylene (PCE) contamination was detected beneath the property, the source of which has never been identified, despite a robust source investigation done by Remediation Testing and Design in December 2011. Remediation Testing and Design recognized a potential off-site source being an adjacent property to the north at 1600 Brommer Street. The ultimate determination of the on-site or off-site nature of the PCE source is not relevant in this matter, because the latest investigation has confirmed that the de minimis levels of the remaining PCE impacts discovered at the site are not a threat to human health or the environment. Additionally, Remediation Testing and Design concluded that the remaining PCE impacts are rapidly dissipating by natural processes and recommended this case for closure. On March 3, 2018, the regulator confirmed that the PCE source has not been identified, and that the concentrations of PCE in soil gas beneath the site have significantly reduced from 2009 to 2011. The regulator was confident this case is near closure and believes the diminishing PCE plume does not pose a potential encroachment risk to adjoining property.
- **Noble Gulch Storm Drain (Cleanup Program Site): Open Site Assessment & Interim Remedial Action as of August 28, 2008.** At this location a storm drain rehabilitation project was conducted. Contaminated soil was encountered that contained TPH, pesticides, and metals. Contaminated soil was excavated and disposed of as needed. Soil sampling results showed that all soils were nonhazardous and were disposed of at Buena Vista Landfill. This site remains open via GeoTracker; however, it appears the project was completed but not officially closed. Emails from Environmental Health in 2011 discuss request for closure.

- **Brommer Street Maintenance Yard (Cleanup Program Site): Closed**. In 2003, discolored stormwater was observed at this Santa Cruz County Public Works facility emanating from the facilities storm drain outfall. Investigation showed the source to be from the facility's wastewater treatment system which passed through a 1,000-gallon oil and grease clarifier. Cracks in the piping were discovered and repaired. Follow-up investigations were conducted between 2012 and 2016. Impacted soils along the water treatment piping were removed. Soils contained elevated concentrations of TPH diesel and motor oil. Groundwater was reported as not encountered or impacted. The site was provided closure in February 2017.

Table 3.7-2 Hazardous Materials Sites within 1/8-Mile of the Project Corridor

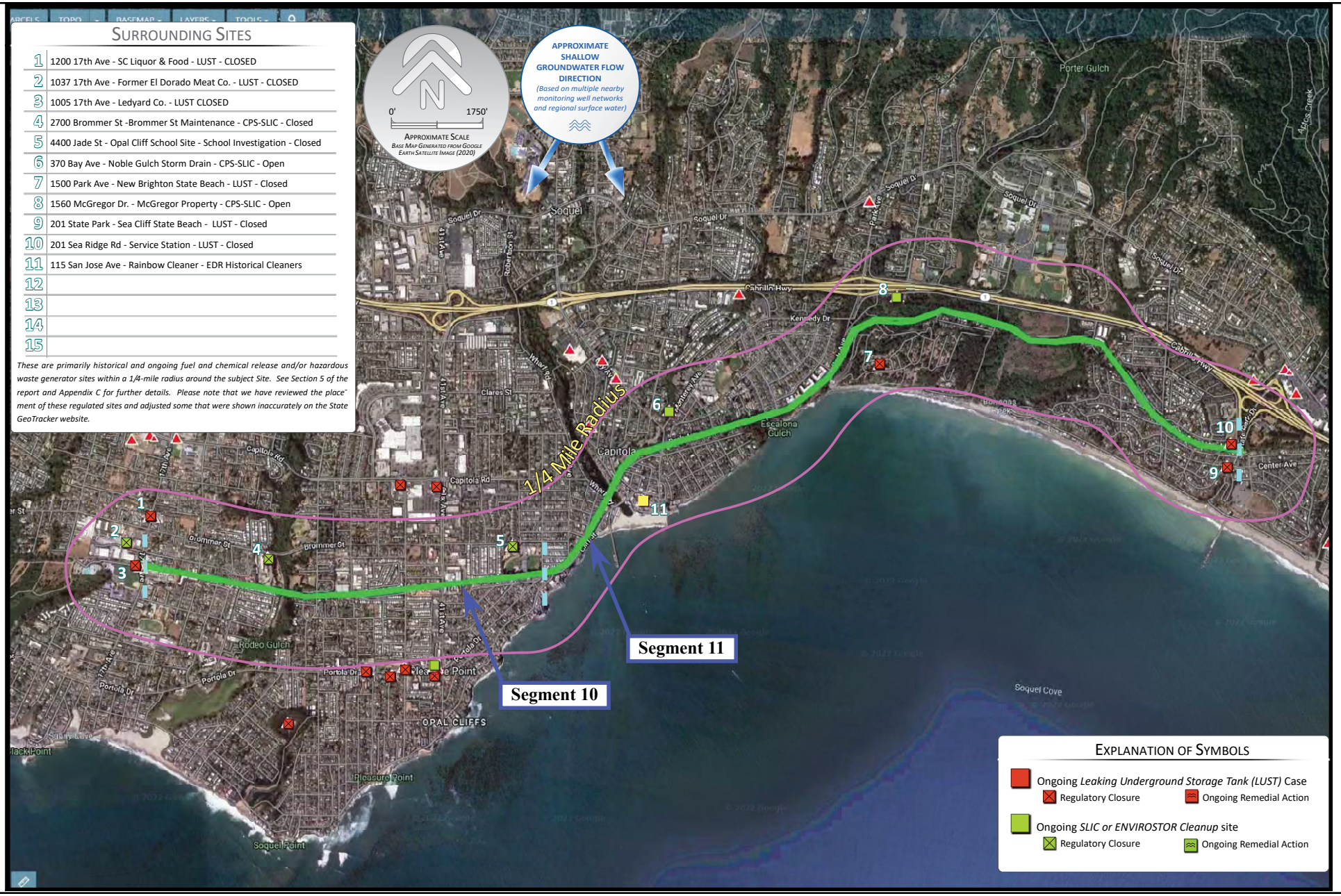
Site Name	Site Location	Distance from Project Corridor	Database Reference	Site Status
1. Unocal Service Station	201 Sea Ridge Road	46 feet north	LUST, Sweeps UST, CERS, UST, EDR History Auto	Closed
2. New Brighton State Beach	1500 Park Avenue	650 feet south	LUST, Cortese, UST	Closed
3. Ledyard	1005 17th Avenue	140 feet north	LUST, Cortese, CERS, AST, UST	Closed
4. Seacliff State Beach	201 State Park Drive	187 south/southeast	LUST, Cortese, CERS	Closed
5. McGregor Property	1560 McGregor Drive	370 feet north	CPS-SLIC, CERS	Open Site Assessment
6. El Dorado Meat Company	1037 17th Avenue	370 feet north	LUST, CPS-SLIC, Cortese, UST	Open Site Assessment
7. Noble Gulch Storm Drain	370 Bay Avenue	450 feet north	CPS-SLIC, CERS	Open Site Assessment and Interim Remedial Action
8. Brommer Street Maintenance Yard	2700 Brommer Street	400 feet north	CPS-SLIC, RCRA-SQG, UST, CERS	Closed

Note: The Site Number corresponds with the location shown on **Figure 3.7-1**, Hazardous Materials Sites in Project Vicinity.

AST = aboveground storage tank; CERS = California Environmental Reporting System; Cortese = Cortese Hazardous Waste and Substances Sites List; CPS-SLIC = Cleanup Program Sites − Spills, Leaks, Investigations, and Cleanups; CUPA = Certified Unified Program Agency; EDR = Environmental Data Resources; HWTS = Hazardous Waste Tracking System; LUST = Leaking Underground Storage Tanks; RCRA-LQG = Resource Conservation and Recovery Act − Large Quantity Generators; RCRA-SQG = Resource Conservation and Recovery Act − Small Quantity Generators; Sweeps UST = Statewide Environmental Evaluation and Planning System − Underground Storage Tank Listing; UST = underground storage tank

A review of the Project vicinity was also conducted to determine the presence of USTs (WHA 2023). A database search of generally historical regulatory records (including the Historical UST Registered Database, Statewide Environmental Evaluation and Planning System, California Facility Inventory Database, and Indian UST) identified 35 sites located within a 0.25-mile radius as having a current or historical record of permitted USTs. Additionally, a records search of Resource Conservation and Recovery Act − Small Quantity Generator, Resource Conservation and Recovery Act − Large Quantity Generator, Facility Index System/Facility Registry System, Notify 65, and Environmental Data Resources Proprietary Records identified seven sites within a 0.25-mile radius as having records showing generation and proper disposal of hazardous waste, typically a waste oil or oily waste. One site was identified as historically operated as a dry cleaner.

Figure 3.7-1, Hazardous Materials Sites in Project Vicinity, illustrates hazardous materials sites within a 1/8-mile radius of the Project corridor. The Phase I ISA (WHA 2023) concluded that these sites do not appear to have the potential to have resulted in hazardous contamination within the Project corridor.



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: Weber, Hayes & Associates 2023.

Harris & Associates

N

0 1750 3500

Feet

Figure 3.7-1

Hazardous Materials Sites in Project Vicinity

Coastal Rail Trail Segments 10 and 11

Hazardous Materials Transport

Both USEPA and the U.S. Department of Transportation regulate the transportation of hazardous waste and material, including transport via rail and highway. USEPA administers permitting, tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act (RCRA). The U.S. Department of Transportation regulates the transportation of hazardous materials through implementation of the Hazardous Materials Transportation Act. This act administers container design and labeling and driver training requirements. Established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste.

The SCBRL was historically used for transporting lumber, quarried material, and agricultural products. Currently, there is no daily freight or passenger service along Segments 10 and 11. However, there is the possibility that an accidental spill of hazardous materials occurred when the railway was active. According to a Phase I ESA of the rail line (Geomatrix Consultants 1997), trains along the former SCBRL occasionally derailed, but only one derailment was reported to have resulted in chemical spillage, and this was outside the Project corridor.

Regulation of hazardous materials transport on state highways falls under federal legislation, but authority is relegated to various state and local agencies focused on specific aspects of hazardous materials and transportation. The Hazardous Waste Control Act establishes the California Department of Public Health as the lead agency in charge of the implementation of the RCRA program. State and local agencies such as the California Highway Patrol, California Department of Transportation, and city and county fire departments are responsible for enforcing federal and state regulations and responding to hazardous materials transport emergencies. The California Highway Patrol establishes federal and state hazardous material truck routes and has lead responsibility over hazardous material spills on state highways. Truck routes are designed to provide access to areas that require truck service (primarily commercial and industrial areas). A truck route along SR-1 is within 1,000 feet of Segment 11.

Plugged, Abandoned, and Unrecorded Wells

An abandoned well is a well that has halted operation and is undergoing the process of being plugged. Once plugged, the well is officially decommissioned. An orphaned well has no responsible party that authorities can mandate to properly abandon the well. Plugged, abandoned, and unrecorded wells can cause environmental damage by leaking pollutants into the atmosphere or water supplies. Important determinants of how much orphaned or abandoned wells impact the environment include the techniques used and precautions taken when first drilling the well, whether it is a gas well, oil well, or combined oil and gas well, and if and how the well was sealed. If wells are not properly sealed when orphaned or abandoned, oil and gas can contaminate groundwater. It is also possible for orphaned and abandoned wells to be significant emitters of methane into the atmosphere. Furthermore, brine present in wells drilled into certain geologic formations can contain some radioactive and toxic substances that contaminate groundwater if the well leaks. Plugging wells can reduce the risk of explosions and protect groundwater, but this does not always prevent methane emissions. In the United States, it is possible for wells to have been orphaned or abandoned for over a century, and information about them can be difficult to locate, if it exists at all.

According to the Well Finder search tool hosted by the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, no abandoned or active wells are located within 1,000 feet of the Project corridor (DOGGR 2023).

Fire Hazards

Wildfires are large-scale, unplanned, and uncontrolled fires that burn in a natural area with combustible vegetation, such as brush, grass, and forests. Wildfires can spread quickly and can affect adjacent developed areas. Wildfires are often caused by human activities and can result in loss of valuable wildlife habitat, soil erosion, and damage to life and property. Wildland fires are influenced by three factors: fuel, weather, and topography. Wildfire spread depends on the type of fuel involved (grass, brush, and trees). Weather influences wildland fire behavior with factors such as wind, relative humidity, temperature, fuel moisture, and possibly lightning. Several of these factors can modify the rate at which a fire will burn, while topography is the largest influence on fire severity (Santa Cruz County 2015).

The Project corridor is mapped as a Local Responsibility Area by the California Department of Forestry and Fire Protection (CAL FIRE), due to the heavily urbanized nature of the area (CAL FIRE 2007). None of the Project corridor would be located in a State Responsible Area but would be less than a 0.25 mile to High and Moderate Fire Hazard Severity Zones (CAL FIRE 2007). However, the trail would be separated from the State Responsible Area Fire Hazard Severity Zones by SR-1.

Emergency Response

The California Emergency Services Act provides the basic authority for conducting emergency operations following proclamations of emergencies by the Governor or other local authority. All local emergency plans are extensions of the State of California Emergency Plan (CalOES 2017). Santa Cruz County and the City of Capitola are in Mutual Aid Region II, the Coastal Region, one of six mutual aid regions that exist in California.

SANTA CRUZ COUNTY LOCAL HAZARD MITIGATION PLAN AND COMMUNITY EMERGENCY RESPONSE TEAM

In September 2015, the County of Santa Cruz approved a Local Hazard Mitigation Plan (LHMP), consistent with state and local guidelines. The LHMP establishes a basis for the coordination, management, and operation of critical resources and describes the local government's authority, responsibilities, and functions. During an emergency, the County will collaborate with federal, state, and local law enforcement agencies, emergency health providers, the American Red Cross, and private industries. The County of Santa Cruz has also established a Community Emergency Response Team, a group of citizens specially trained to provide immediate assistance in the event of an emergency until agencies are able to respond. The training program includes sessions on disaster preparedness, first aid, fire safety, disaster medical operations, search and rescue, communications and teamwork, and more.

NATIONAL INCIDENT MANAGEMENT SYSTEM IMPLEMENTATION

Homeland Security Presidential Directive 5 identifies steps for improved coordination in response to incidents and requires a National Response Plan and a National Incident Management System (NIMS). The NIMS provides a comprehensive, national approach to incident management developed to improve the coordination of federal, state, and local emergency response nationwide. The state NIMS Advisory Committee, part of the California Governor's Office of Emergency Services (CalOES), offers the "California Implementation Guidelines for the National Incident Management System" to assist local governments and other entities to incorporate NIMS into already existing programs, plans, training, and exercises (CalOES 2006).

MUTUAL AID AGREEMENTS

The foundation of California's emergency planning and response is a statewide mutual aid system designed to ensure that adequate resources, facilities, and other support are provided to jurisdictions when their own resources prove to be inadequate to cope with a given situation. Each of the six mutual aid regions in the state consists of counties designated by CalOES, with Santa Cruz County in Region II, the Coastal Region.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code, Sections 8555–8561) requires signatories to the agreement to prepare operational plans for their jurisdictions and outside their areas. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. This agreement was signed in 1950 by state officials, representatives of all state agencies, all political subdivisions, and all fire districts.

Section 8568 of the California Government Code, the "California Emergency Services Act," states that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The act provides the basic authority to conduct emergency operations following the proclamations of emergencies by the Governor or appropriate local authority, such as a city manager. The provisions of the act are further reflected and expanded upon by appropriate local emergency ordinances. The act also describes the functions and operations of government at all levels during extraordinary emergencies, including war (CalOES 2014). Therefore, local emergency plans are considered extensions of the California Emergency Plan.

CAL FIRE works in cooperation with CalOES, along with neighboring state governments, through a network of mutual aid agreements to fight wildland fires. CAL FIRE is the largest multipurpose fire protection agency in the United States, responsible for wildland fire protection of over 31 million acres of California's privately owned watershed lands and services in 36 of the state's 58 counties via contracts with local governments (CAL FIRE 2022a). CAL FIRE responds to over 8,800 wildland fires each year and commands a force of approximately 5,190 full-time fire professionals; 2,870 seasonal personnel; 1,331 mission support positions; 3,000 inmates, wards, California Conservation Corps Members, and California National Guard members; as well as approximately 600 volunteers. In addition to its nearly 360 fire engines, CAL FIRE maintains a significant fleet of aircraft that includes 23 air tankers, 18 air tactical planes, and 12 helicopters (CAL FIRE 2022b).

3.7.2 Regulatory Setting

This section describes the federal, state, regional, and local plans, policies, and laws relevant to hazards and hazardous materials for the Project.

Federal

U.S. Environmental Protection Agency

USEPA is responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Federal regulations are codified primarily in Title 40 of the Federal Code of Regulations. The primary legislation includes the RCRA and the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act and the Emergency Planning and Community Right-to-Know (Superfund Amendments and Reauthorization Act, Title III). These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, transport, or dispose of hazardous materials.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947 assigned responsibility for regulating pesticides to the U.S. Department of Agriculture, but the Federal Environmental Pesticide Control Act was passed in 1972 and transferred this responsibility to USEPA. FIFRA has undergone several amendments to prohibit different formulas and mixtures to protect the environment and public health. FIFRA established registration requirements for all pesticides and initiated a rigorous testing procedure that all pesticides must undergo to be permitted for use. FIFRA ensures that the use of a permitted pesticide "will not generally cause unreasonable adverse effects on the environment." FIFRA defines the term 'unreasonable adverse effects on the environment' to, in part, mean "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide" (USEPA 2022).

U.S. Department of Transportation

The Hazardous Materials Transportation Act of 1975 is the major transportation-related statute regulating the transportation of hazardous cargo. As mentioned under Section 3.7.1, *Existing Conditions*, the act empowers the U.S. Department of Transportation with regulatory and enforcement authority to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material in commerce. For materials designated as hazardous, specific requirements pertaining to the packaging, labeling, and transportation apply to any person or business transporting them. Title 49 of the Code of Federal Regulations governs the transportation and handling of hazardous materials.

State

California Environmental Protection Agency

CalEPA has broad jurisdiction over hazardous materials management in the state. Under CalEPA, the DTSC has primary regulatory responsibility for hazardous waste management and cleanup. Along with the DTSC, the State Water Resources Control Board is responsible for implementing regulations pertaining to management of soil and groundwater investigation and cleanup. State Water Resources Control Board regulations are contained in Title 27 of the California Code of Regulations (CCR). Title 22 of the CCR contains additional state regulations applicable to hazardous materials. Title 26 of the CCR compiles those sections or titles of the CCR applicable to hazardous materials.

In January 1996, CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements are hazardous waste generators and hazardous waste on-site treatment, USTs, aboveground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code Hazardous Materials Management Plans and inventories. The program is implemented at the local level by a local agency—the Certified Unified Program Agency (CUPA). The CUPA is responsible for consolidating the administration of the six program elements within its jurisdiction. The CUPA that has jurisdiction over the Project corridor is Santa Cruz County Environmental Health.

California Hazardous Materials Release Response Plans and Inventory Law, sometimes called the "Business Plan Act," aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored on site, to prepare an emergency response plan, and to train employees to use the materials safely.

California Department of Toxic Substances Control

DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA, and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. In addition, DTSC reviews and monitors legislation to ensure that the legislation reflects DTSC goals. From these laws, DTSC major program areas develop regulations and consistent program policies and procedures. The regulations spell out what those who handle hazardous waste must do to comply with the laws. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. As such, management of hazardous waste in the County is regulated by the DTSC and enforced by Santa Cruz County Environmental Health as the CUPA to ensure compliance with state and federal requirements pertaining to hazardous waste.

California law provides the general framework for regulation of hazardous wastes by the Hazardous Waste Control Act, passed in 1972. DTSC is the state's lead agency in implementing the act. The act provides for state regulation of existing hazardous waste facilities, which include "any structure, other appurtenances, and improvements on the land, used for treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous wastes," and requires permits for, and inspections of, facilities involved in generation and/or treatment, storage, and disposal of hazardous wastes. Enforcement of regulations has been delegated to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous materials under the authority of the act.

A "Uniform Hazardous Waste Manifest" is required by DTSC and must accompany most hazardous waste before any waste is transported off site. The manifest travels with the hazardous waste from the point of generation, through transportation, to the final treatment, storage, and disposal facility. If a discharge or spill of hazardous waste occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area), and shall be responsible for the discharge/cleanup, pursuant to Title 22 of the CCR, Sections 66263.30 and 66263.31. Transportation of hazardous materials in motor vehicles is additionally governed by Title 13 of the CCR, Sections 1160 through 1167.

Although numerous state policies dealing with hazardous waste materials exist, the most comprehensive is the Tanner Act (AB 2948) adopted in 1986. The Tanner Act governs the preparation of Hazardous Materials Management Plans and the siting of hazardous waste facilities in the state. The act also mandates every county in the state to adopt a Hazardous Waste Management Plan, which must include provisions defining (1) the planning process for waste management, (2) the permit process for new and expanded facilities, and (3) the appeal process to the state available for certain local decisions. The California Department of Conservation's Division of Oil, Gas, and Geothermal Resources oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells.

California Division of Occupational Safety and Health

The California Occupational Safety and Health Administration (CalOSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, CalOSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they

handle. For example, manufacturers are to appropriately label containers, Material Safety Datasheets are to be available in the workplace, and employers are to properly train workers. Workplace safety in relation to hazardous materials is governed pursuant to CCR Title 8, which includes standards in the workplace to reduce the potential for injury. Section 1529 and Section 1532.1 specifically govern construction work where an employee may be exposed to asbestos or lead, respectively.

California Office of Emergency Services

CalOES oversees the California Accidental Release Prevention Program (CalARP) (19 CCR Division 2, Chapter 4.5), which covers certain businesses that store or handle more than a certain volume of specific regulated substances at their facilities. The CalARP program regulations became effective on January 1, 1997, and include the provisions of the Federal Accidental Release Prevention program (40 CFR Part 68) with certain additions specific to California pursuant to Article 2, Chapter 6.95, of the California Health and Safety Code.

The list of regulated substances is found in Article 8, Section 2770.5, of the CalARP program regulations. Businesses that use a regulated substance above the noted threshold quantity must implement an accidental release prevention program, and some may be required to complete a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The purpose of an RMP is to decrease the risk of an off-site release of a regulated substance that might harm the surrounding environment and community. An RMP includes the following components: safety information, hazard review, operating procedures, training, maintenance, compliance audits, and incident investigation. The RMP must consider the proximity to sensitive populations located in schools, residential areas, general acute care hospitals, long-term healthcare facilities, and child daycare facilities, and must also consider external events such as seismic activity. The CalARP program is implemented at the local government level by Unified Program Agencies.

California Department of Pesticide Regulation

The California Department of Pesticide Regulation monitors the use of pesticides through evaluation and registration of pesticide products before sale or use in California. The department also evaluates health impacts of pesticides through risk assessment and illness surveillance and conducts comprehensive assessments of pesticide risks to all populations from exposure via air, water, and food, and in the home and workplace. All reported pesticide-related illnesses are investigated, and California Department of Pesticide Regulation uses this data to evaluate its regulatory program and to refine applicable safety rules. The department additionally monitors potential health and environmental impacts of previously registered pesticides, helping find ways to prevent future contamination.

California Fire and Building Code

The 2022 Fire and Building Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenance connected or attached to such building structures throughout the State of California.

Assembly Bill 332

Assembly Bill 332 was approved by the California Legislature in August 2021. This bill statutorily incorporated the former Alternative Management Standards for Treated Wood Waste, which allows preservative treated wood waste to be disposed in the composite lined portion of an approved solid waste landfill.

Regional

Monterey Bay Air Resources District

MBARD Rule 424 implements the federal National Emission Standards for Hazardous Air Pollutants as they relate to handling asbestos. Rule 424 incorporates and amends provisions of Parts 61 and 63, Chapter I, Title 40 of the Code of Federal Regulations. Rule 424 regulates all aspects related to the handling of ACMs, from discovery and removal to transportation and disposal. This includes thorough inspection of materials that will be demolished or renovated and subsequent sampling. Similarly, MBARD Rule 439 specifically governs building removal (including structures such as railroads) to prevent visible emissions, such as those from ACMs.

Local

Santa Cruz County General Plan

The Santa Cruz County General Plan Public Safety and Noise Element contains objectives and policies related to hazardous and toxic materials, hazardous waste management, and fire hazards. Objective 6.5 and Policies 6.5.7 and 6.5.8 require that adequate fire detection and suppression are available for all facilities. Objective 6.6 and Policy 6.6.1 note the continuation of the County's hazardous materials ordinance to minimize discharge and release of hazardous and toxic materials and waste. These policies are listed below (Santa Cruz County 1994):

- **Policy 6.5.7, Certification of Adequate Fire Protection Prior to Permit Approval**. Require all land divisions, multi-unit residential complexes, commercial and industrial complexes, public facilities, and critical utilities to obtain certification from the appropriate fire protection agency that adequate fire protection is available, prior to permit approval.
- **Policy 6.5.8, Public Facilities within Critical Fire Hazard Areas.** Discourage location of public facilities and critical utilities in Critical Fire Hazard Areas. When unavoidable, special precautions shall be taken to ensure the safety and uninterrupted operation of these facilities.
- **Policy 6.6.1, Hazardous Materials Ordinance**. Maintain the County's Hazardous Materials ordinance, placing on users of hazardous and toxic materials the obligation to eliminate or minimize the use of such materials wherever possible, and in all cases to minimize the release, emission, or discharge of hazardous materials to the environment, and properly to handle all hazardous materials and to disclose their whereabouts. Further, maintain the County's ordinance relating to ozone-depleting compounds. Ensure that any amendment of existing ordinance provisions is based on a finding that the amendments will provide protection to the environment and the community against toxic hazards that is equal to or stronger than the existing provisions.

Santa Cruz County Code

Chapter 7.100 of the County Code regulates hazardous materials, hazardous waste, and USTs in the County. The ordinance is intended to protect human health, safety, and the environment by promoting best available industrial processes and best available practical control technology to minimize or eliminate the use of hazardous materials in the County and minimize or eliminate potential contamination by hazardous materials. The ordinance requires that any permitted use of hazardous materials is obligated to strictly control discharges and releases. The ordinance further requires that hazardous materials users monitor any discharges into the environment and keep records on the effectiveness of their hazardous materials management practices as a means of enforcing the obligations established by this chapter. Santa Cruz County Environmental Health is the CUPA responsible for enforcing the Hazardous Materials-Hazardous Waste − Underground Storage Tanks Ordinance, along with state and federal regulations.

Santa Cruz County Environmental Health

Santa Cruz County Environmental Health is designated by CalEPA as the CUPA within the geographic boundaries of the County and is responsible for enforcing the local ordinance and state laws pertaining to use and storage of hazardous materials, including the issuance and administration of Hazardous Materials Management Plans (Santa Cruz County 2022).

The RTC and Santa Cruz County Environmental Health have entered into a Remedial Action Agreement for the rail line right-of-way, whereby Santa Cruz County Environmental Health is the regulatory oversight agency for characterization and potential remedial action under Sections 101480 through 101490 of the California Health and Safety Code, and the Remedial Action Agreement is incorporated by this reference dated June 13, 2017.

City of Capitola Local Hazard Mitigation Plan

The City of Capitola LHMP Five Year Update, which is the first five-year update of the City's original 2013 LHMP, is consistent with state and local guidelines and Federal Emergency Management Agency approved. The goals of the LHMP include reducing risk from natural hazards through education and outreach programs, fostering the development of partnerships, and implementing risk reduction activities (City of Capitola 2020).

City of Capitola General Plan

The Capitola General Plan Safety and Noise Element addresses natural and human-made hazards and contains goals, policies, and actions designed to protect the community and its property from hazards. It specifically addresses risks associated with hazardous materials and other hazards that require emergency response. Goal SN-5 and associated policies are related to emergency and disaster readiness. Goal SN-4 and associated policies are intended to reduce danger and impacts from hazardous materials. Relevant policies under these goals include the following (City of Capitola 2019):

- **Goal SN-4.** Protect the community from the harmful effects of hazardous materials.
    - **Policy SN-4.1, Mitigation Processes.** Mitigate hazard exposure from new development projects through the environmental review process, design criteria, and standards enforcement.

- **Policy SN-4.2, Site Assessments.** Where deemed necessary, based on the history of land use, require site assessments for hazardous and toxic soil contamination prior to approving development project applications.
- **Policy SN-4.5, County Coordination.** Continue to coordinate with the Santa Cruz County Department of Environmental Health Services on enforcement of State and local statutes and regulations pertaining to hazardous materials and waste storage, use, and disposal.

- **Goal SN-5.** Maintain effective emergency response procedures to ensure public safety in the event of natural or man-made disasters.
  - **Policy SN-5.1, Coordination with Other Agencies.** Coordinate preparation efforts for natural and human-made disasters with the Santa Cruz County Office of Emergency Services, neighboring jurisdictions, and other governmental agencies.
  - **Policy SN-5.3, Emergency and Evacuation Routes.** Maintain a current and complete system of emergency and evacuation routes serving all areas of the city.

City of Capitola Municipal Code

Capitola Municipal Code, Chapter 8.42, *Hazardous Materials*, adopts by reference Chapter 7.100 (regarding Hazardous Materials) of the Santa Cruz County Code, which is described above.

3.7.3 Methodology and Significance Thresholds

Methodology

As described under Section 3.7.1, Environmental Data Resources completed a Radius Report in 2022 for the Project corridor to identify features, historical uses, or activities that could be associated with environmental impairment of soil and groundwater along the Project corridor (WHA 2023). The Radius Report included review of historical topographical maps, historical aerial photographs, and publicly maintained and available records pertaining to on-site and nearby environmental investigations, chemical usage, and the possible presence of USTs. The results of this report were analyzed to identify release listings near the Project corridor that could pose a potential threat from excavation and grading activities during construction of the Project.

Assessment of potential impacts is based on the results of the Radius Report and the 2023 Phase I ISA (WHA 2023), which includes a review of prior studies conducted along the corridor, including the Phase I and II ESAs along the Project corridor (Geomatrix Consultants 1997; AMEC Geomatrix 2009).

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of hazards and hazardous materials, and other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this Environmental Impact Report, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* resulted in any of the following conditions:

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area.
F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Project impacts related to creation of a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials would be less than significant (Threshold A). The Project alignment is not located on a hazardous material site (Threshold D). The Project corridor is not near an airport, and no impacts related to airport hazards would occur (Threshold E). The Project would not interfere with an adopted emergency response plan or emergency evacuation plan (Threshold F), and these impacts would be less than significant. Finally, the potential impact related to exposing people or structures to a significant risk involving wildland fires would be less than significant (Threshold G). Therefore, these impact discussions are in Section 3.15, *Effects Found to be Less than Significant*, and this impact discussion focuses on Thresholds B and C.

Potential impacts associated with soil/coastal erosion hazards are addressed in Section 3.5, *Geology and Soils*.

3.7.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold B:	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
Threshold C:	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact HAZ-1 DEMOLITION ACTIVITIES, GROUND DISTURBANCE, OR ACCIDENTAL SPILLS DURING CONSTRUCTION COULD RELEASE CONTAMINANTS, INCLUDING WITHIN A 0.25 MILE OF SCHOOLS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction activities associated with the Project would involve the use of heavy equipment, which would contain fuels and oils, and various other products. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used along the Project corridor and transported to and from the site during construction. However, the Project contractor would be required to comply with California Health and Safety Code, Chapter 6.95, which would minimize risks from upset or accidental release of hazardous materials. Chapter 6.95 requires disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures for businesses that handle, store, or transport hazardous materials in amounts exceeding specified minimums.

The Project corridor is located adjacent to soils with potential for contamination from historical railroad uses, such as arsenic, PAHs, creosote, pesticides, herbicides, and heavy metals. If contaminated, the soil would need to be removed and transported from the site during Project construction. As discussed in further detail below, demolition, grading, and excavation during Project construction could expose persons (including construction workers, residents, students, and teachers at schools listed under *Sensitive Receptors*, and people living near the rail corridor) to existing contaminants from hazardous materials of historical rail operations.

HISTORICAL RAIL USE

As described in the Project Corridor Setting above, because the Project corridor's historical use was a railroad, there is the potential for soil within the Project corridor to be contaminated with arsenic, heavy metals, pesticides, herbicides, PAHs, petroleum products, creosote, and other contaminants associated with rail operations. Thus, construction workers and nearby residents and schools could be exposed to contamination along the corridor, which could be spread via dust particulates created during ground-disturbing construction activities. As discussed in Section 3.7.1 under Residual Chemicals, the Phase II ESA soil borings throughout the Project corridor detected the presence of elevated levels of arsenic, including in a soil boring within 500 feet of Shoreline Middle School. Therefore, there is potential for construction personnel, nearby residents, and the attendees of nearby schools to be exposed to arsenic or other rail-related contaminants. Therefore, impacts would be potentially significant. This impact would be reduced to a less than significant level with implementation of Mitigation Measures HAZ-1a and HAZ-1b. Pursuant to Mitigation Measures HAZ-1a and HAZ-1b, soils would be tested, and contaminated soil would be appropriately handled and hauled off site for disposal in accordance with DTSC standards. Construction activities would require an estimated two round trips per day to dispose of soils at the Buena Vista Landfill located approximately 6.7 miles southeast of the Project corridor's easternmost extent at State Park Drive. If the concentration of contamination found in the soil to be hauled off-site would require disposal at a Waste Discharge Requirement Class II facility, the contaminated soil would be hauled to the Altamont Landfill or the Vasco Road Sanitary Landfill, both located in Livermore, approximately 60

miles northeast of the Project corridor, depending on the facilities' available capacity at that time. If the concentration of contamination found in the soil to be hauled off site would require disposal at a Waste Discharge Requirement Class III facility, the contaminated soil would be hauled to the Forward Landfill, located in Stockton, approximately 80 miles northeast of the Project corridor. The transport and disposal of hazardous materials would be subject to federal, state, and local regulations pertaining to the transport and disposal of hazardous materials to minimize risk from accidental spills. Implementation of Mitigation Measures HAZ-1a and HAZ-1b would address the potential impacts from elevated levels of hazardous materials through soil and ballast sampling, necessary remediation, management, and proper disposal. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

Asbestos and Lead

The Project corridor contains structures such as crossing gates, switch boxes, and other small supporting enclosures or appurtenances that may include ACMs or LBPs. Demolition of these structures as part of the Project could result in health hazard impacts to workers if not remediated prior to construction activities. Lead-based materials and asbestos exposure are regulated by CalOSHA. CCR Section 1532.1 requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels would not exceed CalOSHA standards. Under this rule, construction workers (and by extension, neighboring properties) would not likely be exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an 8-hour period, and regulations require that exposure must be reduced to lower concentrations if the workday exceeds 8 hours. Similarly, CCR Section 1529 sets requirements for ACM exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers. Development of the Project would also be required to adhere to MBARD Regulation IV, Rule 424 and Rule 439, which govern the proper building removal, handling, and disposal of ACM for demolition, renovation, and manufacturing activities in the Monterrey Bay Area, and CalOSHA regulations regarding lead-based materials. Additionally, MBARD Rule 424 requires that the owner or operator of any demolition or renovation activity contract with a licensed asbestos sampling company to perform an asbestos survey prior to demolition.

Pursuant to federal and state standards, an Asbestos and Lead Survey Report would be required to quantify the areas of ACMs and LBPs. If the existing structures are found to contain ACMs or LBPs, trained and certified abatement personnel would perform abatement activities. These materials would be hauled to a licensed receiving facility and disposed of under proper manifest, if needed, by a transportation company certified to handle ACMs and LBPs. Compliance with applicable standards would ensure impacts related to ACM and LBPs are **less than significant.**

Construction Conclusion

With adherence to federal, state, and local regulations and implementation of mitigation measures, potential hazardous waste impacts from construction activities would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b)**.** Implementation of Mitigation Measure HAZ-1a and HAZ-1b, which are identified below, require soil sampling and remediation measures.

Therefore, with mitigation, the Project would not likely create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment or emission of hazardous materials near schools.

Operation

Once constructed, the Project corridor would be used for active transportation and recreation (e.g., bicyclists, pedestrians), and thus would not operate in a way that could result in accidental or reasonably foreseeable release of hazardous materials. Additionally, the paved trail would act as a cap that prevents trail users from direct exposure to any underlying soils contaminated from the historical rail uses. Trail users would not disturb contaminated soils, and there would be no operational impact to nearby schools. Therefore, impacts would be **less than significant** from the risk of accidental release of hazardous materials during operation.

In summary, Impact HAZ-1 would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

Mitigation Measure HAZ-1a: Conduct Soil Sampling and Implement Necessary Remediations[2]

Prior to Project construction, the County of Santa Cruz, in coordination with the RTC, shall prepare and submit Work Plans for a Supplemental Soils Investigation to Santa Cruz County Environmental Health. The Supplemental Soils Investigation shall include an evaluation of near-surface materials (soil and ballast) within the Project area. Following notification that Santa Cruz County Environmental Health has received, reviewed, and accepted these Work Plan(s), the County shall conduct a Supplemental Soils Investigation, which shall include near-surface materials sampling at selected locations within the limits of the Project corridor under the supervision of a professional geologist or professional civil engineer to identify the concentrations of anticipated contaminants, which may include arsenic, pesticides, herbicides, heavy metals, creosote, PAHs, and other reasonably anticipated contaminants of concern associated with prior rail use.

The County shall coordinate with Santa Cruz County Environmental Health to develop and implement a program to remediate or manage known contaminated materials during construction. If necessary, any additional information gathered from a Supplemental Soil Investigation shall be used to identify locations along the Project corridor that may require remedial action in order to prevent exposure of construction workers, school attendees, and the public to these contaminants. The environmental data collected shall also be used to identify the appropriate disposal options for those materials that require off-site disposal.

Disposal shall occur at an appropriate facility licensed to handle such contaminants, and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such activities. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health. The County shall submit any required correspondence to Santa Cruz County Environmental Health prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed in accordance with applicable DTSC and CalOSHA regulations. Upon completion of the Supplemental Site Investigation, the environmental consultant shall prepare a report presenting the findings of the additional assessment. The report shall be submitted to Santa Cruz County Environmental Health and include figures depicting the boring locations, summary tables of analytical data, conclusions, and recommendations.

[2] This is Mitigation Measure HAZ-1a (Soil Sampling and Remediation) from the Master Plan Environmental Impact Report (RTC 2013), refined to account for project-specific conditions. The Phase I ISA prepared for the Project corridor recommended conducting a limited shallow soil screening across the length of the Segments 10 and 11 to identify the naturally occurring background concentration for arsenic and potentially other contaminants and to assist with special handling required during construction activities (WHA 2023).

Mitigation Measure HAZ-1b: Prepare and Implement Soils Management Plan[3]

The County of Santa Cruz shall ensure a Soils Management Plan is developed by a qualified engineer. The plan shall be implemented to protect workers and persons at nearby schools during ground-disturbing activities and to remove and/or mitigate exposure to hazardous materials (soil and/or ballast), where present in the Project corridor. Laboratory data for the Supplemental Soils Investigation conducted under Mitigation Measure HAZ-1a shall be used to profile excavated materials prior to transport, treatment, recycling, capping, or disposal at a licensed treatment facility. Additional profiling of the export materials shall be performed as needed to satisfy requirements of the receiving facility. Removal, transportation, and disposal of contaminated materials shall be performed in accordance with applicable DTSC and CalOSHA laws, regulations, and ordinances. The Soils Management Plan shall include health and safety information for workers and the general public with an emphasis on potential adverse health effects and how to seek proper help if an accident is suspected and inform the various contractors and workers of the presence of contaminated shallow materials and the appropriate measures to avoid exposure to contaminants. These measures may include but would not be limited to the following:

1. Installing temporary security fencing around the construction site and flag/cone off the areas of contaminated soils (hotspots) until the contaminants are removed
2. Providing all personnel entering a hotspot with site-specific awareness training
3. Requiring that all personnel whose work will involve the excavation or disturbance of soils in and around the hotspot must have successfully completed 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training
4. Requiring a HAZWOPER supervisor to be on-site at all times during the excavation or disturbance of soils in a hotspot
5. Prohibiting personnel who cannot prove that they are authorized to enter a hotspot or do not have the appropriate personal protective equipment from entering a hotspot
6. Prohibiting eating, drinking, smoking, chewing gum or tobacco in hotspots, and requiring consumable items and activities be confined to designated worker break areas

In the event that contaminated materials and/or groundwater is identified where not previously anticipated during construction, the Soils Management Plan shall also require that construction cease and that appropriate handling and disposal procedures be implemented. Contaminated materials and/or groundwater can be identified by discoloration or stains, distinctive odors, absence of plants and animals, subsequent erosion from the absence of plant life, or the presence of paint chips or other materials known to contaminate near-surface materials. Procedures for properly handling, storing, and disposing of contaminated soils may include but are not limited to the following:

1. Placing contaminated materials in properly labeled drums or lined hazardous waste storage/transportation conveyance units (i.e., roll-off waste boxes) in preparation of transportation and disposal
2. Avoiding temporary stockpiling of hazardous materials

[3] This is a modified version of Mitigation Measure HAZ-1b (Arsenic Management Plan) from the Master Plan Environmental Impact Report (RTC 2013) that includes arsenic-containing soils management as well as other potential contaminants. The Phase I ISA prepared for the Project corridor further recommended completing a soil management plan to identify soil excavation, stockpiling, and disposal procedures, and construction monitoring guidelines.

3. If temporary stockpiling is necessary:
    a. Covering the stockpile with plastic sheeting or tarps
    b. Installing a berm around the stockpile to prevent runoff from leaving the area
    c. Avoiding stockpiling in or near storm drains or watercourses
4. Monitoring the air quality during excavation operations at locations potentially exhibiting elevated concentrations of hazardous material
5. Collecting water from decontamination procedures and treating and/or disposing of it at an appropriate disposal site
6. Collecting non-reusable protective equipment and disposing of the equipment at an appropriate disposal site

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Impacts from implementation of the Optional Interim Trail (Part 1) would be greater than those identified for *Ultimate Trail Configuration (Trail next to Rail Line)*. While construction would not involve ground disturbance outside the rail bed, there is the potential for exposure to contaminants from removal of the rail line. Removal of the rail and construction of the Optional Interim Trail could result in health hazard to construction workers and attendees at nearby schools from exposure to contaminants that could be present on the track ballast and the rail ties.

The Optional Interim Trail would require more ground disturbance than the Ultimate Trail Configuration, which would increase the potential for disturbance of contaminated soil within the Project corridor. This impact would be reduced to a less than significant level with implementation of Mitigation Measures HAZ-1a and HAZ-1b. Pursuant to Mitigation Measures HAZ-1a and HAZ-1b, soils would be tested and contaminated soil that will be removed during construction would be appropriately handled and hauled off site for disposal in accordance with DTSC standards.

Compared to the Ultimate Trail Configuration, the Optional Interim Trail would involve the removal of more existing structures and equipment associated with rail crossings including crossing gates, switch boxes, and other small supporting enclosures or appurtenances, which would have been originally constructed between 1903 and 1977 (RTC 2012). Based on the age of these structures, demolition could involve the disturbance of LBP or ACMs. Pursuant to federal and state standards, an Asbestos and Lead Survey Report would be required to quantify the areas of ACMs and LBPs. If the existing structures are found to contain ACMs or LBPs, trained and certified abatement personnel would perform abatement activities. These materials would be hauled to a licensed receiving facility and disposed of under proper manifest, if needed, by a transportation company certified to handle ACMs and LBPs.

The Optional Interim Trail would also require the removal of a greater length of railroad tracks than the Ultimate Trail Configuration. Removal of rail ties would follow the required Surface Transportation Board requirements for abandonment and track removal, including remediation for hazardous materials. Removing the tracks entails disposal of more railroad ties treated with creosote. This would result in more transport and disposal of hazardous materials, thus increasing the risk of accidental release into the environment. Pursuant to AB 332, treated wood waste (including rail ties) is required to be stored, managed, transported, and disposed of in landfills permitted to receive treated wood waste. No contaminated ballast, ties, or other unregulated hazardous materials would be stored on site.

Following the removal of railroad tracks, ties, and other appurtenances, the multi-use trail under the Optional Interim Trail would be constructed on the track bed and regraded ballast. As specified in Section 2.6, *Project Construction*, to reduce the quantity of materials hauled off-site, the existing ballast material, which forms the raised track bed, would be leveled and capped with trail pavement. Unlike the Ultimate Rail Trail, the ballast would be reused on site because the trail would be placed on the rail line where the existing ballast is located. As discussed in Section 3.7.1, *Existing Conditions*, the contaminated rail ballast are likely to contain concentrations of PAHs, creosote, heavy metals, arsenic, pesticides, and/or herbicides beyond acceptable screening levels. Because the Optional Interim Trail would involve physically disturbing ballast, there is potential for aerially releasing contaminants, directly or indirectly exposing construction personnel, nearby residents, or school attendees. In addition, there is potential for contaminated ballast to expose future trail users to concentrations of hazardous material if reused on site and not properly capped. Therefore, impacts would be potentially significant.

Existing regulations are in place to reduce the exposure of human and environmental receptors where future land and water uses may not be compatible with residual contamination or where cleanup involves leaving contaminated soils in place. These regulations are applicable to the Optional Interim Trail because existing contaminated ballast may be reused on site and capped by the trail pavement. California Code of Regulations, Title 22, Section 67391.1, requires the property owner of sites where hazardous materials would remain on site to enter into a Land Use Covenant to ensure that the DTSC (or the agency to which its authority has been delegated) will have authority to implement, monitor, and enforce protective restrictions. In compliance with California Code of Regulations, Title 22, Section 67391.1, the RTC would execute and record the Land Use Covenant with Santa Cruz County Environmental Health if hazardous materials, hazardous wastes or constituents, or hazardous substances remain at levels not suitable for unrestricted land use. In addition, Santa Cruz County Environmental Health would set forth and define land use limitations or covenants in a cleanup decision document prior to approving or concurring with any facility closure, corrective action, remedial or removal action, or other response actions. Compliance with California Code of Regulations, Title 22, Section 67391.1, would reduce impacts of hazardous material release through additional oversight by the DTSC and Santa Cruz County Environmental Health.

In addition to compliance with existing regulations, Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c are required to reduce impacts to a less than significant level. Pursuant to Mitigation Measures HAZ-1a and HAZ-1b, the ballast would be tested for hazardous materials and appropriately handled. Pursuant to Mitigation Measure HAZ-1c, contaminated ballast reused for base rock would be properly capped to avoid the exposure of future trail users to arsenic or other rail-related contaminants. Mitigation Measure HAZ-1c is required for the Optional Interim Trail because the ballast would be reused on site and capped by the trail pavement; this measure is not required for the Ultimate Trail Configuration where ballast would be removed and disposed of off site. Alternatively, if the ballast cannot be capped or requires removal to construct the Optional Interim Trail, the ballast and contaminated subsoil would be hauled off site for disposal in accordance with DTSC standards. There would be no on-site storage of contaminated ballast, other than that capped in asphalt, and no ties or other unregulated hazardous materials would be stored on site.

Therefore, Impact HAZ-1 would be **less than significant with mitigation** (Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would remove the trail and re-install the rail tracks/ties on the rail bed. The potential impact would be similar to but slightly greater

than for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Demolition of the Optional Interim Trail and ground disturbance during construction of the rail line could release contaminants that would expose construction personnel, the public, and students at nearby schools. Further, demolition of the Optional Interim Trail and rebuilding of the rail line would require substantially more material movement (from demolishing the paved trail) than the Ultimate Trail Configuration, increasing the potential for accident or foreseeable upset of hazardous materials. However, the materials being transported for Optional Interim Trail Part 2 are primarily pavement and not as hazardous as the materials being transported for Optional Interim Trail Part 1, which include tracks, ties, and other rail infrastructure. With implementation of mitigation measures and adherence to federal, state, and local regulations pertaining to the transport, use, storage, and disposal of hazardous materials such as the Toxic Substances Control Act and the Resource Conversation and Recovery Act, Hazardous Waste Control Act, and the City of Capitola LHMP, this impact would be reduced. This impact would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would result in potential impacts similar to those described above for Impact HAZ-1 under Ultimate Trail Configuration *(Trail next to Rail Line)*. The impact would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

Mitigation Measure HAZ-1c: Evaluate and Cap Contaminated Subgrade Soil and Ballast (Only Required for Optional Interim Trail Part 1 and Design Option A)

In locations where the trail pavement would be placed on the existing rail ballast during construction of the Optional Interim Trail (Part 1) and Design Option A for the Ultimate Trail Configuration, the County of Santa Cruz, in coordination with the RTC, shall evaluate and cap the subgrade materials (soil and ballast) as follows. Prior to the finalization of pavement design for the Optional Interim Trail and prior to removal of the rail and construction of the Optional Interim Trail (Part 1), as well as Design Option A, the structural quality of the subgrade materials shall be evaluated to ensure that it has adequate strength to carry the predicted loads during the design life of the pavement and to avoid exposure of trail users to hazardous materials. The Optional Interim Trail pavement shall also be engineered to limit the expansion and loss of density of the subgrade soil. The existing ballast material shall serve as the base rock layer to support the base material and asphalt layer of the cover. The ballast material shall be leveled to establish a base rock layer at a depth to be determined following evaluation of hazardous materials.

Residual materials disturbed by construction (on which the trail would be placed) would be capped (e.g., covered with asphalt) to avoid exposure of trail users to hazardous materials. To ensure that the asphalt cap is maintained as designed, a regulatory oversight agreement between the owner or their designee and Santa Cruz County Environmental Health shall be required. This Post-Construction Site Management Plan shall include procedures and requirements for ongoing maintenance of the asphalt cap to ensure the cap is maintained in good condition so that it remains protective of public health and the environment. The Accountable Care Organization Agreement shall include the following elements:

- **Inspections.** The cap shall be regularly inspected to ensure that it is functioning as intended. These inspections shall be conducted on a routine basis as well as after unplanned events (e.g., earthquake, on-site construction activity) that may have affected the integrity of the asphalt cap.

- **Repairs and Maintenance.** The cap shall be maintained in a manner that ensures it is functioning as intended. Examples of cap maintenance include vegetation control and repairs due to cover erosion, asphalt cracking, settlement, and subsidence. For asphalt and concrete caps, periodic sealing of the cap surface will be necessary. Repairs and maintenance of the cap shall be performed according to the procedures and timeframes specified in the Accountable Care Organization Agreement.
- **Reporting, Recordkeeping, and Notification.** The Accountable Care Organization Agreement shall outline the recordkeeping requirements, provide for submittal of periodic inspection summary reports, identify the site activities or conditions that require notification of the regulatory agencies, and identify the time frame and mechanism (e.g., verbal, written) for the required notifications.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of Optional Interim Trail (Parts 1, 2, 3) would be an overall increase in potential impacts related to the release of hazardous materials. However, implementation of Mitigation Measures HAZ-1a through HAZ-1c would reduce the impact to a less than significant level. No operational impacts would exist in respect to hazardous materials, as discussed above. Therefore, the combined effects of the Optional Interim Trail on hazardous materials would be **less than significant with mitigation** (Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village (**Appendix A.3**). In comparison to the Project (Ultimate Trail Configuration), this design option would require slightly more ground disturbance and material movement since it would include more linear length along the rail corridor than the Project and thus result in an increased risk of exposure to contaminated materials. In addition, this design option would require structural repairs and replacement of the ballast, tracks, and ties with fiber-reinforced polymer decking on the Capitola Trestle Bridge. Additionally, approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. The bridge repairs could increase the quantity of hazardous materials encountered if ACM, LBP, or other hazardous materials are present in the bridge materials. However, the nature of hazardous materials that would potentially be encountered or required for removal would be similar to those under the Project, and the slightly greater quantity would not increase the significance of the impact findings. Additionally, given the area's proximity to the existing rail line, risk of hazardous material release would be similar to that described above for the Ultimate Trail Configuration. The impacts would remain **less than significant with mitigation** (Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c) to sample, remediate, and manage contaminated soils and cap existing ballast with trail pavement.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola (**Appendix A.4**). Ground disturbance would be substantially similar, and there is no evidence of additional hazardous materials within the inland side as compared to the coastal side. Given the area's proximity to the

existing rail line, risk of hazardous material release would be similar to that described above for the Ultimate Trail Configuration. The impacts would remain **less than significant with mitigation** (Mitigation Measure HAZ-1a and HAZ-1b) to sample, remediate, and manage contaminated soils.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have greater potential impacts with respect to release of hazardous materials than the Ultimate Trail Configuration (Project without the Optional Interim Trail). Removal of the existing rail line (Optional Interim Trail Part 1) and removal of the Optional Interim Trail (Optional Interim Trail Part 2) would have the potential to release and contaminants including LBPs, ACMs, PAHs, creosote, heavy metals, arsenic, pesticides, and/or herbicides that would be disturbed by construction. Additionally, ground-disturbing construction would occur three times for the Optional Interim Trail, instead of once, which would increase the potential for exposure to contaminants. In addition to HAZ-1a and HAZ-1b, the Optional Interim Trail (Part 1) would require one additional mitigation measure, Mitigation Measure HAZ-1c, to reduce impacts related to reuse and capping of the existing ballast to construct the Optional Interim Trail. Mitigation Measure HAZ-1c is not required for the Ultimate Trail Configuration because existing ballast would be removed and disposed of off-site. The impacts would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b for the Project without the Optional Interim Trail and Mitigation Measures HAZ-1a through HAZ-1c for the Optional Interim Trail).

3.7.5 Summary Comparison

Comparison of Impacts for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.	**LTSM** MM HAZ-1a MM HAZ-1b	**LTSM** Marginally greater impact MM HAZ-1a MM HAZ-1b MM HAZ-1c	**LTSM** Marginally greater impact MM HAZ-1a MM HAZ-1b MM HAZ-1c	**LTSM** Substantially similar MM HAZ-1a HAZ-1b

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail* (*Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail* (*Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

3.8 Hydrology and Water Quality

This section evaluates potential impacts relating to hydrology and water quality on and around the Project corridor as a result of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* construction and operation. This analysis includes a review of surface water, runoff patterns, groundwater, flooding, and water quality. Water supply and wastewater conveyance and treatment are discussed in Section 3.14, *Utilities and Service Systems*. Potential impacts to wetlands and waters of the United States are discussed in Section 3.3, *Biological Resources*. **Table 3.8-1** presents a summary of potential impacts related to hydrology and water.

Table 3.8-1 Summary of Project Impacts on Hydrology and Water Quality[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
HYD-1. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality or conflict with a Water Quality Control Plan.	Less than Significant	None Required	Less than Significant
HYD-2. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	Less than Significant	None Required	Less than Significant
HYD-3. The Project would not substantially alter drainage patterns within the Project corridor or vicinity.	Less than Significant	None Required	Less than Significant
HYD-4. The Project would not risk release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones.	Less than Significant	None Required	Less than Significant

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.8.1 Existing Conditions

Regional Setting

Watersheds

The U.S. Geological Survey Watershed Boundary Dataset identifies watersheds within the Project vicinity and delineates watersheds according to hydrologic units (HUs), identified by name and by HU Code. On a statewide scale, HUs consist of large regions and subregions draining to a common outlet. At this scale, the Project corridor is within the 674-square-mile San Francisco Coastal South Subbasin (HU Code 18050006), which includes all watersheds on the coastal side of the San Francisco peninsula.

The California Department of Water Resources divides surface watersheds in California into 10 hydrologic regions. The Project corridor is located in the Central Coast Hydrologic Region. This region covers approximately 7.25 million acres and includes all of Santa Cruz, Monterey, San Luis Obispo, and

Santa Barbara Counties, as well as parts of San Benito, San Mateo, Santa Clara, and Ventura Counties. Major geographic features that define the region include the Pajaro, Salinas, Carmel, Santa Maria, Santa Ynez, and Cuyama Valleys; the coastal plain of Santa Barbara; and the California Coast Ranges. The region is largely defined by the northwest-trending southern California Coast Ranges, with a climate generally classified as Mediterranean. The region depends heavily on groundwater, which makes up the majority of available water supply, but recycled water is becoming a more plentiful supplemental source for agricultural and other non-potable uses (DWR 2009).

The California Department of Water Resources subdivides hydrologic regions into HUs that are commonly known as watersheds. In the Central Coast Hydrologic Region, the Project corridor is located in the Big Basin HU. The Central Coast Regional Water Quality Control Board (CCRWQCB) governs basin planning and water quality in the Big Basin HU (CCRWQCB 2019). The California Department of Water Resources further subdivides HUs into hydrologic areas and hydrologic sub-areas. The Project corridor is located in the Santa Cruz Hydrologic Area and the Arana Gulch-Rodeo Watershed and the Soquel Creek Watershed.

The Arana Gulch-Rodeo Watershed drains a 3.5-square-mile area at the outer (eastern) edges of the City of Santa Cruz. Major waterways and water bodies in this watershed include Arana Gulch, Leona Creek, Schwann Lake, Rodeo Gulch, and several unnamed waterways. Principal land uses in the watershed are urban, primarily residential, commercial, and light industrial, plus institutional areas such as schools, hospitals, and cemeteries. High sediment loads threaten the quality of habitat for the steelhead and other aquatic species in Arana Gulch.

The Soquel Creek Watershed drains an area of 42 square miles. Major tributaries include the West Branch (Burns Creek, Laurel Creek, Hester Creek, Amaya Creek, Fern Gulch, Ashbury Gulch, Hinkley Creek, and numerous unnamed waterways) and the Main Branch (fed by Moore's Gulch, Grover Gulch, Love Creek, and Bate's Creek). Principal land use in the watershed includes urban development, rural residential development, agriculture, parks and recreation, and mining and timber harvesting. The unincorporated town of Soquel and the City of Capitola (City) are both located in the lower reaches of the watershed. Sedimentation and impairment of important fish habitat have been identified as principal resource concerns in this watershed.

Topography and Climate

In the Project area, average annual temperatures in degrees Fahrenheit (°F) are relatively stable and range from winter lows in the upper 30s to summer highs in the middle 70s (WRCC 2023). The total average annual precipitation is approximately 29.33 inches, with the majority of rainfall occurring from November through March.

Refer to Section 3.2, *Air Quality*, for additional information about weather and wind patterns.

Project Corridor Setting

Surface Water

This section describes the surface water features along the Project corridor and the existing beneficial uses[1] and water quality for those waters.

[1] Beneficial uses are defined in the Basin Plan as existing or potential uses of water in the Central Coastal Basin that must be protected. The Basin Plan then establishes water quality standards and the level of treatment necessary to maintain the standards and ensure the continuance of the beneficial uses (CCRWQCB 2019).

DRAINAGE PATTERNS AND STREAMS

In general, the area surrounding the Project corridor drains into the Santa Cruz County (County) and City of Capitola storm drain systems and ultimately to the Pacific Ocean (Monterey Bay). Currently, stormwater runoff from the rail corridor in both Segments 10 and 11 drains along the existing topography and discharges to existing waterways or storm drain systems in the County or City. The rail corridor for both Segments 10 and 11 drains along the existing topography and discharges to existing waterways or storm drain systems in the City of Capitola or Santa Cruz County.

The trail would cross an identified waterway or aquatic feature (from west to east) at nine locations, as identified and described in **Table 3.8-2** and shown on **Figure 3.8-1**, Aquatic Features.

Table 3.8-2 Aquatic Features along Rail Trail Segments 10 and 11

Aquatic Feature[a]	Description
Rodeo Gulch	Rodeo Gulch is an open stream channel that flows under the existing railroad bridge.
Stream 472	Stream 472 is conveyed under the rail line through a 60-inch corrugated metal pipe and 42-inch reinforced concrete pipe. Much of stream 472 is conveyed through subsurface storm drain pipe, but daylighted section persist, including through the Blue and Gold Mobile Home Park immediately north of the proposed trail alignment
Soquel Creek	Soquel Creek is an open stream channel that flows under Capitola Trestle Bridge and Stockton Avenue Bridge.
Escalona Gulch	Escalona Gulch extends under the rail line through a concrete pipe to daylight in a swale south of rail corridor on the right (western) bank.
Tannery Gulch	Tannery Gulch meanders along the rail line as a modified open channel and through pipes and culverts. Four impounded wetlands are adjacent to the southern (coastal) side of the rail line.
New Brighton Creek	New Brighton Creek extends under the rail line and a maintained fire/access road through a 4-foot by 3-foot concrete arch culvert.
Borregas Creek	Borregas Creek flows under the rail line through a 36-inch corrugated metal culvert and then continues as an open channel.
Stream 633	Stream 633 flows under the rail line through an 8-foot by 6-foot concrete tunnel arch to the confluence with Borregas Creek, approximately 600 feet downstream (southeast and then east) of the rail corridor.
Flatiron Creek	Flatiron Creek flows under the rail line through a 2-foot concrete pipe.[b]

[a] Refer to Figure 3.8-1.

[b] The creek was recently modified with a drop structure and pipe to convey flow between the rail line and the "flatiron" residence at 212 Poplar Street until the new pipe outlets into the naturalized channel that flows alongside, immediately southwest of the rail line before veering off northwest to the confluence with Stream 633 and then Borregas Creek.

SURFACE WATER QUALITY

The CCRWQCB regulates water quality in the Big Basin Hydrologic Area and establishes water quality objectives and requirements for the quality of point and nonpoint sources of discharge through the Central Coast Water Quality Control Plan (Basin Plan). A point source of discharge is defined as waste emanating from a single, identifiable point, such as a wastewater treatment plant. A nonpoint source of discharge results from drainage and percolation of agricultural and urban stormwater runoff.

The Basin Plan defines beneficial uses of several streams and estuaries within or adjacent to the Project corridor. The beneficial uses for those waterbodies are listed in **Table 3.8-3**. Based on the established beneficial uses listed below, the CCRWQCB established water quality standards and the level of treatment necessary to maintain the standards and ensure the continuance of the beneficial uses.

Table 3.8-3 Beneficial Uses of Waterbodies in the Project Corridor

Beneficial Uses	Waterbodies[a] Rodeo Gulch	Soquel Creek
Municipal and Domestic Supply	X	X
Agricultural Supply	X	X
Industrial Process Supply		
Industrial Service Supply	X	X
Groundwater Recharge	X	X
Water Contact Recreation	X	X
Non-Contact Water Recreation	X	X
Wildlife Habitat	X	X
Cold Fresh Water Habitat	X	X
Warm Fresh Water Habitat		
Migration of Aquatic Organisms		X
Spawning, Reproduction, and/or Early Development	X	X
Preservation of Biological Habitats of Special Significance		X
Rare, Threatened, or Endangered Species		
Estuarine Habitat		
Fresh Water Replenishment	X	X
Commercial and Sport Fishing	X	X
Shellfish Harvesting		
Navigation		

[a] Rodeo Gulch and Soquel Creek were the only two waterway crossings (along the rail corridor in Segments 10 and 11) identified as having beneficial uses in the Basin Plan by the CCRWQCB.

Soquel Lagoon is listed on the 2020–2022 California Integrated Report for impairments (Clean Water Act [CWA] Section 303[d] List/305[b] Report) as impaired due to pathogens (SWRCB 2022). Being impaired (also referred to as "water quality limited") means that a water body is "not reasonably expected to attain or maintain water quality standards" without additional regulation. The CWA requires that each state develop Total Maximum Daily Loads (TMDL) for each impaired water body in the nation, which specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. A TMDL was prepared and approved in November 2010.

Groundwater

This section describes the groundwater basins, or aquifers, that underlie the Project corridor. The storage capacity, current estimated amount of groundwater in storage, and quality of the groundwater are reported based on available data.

GROUNDWATER STORAGE CAPACITY AND LEVELS

The Santa Cruz Mid-County Groundwater Basin underlies the Project corridor as shown on **Figure 3.8-2**, Groundwater Basin. The lateral boundaries of the basin generally follow the definable limits of the stacked Purisima Formation aquifer system and the Aromas Red Sands, plus some other Tertiary-aged units that occur between the base of the Purisima Formation and the granitic basement of the basin. The western boundary of the basin follows the watershed boundary between Carbonera Creek and

Branciforte Creek where the Purisima Formation is eroded to the granitic basement and is considered a barrier to groundwater flow. The watershed boundary extends north from the Pacific Ocean separating the Santa Cruz Mid-County Groundwater Basin from the West Santa Cruz Terrace Basin to the west. The Santa Cruz Mid-County Groundwater Basin is a high priority groundwater basin in critical overdraft and threatened by seawater intrusion (MCGA 2019).

GROUNDWATER QUALITY

Groundwater produced in the Santa Cruz Mid-County Groundwater Basin is generally of good quality and does not regularly exceed primary drinking water standards. A few naturally occurring constituents, including iron and manganese, exceed drinking water standards in parts of the basin. As previously mentioned, some coastal monitoring wells have elevated chloride and total dissolved solids concentrations associated with seawater intrusion (MCGA 2019).

Hazards

FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD HAZARD ZONES

The Federal Emergency Management Agency (FEMA) establishes base flood heights for the 100-Year Flood Zone and the 500-Year Flood Zone. The 100-Year Flood Zone is defined as the area that could be inundated by a flood that has a 1% probability of occurring in any given year, or once every 100 years. The 500-Year Flood Zone is defined as the area that could be inundated by a flood that has a 0.2% probability of occurring in any given year, or once in 500 years.

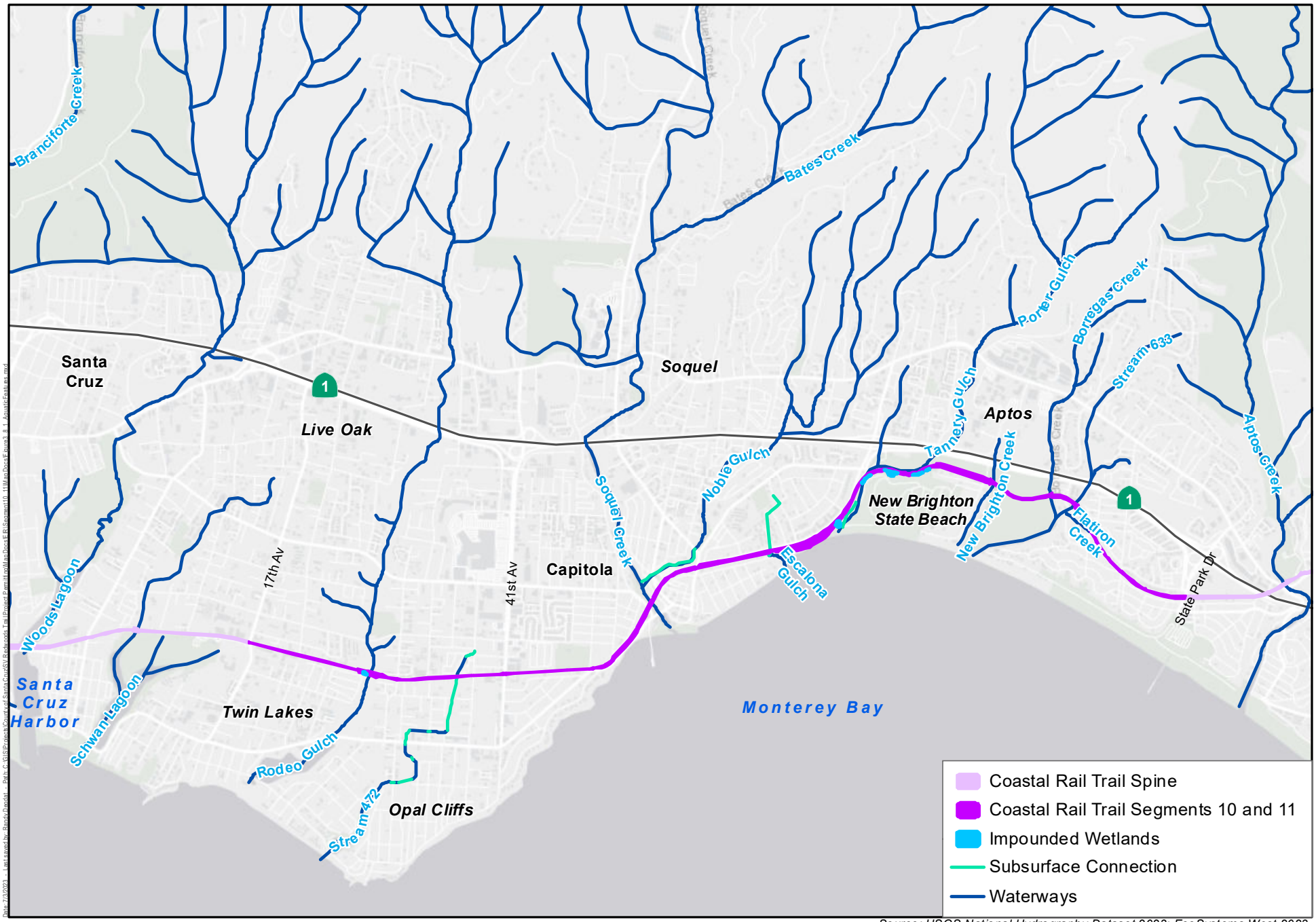
The Project corridor crosses Rodeo Gulch located along the rail line south of Brommer Street between Capitola Drive and 30th Avenue where it crosses Rodeo Gulch Zone AE, an area subject to inundation from a 100-year flood event with specified base flood elevation and its regulatory floodway (Balance Hydrologics 2023). The Project corridor also crosses the Soquel Creek Zone AE.

MUDFLOW, SEICHE, TSUNAMI

The Project corridor is generally flat and not surrounded by steep slopes, and therefore, the Project is not subject to inundation by mudflow.

A seiche is a standing wave oscillating in a body of water and may occur in any enclosed or semi-enclosed bodies of water, such as bays and lakes. Seiches are typically caused by strong wind and rapid changes in atmospheric pressure. They can also form along ocean shelves and harbors due to earthquakes, tsunamis, or severe storm fronts. The Project corridor would not pass near an enclosed body of water.

A tsunami is a series of waves generated by an impulsive disturbance in the ocean or in a small, connected body of water. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. Sudden vertical movement of the ocean floor when fault movement occurs can displace the overlying water column, creating a wave that travels outward from the earthquake source. An earthquake anywhere in the Pacific can cause tsunamis around the entire Pacific basin. Since the Pacific Rim is highly seismically active, tsunamis are not uncommon (City of Santa Cruz 2018). For example, in January 2022, a tsunami caused by an underwater volcano near Tonga caused damage to utility infrastructure, pilings, and facilities such as restrooms and showers in the Santa Cruz Harbor, and in 2011, a tsunami caused by an 8.9 magnitude earthquake off the coast of Japan caused extensive damage to the coastline and Santa Cruz Harbor. **Figure 3.8-3**, Flood and Tsunami Inundation Zones, shows the extent of the tsunami inundation area in the Project corridor and indicates that 0.56 mile of the Project corridor is mapped in a tsunami inundation area.



Source: USGS National Hydrography Dataset 2023; EcoSystems West 2023.

Harris & Associates

N

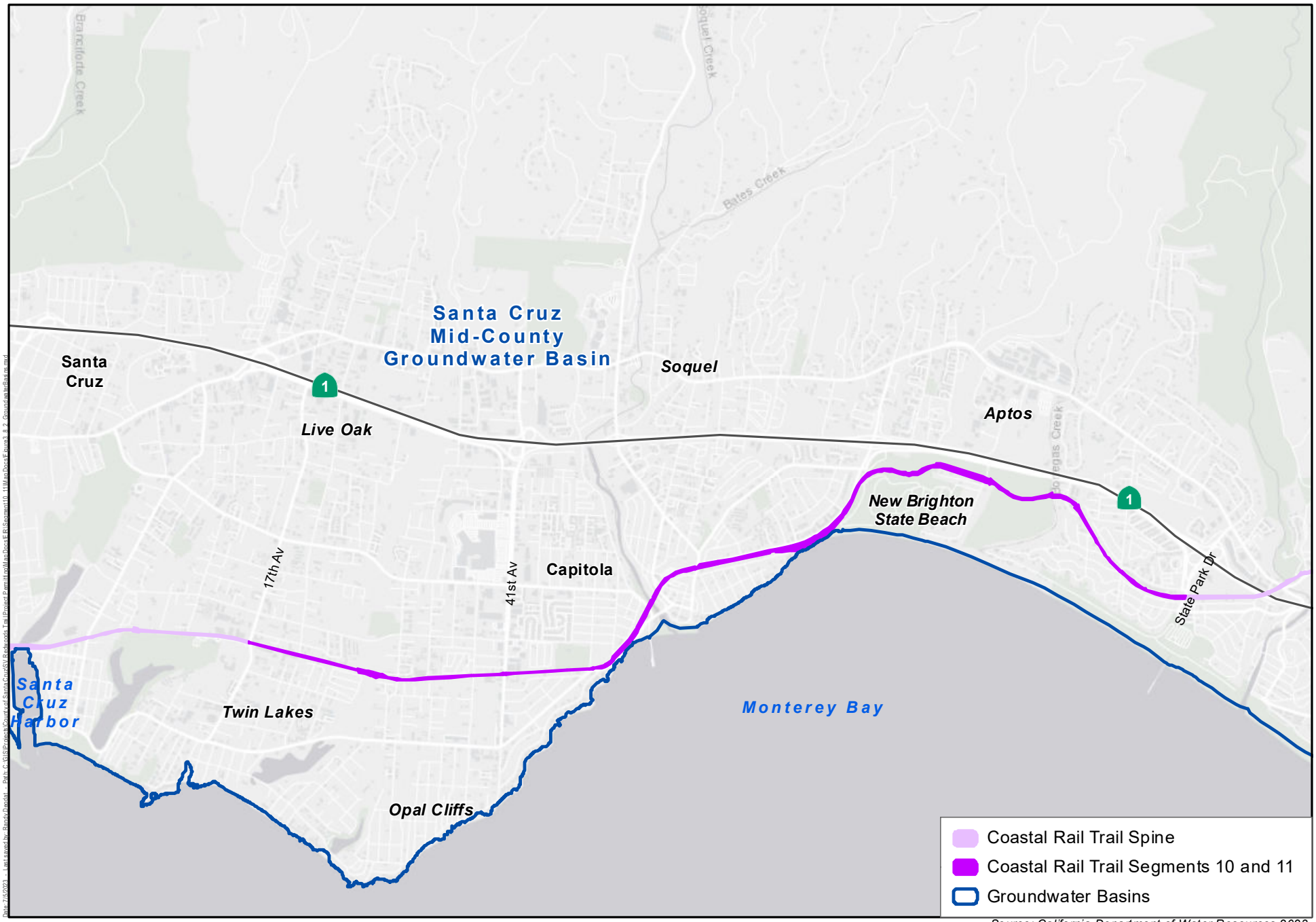
0 1,500 3,000

Feet

Figure 3.8-1

Aquatic Features

Coastal Rail Trail Segments 10 and 11



Source: California Department of Water Resources 2023.

Harris & Associates

N

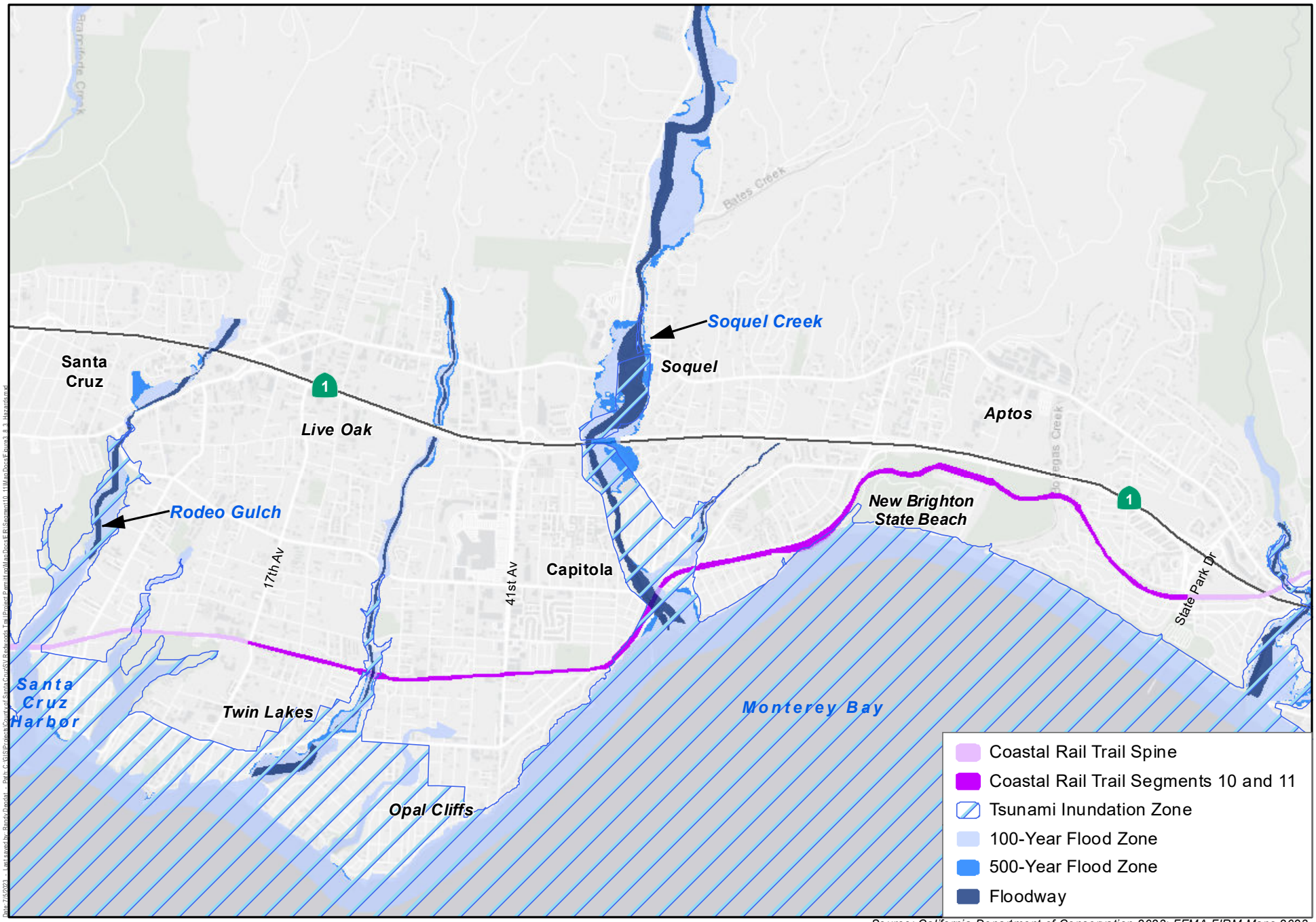
0 1,500 3,000

Feet

Figure 3.8-2

Groundwater Basin

Coastal Rail Trail Segments 10 and 11



Source: California Department of Conservation 2023; FEMA FIRM Maps 2023.

Harris & Associates

N

0 1,500 3,000

Feet

Figure 3.8-3

Flood and Tsunami Inundation Zones

Coastal Rail Trail Segments 10 and 11

3.8.2 Regulatory Setting

This section describes the federal, state, regional, and local plans, policies, and laws relevant to hydrology and water quality for the Project.

Federal

Federal Clean Water Act

In 1972, Congress passed the Federal Water Pollution Control Act, commonly known as the CWA, with the goal of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. 1251[a]). The CWA directs states to establish water quality standards for all waters of the United States and to review such standards on a triennial basis and consider updating them. Section 319 mandates specific actions for the control of pollution from nonpoint sources. The U.S. Environmental Protection Agency has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) Program, to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs).

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body's designated beneficial use. Water quality standards are typically numeric, although narrative criteria based on biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. Water quality standards applicable to the Project are provided in the Basin Plan (CCRWQCB 2019).

Section 303(d) of the CWA bridges the technology-based and water quality-based approaches for managing water quality. Section 303(d) requires that states make a list of waters that are not attaining standards after the technology-based limits are put into place. For waters on this list and where the U.S. Environmental Protection Agency administrator deems they are appropriate, states are to develop TMDL. TMDLs are established at the level necessary to implement the applicable water quality standards. A TMDL must account for all sources of the pollutants that caused the water to be listed.

Section 402 of the CWA established the NPDES. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of best management practices (BMPs). The NPDES permit system was established in the CWA to regulate point source discharges (a municipal or industrial discharge at a specific location or pipe) and certain types of diffuse discharges, including urban stormwater and construction site runoff.

The SWRCB permits all regulated construction activities under NPDES General Permit for Stormwater Discharges Associated with Construction Activity (adopted September 2, 2009), known as the "Construction General Permit." Every construction project that disturbs 1 or more acres of land surface or that is part of a common plan of development or sale that disturbs more than 1 acre of land surface would require coverage under this Construction General Permit. To obtain coverage under this Construction General Permit, the landowner or other applicable entity must file Permit Registration Documents prior to the commencement of construction activity and mail the appropriate permit fee to the SWRCB. The Permit Registration Documents include a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other documents required by the

Construction General Permit. Since the Project would disturb more than 1 acre, construction of the Project would be subject to these Construction General Permit requirements.

Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation, that result in soil disturbances of at least 1 acre of total land area. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges, and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater and non-stormwater discharges. BMPs are intended to reduce impacts to the maximum extent practicable.

Section 404 of the CWA prohibits the discharge of any pollutants into waters of the United States except as allowed by permit. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to issue permits for and to regulate the discharge of dredged or fill materials into wetlands or other waters of the United States. Under the CWA and its implementing regulations, "waters of the United States" are broadly defined to consist of rivers, creeks, streams, and lakes extending to their headwaters, including adjacent wetlands.

Federal Emergency Management Agency

FEMA formed in 1979 as an independent agency and became part of the U.S. Department of Homeland Security in March 2003. The agency is tasked with responding to, planning for, recovering from, and mitigating against disasters. FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers studies and approved agency studies, as well as for coordinating the federal response to floods, earthquakes, hurricanes, and other natural or human-made disasters. FEMA also provides disaster assistance to states, communities, and individuals.

FEMA distributes Flood Insurance Rate Maps that identify the locations of Special Flood Hazard Areas, including the 100-Year Flood Zone. Executive Order 11988 (Flood Plain Management) links the need to protect lives and property with the need to restore and preserve natural and beneficial floodplain values. Specifically, federal agencies are directed to avoid conducting, allowing, or supporting actions on the base floodplain unless the agency finds that the base floodplain is the only practicable alternative location. As noted previously, one location along the Project corridor is crossed by a 100-Year Flood Zone. All project improvements would be outside the zone.

Similarly, U.S. Department of Transportation Order 5650.2 implements Executive Order 11988 and was issued pursuant to the National Environmental Policy Act of 1969, the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973. The order prescribes policies and procedures for ensuring that proper consideration is given to avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs, and budget requests.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) establishes the SWRCB and each RWQCB as the principal state agencies for coordinating and controlling water quality in California. Specifically, the Porter-Cologne Act authorizes the SWRCB to adopt, review, and revise policies for all surface waters and groundwater of the state and directs the RWQCBs to develop regional Basin Plans.

The CCRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters in its jurisdiction. As described previously, water quality objectives for receiving waters in the County are specified in the Basin Plan prepared by the CCRWQCB, in compliance with the federal CWA and the Porter-Cologne Act. The principal elements of the Basin Plan are a statement of beneficial water uses protected under the plan, water quality objectives necessary to protect the designated beneficial water uses, and strategies and time schedules for achieving the water quality objectives. Together, narrative and numerical objectives define the level of water quality that shall be maintained in the region. The water quality objectives are achieved primarily through the establishment and enforcement of waste discharge requirements (WDRs).

The RWQCBs have primary responsibility for issuing WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. Violations of WDRs may be addressed by issuing Cleanup and Abatement Orders or Cease and Desist Orders, assessing administrative civil liability, or seeking imposition of judicial civil liability or judicial injunctive relief.

California Coastal Act

The California Coastal Commission was established in 1972 and is responsible for protecting, conserving, and restoring water quality in coastal environments as detailed in Sections 30230 and 30231 of the California Coastal Act. The California Coastal Commission establishes policies that address shoreline public access and recreation, habitat protection, aesthetic resources, public works, and other uses. The act provides long-term protection of California's coastline for the benefit of the public. In order to meet the requirements of Sections 30230 and 30231, the California Coastal Commission requires site design, source control, and treatment BMPs. New development and redevelopment projects located in a Coastal Zone are required to apply for a Coastal Development Permit prior to construction. The Coastal Development Permit requires projects to demonstrate water quality protection through the implementation of appropriate BMPs.

The California Coastal Act includes specific policy language protecting wetlands, which are defined as all areas meeting at least one wetland parameter. California Public Resources Code, Section 30233, limits permissible uses within wetlands to a handful of authorized uses, including "nature study" and "similar resource-dependent activities." Even these limited activities are only permitted "where feasible mitigation measures have been provided to minimize adverse environmental effects" and "where there is no feasible less environmentally damaging alternative."

Regional

Central Coast Water Quality Control Plan

Each RWQCB is required to adopt a Water Quality Control Plan or Basin Plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems.

The Project corridor is located in the Central Coast Basin, Region 3. The Central Coast Water Quality Control Plan was adopted in 1971 and last revised in 2019. The Basin Plan provides direction on the beneficial uses of state waters in Region 3, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the plan.

Santa Cruz Mid-County Groundwater Sustainability Plan

The State of California enacted the Sustainable Groundwater Management Act, effective January 1, 2015, as the first legislation in the state's history to mandate comprehensive sustainable groundwater resources management.

The Santa Cruz Mid-County Groundwater Agency was formed under the Sustainable Groundwater Management Act to develop the Santa Cruz Mid-County Groundwater Sustainability Plan for the Santa Cruz Mid-County Groundwater Basin, which is a high-priority groundwater basin in critical overdraft and threatened by seawater intrusion (MCGA 2019). The intent of the Santa Cruz Mid-County Groundwater Sustainability Plan is to guide long-term management of the shared groundwater resource to ensure a reliable water supply for community needs and the natural environment now and into the future.

Local

Santa Cruz County General Plan and Local Coastal Program

The County General Plan and Local Coastal Program (Santa Cruz County 1994) also provides the following objectives and policies to protect surface water quality and groundwater:

- **Objective 5.4, Monterey Bay and Coastal Water Quality.** To improve the water quality of Monterey Bay and other Santa Cruz County coastal waters by supporting and/or requiring the best management practices for the control and treatment of urban runoff and wastewater discharges in order to maintain local, state, and national water quality standards, protect County residents from health hazards of water pollution, protect the County's sensitive marine habitats and prevent the degradation of the scenic character of the region.
    - **Policy 5.4.1, Protecting the Monterey Bay National Marine Sanctuary from Adverse Impacts.** Prohibit activities which could adversely impact sensitive habitats of the Monterey Bay National Marine Sanctuary, including the discharge of wastes and hazardous materials. The main sources of concern are wastewater discharge, urban runoff, toxic agricultural drainage water, including that originating outside of Santa Cruz County, and the accidental release of oil or other hazardous material from coastal tanker traffic.
    - **Policy 5.4.14, Water Pollution from Urban Runoff.** Review proposed development projects for their potential to contribute to water pollution via increased storm water runoff. Utilize erosion control measures, on-site detention and other appropriate storm water best management practices to reduce pollution from urban runoff.
    - **Policy 5.7.1, Impacts from New Development on Water Quality.** Prohibit new development adjacent to marshes, streams and bodies of water if such development would cause adverse impacts on water quality which cannot be fully mitigated.
    - **Policy 5.7.6, Maintaining Saltwater Inflow to Coastal Lagoons.** Prohibit new development, site alteration or road projects adjacent to coastal lagoons unless it can be demonstrated that such projects will not restrict, impound or otherwise interfere with the natural drainage patterns and tidal circulation.
    - **Policy 6.4.1, Geologic Hazards Assessment Required in Flood Hazard Areas.** Require a geologic hazards assessment of all development proposals within the County's flood hazard areas in order to identify flood hazards and development constraints.

- **Policy 6.4.2, Development Proposals Protected from Flood Hazard.** Approve only those grading applications and development proposals that are adequately protected from flood hazard and which do not add to flooding damage potential. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures.
- **Policy 6.4.3, Development on or Adjacent to Coastal Bluffs and Beaches.** Allow development in areas immediately adjacent to coastal bluffs and beaches only if a geologist determines that wave action, storm swell and tsunami inundation are not a hazard to the proposed development or that such hazard can be adequately mitigated. Such determination shall be made by the County Geologist, or a certified engineering geologist may conduct this review at applicant's choice and expense. Apply Coastal Bluffs and Beaches policies.
- **Policy 6.4.4, Locate Public Facilities Outside Flood Hazard Areas.** Require new utilities, critical facilities, and non-essential public structures to be located outside the 100-year flood and coastal high hazard areas, unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life or property within or adjacent to the floodplain or coastal inundation areas.

Santa Cruz County Code

The County Department of Environmental Health monitors surface and beach water quality within the County. The department also works with the RWQCB and the local cities to regulate and enforce when water quality violations occur. Chapter 16.22 of the County Code includes policies to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation cover, disruption of water supply, and increased danger from flooding, and to implement Local Coastal Program land use policies. Chapter 16.24 of the County Code includes policies for the protection of water quality regarding increases in turbidity and settleable solids. In addition, Chapter 7.79 of the County Code provides regulations for runoff control, including compliance with NPDES stormwater discharge permits. In addition, Chapter 16.20 of the County Code provides grading regulations to safeguard health, safety, and the public welfare; to minimize erosion and the extent of grading; to protect fish and wildlife; to protect the watersheds; to ensure the natural appearance of grading projects; and to otherwise protect the natural environment of the County.

City of Capitola General Plan

The Open Space and Conservation Element of the Capitola General Plan contains the goals and policies related to water quality and conservation provided below (City of Capitola 2019):

- **Goal OSC-8**. Provide for a high level of water quality.
  - **Policy OSC-8.2, Non-Point Source Pollution.** Minimize, avoid, or eliminate non-point source pollution by controlling stormwater runoff, polluted dry weather runoff, and other pollution, in compliance with Capitola's National Pollutant Discharge Elimination System (NPDES) Permit and Stormwater Management Plan.
  - **Policy OSC-8.3, Best Management Practices**. Require all new development, public and private, to meet or exceed State stormwater requirements and incorporate best management practices to treat, infiltrate, or filter stormwater runoff and reduce pollutants

discharged into the storm drain system and surrounding coastal waters during construction and post-construction, to the maximum extent practicable.

- **Policy OSC-8.4, Landscaping and Re-Vegetation**. Require landscaping and re-vegetation of graded or disturbed areas for new development.
- **Policy OSC-8.8, Drainage Plans**. Require new development to protect the infiltration, purification, and retentive functions of natural systems that exist on the site. Drainage plans shall be designed to complement and utilize existing drainage patterns and systems, providing drainage for the developed area in a non-erosive manner.
- **Policy OSC-8.9, Impervious Surfaces**. Require all new development to minimize the creation of new impervious surfaces and reduce unused impervious surfaces. Prohibit post-project peak stormwater runoff discharge rates from exceeding the estimated pre-project rate.

The Safety and Noise Element of the Capitola General Plan contains the goals and policies related to flooding and inundation provided below:

- **Goal SN-1.** Reduce hazards associated with flooding or inundation.
  - **Policy SN-1.1, New Development**. Require new development to be located, designed, and maintained to minimize public exposure to flood hazards.
  - **Policy SN-1.3, Site Drainage**. Require new development to incorporate storm drainage systems that minimize erosion and control the rate and amount of runoff so that development does not increase downstream flooding potential.
  - **Policy SN-1.4, Impervious Surfaces**. Minimize impervious surfaces within the city to reduce stormwater runoff, protect water quality, and reduce flood hazards.

City of Capitola Municipal Code

Chapter 13.16, *Stormwater Pollution Prevention and Protection*, of the Capitola Municipal Code establishes regulations for controlling the introduction of pollutants into the stormwater system to ensure the City's compliance with provisions of the SWRCB's NPDES General Permit and WDRs. The City's regulations provide for the health, safety, and general welfare of the citizens of the City through the regulation of non-stormwater discharges to the storm drainage system as required by federal and state law.

Chapter 15.28, *Excavation and Grading*, of the Capitola Municipal Code establishes requirements for obtaining a grading permit and implementation of erosion control measures to prevent accelerated erosion. Section 15.28.110(C), *Design Standards For Cut and Fill Setbacks*, addresses stream and riparian setbacks. Tops and toes of cut and/or filled slopes shall be set back far enough to prevent encroachment upon streams, floodplains, channels, or bodies of standing water and provide and maintain an undisturbed protective strip between the grading and the riparian corridor. This strip shall have sufficient filter capacity as determined by the grading official to prevent degradation of water quality. If it is determined that the filter capacity of the protective strip is insufficient, additional erosion control may be required by increasing the width of the protective strip or with structural measures and/or by seeding, planting, mulching of bare soil areas.

Capitola Municipal Code, Chapter 17.50, *Floodplain District*, promotes public health, safety, and general welfare and minimizes public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land within flood-prone, mudslide (i.e., mudflow), or flood-related erosion areas.

3.8.3 Methodology and Significance Thresholds

Methodology

This section describes the potential environmental impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* relevant to hydrology and water quality. The impact analysis is based on an assessment of baseline conditions for the Project corridor, including climate, topography, watersheds and surface waters, groundwater, and floodplains (refer to Section 3.8.1, *Existing Conditions*), and the potential changes to these conditions that would be caused by Project construction and operation in light of relevant regulations and policies. This analysis identifies potentially significant impacts based on the identified thresholds and recommends mitigation measures, when necessary, to avoid or minimize impacts.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of hydrology and water quality, as well as the other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For the purposes of this Environmental Impact Report, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    1. Result in substantial erosion or siltation on- or off-site.
    2. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.
    3. 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.
    4. Impede or redirect flood flows.
D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Threshold D should be understood against the backdrop of the California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) (62 Cal.App.4th 369, 377–378). In that case, the court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users

or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the *project's* impact on the environment—and not the *environment's* impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions" (original italics). When the case was remanded from the Supreme Court down to the Court of Appeal, the latter body noted that, for a public project, a lead agency could choose to disregard these limitations on the scope of CEQA analysis and could voluntarily address the effects of pre-existing environmental hazards of project users (*California Building Industry Association v. Bay Area Air Quality Management District* (2016) 2 Cal.App.5th 1067, 1082–1083).

3.8.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
Threshold E:	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact HYD-1 THE PROJECT WOULD NOT VIOLATE ANY WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS OR OTHERWISE SUBSTANTIALLY DEGRADE SURFACE OR GROUNDWATER QUALITY OR CONFLICT WITH A WATER QUALITY CONTROL PLAN. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction of the Project would include excavation of material sources, clearing and grubbing, tree removal, grading, retaining wall construction, viaduct construction, drainage improvements, placement of crushed aggregate base and paved surface, revegetation, installation of fencing, signs, and other trail and safety related features. As described in Section 2.6, *Project Construction* (**Table 2-2**), construction of the Ultimate Trail Configuration would disturb approximately 10.7 acres.

Construction staging, equipment staging, and stockpiling would take place on existing disturbed or paved areas along the railroad right-of-way at least 50 feet from drainages or waterways. Potential construction staging areas include disturbed, vacant land identified in Section 2.6.1, *Ultimate Trail Configuration (Trail next to Rail Line)*. All equipment and materials would be stored, maintained, and refueled in designated portions of the staging areas in accordance with permit requirements. As such, no staging would occur in areas with sensitive biological resources or directly adjacent to drainages.

Construction of the Project could result in soil erosion due to earthmoving activities such as excavation, grading, soil compaction and moving, soil stockpiling, and slope modification. Although the Project corridor is generally flat, runoff during a large storm event could occur as sheet flow

across the Project alignment. This runoff has the potential to result in substantial amounts of erosion, resulting in off-site sediment transport via stormwater runoff. The types of pollutants contained in runoff from construction sites along the Project corridor could include sediments and contaminants such as oils and fuels from construction equipment. Additionally, existing pollutants that may be present in the Project corridor, such as nutrients, pesticides, herbicides, trace metals, and hydrocarbons, could attach to sediment and be transported downstream through erosion to nearby drainages or into Monterey Bay, contributing to degradation of water quality.

Construction of the Project could also potentially result in the accidental release of hazardous materials such as diesel fuel, gasoline, lubricant oils, hydraulic fluid, antifreeze, transmission fluid, cement slurry, and other fluids required for the operation of construction vehicles or equipment. Motorized equipment used at the Project area during construction could also leak the previously described hazardous fluids due to inadequate or improper maintenance, unnoticed or unrepaired damage, improper refueling, or operator error. These accidentally released or leaked hazardous materials could directly or indirectly impact water quality during a subsequent storm event, when the spilled material could come in contact with or be washed into flowing water and eventually enter a nearby drainage or Monterey Bay. Similarly, groundwater could be contaminated through direct or indirect contact with potentially harmful or hazardous materials.

Because construction of the Project would disturb over 1 acre, it would be subject to the NPDES Construction General Permit (Order No. 2012-0006-DWQ) adopted by the SWRCB. Compliance with the permit requires each qualifying development project to file a Notice of Intent with the SWRCB. Permit conditions require development of a SWPPP that must describe the site, facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Additionally, inspection of construction sites before and after storms is required to identify stormwater discharge from the construction activity and to identify and implement erosion controls where necessary. Implementation of the required SWPPP would reduce the potential for eroded soil and any contaminants attached to that soil to contaminate a waterbody following a storm event.

Chapter 7.79 of the County Code provides regulations for runoff control, including compliance with NPDES stormwater discharge permits, and Chapter 16.20 of the County Code provides grading regulations to minimize erosion.

Further, the Project includes BMPs to be implemented during construction to include but are not limited to the following:

- Limit grading activities during periods of high wind (over 15 miles per hour) or water for dust suppression.
- Water active construction areas as needed based on the activity, soil, and wind exposure.
- Apply soil stabilizers on inactive construction areas (disturbed lands unused for 4 consecutive days).
- Apply native hydro-seed or non-toxic binders to exposed areas after cut/fill operations.
- Maintain at least 2-foot freeboard in haul trucks, and cover all trucks hauling dirt, sand, or other loose materials.
- Cover inactive storage piles.
- Install perimeter protection (e.g., silt fence, fiber rolls) to prevent contaminated construction runoff from leaving the construction site and to protect adjacent waterways.
- Install Project storm drain catch basin and inlet protection (e.g., inlet filters, fiber rolls, gravel bags).

- Implement additional measures in the Soil Management Plan to be prepared by the City, County, or their construction contractor.
- During construction of the new prefabricated, clear span bridge over Rodeo Gulch, install a debris containment system to ensure construction debris and materials do not enter Rodeo Gulch. The debris containment device shall remain in place during construction activities over the water. A debris containment system would also be used under the existing Capitola Trestle Bridge if *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* or the *Optional Interim Trail (Trail on the Rail Line)* is selected and implemented.

Implementation of the BMPs to be included in the construction specifications and compliance with the NPDES-required SWPPP and County's grading regulations would reduce the risk of water degradation on and off site from soil erosion, and other pollutants related to construction activities would not obstruct or conflict with the implementation of the Basin Plan. Therefore, this construction-related impact of the Project would be **less than significant**. No mitigation is required.

Operation

Based on the operation of other bike/ped trails in the County, the Project is unlikely to generate sources of water pollution. However, there is a possibility that Project operation could generate pollutants that could degrade the surface water quality of downstream receiving waters. The Basin Plan stormwater program objectives include identification and elimination of pollutant contact with stormwater by implementation of BMPs.

Pollutant sources could include trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff.

As described in Section 2.4.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, the trail would extend past several areas with existing trash receptacles (e.g., Jade Street Park), and additional trash receptacles, including recycling receptacles and dog waste stations, would be added at the following locations: Corcoran Avenue (sheet CP-1.04), 30th Avenue (sheet CP-1.07), 38th Avenue, 41st Avenue, 47th Avenue, Cliff Drive Plaza, Monterey/Park Avenue crossing, Grove Lane, Park Avenue/Coronado Street ramp, New Brighton Road, Estates Drive, Mar Vista Drive, and State Park Drive.

The current plans for the Project include several stormwater quality management measures, such as the relocation and/or connection to existing storm drain systems at 17th Avenue, 30th Avenue, Blue and Gold Star Mobile Home Park, Castle Mobile Estates, 600 feet east of 41st Avenue, near the Cliff Drive Parking Lot, the eastern side of Monterey Avenue, Coronado Street, New Brighton State Beach Bridge (over New Brighton State Beach roadway), and the western side of State Park Drive. Storm drain catch basins, pipes, culverts, stormwater treatment devices, and outlet structures (with outlet energy dissipation) would be installed where the trail alignment crosses or is adjacent to aquatic features.

As described in Section 2.6 under *Stormwater Drainage*, the Project may include a 2-foot-wide natural swale or concrete V-ditch along the track side of the trail adjacent to the tracks for most of Segments 10 and 11. As described in Section 2.6 (under *Stormwater Drainage*), these drainage systems (e.g., swales, V ditches, pipes) would comply with County Design Criteria Standards, Section H, as follows: All drainage improvements shall be designed to convey a minimum 10-year storm event. In addition, means of conveying flood overflows from the site would be per the 25-year storm return period. All runoff generated by the impervious trail surface would first drain to the proposed natural swales alongside the trail. Any trail-generated flows and off-site flows that exceed the capacity (i.e., overflows) of the proposed swales would be diverted to a proposed storm drainpipe system under the trail.

Any off-site flows that would be intercepted by existing or proposed storm drain infrastructure (e.g., catch basins, sidewalk underdrains, V ditches, swales) would be piped in the new storm drain system under the proposed trail to an outlet structure at an existing storm drain system or creek downstream. Stormwater treatment devices (e.g., gross solids removal device, hydrodynamic separators, trash screens, and flow through water quality treatment devices) could be installed, as determined appropriate by the County, with the proposed storm drain system to treat off-site and/or on-site flows before ultimately discharging to a creek/drainage, river, or ocean, improving water quality.

In addition, as described in Section 2.6.1 under *Waterway Crossings*, the Project would cross nine waterways or aquatic features that extend below the existing rail corridor. **Table 3.8-4** identifies the planned improvements at each crossing and describes how stormwater runoff would be treated to treat flows before discharging into the identified aquatic feature.

Table 3.8-4 Aquatic Features and Planned Improvements for Ultimate Trail Configuration

Aquatic Feature	Proposed Improvement Ultimate Trail Configuration
Rodeo Gulch	Trail on new clear-span bridge on the northern side of existing railroad bridge, combined with viaducts at the eastern and western approaches[a]
Stream 472	Trail at grade on northern side of rail line[a] Replace the two culverts below the rail line within the RTC ROW to update the aging material Possibly modify portions of existing open channel on the north side if required for structural support
Soquel Creek	Use existing Stockton Avenue Bridge (sidewalk and bike lanes)[b, c] No modifications required
Escalona Gulch	Trail along new viaduct (Grove Lane Viaduct) on southern side of rail line[a] extending parallel to Escalona Gulch at top of bank No modifications to existing culvert
Tannery Gulch	At-grade trail on southern side of rail line[a] supported by new retaining wall above the culvert No modifications to existing culvert Add storm drain line that ties into existing storm drain culverts and/or catch basins adjacent to Project
New Brighton Creek	Trail along new viaduct (New Brighton Viaduct) on southern side of rail line[a] No modifications to existing culvert
Borregas Creek	Trail along new viaduct (Borregas Creek Viaduct) on southern side of rail line[a] No modifications to existing culvert
Stream 633	Trail along new viaduct (Estates Drive Viaduct) on southern side of rail line[a] No modifications to existing culvert
Flatiron Creek	At-grade trail on southern side of rail line[a] Replace existing culvert with junction box Possibly replace second culvert parallel to rail line

[a] This portion of the trail may include a curb to convey surface stormwater runoff to existing or proposed storm drain infrastructure (e.g., pipes, catch basins, inlets, bioswales) that would filter and discharge the runoff at a rock energy dissipator located above the ordinary high water mark before comingling runoff with stream water unless the RWQCB prefers that the runoff flow off the sides of the trail. Other RWQCB stormwater treatment options include sheet flowing off the side of the trail to vegetated areas or off-site alternative compliance.

[b] These improvements would also be implemented for *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* and for Alternative 1 (Trail Only), if selected by the decision makers.

[c] Repairs to the Stockton Avenue Bridge are required for the bridge to support trail use or any use of bridge. Refer to Section 2.6, *Project Construction*, for additional information.

ROW = right-of-way; RTC = Santa Cruz County Regional Transportation Commission

In addition, general maintenance activities anticipated for the trail include trash/recycling collection and disposal, waste collection bags restock, drainage inspection and cleaning, and trail structure inspection and required maintenance.

The inclusion of stormwater drainage features and treatment devices described above and compliance with the NPDES-required SWPPP, County Code, and Capitola Municipal Code would reduce the risk of water degradation on and off site from soil erosion and other pollutants related to operational activities related to advertent littering and illegal disposal and pathogens from pet wastes, would minimize the potential for water quality degradation, and would comply with the objectives in the Central Coast Water Quality Control Plan. Therefore, the operational impact of the Project would be **less than significant**. No mitigation is required.

In summary, the construction and operational impacts of the Project would be **less than significant**. No mitigation is required.

Optional First Phase: Trail on the Rail Line (Interim Trail)

1) Implementation of Interim Trail

Impacts from implementation of the Optional Interim Trail (Part 1) would be greater than those identified for the *Ultimate Trail Configuration (Trail next to Rail Line)*. As described in Section 2.6 (**Table 2-3**), construction of the *Optional Interim Trail (Trail on the Rail Line)* would disturb approximately 13.2 acres, which is greater than the Ultimate Trail Configuration due to the demolition of the existing rail, construction of a wider trail (generally 16 feet instead of 12 feet), and construction of additional trail sections on each side of the Capitola Trestle Bridge (additional 0.5 mile), which could result in the additional off-site sediment transport and the potential release of additional pollutants. However, similar to the Ultimate Trail Configuration, implementation of the BMPs to be included in the construction specifications including installing a debris containment system under the existing Capitola Trestle Bridge over Soquel Creek. In addition, the Optional Interim Trail (Part 1) would be required to comply with the NPDES-required SWPPP, Capitola Grading Ordinance, and County grading regulations, which would reduce the risk of water degradation related to construction activities and would ensure that construction activities would not obstruct or conflict with the implementation of the Basin Plan.

After construction, similar to the Ultimate Trail Configuration, the Optional Interim Trail could generate pollutants from trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff that could degrade the surface water quality of downstream receiving waters. Similar to the Ultimate Trail Configuration, the Optional Interim Trail would incorporate several design features for solid waste disposal and stormwater quality management to control and treat potentially contaminated stormwater runoff before ultimately discharging to a creek/drainage, river or ocean. In addition, similar to the Ultimate Trail Configuration, the Optional Interim Trail would cross nine waterways but would use the existing Capitola Trestle Bridge to cross Soquel Creek. **Table 3.8-5** identifies the planned improvements at each waterway crossing and describes how stormwater runoff would be treated to treat flows before discharging into the identified aquatic feature.

Table 3.8-5 Aquatic Features and Planned Improvements for Optional Interim Trail

Aquatic Feature	Optional Interim Trail
Rodeo Gulch	Use existing railroad bridge (replacing tracks with trail)[a]
Stream 472	Use existing rail bed (replacing tracks with trail)[a] No modifications to existing culverts or open channel
Soquel Creek	Use existing Capitola Trestle Bridge (replacing tracks and ties with trail)[a, b] Repair Capitola Trestle Bridge[c]
Escalona Gulch	Use existing rail bed (replacing tracks with trail)[a] No modifications to existing culvert
Tannery Gulch	Use existing rail bed (replacing tracks with trail)[a] above the culvert No modifications to existing culvert Add storm drain line that ties into existing storm drain culverts and/or catch basins adjacent to Project
New Brighton Creek	Use existing rail bed (replacing tracks with trail)[a] above the culvert No modifications to existing culvert
Borregas Creek	Use existing rail bed (replacing tracks with trail)[a] above the culvert No modifications to existing culvert
Stream 633	Use existing railroad bridge (replacing tracks with trail)[a] No modifications to existing culvert
Flatiron Creek	Use existing rail bed (replacing tracks with trail)[a] above the culvert No modifications to existing culvert

[a] This portion of the trail may include a curb to convey surface stormwater runoff to existing or proposed storm drain infrastructure (e.g., pipes, catch basins, inlets, bioswales) that would filter and discharge the runoff at a rock energy dissipator located above the ordinary high water mark before comingling runoff with stream water unless the RWQCB prefers that the runoff flow off the sides of the trail. Other RWQCB stormwater treatment options include sheet flowing off the side of the trail to vegetated areas or off-site alternative compliance.

[b] These improvements would also be implemented for *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek* and for Alternative 1 (Trail Only), if selected by the decision makers.

[c] Repairs to the Capitola Trestle Bridge are required for the bridge to support trail use or any use of bridge. Refer to Section 2.6, *Project Construction*, for additional information.

In addition, general maintenance activities anticipated for the trail include trash/recycling collection and disposal, waste collection bags restock, drainage inspection and cleaning, and trail structure inspection and required maintenance. Refer to the discussion above for the Ultimate Trail Configuration. These stormwater drainage features and treatment devices would minimize the potential for water quality degradation; therefore, the Project would ensure that operational activities would not obstruct or conflict with the implementation of the Basin Plan.

Therefore, implementation of the Optional Interim Trail (Part 1) would not violate any water quality standards or WDRs or otherwise substantially degrade surface or groundwater quality, and impacts would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would remove the trail and re-install the rail tracks/ties on the rail bed. The potential construction-related impacts would be similar to but slightly greater than that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail (Part 1). Demolition of the Optional Interim Trail and rebuilding of the rail line would require substantially more material movement (from demolishing the paved trail), which could result in additional off-site sediment transport and the potential

release of additional pollutants during construction activities. However similar to the Ultimate Trail Configuration and Optional Interim Trail Part 1, implementation of the BMPs to be included in the construction specifications and compliance with the NPDES-required SWPPP, Capitola Grading Ordinance, and County grading regulations would reduce the risk of water degradation related to construction activities and would not conflict or obstruct the implementation of the Basin Plan. There would be no operational impacts because there would be no trail associated with Part 2. The impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* for construction and operational impacts. Refer to the discussion for Impact HYD-1 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of the Optional Interim Trail (Parts 1, 2, and 3) would be an overall increase in construction activities that could result in a violation of water quality standards that could otherwise degrade surface or groundwater quality. However, all three parts of the Optional Interim Trail would be required to comply with federal, state, and local regulations. Further, Parts 1, 2, and 3 would be constructed sequentially, with substantial time (estimate 25 years) between Parts 1 and 3, rather than concurrently. Therefore, the impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. The impact would be slightly increased compared to the impact described above for the Ultimate Trail Configuration. Like for the Optional Interim Trail, this design option would temporarily convert the railroad bridge to trail use by implementing the necessary structural repairs and replacing the ballast, tracks, and ties with fiberglass-reinforced polymer (FRP) deck for the trail. As described in Section 2.6 under *Best Management Practices*, a debris containment system would be installed under the Capitola Trestle Bridge to ensure construction debris and materials do not enter Soquel Creek. After construction, this design option could generate pollutants from trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff that could degrade the surface water quality of downstream receiving waters. Similar to Impact HYD-1, impacts would be reduced to **less than significant** with implementation of BMPs and compliance with the required SWPPP during construction; Project design measures to manage stormwater flow and treat off-site flows before they ultimately discharge in at a creek/drainage, river, or ocean; and ongoing maintenance of these features and solid waste collection. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would be slightly greater because the inland design option would require approximately twice as much retaining wall and the construction of an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. Similar to the Ultimate Trail Configuration, construction activities could result in soil erosion due to earthmoving activities such as excavation, grading, soil compaction and moving, and soil stockpiling. After construction, Design Option B similar to the Ultimate Trail Configuration, could generate pollutants from trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff that could degrade the surface water quality of downstream receiving waters. Similar to the Ultimate Trail Configuration, stormwater would surface flow from the new impervious surfaces into the existing drainage system (i.e., existing culvert, pipe, and/or creek), proposed drainage system, and/or natural material swale included in the trail design. Stormwater treatment devices (e.g., gross solids removal device, hydrodynamic separators, trash screens, and flow through water quality treatment devices) could be installed as determined appropriate by the County and/or City, with the proposed storm drain system treating runoff to improve water quality. Thus, adding Design Option B would slightly increase the construction and operational impacts of Project with or without the Optional Interim Trail. However, as described in Impact HYD-1, this impact would be reduced to **less than significant** with implementation of BMPs and compliance with the required SWPPP during construction; Project design measures to manage stormwater flow and treat off-site flows before they ultimately discharge in at a creek/drainage, river, or ocean; and ongoing maintenance of these features and solid waste collection. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have greater impacts with respect to potential violation of water quality standards because the Optional Interim Trail would require two additional construction and demolition activities that would require substantially more material movement than the Project without the Optional Interim Trail. However, under either scenario (the Project with or without the Optional Interim Trail) would include design features to protect water quality and would be required to comply with the NPDES-required SWPPP, Capitola Grading Ordinance, and County grading regulations, which would reduce the risk of water degradation on and off site from soil erosion and other pollutants related to construction activities. Impacts related to operation would be similar with and without the Optional Interim Trail. Therefore, under either scenario, the impacts related to water quality would be **less than significant**. No mitigation is required.

Threshold B:	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
Threshold E:	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact HYD-2 THE PROJECT WOULD NOT SUBSTANTIALLY DECREASE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Rail Configuration (Trail next to Rail Line)

The Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.

Construction and operation of the Project would not use groundwater and therefore would not deplete groundwater resources. However, implementation of the Project could interfere with groundwater recharge by introducing approximately 26,245 square yards (236,200 square feet) of new paved impervious surfaces associated with new trail construction in Segments 10 and 11.

Approximately 4.2 miles of the new paved trail would traverse the Santa Cruz Mid-County Ground Basin. The typical width of the paved trail would be 12 feet. Following Project construction, as discussed above and in Section 2.6.1 under *Stormwater Drainage*, stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swale included in the trail design. As described for Impact HYD-1, runoff from new or replaced impervious trail surfaces would discharge to a proposed graded natural material swale on the track side of the trail. Runoff generated by the impervious surfaces of the proposed trail would first drain to the proposed natural swales alongside the trail. Any trail-generated flows and off-site flows that exceed the capacity (i.e., overflows) of the proposed swales would be diverted to a proposed storm drainpipe system under the trail.

The small amount of new impervious surface area that the Project would introduce relative to the total surface area of each groundwater basin would be minimal. Further, it would be distributed along virtually the entire length of each basin and would be no more than approximately 12 feet wide at any given location with the exception of the section between 30th Avenue and 38th Avenue where there is adequate space for the trail to be 14 feet wide. The dispersed nature of the new impervious surface over 4.2 miles, as well as the anticipated volume, would ensure that the infiltration capacity of the basin would not be substantially altered compared to existing conditions. In addition, rainfall that could have infiltrated in the ground where the Project footprint is located (prior to the introduction of new impervious surface area) would surface flow over the paved portion of the trail as runoff, but it would have the same infiltration potential on adjacent lands as it did prior to implementation of the Project. Therefore, the dispersed nature of the new impervious surface would ensure that the infiltration capacity would not be substantially altered compared to existing conditions, consistent with the goals to protect groundwater levels and prevent groundwater overdraft.

This impact of the Project would be **less than significant** because new impervious surfaces would occupy a relatively small percentage of the surface area of underlying groundwater basins and would not substantially alter the infiltration capacity of those basins. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Similar to the Ultimate Trail Configuration, construction and operation of the Optional Interim Trail (Part 1) would not use groundwater and therefore would not deplete groundwater resources because it is within the same Project corridor and would transverse the same groundwater basins. However, there is slightly greater potential for the Optional Interim Trail (Part 1) to interfere with

groundwater recharge than the Ultimate Trail Configuration because it would introduce an additional 13,472 square yards (121,255 square feet) of new impervious surface. This is because of the typical trail width (16 feet instead of 12 feet) and the construction of the additional trail sections associated with crossing the Capitola Trestle Bridge (instead of directing trail users through Capitola Village on surface streets). However, similar to the Ultimate Trail Configuration, the anticipated volume would ensure that the infiltration capacity of the basin would not be substantially altered compared to existing conditions. Additionally, in general, stormwater would surface flow from the new paved trail to the adjacent natural surfaces. Drainage improvements necessary to maintain existing overland flow patterns would be made in conjunction with trail construction. Therefore, rainfall that could have infiltrated in the ground along the Optional Interim Trail Part 1 alignment prior to construction would surface flow over the paved portion of the trail as runoff, but it would have similar infiltration potential on adjacent lands as it did prior to implementation.

Therefore, Optional Interim Trail Part 1 would not substantially alter the infiltrations capacity of the groundwater basins and would not conflict or obstruct with implementation of the Santa Cruz Mid-County Groundwater Sustainability Plan, and impacts would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not use groundwater and therefore would not deplete groundwater resources. Removing the paved trail and installing the rail tracks and ties would reduce the amount of impervious surface compared to Part 1 of the Optional Interim Trail and would be similar to existing conditions. Therefore, it would not interfere with groundwater recharge through the introduction of impervious surfaces because infiltration potential would be similar to existing conditions prior to implementation. Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not interfere with the sustainability goals to ensure groundwater is available for beneficial uses and a diverse population of beneficial users, prevent groundwater overdraft, and maintain or enhance groundwater levels where groundwater dependent ecosystems exist.

Therefore, the impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration. Refer to the discussion for Impact HYD-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of the Optional Interim Trail (Parts 1, 2, and 3) would be an overall increase in the amount of impervious surface that would be constructed. Part 1 would introduce approximately 39,717 square yards (357,455 square feet) of impervious pavement for the Optional Interim Trail, as shown in **Table 2-3**, compared to 26,245 square yards (236,200 square feet) for the Ultimate Trail Configuration, as shown in **Table 2-2**. Part 2 would remove the paved trail. Part 3 would re-introduce approximately 20,175 square yards (181,575 square feet) of impervious pavement for the Ultimate Trail Configuration. This increase for the Optional Interim Trail is because the Ultimate Trail Configuration includes viaducts that allow stormwater to infiltrate beneath them. The viaducts are not proposed for the Optional Interim Trail.

However, infiltration capacity of each of the two basins would not be substantially altered compared to existing conditions due to the dispersed nature of the new impervious surface of surface runoff. In addition, Optional Interim Trail (Parts 1, 2, and 3) would not conflict or obstruct with implementation of the Santa Cruz Mid-County Groundwater Sustainability Plan. Therefore, the impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. The impact would be slightly greater than the impacts described above for the Ultimate Trail Configuration. As shown in **Table 2-2**, Design Option A would add approximately 3,064 square yards (27,575 square feet) of pavement (new impervious surface) to the approximately 26,245 square yards (236,200 square feet) for the Ultimate Trail Configuration. However, similarly stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swale included in the trail design, resulting in little to no effect on the infiltration capacity of the Santa Cruz Mid-County Groundwater Basin or its Sustainability Plan. Impacts would be less than **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under Design Option B, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Compared to the coastal alignment, this inland design option would require an additional staircase and ramp connecting to the existing Park Avenue sidewalk near Grove Lane. Design Option B would have a traditional ramp at Coronado Street in lieu of the elevated pier support ramp shown for the coastal side and would not require any viaduct structures for a reduction of 330 feet of viaduct, which would result in an increase in asphalt paving. The impact would a be slightly greater impact than the impact described above for the Ultimate Trail Configuration. Thus, constructing the trail on the inland side of the tracks would result in an additional 1,235 square yards (11,115 square feet) of pavement (new impervious surface) than constructing the trail on the coastal side of the tracks. Similarly, stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swale included in the trail design, resulting in little to no effect on the infiltration capacity of the Santa Cruz Mid-County Groundwater Basin or its Sustainability Plan. Impacts would be less than **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have slightly greater impacts with respect to interference with groundwater recharge because the Optional Interim Trail (Part 1) would result in greater amounts of new impervious surfaces (approximately 39,717 square yards or 357,455 square feet) than the Ultimate Trail Configuration (approximately 26,245 square yards) or 236,205 square feet). This is because the Optional Interim Trail is wider (typically 16 feet instead of 12 feet) and includes additional trail sections on each side of the Capitola Trestle Bridge. Additionally, the Ultimate Trail Configuration includes several sections composed of viaducts, which are raised and

thus allow for more stormwater infiltration for groundwater recharge. However, the Project with or without the Optional Interim Trail is not anticipated to adversely affect the infiltration capacity of the two basins because of the dispersed nature of the new impervious surface and the relatively low volume of runoff that would infiltrate the ground compared to existing conditions. Therefore, under either scenario, groundwater recharge to the Santa Cruz Mid-County Groundwater Basin would be **less than significant** and would not conflict with or obstruct implementation of the Santa Cruz Mid-County Groundwater Sustainability Plan. No mitigation is required.

Threshold C:	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would (1) result in substantial erosion or siltation on- or off-site, (2) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, (3) 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 (4) impede or redirect flood flows.

Impact HYD-3 THE PROJECT WOULD NOT SUBSTANTIALLY ALTER DRAINAGE PATTERNS WITHIN THE PROJECT CORRIDOR OR VICINITY. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The Project would not substantially alter drainage patterns in the Project corridor or immediate vicinity in a manner that could (1) result in substantial erosion or siltation, (2) substantially increase the rate or amount of surface runoff that could result in flooding, (3) create or contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or (4) impede or redirect flood flows.

Construction and operation of the Project would not result in alterations of the course of a stream or river. As shown in **Table 3.8-4**, the Project would cross nine waterways (aquatic features), and the relatively minor planned improvements would maintain localized storm drainage patterns and would not result in alteration of the course of the existing aquatic features.

Construction

Land-disturbing construction activities associated with implementation of the Project, such as vegetation clearing, grading, and excavation of Project sites, could result in the temporary alteration of localized drainage patterns and a temporarily increase in erosion and sedimentation in the construction area. The potential erosion and sedimentation impacts of increased runoff are discussed above under Impact HYD-1. With compliance with the NPDES-required SWPPP, which would include the implementation of erosion and sediment control BMPs, any short-term impacts resulting from alterations of drainage and hydrology during construction would be **less than significant**.

Operation

Once constructed, the Project would result in an additional 26,690 square yards of new impervious surfaces from the new or replaced trail surfaces that could result in minor changes to localized drainage patterns. In general, stormwater would surface flow from the new and replaced

impervious surfaces into the existing drainage system or natural material swale included in the trail design. All off-site flows would match existing condition drainage patterns.

Runoff from new impervious trail surfaces would discharge to a proposed graded natural material swale on the track side of the trail. These drainage systems (e.g., swales, V ditches, pipes) would comply with County Design Criteria Standards and Capitola Design Criteria Standards as follows: All drainage improvements shall be designed to convey a minimum 10-year storm. In addition, means of conveying flood overflows from the site would be per the 25-year storm return period. Runoff generated by the impervious trail surface would first drain to the proposed natural material swales alongside the trail. Any trail-generated flows and off-site flows that exceed the capacity (i.e., overflows) of the proposed swales would be diverted to a proposed storm drainpipe system under the trail.

Any off-site flows that would be intercepted by existing or proposed storm drain infrastructure (e.g., catch basins, sidewalk underdrains, V ditches, swales) in the Project area would be piped in the new storm drain system under the proposed trail to an outlet structure at an existing storm drain system or creek downstream. Stormwater treatment devices (e.g., gross solids removal device, hydrodynamic separators, trash screens, and flow through water quality treatment devices) could be installed as determined appropriate by the County and/or City with the proposed storm drain system treating stormwater flows before they ultimately discharge at a creek or ocean to improve water quality by reducing polluted runoff. Stormwater treatment devices would not substantially alter drainage patterns in the area.

Therefore, the Project would not substantially alter existing drainage patterns along the Project corridor or within the immediate vicinity in a manner that would result in flooding on or off site, create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Impacts would be **less than significant.** No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail (Part 1) would not result in alterations of the course of a stream or river. As shown in **Table 3.8-5**, the Project would cross nine waterways (aquatic features), and the relatively minor planned improvements would maintain localized storm drainage patterns and would not result in alteration of the course of the existing aquatic features.

CONSTRUCTION

Similar to the Ultimate Trail Configuration, land-disturbing activities associated with Optional Interim Trail Part 1 could result in the localized alteration of drainage patterns and the temporary increase in erosion and sedimentation in the construction area. However, impacts could be greater due the increase in demolition and construction activities required for removal of the rail, required repairs to the Capitola Trestle Bridge, and additional 0.5 mile of trail constructed along the Capitola Trestle Bridge. However, with compliance with the NPDES-required SWPPP, which would include the implementation of erosion and sediment control BMPs, any short-term impacts resulting from temporary alterations of drainage and hydrology during construction would be **less than significant**. No mitigation is required.

OPERATION

Like the Ultimate Trail Configuration, in general, stormwater would surface flow from the new paved trail to the adjacent natural surfaces. Drainage improvements necessary to maintain existing overland flow patterns are included in Project design and would be made in conjunction with trail construction. Refer to the discussion for Impact HYD-3 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The proposed swales and drainpipes would be adequate to convey the surface flows and thus would not result in flooding on or off site or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. In addition, stormwater treatment devices (e.g., hydrodynamic separators) would be installed in storm drain system to treat off-site flows before they ultimately discharge to a drainage leading to a waterway or the bay, as determined appropriate by the City and/or County, improving water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail. Impacts would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not result in alterations of the course of a stream or river.

Similar to the Ultimate Trail Configuration and Optional Interim Trail Part 1, land-disturbing activities associated with the demolition of the Optional Interim Trail and the rebuilding of the rail line (Part 2) could result in the temporary localized alteration of drainage patterns and the temporary increase in erosion and sedimentation in the construction area. However, impacts could be greater due to the increase in demolition and construction activities. However, with compliance with the NPDES-required SWPPP, which would include the implementation of erosion and sediment control BMPs, any short-term impacts resulting from alterations of drainage and hydrology during construction would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration. Refer to the discussion for Impact HYD-3 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined construction effects of the Optional Interim Trail (Parts 1, 2, and 3) would be an overall increase in construction and demolition activities that could result in temporary, short-term alterations of localized drainage patterns and hydrology during construction. However, all three parts of the Optional Interim Trail would be required to comply with federal, state, and local regulations. Further, Parts 1, 2, and 3 would be constructed sequentially, with substantial time (estimate 25 years) between Parts 1 and 3, rather than concurrently. The combined operational effects of the Optional Interim Trail (Parts 1, 2, and 3) would be similar to the proposed swales, and drainpipes would adequately convey surface flows from the trails and thus would not result in flooding on or off site or create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. In addition, stormwater treatment devices (e.g., hydrodynamic separators) would be installed in the storm drain system to treat off-site flows before they ultimately discharge to a drainage leading to a waterway or the bay, as determined appropriate

by the City and/or County, improving water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail. Therefore, the impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. The impact would be similar to the impact described above for the Ultimate Trail Configuration and the Optional Interim Trail. It would be similar because, in general, stormwater would surface flow from the new impervious surfaces into the drainage system included in the trail design (e.g., swales, V ditches, pipes). Thus, with implementation of the improvements described in **Tables 3.8-4** and **3.8-5**, stormwater flows would be similar to existing condition drainage patterns and would not substantially alter drainage patterns in the Project corridor and within the vicinity. In addition, as determined appropriate by the City/County, stormwater treatment devices, including hydrodynamic separators, would be installed in the storm drain system to treat off-site flows to improve water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail. Impacts would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under Design Option B, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would be similar to the impact described above for the Ultimate Trail Configuration and the Optional Interim Trail. It would be similar because, in general, stormwater would surface flow from the new impervious surfaces into the drainage system included in the trail design (e.g., swales, V ditches, pipes). All off-site flows would match existing condition drainage patterns. In addition, as determined appropriate by the City/County, stormwater treatment devices, including hydrodynamic separators, would be installed in the storm drain system to treat off-site flows to improve water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail. Impacts would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would have greater impacts with respect to temporary, localized alterations to drainage patterns and hydrology during construction because the Optional Interim Trail would require two additional construction phases (Parts 2 and 3) and additional demolition activities (Parts 1 and 2) that would require substantially more material movement than the Project without the Optional Interim Trail. However, the Project with and without the Optional Interim Trail would be required to comply with the NPDES-required SWPPP, which would include the implementation of erosion and sediment control BMPs.

Once constructed, the Project with and without the Optional Interim Trail would not result in substantial alterations of drainage and hydrology because stormwater would surface flow from the new paved trail to the adjacent natural surfaces whether in the Optional Interim Trail or Ultimate

Trail alignment. Drainage improvements necessary to maintain existing overland flow patterns would be made in conjunction with trail construction, as described in **Tables 3.8-4** and **3.8-5**. Therefore, under either scenario, the impacts related to drainage alterations would be **less than significant**. No mitigation is required.

Threshold D:	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation.

Impact HYD-4 THE PROJECT WOULD NOT RISK RELEASE OF POLLUTANTS DUE TO PROJECT INUNDATION IN FLOOD HAZARD, TSUNAMI, OR SEICHE ZONES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

As described in Section 3.8.1, the Project corridor crosses Rodeo Gulch and Soquel Creek Zone AE, an area subject to inundation 100-year flood event with specified base flood elevation and its regulatory floodway. In addition, 0.56 mile of the Project corridor is mapped in a tsunami inundation area. Please also refer to **Figure 3.8-3**. Once constructed and in use, the trail would not involve the use of hazardous materials or other pollutants that could be inadvertently released due to Project inundation in a flood hazard, tsunami, or seiche zone.

Flood Hazard

The Project corridor crosses Rodeo Gulch Zone AE located along the rail trail south of Brommer Street between Capitola Drive and 30th Avenue where it crosses an area subject to inundation from a 100-year flood event with specified base flood elevation and its regulatory floodway (Balance Hydrologics 2023). The Project corridor also crosses Soquel Creek Zone AE.

As described in Section 2.4.1 under *Waterway Crossings*, the Project includes construction of a new clear-span bridge over Rodeo Gulch just north of the existing railroad bridge supported on each end by an abutment. Each abutment would be supported by drilled concrete pilings. The new clear-span bridge would have a viaduct with FRP bridge decks approaching at least one side of the bridge built up to the abutments. The new clear-span bridge would match existing railroad bridge infrastructure and existing grades. Thus, it would clear span 16.5-17.2 feet above the base flood elevation of 22.4 feet and would not result in the change to the floodplain area or capacity. In the area of Soquel Creek, trail users would be directed to the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village. Therefore, the trail alignment would not encroach on the Soquel Creek Zone AE.

The additional crossings identified in **Table 3.8-2** do not encroach into FEMA Special Flood Hazard Areas. Therefore, the Project would not result in a release of pollutants due to Project inundation in a FEMA Special Flood Hazard Area.

Seiche

The proposed corridor is not located near an enclosed or semi-enclosed body of water such as bays and lakes. Therefore, the Project would not result in a release of pollutants due to Project inundation due to seiche.

Tsunami

As shown on **Figure 3.8-3**, 0.56 mile of the Project corridor is located in a Tsunami Inundation Zone. Inundation of the proposed paved recreation trail in this portion of the corridor as a result of a tsunami would not result in the potential release of pollutants because operation of the Project would not include any pollutants.

Therefore, the Project would not result in the release of pollutants due to Project inundation from a flood, tsunami, and/or seiche. The potential impact would be **less than significant**. No mitigation is required.

Optional First Phase: Trail on the Rail Line (Interim Trail)

1) Implementation of Interim Trail

As described above for the Ultimate Trail Configuration, the Project corridor crosses Rodeo Gulch Zone AE located along the rail trail south of Brommer Street between Capitola Drive and 30th Avenue. However, unlike the Ultimate Trail Configuration, the Optional Interim Trail would continue along the rail corridor and Capitola Trestle Bridge, which crosses over Soquel Creek. Conversion of the existing Capitola Trestle Bridge to trail use would include the removal of ballast, tracks, and ties and addition of FRP deck. Additionally, structural repairs are needed for any future use of the Capitola Trestle Bridge, including conversion to a trail use. Since the Optional Interim Trail would rely on an existing bridge, no improvements would encroach into FEMA Special Flood Hazard Areas and would not result in a release of pollutants due to Project inundation in a FEMA Special Flood Hazard Area.

A portion of the Project corridor and thus the Optional Interim Trail is not located near an enclosed or semi-enclosed body of water along Project corridor. Therefore, implementation of Optional Interim Trail Part 1 would not result in a release of pollutants due to Project inundation due to seiche.

A portion of the Project corridor and thus Optional Interim Trail Part 1 are located in a Tsunami Inundation Zone. Inundation of the proposed paved recreation trail in this portion of the corridor as a result of a tsunami would not result in the potential release of pollutants because the operation of the Project would not include any pollutants that would be released.

Therefore, similar to the Ultimate Trail Configuration, Optional Interim Trail Part 1 would not result in the release of pollutants due to Project inundation from a flood, tsunami, and/or seiche. The potential impact would be **less than significant.** No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

As stated above, the Project corridor is located in a Flood and Tsunami Inundation Zone but not likely to release pollutants as described above. The rail line would be built in accordance with American Railway Engineering and Maintenance-of-Way Association, Federal Railroad Administration, and California Public Utility Commission requirements, as applicable, which include provisions for rail construction within a Flood and Tsunami Inundation Zone. Therefore, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not result in a release of pollutants due to Project inundation in a FEMA Special Flood Hazard Area.

Therefore, the impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration. Refer to the discussion for Impact HYD-4 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of the Optional Interim Trail (Parts 1, 2, and 3) would be a similar to the Project because construction of proposed improvements would be located outside the designated FEMA Special Flood Hazard Areas. In addition, the proposed features would not result in the release of pollutants as a result of inundation from a tsunami. Therefore, the impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would temporarily convert the railroad bridge to trail use by implementing the necessary structural repairs and replacing the ballast, tracks, and ties with FRP deck for the trail. Impacts would be similar to the impacts described above for the Ultimate Trail Configuration because no improvements would encroach into a FEMA Special Flood Hazard Area. In addition, Design Option A would be located in a tsunami inundation area, but similar to the Ultimate Trail Configuration, inundation of the paved recreation trail in this portion of the corridor as a result of a tsunami would not result in the potential release of pollutants because the operation of the Project would not include any pollutants that would be released. In addition, no improvements would be located in a FEMA Special Flood Hazard Area. Impacts would be **less than significant**, and no mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under Design Option B, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would be similar to the impact described above for the Ultimate Trail Configuration because Design Option B would be located in a tsunami inundation area. Inundation of the paved recreation trail on the inland side as a result of a tsunami would not result in the potential release of pollutants because the operation of the Project would not include any pollutants that would be released. In addition, no improvements would be located in a FEMA Special Flood Hazard Area as with portions of the Ultimate Trail Configuration. Impacts would be **less than significant**, and no mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with or without the Optional Interim Trail would have similar impacts with respect to potential impacts from the release of pollutants as a result of inundation from a flood and tsunami. Under either scenario, the Project alignment would cross a FEMA Special Flood Hazard Area and

would be located in a tsunami inundation area. However, for the reasons described in the analysis for Impact HYD-4, impacts would not result in the release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones. Overall, the impact of the Project with or without the Optional Interim Trail would be **less than significant**.

3.8.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
HYD-1. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality or conflict with a Water Quality Control Plan.	LTS	LTS Similar, slightly greater	LTS Similar, slightly greater	LTS Similar
HYD-2. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	LTS	LTS Similar, slightly greater	LTS Similar	LTS Similar
HYD-3. The Project would not substantially alter drainage patterns within the Project corridor or vicinity.	LTS	LTS Similar, slightly greater	LTS Similar, slightly greater	LTS Similar
HYD-4. The Project would not risk release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones.	LTS	LTS Similar	LTS Similar	LTS Similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

3.9 Land Use and Planning

This section identifies and evaluates impacts related to land use and planning that may arise through implementation of the Ultimate Trail Configuration *(Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)*. Existing land uses within the Project corridor and adjacent to the corridor in the unincorporated County of Santa Cruz (County) or City of Capitola (City), along with applicable land use policies and regulations, are described in this section. The Project is proposed by the County, in coordination with the City and the Santa Cruz County Regional Transportation Commission (RTC); therefore, the overall consistency of the Project has been assessed in relation to applicable land use designations, zoning regulations, and other relevant plans, ordinances, and standards of these three agencies. **Table 3.9-1** presents a summary of Project impacts regarding land use and planning.

Table 3.9-1 Summary of Impacts on Land Use and Planning[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
LUP-1. The Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	None Required	Less than Significant
Beneficial Effect. The Project would increase connectivity across established communities by providing a pedestrian and bicycle trail using an existing corridor.			

[a] The impacts apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.9.1 Existing Conditions

Regional Setting

The County occupies approximately 600 square miles of urban and rural lands bordered by beaches and coastal bluffs along Monterey Bay and backed by coastal mountains and valleys to the east. The County supports a diverse range of habitats and land uses that include redwood forests in the mountains in the northern portion of the County, urban and residential development in the central portion, and agricultural land uses in the northwestern and southern portions. Most of the population in the County is centrally located in urban and residential development.

Land uses in the County are predominately open space (including agriculture), which accounts for approximately 64% of the land uses (169,600 acres). This is followed by lands designated for residential uses (65,152 acres, or 24.5%), public and institutional lands (24,252 acres, or 9.1%), and commercial and industrial lands (6,431 acres, or 2.4%) (Santa Cruz County 2022).

Regional Land Uses

The Project corridor is located in the central portion of the County, within the southern portions of the unincorporated communities of Live Oak and Aptos and the City of Capitola. As of 2022, Live

Oak had a population of 17,038, Aptos had a population of 6,664, and the City of Capitola had a population of 9,794 (U.S. Census Bureau 2020a, 2020b; California Department of Finance 2023).

The communities' and the City's land use patterns are the result of historical development patterns, including the County's and City's original development and recent land use policies guided by the County and City. Land uses in Live Oak, Capitola, and Aptos consist primarily of residential land uses, with commercial areas concentrated along 41st Avenue, Capitola Road, and Capitola Village, and recreational uses located along the western boundary of Aptos.

Project Corridor Setting

Project Corridor Land Uses

The Project corridor is 4.7 miles, located along the RTC-owned Santa Cruz Branch Rail Line (SCBRL) corridor in central Santa Cruz County. The Project corridor would extend from 17th Avenue in the unincorporated community of Live Oak, through the City of Capitola, to the western side of State Park Drive in the unincorporated community of Aptos. Land uses along the Project corridor include residential, commercial, industrial, public lands, and parks and recreation.

Segment 10 would extend from 17th Avenue in Live Oak to 47th Avenue in Capitola. Land uses inland of the Project corridor consist primarily of single-family and multi-family residences, with some commercial uses located along 17th Avenue and Thompson Avenue. Land uses on the ocean side of the Project corridor are primarily single-family and multi-family residences. Segment 10 would cross Rodeo Gulch, which is designated as Urban Open Space.

Segment 11 would extend from 47th Avenue in Capitola to State Park Drive in Aptos. In Capitola, land uses on either side of the Project corridor consist primarily of single-family and multi-family residences with commercial and park uses (e.g., Jade Street Park). The eastern end of Segment 11 as it exits Capitola is surrounded by parks and open space uses (e.g., New Brighton State Beach). In Aptos, land uses inland of the Project corridor consist of parks and open space as the corridor enters Aptos and then is surrounded by single-family and multi-family residential uses until the end of Segment 11 along State Park Drive, which also includes commercial uses.

3.9.2 Regulatory Setting

This section includes a description of relevant federal, state, regional, and local plans and policies, with a consistency determination presented in **Tables 3.9-2** and **3.9-3**.

Section 2.7, *Required Permits and Approvals*, states that, because the Project is being implemented by the County, the City and RTC do not have to certify this Environmental Impact Report (EIR) on their own. However, the County and RTC would rely on this EIR to carry out discretionary approvals related to the Project; therefore, consistency of the Project with applicable City land use plans and policies is evaluated as part of the project analysis, and consistency of the Project with applicable City and RTC land use plans and policies is evaluated in this EIR for informational purposes.

As part of the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan, the Project has been planned and designed in coordination with many responsible agencies and stakeholders, including but not limited to the California Coastal Commission (CCC), California Public Utilities Commission, California Department of Fish and Wildlife, and the public. As part of this process, consideration has been given to existing and proposed programs and plans to determine the design and project features.

Federal

Coastal Zone Management Act

The Coastal Zone Management Act was passed by Congress in 1972. It provides for management of coastal resources and aims to protect, restore, and enhance coastal resources through three programs administered by the National Oceanic and Atmospheric Administration in partnership with coastal states. In California, the Coastal Zone Management Act is administered in partnership with the CCC. In partnership with coastal cities and counties, it plans and regulates the use of land and water in the Coastal Zone. Development activities, which are broadly defined by the Coastal Zone Management Act to include construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters (among other activities), generally require a coastal permit from either the CCC or the local government. The National Coastal Zone Management Program balances competing land and water issues. Programs under the Coastal Zone Management Act include the National Estuarine Research Reserve System, which protects estuaries for use as field laboratories that improve understanding of estuaries, and the Coastal and Estuarine Land Conservation Program, which assists with acquisition of coastal property or easements for conservation purposes.

State

California Coastal Act

The California Coastal Act of 1976 establishes procedures for the review of proposed developments in the Coastal Zone and policies for the protection of coastal resources and public access to the coastline. There are a number of Coastal Act regulations in the California Public Resources Code that pertain to land use and planning. These include articles that protect the coastal lands and natural resources that they support while providing public access to the greatest extent possible. There are also provisions for providing the appropriate number and distribution of public facilities to support the continuous population growth in California. These include recreational opportunities such as trails, access facilities, and public restrooms. There are also provisions to protect the rights of private landowners and the land uses on private properties that neighbor public access and coastal areas.

California State Parks General Planning Handbook

The California State Parks General Planning Handbook (State Parks 2010) guides planning efforts within and across California State Parks. Guidelines have been established to balance public use while protecting and enhancing natural resources and providing educational opportunities to the public. The handbook provides a tool to standardize planning efforts across the State of California. The overall goals of the handbook are to direct state park planning practices to guide natural resources management, restoration of unique and protected wildlife and vegetation, public involvement, and protection of sensitive resources across the parks and to provide educational opportunities for the public to use state park lands along the extent of the State of California.

New Brighton State Beach General Plan

The New Brighton State Beach General Plan (State Parks 1990) recognizes the potential of New Brighton State Beach, located on the ocean side of Segment 11, to help meet California's recreation demands. The plan establishes goals to provide recreational opportunities for day use, protect cultural and natural resources, and provide educational elements throughout the park for both cultural and

natural resources. It also identifies natural areas to rehabilitate that have been degraded through past land uses and disturbance. While intending to preserve and enhance natural resources and use of the beach, the plan also acknowledges that the beach's size and associated facilities are inadequate to serve demand. The New Brighton State Beach General Plan concludes with goals related to parking availability, vegetation and wildlife, aesthetic improvements, and visitor safety and proposals related to providing connections to city streets, transit, and recreational trails.

Regional

Association of Monterey Bay Area Governments Metropolitan Transportation Plan/Sustainable Communities Strategy

The Association of Monterey Bay Area Governments (AMBAG) is the metropolitan planning organization and council of governments for Santa Cruz, Monterey, and San Benito Counties. AMBAG performs metropolitan level transportation planning on behalf of the region and formulates land use and transportation measures that would support the region in achieving greenhouse gas emissions reduction targets as established by the California Air Resources Board. AMBAG works closely with local governments within its jurisdiction to ensure that land use patterns at the local level support regional transportation and land use goals. AMBAG's 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy addresses how the AMBAG region will meet its transportation needs through 2045. Specifically, the Sustainable Communities Strategy details strategies for the AMBAG region to focus housing and job growth in existing urban areas, use infill development opportunities, and invest in expanded transit networks and active transportation options.

Monterey Bay Sanctuary Scenic Trail Network Final Master Plan

The MBSST Network Master Plan (RTC 2014) was developed to establish the design standards and course for a continuous recreational trail system along the SCBRL throughout Santa Cruz County. This trail would connect to the Monterey Bay Coastal Recreation Trail that spans the Monterey County coastline at the border of Santa Cruz and Monterey Counties along the Pajaro River. At full buildout, the trail would span Santa Cruz and Monterey Counties, providing a continuous recreational trail along the entire Monterey Bay coastline.

Local

Santa Cruz County General Plan and Local Coastal Program

The County General Plan and Local Coastal Program (LCP) provides a framework for development and growth in the County (Santa Cruz County 1994). The General Plan and LCP were adopted by the County Board of Supervisors on May 24, 1994, and were certified by the CCC on December 15, 1994. Several amendments were made to the County General Plan and LCP under the Sustainability Policy and Regulatory Update (Sustainability Update) in 2022, which are discussed below. The County General Plan and LCP provide policies to manage growth in the County. The policies determine where growth should be focused in the County and that public services grow with the population. Growth is also balanced with the protection of natural resources.

The County General Plan includes elements required by the state by including Land Use; Circulation; Housing; Conservation and Open Space; Public Safety; Noise; Parks, Recreation, and Public Facilities; and Community Design Elements (Santa Cruz County 1994). The Project was analyzed for consistency with policies and objectives of the County General Plan, including those in the

Conservation and Open Space; Land Use; and Parks, Recreation, and Public Facilities Elements. These elements address the enhancement of public recreational opportunities in the County and provide additional access to natural amenities, preserve natural resources, and provide natural resource educational opportunities to the public.

In the Land Use Element, County General Plan land use designations define the physical uses and intensity of development for each land use designation. The Project corridor is within the Public Facilities land use designation and is surrounded by Public Facilities; Urban Low, Medium, and High Density Residential; Commercial Service; and Parks and Recreation land uses. County General Plan land use designations are shown on **Figure 3.9-1**, County of Santa Cruz General Plan Land Use Designations, located at the end of this section.

Santa Cruz County Sustainability Policy and Regulatory Update (Sustainability Update)

The Sustainability Update is a comprehensive update to the County General Plan and LCP and County Code. The Sustainability Update is intended to make the County General Plan and County Code consistent with new state laws and new regional and local plans related to sustainable development. The County approved the Sustainability Update in December 2022, and adopted documents are pending final certification from the CCC.

The Sustainability Update involves amendments to the County General Plan and LCP, amendments to the County Code, and creation of new County Design Guidelines. Key updates to the County General Plan include incorporation of 2040 as the document's planning horizon year and amendments to goals and policies to align with state law and recently adopted local plans such as the County Climate Action and Adaptation Plan, Economic Vitality Strategy, and Parks Strategic Plan. Several amendments to the County Code were made to align with changes to the County General Plan, including amendments to Title 5 (Business Regulations), Title 12 (Building Regulations), Title 13 (Planning and Zoning Regulations), Title 15 (Community Facilities), Title 16 (Environmental Resource Protection), and Title 18 (Procedures). Finally, the Sustainability Update resulted in the creation of new County Design Guidelines, which were developed to guide new development in the County to be attractive, functional, and context-sensitive and to align with community goals and objectives.

The Sustainability Update involves revisions to several County General Plan goals and policies that encourage or address the Project. The Sustainability Update revised Policy PPF-2.7.1, Trails Master Plan, which encourages implementation of the MBSST, and Implementation Policy PPF-2.7f, which encourages incorporation of the MBSST into a trails system and future County Trails Master Plan.

Santa Cruz County Zoning Ordinance, Title 13

The County Zoning Ordinance (Chapter 13.9) implements the policies of the County General Plan and LCP by classifying and regulating the uses of land in the County. The County Zoning Ordinance identifies specific zoning districts in the County and development standards that apply to each district. Zoning designations in and adjacent to the Project corridor are shown on **Figure 3.9-2**, County of Santa Cruz Zoning Districts, located at the end of this section.

The Project corridor is zoned as Public and Community Facilities and is immediately surrounded by Single Family Residential, Multi-Family Residential, Commercial Services, and Parks, Recreation, and Open Space zoning districts. These designations are defined below:

- **Single Family Residential:** Single-family residence, urban or rural. Maximum lot coverage of 40% and maximum height of 28 feet. Additional uses, including but not limited to accessory

habitable structures, require a building permit and public noticing and/or public hearing by the zoning administrator.

- **Multi-Family Residential:** Multiple-family residential, including appurtenant accessory uses and structures, urban. Some Multi-Family Residential zoning districts allow mobile homes.
- **Commercial Services:** Commercial service uses are intended primarily to be nonretail in nature, such as building material suppliers, auto repair, or freight terminals, and to be nonpolluting. Commercial Services zoning districts are intended to be located in areas where the impact of noise, traffic, and other nuisances and hazards associated with such uses will not adversely affect other land uses.
- **Parks, Recreation, and Open Space:** Intended to preserve the County's undevelopable lands and public park lands as open space, protect open space in the County by allowing commercial recreational uses that preserve open space by means of large acreage sites with low-intensity uses that are compatible with the scenic values and natural setting of the County, and preserve agriculture as an open space use.

City of Capitola General Plan

The Capitola General Plan, adopted in 2014 and updated in 2019, establishes guidelines for development and growth in the City. The Capitola General Plan expresses the desires of Capitola residents about the City's future physical, social, economic, and environmental character, and plans for development in the City through five topical chapters. State law provides that a General Plan consists of eight mandatory elements. The City has addressed state requirements by including Land Use, Open Space and Conservation, Mobility, Safety and Noise, and Economic Development Elements in its General Plan (City of Capitola 2019). Because the Capitola General Plan was adopted prior to the 2017 requirement for an Environmental Justice Element, the Capitola General Plan does not include this element. The City is also in the process of preparing its 2024–2031 Housing Element.

The Capitola General Plan Land Use Element establishes land use designations for the City, which define the physical uses and intensity of development for each land use designation. The Project corridor land use designation is Public/Quasi-Public. Capitola General Plan land use designations adjacent to the Project corridor include Single-Family Residential and Mobile Home along Cliff Drive and Park Avenue; Multi-Family Residential and Mixed Use Village on the ocean side of the Project corridor near Soquel Creek; and Parks and Open Space as the Project corridor exits Capitola to the east. The Capitola General Plan land use designations along the Project corridor are shown on **Figure 3.9-3**, City of Capitola General Plan Land Use Designations, located at the end of this section.

Policies included in the Land Use Element and the Open Space and Conservation Element of the Capitola General Plan pertain to land planning and environmental effects. These policies include goals and strategies for community enhancement, land use compatibility, protection of natural resources, and the provision of parks and open space.

City of Capitola Municipal Code

The Capitola Zoning Ordinance, established by Title 17 of the Capitola Municipal Code, implements the policies of the Capitola General Plan by classifying and regulating land uses within the City. While land use designations characterize the physical uses and the intensity of those uses, zoning designations legally define permitted uses and development standards. The Capitola Zoning Ordinance identifies specific zoning districts in the City and development standards that apply to each district. The Project corridor is zoned as Community Facility. Zoning districts along the Project

corridor include Single-Family Residential and Mobile Home along Cliff Drive and Park Avenue; Multi-Family Residential (Low Density) and Mixed Use Village on the ocean side of the Project corridor near Soquel Creek; and Parks and Open Space as the Project corridor exits Capitola to the east. The Mixed Use Village district on the ocean side of the Project corridor near Soquel Creek is within a Visitor Serving overlay zone. City zoning districts along the Project corridor are shown on **Figure 3.9-4**, City of Capitola Zoning Districts, located at the end of this section. These districts are defined below:

- **Community Facility:** The Community Facility zoning district provides areas for public and community facilities serving Capitola residents and visitors. Land uses permitted in the Community Facility zoning district include public uses such as governmental offices, police and fire stations, community centers, schools, libraries, and similar uses.
- **Mobile Home:** The Mobile Home zoning district provides areas for exclusive development of mobile home parks, which the City Zoning Code recognizes as a valuable source of affordable housing serving Capitola's lower-income and senior residents.
- **Single-Family Residential:** The purpose of the Single-Family Residential zoning district is to protect and enhance the unique qualities of individual neighborhoods in Capitola. The Single-Family Residential (R-1) zoning district allows for variation in development standards based on existing development patterns.
- **Multi-Family Residential (Low Density):** The purpose of the Multi-Family Residential (Low Density) zoning district is to accommodate a range of housing types to serve all Capitola residents. Multi-Family Residential (Low Density) zoning districts require 4,400 square feet of parcel area per residential unit (approximately 10 dwelling units per acre).
- **Multi-Family Residential (High Density):** Multi-Family Residential (High Density) zoning districts require 2,200 square feet of parcel area per residential unit (approximately 10 dwelling units per acre).
- **Mixed Use Village:** The purpose of the Mixed Use Village zoning district is to preserve and enhance Capitola Village. Allowable uses in this zoning district include but are not limited to retail, restaurants, services, and recreational amenities.
- **Planned Development:** Planned Development zoning districts allow high-quality development that deviates from standards and regulations applicable to other zoning districts in Capitola. This zoning district is intended to promote creativity in building design, flexibility in permitted land uses, and innovation in development concepts.
- **Parks and Open Space:** The Parks and Open Space districts provides parks, recreational facilities, and open space for the use and enjoyment of the community and visitors.

3.9.3 Methodology and Significance Thresholds

Methodology

Potential impacts related to land use and planning as a result of the Project were evaluated by comparing Project objectives and characteristics to existing plans and policies throughout the County, including General Plan and LCP land use and zoning designations, policies, and existing and proposed recreational plans in the City and the County. Mitigation measures required throughout this EIR for identified areas of potentially significant impacts were taken into consideration in the evaluation of consistency with applicable policies and plans.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, which provides a sample Initial Study checklist that includes number of factual inquiries related to the subject of land use, and the other environmental topics. The letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For the purpose of this EIR, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would:

A. Physically divide an established community.

B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The trail alignment would follow the existing rail line and would not act as a new dividing element that was not already introduced by the SCBRL. Furthermore, the Project would create a multi-modal bicycle/pedestrian trail, which would create connections to the trail itself rather than create physical divisions. Therefore, impacts related to division of an established community (Threshold A) would be less than significant. This impact discussion is included in Section 3.15, *Effects Found to be Less than Significant*.

3.9.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold B:	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Impact LUP-1 THE PROJECT WOULD NOT CONFLICT WITH APPLICABLE LAND USE PLANS, POLICIES, OR REGULATIONS ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration Trail (Trail next to Rail Line)

County of Santa Cruz. The goals and policies of the County General Plan and LCP include goals for increased connectivity and the provision of additional recreational opportunities in the County while preserving public safety and natural resources. The Project would provide connectivity between existing recreation areas and ultimately throughout the County, support the goals to enhance recreational opportunities by improving access throughout the region, and include educational signage throughout the Project corridor. The Project would also be consistent with the policies set forth in the County Bicycle Plan and MBSST Network Master Plan because it supports development of safe bicycle routes and implements Segments 10 and 11 of the MBSST. The Project would provide an accessible bicycle/pedestrian path for active transportation, recreation, and nature education

along the rail corridor, consistent with the MBSST Network Master Plan. The project objectives are based on and consistent with objectives and policies in the approved MBSST Network Master Plan.

Project consistency with specific relevant policies and objectives (hereinafter referenced as policies) of the County General Plan and LCP with the purpose of avoiding or mitigating an environmental effect is demonstrated in **Table 3.9-2**. As described therein, the Project would be consistent with 28 of the 32 relevant policies and objectives. Several of these consistency determinations are based on the impact analyses and mitigation measures presented in other sections of the EIR, which are referenced throughout **Table 3.9-2**.

The Project would not be consistent with Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8 because it would result in tree removal that would be a significant disruption in sensitive habitat. Refer to Section 3.3, *Biological Resources*, for a full discussion of impacts associated with sensitive habitat.

Because the Project would be consistent with most (28 of 32) of the applicable land use policies and objectives in the County General Plan and LCP and because the specific potential impacts and required mitigation measures are addressed in other sections throughout this EIR, this impact would be **less than significant**. No additional mitigation is required.

City of Capitola. The Capitola General Plan establishes goals for community enhancement, land use compatibility, protection of natural resources, and the provision of parks and open space in the City. The Project would provide connectivity in the City and, as such, would enhance the community, be compatible with existing land uses and long-term land use goals, and enhance recreational opportunities by providing a recreational trail that increases connectivity to existing recreation areas, such as New Brighton State Beach. Project consistency with specific relevant policies of the Capitola General Plan with the purpose of avoiding or mitigating an environmental effect is demonstrated in **Table 3.9-3**. As described therein, the Project would be consistent with 11 of the 13 relevant policies. Several of these consistency determinations are based on the impact analyses and mitigation measures presented in other sections of the EIR, which are referenced throughout **Table 3.9-3**. The Project would not be consistent with Policies OSC-6.2 and OSC-6.9 because the Project would result in tree removal that would be a significant disruption in sensitive habitat. Because the Project would be consistent with 11 of the 13 applicable land use policies in the Capitola General Plan and because the specific potential impacts and required mitigation measures are addressed in other sections throughout this EIR, this impact would be **less than significant**. No additional mitigation is required.

Additionally, the Project would be consistent with the goals of the New Brighton State Beach General Plan. The New Brighton State Beach General Plan establishes goals to provide recreational opportunities for day use, protect cultural and natural resources, and provide educational elements throughout the park for both cultural and natural resources. The New Brighton State Beach General Plan also includes proposals for connections to recreational trails. Because the Project would increase connectivity and improve access to the park and provide additional facilities near the beach, the Project would be consistent with the New Brighton State Beach General Plan.

The Project would also be consistent with the Capitola Bicycle Transportation Plan. The Capitola Bicycle Transportation Plan identifies goals to improve bicycle circulation and access, increase bicycle ridership, and improve bicycle safety. Additionally, the plan also discusses the MBSST and incorporates the Project alignment into other planned bicycle facilities (City of Capitola 2011). The Project would be consistent with the Capitola Bicycle Transportation Plan because it would implement a portion of the MBSST.

The Project corridor in the City is zoned as Community Facility. Trails and recreational facilities are permitted in each of these zoning districts with applicable use permits, pursuant to Title 17 of the Capitola Municipal Code. Further, the Project corridor in the County is zoned as Public and Community Facilities, which allows recreational facilities and accessory uses pursuant to the County Code, Chapter 13.10. Accordingly, the Project would be consistent with the Capitola and County Codes.

In summary, the Project would be consistent with and support planning goals to enhance and establish safe alternative transportation and recreational opportunities throughout the County and City. The Project would be substantially consistent with applicable land use policies. Of the 45 specific policies and objectives reviewed in **Tables 3.9-2** and **3.9-3**, the Project would be consistent with all except County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8 and Capitola General Plan Policies OSC-6.2 and OSC-6.9. Consistency with policies and ordinances protecting biological resources, including trees, is addressed in Section 3.3 (Impact BIO-10). Several of these consistency determinations are based on the impact analyses and mitigation measures presented in other sections of the EIR, which are referenced throughout **Tables 3.9-2** and **3.9-3**. Implementing the mitigation measures to reduce impacts as a byproduct would result in overall consistency with applicable plans and policies discussed in this section. To avoid redundancy with the impact analyses and conclusions in other sections of this EIR, the analysis and conclusion for Impact LUP-2 focus on the overall resulting consistency.

Therefore, because the Project would be consistent with County and City goals to establish safe alternative transportation and recreational opportunities, because the Project would be consistent with most (39 of 45 of the applicable County and City land use policies and objectives, and because the specific potential impacts and required mitigation measures associated with these policies are fully addressed in other sections throughout this EIR, this impact would be **less than significant**. No additional mitigation is required.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Aesthetics	
Policy 5.10.3. Protection of Public Vistas. Protect significant public vistas as described in policy 5.10.2 from all publicly used roads and vista points by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping, and structure design. Provide necessary landscaping to screen development which is unavoidably sited within these vistas.	**Inconsistent.** The Project would situate construction staging areas to avoid impacts to vegetation when feasible. Project fencing would be designed to maximize views of public vistas along the trail. As discussed in Section 3.1, *Aesthetics*, the Project would result in removal of approximately 800 trees along the Project corridor. Although the Project would include tree planting to restore trees along the Project corridor, there would be a potential impact to public vistas from removal of trees. Therefore, the Project would be inconsistent with this policy.
Policy 5.10.6, Preserving Ocean Vistas. Where public ocean vistas exist, require that these vistas be retained to the maximum extent possible as a condition of approval for any new development.	**Consistent.** The Project would not only retain public views of ocean vistas throughout the Project corridor but would also increase public access to viewing areas for ocean vistas. The Project would be consistent with this policy.
Policy 5.18.8. Encouraging Landscaping. Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.	**Inconsistent.** As discussed in Section 3.1, *Aesthetics*, the Project would require the removal of approximately 800 trees, which would decrease the density of vegetated and forested areas along the Project corridor. Although the Project would replace trees along the corridor, the Project would be inconsistent with this policy.
Air Quality	
Policy 5.18.1. New Development. Ensure new development projects are consistent at a minimum with the Monterey Bay Unified Air Pollution Control District Air Quality Management Plan and review such projects for potential impact on air quality.	**Consistent.** The Project has been reviewed for consistency with the Monterey Bay Unified Air Pollution Control District (now known as the Monterey Bay Air Resources District) Air Quality Management Plan to determine the potential for impacts on air quality, as discussed in Section 3.2, *Air Quality*. Implementation of the Project would not result in permanent increases in air emissions. Typical construction equipment would be utilized through either development option, and standard BMPs, including but not limited to limiting grading activities during high winds, watering construction areas, covering inactive storage piles, installing perimeter protection, and implementing measures from the Soil Management Plan to be prepared by the County, would be implemented throughout construction. These emissions have been accounted for in the Air Quality Management Plan and would not significantly impact air quality. Therefore, implementation of the Project would be consistent.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 5.18.3. Air Quality Mitigation. Require land use projects generating high levels of pollutants (i.e., manufacturing facilities, hazardous waste handling operations) to incorporate air quality mitigations in their design.	**Consistent.** The Project is a trail and would not generate high levels of pollutants like a manufacturing facility or hazardous waste handling operation might. As discussed in Section 3.2, *Air Quality*, the Project would generate temporary construction-related emissions but would not result in permanent increases in air emissions. Implementation of BMPs, including limiting grading activities during high winds, watering construction areas, covering inactive storage piles, installing perimeter protection, and implementing measures from the Soil Management Plan to be prepared by the County, would reduce potential impacts to a less than significant level. Therefore, the Project would be consistent with this policy.
Objective 3.1. Vehicle Miles. To limit the increase in Vehicle Miles Traveled (VMT) to achieve as a minimum, compliance with the current Air Quality Management Plan.	**Consistent.** As described in Section 3.12, *Transportation,* the Project would not conflict with or be inconsistent with guidance related to VMT established by the Office of Planning and Research, California Department of Transportation, and the County. Overall, the Project would result in a decrease in VMT by increasing active transportation opportunities and connectivity in the region. Further, as discussed in Section 3.2, *Air Quality,* the Project would be consistent with the Monterey Bay Air Resources District Air Quality Management Plan. Therefore, the Project would be consistent with this policy.
Biological Resources	
Policy 5.1.6. Development in Sensitive Habitats. Sensitive Habitats shall be protected against a significant disruption of habitat values; and any proposed development within or adjacent to these areas must maintain or enhance functional capacity of the habitat. Reduce in scale, redesign, or if no other alternative exists, deny any project which cannot sufficiently mitigate significant adverse impacts on sensitive habitats unless approval of project is legally necessary to allow a reasonable use of the land.	**Inconsistent.** As discussed in Section 3.3, *Biological Resources,* the Project corridor extends through sensitive habitat, including Environmental Sensitive Habitat Areas, and Project development requires tree removal that would disrupt habitat values. Therefore, the Project would be inconsistent with this policy.
Policy 5.1.8. Chemicals Within Sensitive Habitats. Prohibit the use of insecticides, herbicides, or any toxic chemical substances in sensitive habitats, except when an emergency has been declared, when the habitat itself is threatened, when a substantial risk to public health and safety exists, including maintenance for flood control by Public Works, or when such use is authorized pursuant to a permit issued by the Agricultural Commissioner.	**Consistent.** No proposed toxic chemical applications are planned for the trail corridor or adjacent land uses. Prior to the onset of construction activities, the County would be required to prepare an erosion control plan and would prepare a SWPPP in accordance with the state NPDES, which would include the implementation of BMPs to ensure toxic substances that may be related to construction activities would not enter sensitive environments adjacent to the trail corridor, as discussed in Section 3.8, *Hydrology and Water Quality*. Therefore, the Project would be consistent with this policy.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 5.1.9. Biotic Assessments. Within the following areas, require a biotic assessment as part of normal project review to determine whether a full biotic report should be prepared by a qualified biologist: (a) Areas of biotic concern, mapped (b) Sensitive habitats, mapped and unmapped	**Consistent.** A Natural Environment Study was prepared for the Project, which includes the evaluation of adjacent land uses and sensitive environments. These are described in Section 3.3, *Biological Resources.* Because a biotic assessment was prepared for the Project, the Project is consistent with this policy.
Policy 5.2.3. Activities Within Riparian Corridors and Wetlands. Development activities, land alteration and vegetation disturbance within riparian corridors and wetlands and required buffers shall be prohibited unless an exception is granted per the Riparian Corridor and Wetlands Protection ordinance. As a condition of riparian exception, require evidence of approval for development from the U.S. Army Corps of Engineers, California Department of Fish and Game, and other federal or state agencies that may have regulatory authority over activities within riparian corridors and wetlands.	**Consistent.** As described in Section 3.3, *Biological Resources,* the Project corridor includes wetlands and riparian vegetation. Therefore, an exception is required per the County's Riparian Corridor and Wetlands Protection. The County would obtain permits from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife (formally California Department of Fish and Game), and Central Coast Regional Water Quality Control Board prior to the construction of the Project. The County also coordinated with the CCC to determine Environmentally Sensitive Habitat Areas along the trail corridors. Therefore, the Project would be consistent with this policy.
Policy 5.2.7. Compatible Uses With Riparian Corridors. Allow compatible uses in and adjacent to riparian corridors that do not impair or degrade the riparian plant and animal systems, or water supply values, such as non-motorized recreation and pedestrian trails, parks, interpretive facilities and fishing facilities. Allow development in these areas only in conjunction with approval of a riparian exception.	**Consistent.** As stated above, the Project would extend through a riparian corridor. Implementation of the Project would result in the addition of a non-motorized recreational and pedestrian trail with an educational program that includes signs that provide information on sensitive habitats located along the trail corridor. Therefore, the Project would be consistent with this policy. Refer to Policy 5.1.6, Development in Sensitive Habitats, for issues related to trail construction and tree removal.
Policy 5.2.10. Development in Wetland Drainage Basins. Require development projects in wetlands basins to include drainage facilities or Best Management Practices (BMPs) which will maintain surface runoff patterns and water quality, unless a wetland management plan specifies otherwise, and minimize erosion, sedimentation, and introduction of pollutants.	**Consistent.** The Project corridor is not located within a wetland drainage basin. Further, prior to the onset of construction activities, the County would prepare an erosion control plan, prepare a SWPPP in accordance with the state Stormwater NPDES, and implement BMPs to ensure that runoff and erosion that may be related to construction activities would not enter sensitive environments adjacent to the trail corridor, resulting in the addition of toxic materials or sedimentation to wetlands, as discussed in Sections 3.3, *Biological Resources*, and 3.8, *Hydrology and Water Quality*. Therefore, the Project would be consistent with this policy.
Policy 5.10.4, Preserving Natural Buffers. Preserve the vegetation and landform of natural wooded hillsides which serve as a backdrop for new development. Also comply with policy 8.6.6 regarding protection of ridgetops and natural landforms.	**Consistent**. Although the Project would remove trees, the Project would largely preserve existing vegetation where feasible. The Project would not involve substantial grading of hillsides and would protect natural landforms. Therefore, the Project would be consistent with this policy.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 5.10.8, Significant Tree Removal Ordinance (LCP). Maintain the standards in the County's existing ordinance which regulates the removal of significant trees and other major vegetation in the Coastal Zone, and provide appropriate protection for significant trees and other major vegetation in areas of the County located within the Urban Services Line.	**Inconsistent.** The Project would conflict with policies and ordinances protecting trees, including the County's Significant Tree Ordinance. A total of 664 trees planned for removal are classified as "Protected" by the City or County "Significant Trees," and of these, 362 are native, protected, or significant trees. Therefore, the Project would be inconsistent with this policy.
Cultural Resources	
Policy 5.19.1. Evaluation of Native American Cultural Sites. Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites without an appropriate permit. Maintain the Native American Cultural Sites ordinance.	**Consistent.** Previously identified cultural resources have been identified, and the area has been surveyed by qualified archaeologists. The rail line alignment has been identified as a historical resource, and mitigation has been established that would involve historical interpretive exhibits for the SCBRL. This would ensure that existing recorded resources are protected, and the unexpected discovery of previously unknown resources were properly handled and recorded, in accordance with Chapter 16.40 of the County Code, as further discussed in Section 3.4, *Cultural Resources*. Therefore, implementation of the Project would be consistent with this policy.
Policy 5.19.2. Site Surveys. Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological Sensitive Areas, as designated on General Plan and LCP Resources and Constraint Maps files in the Planning Department.	**Consistent.** A qualified archaeologist has surveyed the Project corridor for cultural resources. The findings of this study are detailed in Section 3.4, *Cultural Resources*. Therefore, the Project would be consistent with this policy.
Policy 5.19.3. Development Around Archaeological Resources. Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earthfill to a depth that ensures the site will not be disturbed by development, as determined by a professional archaeologist.	**Consistent.** Previously identified cultural resources have been identified, and the area has been surveyed by qualified archaeologists. The rail line alignment has been identified as a historical resource, and mitigation has been established that would involve historical interpretive exhibits for the SCBRL. This would ensure that existing recorded resources are protected, and the unexpected discovery of previously unknown resources were properly handled and recorded, in accordance with Chapter 16.40 of the County Code, as further discussed in Section 3.4, *Cultural Resources*. Therefore, implementation of the Project would be consistent with this policy.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 5.19.4. Archaeological Evaluations. Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.	**Consistent.** An Archaeological Survey Report has been undertaken by a qualified archaeologist for the Project. Previously identified cultural resources have been identified, and the area has been surveyed by qualified archaeologists. The rail line alignment has been identified as a historical resource, and mitigation has been established that would involve historical interpretive exhibits for the SCBRL. This would ensure that existing recorded resources are protected and the unexpected discovery of previously unknown resources were properly handled and recorded in accordance with Chapter 16.40 of the County Code, as further discussed in Section 3.4, *Cultural Resources*. Therefore, implementation of the Project would be consistent with this policy.
Policy 5.19.5. Native American Cultural Sites. Prohibit any disturbance of Native American Cultural Sites without an archaeological permit which requires, but is not limited to, the following: (a) A statement of the goals, methods, and techniques to be employed in the excavation and analysis of the data, and the reasons why the excavation will be of value; (b) A plan to ensure that artifacts and records will be properly preserved for scholarly research and public education; (c) A plan for disposing of human remains in a manner satisfactory to local Native America Indian groups.	**Consistent.** An Archaeological Survey Report has been prepared by a qualified archaeologist for the Project. Previously identified cultural resources have been identified, and the area has been surveyed by qualified archaeologists. The rail line alignment has been identified as a historical resource, and mitigation has been established that would involve historical interpretive exhibits for the SCBRL. This would ensure that existing recorded resources are protected and the unexpected discovery of previously unknown resources were properly handled and recorded in accordance with Chapter 16.40 of the County Code, as further discussed in Section 3.4, *Cultural Resources*. Therefore, implementation of the Project would be consistent with this policy.
Policy 5.20.3, Development Activities. For development activities on property containing historic resources, require protection, enhancement, and/or preservation of the historic, cultural, architectural, engineering or aesthetic values of the resources as determined by the Historic Resources Commission. Immediate or substantial hardship to a project applicant shall be considered in establishing project requirements.	**Consistent.** The Ultimate Trail Configuration and the Optional Interim Trail would involve changes to two identified historical resources, the Santa Cruz Railroad and the Stockton Avenue Bridge. In addition, the Optional Interim Trail would involve changes to the Capitola Trestle Bridge. However, Project elements would not result in the material impairment of these resources such that it would no longer convey their significance. Therefore, implementation of the Project would be consistent with this policy.
Policy 5.20.4, Historic Resources Commission Review. Require that applicants for development proposals on property containing a designated historic resource submit plans for the protection and preservation of the historic resource values to the Historic Resources Commission for their review and approval; require an evaluation and report by a professional historian or a cultural resources consultant when required by the Commission.	**Consistent.** The Project area contains three designated historic resources: the Santa Cruz Railroad, Stockton Avenue Bridge, and Capitola Trestle Bridge. The Project's impact to these resources has been evaluated by cultural resource consultants, who determined that the Project would not significantly impact these resources. The historical resources in the Project area would be protected and preserved, and their integrity would not change during Project implementation. Therefore, implementation of the Project would be consistent with this policy.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 5.20.5, Encourage Protection of Historic Structures. Encourage and support public and private efforts to protect and restore historic structures and continue their use as an integral part of the community.	**Consistent.** As discussed in Section 3.4, *Cultural Resources*, the Project would not result in material impairment of historical resources, and the significance of historical resources would be preserved such that they remain an integral part of the community. Therefore, implementation of the Project would be consistent with this policy.
Energy	
Policy 5.17.1. Promote Alternative Energy Sources. Promote the use of energy sources which are renewable, recyclable and less environmentally degrading than non-renewable fossil fuels.	**Consistent.** As discussed in Section 3.15.3, *Energy*, energy would be consumed as necessary during project construction but would not be wasteful or inefficient. Following construction, operation of the trail would include minimal new lighting, which would be solar-powered where feasible, as stated in Chapter 2, *Project Description*. Otherwise, operation of the Project would not require the use of energy sources. Therefore, the Project would be consistent with this policy.
Geology and Soils	
Policy 5.9.1. Protection and Designation of Significant Resources. Protect significant geological features such as caves, large rock outcrops, inland cliffs and special formations of scenic or scientific value, hydrological features such as major waterfalls or springs, and paleontological features, through the environmental review process. Designate such sites on the General Plan and LCP Resources and Constraints Maps where identified.	**Consistent.** The Project would not be located near currently identified hydrological, geological, or paleontological features. Further, compliance with existing regulations regarding hydrological, geological, and paleontological resources, and implementation of mitigation measures pertaining to these resources would ensure that the Project would not result in significant impacts to such resources. For a full discussion on hydrological, geological, and paleontological resources and the mitigation measures contained therein, refer to Section 3.5, *Geology and Soils*, and Section 3.8, *Hydrology and Water Quality.* Therefore, the Project would be consistent with this policy.
Hydrology and Water Quality	
Policy 6.3.4. Erosion Control Plan Approval Required for Development. Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.	**Consistent.** Prior to the onset of construction activities, the County would be required to prepare an erosion control plan and would prepare a SWPPP in accordance with the state Stormwater NPDES, which would include the implementation of BMPs to ensure toxic substances that may be related to construction activities would not enter sensitive environments adjacent to the trail corridor, as discussed in Section 3.8, *Hydrology and Water Quality*. Therefore, the Project would be consistent with this policy.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 6.3.5. Installation of Erosion Control Measures. Require the installation of erosion control measures consistent with the Erosion Control ordinance, by October 15, or the advent of significant rain, or project completion, whichever occurs first. Prior to October 15, require adequate erosion control to be provided to prevent erosion from early storms. For development activities, require protection of exposed soil from erosion between October 15 and April 15 and require vegetation and stabilization of disturbed areas prior to completion of the project. For agricultural activities, require that adequate measures are taken to prevent excessive sediment from leaving the property.	**Consistent.** Prior to the onset of construction activities, the County would be required to prepare an erosion control plan and would prepare a SWPPP in accordance with the state Stormwater NPDES, which would include the implementation of BMPs to avoid and minimize erosion to the extent feasible within the trail corridor, as discussed in Section 3.8, *Hydrology and Water Quality*. Furthermore, the Project would comply with the County's Grading Ordinance as applicable. Section 16.20.070 of the County' Code prohibits grading in the County during the winter season (October 15 through April 15). Therefore, the Project would be consistent with this policy.
Greenhouse Gas Emissions	
Policy 5.18.9. Greenhouse Gas Reduction. Implement state and federal legislation promoting the national goal of 35 percent reduction of carbon dioxide and other greenhouse gases by 2000.	**Not Applicable.** Since the target year for this goal has passed, this policy is not applicable to the Project. However, as discussed fully in Section 3.6, *Greenhouse Gas Emissions/Climate Change,* the Project would be consistent with current state, regional, and local greenhouse gas emissions reduction targets, including those established by the California Air Resources Board 2017 Scoping Plan, and the County Climate Action and Adaptation Plan.
Hazards and Hazardous Materials	
Objective 6.6. Hazardous and Toxic Materials. To eliminate, to the greatest degree possible, the use of hazardous and toxic materials, and where it is not feasible completely to eliminate the use of such materials, then to minimize the reduction in the use of such materials, so as to ensure that such materials will not contaminate any portion of the County's environment, including the land, water, and air resources of the County.	**Consistent.** As discussed fully in Section 3.7, *Hazards and Hazardous Materials,* small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment) would be used along the Project corridor and transported to and from the site during construction. However, the Project contractor would be required to comply with California Health and Safety Code, Chapter 6.95, which would ensure that risks from routine use, transport, handling, storage, disposal, and release of hazardous materials would be minimized. Compliance with existing regulations would ensure that impacts related to hazardous materials are avoided and minimized to the extent feasible. Therefore, the Project would be consistent with this policy.
Noise	
Policy 6.9.6 Vibration from Rail. Evaluate vibrations from rail activities for future development within 200 feet of the railroad tracks as part of environmental review.	**Consistent.** The Project corridor is not currently in use. Therefore, vibration would not impact the Coastal Rail Trail while it is in operation. Therefore, Project implementation would be consistent with this policy. Refer to Section 3.10, *Noise*, for a full discussion on Project vibration impacts.

Table 3.9-2 Santa Cruz County General Plan Policy Consistency Analysis

Santa Cruz County General Plan Policy	Consistency Discussion
Policy 6.9.7 Construction Noise. Require mitigation on construction noise as a condition of future project approach.	**Consistent.** The Project would not result in significant impacts related to construction noise, as detailed in Section 3.10, *Noise*. As stated in Section 2.6, *Project Construction*, construction would occur between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Additionally, construction could also start at 7:00 a.m., Monday through Friday, or occur on Saturdays or Sundays with written approval from the County. There would be no construction on national holidays. Emergencies may require work outside these hours. This would minimize construction impacts on adjacent land uses, and noise-reducing measures would be implemented on construction equipment when used within 150 feet of residences. Therefore, implementation of the Project would be consistent.
Recreation	
Policy PPF-2.7.1. Trails Master Plan. Support the development of a regional Trails Master Plan that provides recreational opportunities in a variety of natural settings, supports implementation of the Monterey Bay Sanctuary Scenic Trail and California Coastal Trail, links County park facilities, connects to trail systems maintained by other agencies within the County and connects to trail systems in neighboring counties.	**Consistent.** The Project would involve implementation of Segments 10 and 11 of the MBSST.
Implementation Policy PPF-2.7f. Incorporate the Monterey Bay Sanctuary Scenic Trail and California Coastal Trail into a trails system and a future County Trails Master Plan. Seek permission from rail corridor owners person to utilize rail right-of-way in the trail system and acquire rail right-of-way in event of abandonment, subject to Policy PPF-2.7.2: Trail Easements.	**Consistent.** The Project would involve implementation of Segments 10 and 11 of the MBSST.

BMP = best management practice; LCP = Local Coastal Program; MBSST = Monterey Bay Sanctuary Scenic Trail; NPDES = National Pollutant Discharge Elimination System; SCBRL = Santa Cruz Branch Rail Line; SWPPP = Stormwater Pollution Prevention Plan; VMT = vehicle miles traveled

Table 3.9-3 City of Capitola General Plan Policy Consistency Analysis

City of Capitola General Plan Policy	Consistency Discussion
Land Use	
Policy LU-1.3. Compatible Development. Ensure that all new development is compatible with neighboring land uses and development.	**Consistent.** The Project corridor is zoned as Public and Community Facilities and as Community Facility by the County Zoning Ordinance and the Capitola Zoning Ordinance, respectively. The land use designation in the Project corridor is Public Facilities in the County and Public/Quasi-Public in the City. The Project would be consistent with the associated General Plan designations and would be permitted in the associated zoning districts. Therefore, the Project would be consistent with this policy.
Policy LU-2.1. Historic Structures. Encourage the preservation, restoration, rehabilitation, maintenance, and adaptive reuse of important historic structures in Capitola.	**Consistent.** An Archaeological Survey Report has been undertaken by a qualified archaeologist for the Project. The rail line alignment has been identified as a historical resource, and mitigation has been established that would involve historical interpretive exhibits for the SCBRL. This would ensure that existing recorded resources are protected, and the unexpected discovery of previously unknown resources were properly handled and recorded, as further discussed in Section 3.4, *Cultural Resources*. In addition, the Optional Interim Trail and Design Option A (Interim Trail on Capitola Trestle over Soquel Creek) would include rehabilitation of the Capitola Trestle Bridge, a historic structure, to accommodate a bicycle and pedestrian trail. Therefore, implementation of the Project would be consistent with this policy.
Policy LU-3.2. Walkability. Encourage development and land uses that enhance a pedestrian-oriented environment.	**Consistent.** The Project would involve construction of a multi-modal trail that would enhance connectivity and provide additional pedestrian facilities in Capitola. Therefore, the Project would be consistent with this policy.
Policy LU-6.4. Public Spaces. Provide high quality public spaces available for the use and enjoyment of visitors and residents. Prioritize pedestrian access to these spaces and maintain amenities, such as seating areas, drinking fountains, restrooms, and landscaping that invite and encourage pedestrian activity.	**Consistent.** The Project would enhance pedestrian access and connectivity in Capitola and Santa Cruz County and would include pedestrian amenities and landscaping that would contribute to high-quality public spaces. Therefore, the Project would be consistent with this policy.

Table 3.9-3 City of Capitola General Plan Policy Consistency Analysis

City of Capitola General Plan Policy	Consistency Discussion
Policy LU-7.3, Scenic Resources. Protect and enhance significant scenic views and resources that contribute to the unique identity and public enjoyment of the Village. Scenic resources include: ▪ The general pedestrian-oriented and coastal village character of existing development in the Village. ▪ Public and semi-public gathering places, including Esplanade Park, Lawn Way, Capitola Beach, Soquel Creek path, and the historic Capitola Wharf. ▪ Landscaping and streetscape amenities. ▪ Historic structures, including structures contributing to Capitola's four National Register Historic Districts and structures listed on the official City of Capitola Historic Structures List. Natural features such as Capitola Beach, Soquel Creek and Lagoon, cliffs and bluffs, and vegetated banks.	**Consistent.** The Project would not include structures or bulky features that would hinder public scenic views of the nearby vistas, including Capitola Village, Capitola Beach, Capitola Wharf, or natural features. Project fencing, both along the trail and at waterway crossings, is designed to maximize views of public vistas along the trail. The Project would be consistent with this policy.
Action LU-14.2. Regional Trails. Cooperate with the Regional Transportation Commission to encourage connections with regional trails such as the Monterey Bay Sanctuary Scenic Trail.	**Consistent.** The Project would involve construction and operation of Segments 10 and 11 of the MBSST.
Open Space and Conservation	
Policy OSC-3.2. Development Design. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by reducing vehicle trips (e.g. projects with access to transit and projects that provide walking and bicycling amenities), as well as by being energy-efficient.	**Consistent.** The Project would provide 4.7 miles of a multi-use bicycle and pedestrian trail. As discussed in Section 3.2, *Air Quality,* the Project would not result in significant impacts to air quality, and as discussed in Section 3.12, *Transportation,* implementation of the Project would ultimately reduce VMT in the vicinity of the Project corridor as the trail would provide an alternative means of travel. Therefore, the Project would be consistent with this policy.
Policy OSC-6.2. Environmentally Sensitive Areas. Protect, enhance, and, where possible, expand environmentally sensitive areas in Capitola, including: ▪ Soquel Lagoon ▪ Soquel Creek riparian corridor ▪ Noble Gulch Riparian corridor ▪ Tannery Gulch riparian corridor ▪ Soquel Creek monarch butterfly habitat ▪ Escalona Gulch monarch butterfly habitat	**Inconsistent.** As discussed in Section 3.3, *Biological Resources,* the Project corridor extends through sensitive habitat, including the Soquel Creek riparian corridor, and Project development requires tree removal that would disrupt habitat values. Therefore, the Project would be inconsistent with this policy.

Table 3.9-3 City of Capitola General Plan Policy Consistency Analysis

City of Capitola General Plan Policy	Consistency Discussion
Policy OSC-6.3. Development Projects. Ensure that new development avoids, minimizes, and/or mitigates impacts to biological resources and sensitive habitat.	**Consistent.** As discussed in Section 3.3, *Biological Resources,* the Project would be required to implement Mitigation Measures BIO-1a through BIO-9c, which would reduce most potentially significant impacts to biological resources to a less than significant level. Therefore, the Project would be consistent with this policy.
Policy OSC-6.9. Urban Forest. Continue to enforce the City's Community Tree and Forest Management Ordinance to protect trees on private and public property as important environmental and scenic resources.	**Inconsistent.** As discussed in Section 3.1, *Aesthetics*, the Project would require the removal of approximately 800 trees, which would decrease the density of vegetated and forested areas along the Project corridor. Although the Project would replace trees along the corridor, the Project would be inconsistent with this policy.
Mobility	
Policy MO-8.3 All Users. Ensure that bikeways in Capitola are safe and convenient for bicyclists of all ages and abilities.	**Consistent.** The Project would include safety features (such as safety fencing, guardrails, signage, pavement markings, and trail narrowing and/or chicanes to slow trail users before intersections) to protect trail users (including bicyclists) from conflicts along the railway, adjacent roadways, and roadway crossings. The Ultimate Trail Configuration would include striping modifications along Cliff Drive and through Capitola Village on Stockton Avenue, Capitola Avenue, and Monterey Avenue, which would improve the visibility of existing delineated bicycle lanes and improve safety for both bicyclists and pedestrians. Specifically, for an approximately 350-foot portion of Cliff Drive where pedestrians and bicyclists currently share the coastal Class II bike lane, the width of the existing bicycle and vehicular lanes would be revised to allow for demarcation of a separate 4-foot-wide pedestrian path on the coastal side of the Class II bike lane. This would allow for separation of pedestrians and bicyclists where they are currently intermixed. In addition, the existing white striping would be re-painted and green pavement painting would be added to the existing Class II bicycle lanes, and white sharrow markings with green backgrounds would be installed along the Class III bicycle routes where bicycles and vehicles share the lane. These features would improve safety for both bicyclists and pedestrians. The Project would be consistent with this policy.
Policy MO-8.4 Safety. Improve public safety by minimizing conflicts between bicyclists and motor vehicles on Capitola's roadways	**Consistent.** Refer to Policy MO-8.3.
Policy MO-9.2 Pathways. Maintain and improve pedestrian pathways in Capitola, particularly pathways providing pedestrian access to natural areas and scenic vistas.	**Consistent.** The Project would increase public access to viewpoints for natural areas and scenic vistas. The Project would be consistent with this policy.

Optional Interim Phase (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementing the Optional Interim Trail (Part 1) would be subject to the same regional and local regulations and land use plans as described above for the Ultimate Trail Configuration *(Trail next to Rail Line)*. Therefore, as described above, the Optional Interim Trail would be consistent with most of the applicable goals and policies in **Tables 3.9-2** and **3.9-3**. Because the Optional Interim Trail would be consistent with most County and City goals to establish safe alternative transportation and recreational opportunities, the Optional Interim Trail would be consistent with most of the applicable County and City land use policies, and the specific potential impacts and required mitigation measures associated with these policies are fully addressed in other sections throughout this EIR, this impact would be **less than significant**.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and reconstruction of the rail line (Optional Interim Trail Part 2) would involve additional demolition and construction activities. However, these activities would be similar to those of the Ultimate Trail Configuration *(Trail next to Rail Line)* and would comply with measures to avoid or minimize an environmental effect, including those established by the Capitola Municipal Code or the County Code. Demolition of the trail and reconstruction of the rail line would result in potential impacts and required mitigation measures detailed throughout this EIR, which as a byproduct, would result in consistency with most applicable plans and policies. Therefore, Part 2 of the Optional Interim Trail would be consistent with most applicable goals and policies of the Capitola General Plan or County General Plan and LCP with the purpose of avoiding or mitigating an environmental effect. Impacts would be **less than significant**.

3) Construction of the Ultimate Trail Configuration

This third part of the optional first phase includes constructing the trail alongside the rail in the same location with the same features as the Ultimate Trail Configuration *(Trail next to Rail Line)* described and analyzed above. As discussed, the Ultimate Trail Configuration would be consistent with most applicable goals and policies of the Capitola General Plan or County's General Plan and LCP with the purpose of avoiding or mitigating an environmental effect. The inconsistency with County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8 and with Capitola General Plan Policies OSC-6.2 and OSC-6.9 are fully addressed in Section 3.3. Therefore, because the Ultimate Trail Configuration would be consistent with County and City goals to establish safe alternative transportation and recreational opportunities, the Ultimate Trail Configuration would be consistent with most (39 of 45) of the applicable County and City land use policies and objectives, and the specific potential impacts and required mitigation measures associated with these policies are fully addressed in other sections throughout this EIR, this impact would be **less than significant**.

Combined Effect of Interim Trail Parts 1, 2, 3

Altogether, the Optional Interim Trail would involve additional demolition and construction and full buildout would occur over a longer period of time compared to the Ultimate Trail Configuration *(Trail next to Rail Line)*. However, as discussed above, each of these project stages would be consistent with most of the goals and policies of the Capitola General Plan or the County General Plan and LCP. Therefore, the combined impact of Optional Interim Trail Parts 1, 2, and 3 would be **less than significant**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would require structural repairs and replacement of the ballast, tracks, and ties with fiberglass reinforced polymer deck on the Capitola Trestle Bridge. The impacts of this design option would be similar to those of the Ultimate Trail Configuration. This design option would be consistent with most of the applicable goals and policies described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Like the Ultimate Trail Configuration, it would be inconsistent with County General Plan Policies 5.1.6, Development in Sensitive Habitats; 5.10.3, Protection of Public Vistas; 5.10.8, Significant Tree Removal Ordinance; and 5.18.8, Encouraging Landscaping, and Capitola General Plan Policies OSC-6.2, Environmentally Sensitive Areas, and OSC-6.9, Urban Forest, because it would require removal of trees. Refer to Section 3.1, *Aesthetics*, and Section 3.3*, Biological Resources*, for a full discussion of the potential impacts. For the discussion of Impact LUP-1 in this section, this design option would be consistent with most of the applicable goals and policies. Therefore, the impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impacts of this design option would be similar to those of the Ultimate Trail Configuration. This design option would be consistent with most of the applicable goals and policies described above for the Ultimate Trail Configuration *(Trail next to Rail Line)*. Like the Ultimate Trail Configuration, it would be inconsistent with County General Plan Policies 5.1.6, Development in Sensitive Habitats; 5.10.3, Protection of Public Vistas; 5.10.8, Significant Tree Removal Ordinance; and 5.18.8, Encouraging Landscaping, and Capitola General Plan Policies OSC-6.2, Environmentally Sensitive Areas, and OSC-6.9, Urban Forest, because it would require removal of trees. Refer to Sections 3.1, *Aesthetics*, and 3.3*, Biological Resources*, for a full discussion of the potential impacts. For purposes of the discussion of Impact LUP-1 in this section, this design option would be consistent with most of the applicable goals and policies. Therefore, the impacts associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would be consistent with most applicable land use goals and policies. Under either scenario, the Project would be inconsistent with County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8, and Capitola General Plan Policies OSC-6.2 and OSC-6.9. Overall, for reasons described in the above discussions, the impacts would be **less than significant**.

3.9.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail Next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
LUP-1. The Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	LTS Similar, more	LTS Similar	LTS Substantially similar

[a] The impacts of the Ultimate Trail Configuration *(Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the Ultimate Trail Configuration *(Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for Ultimate Trail Configuration *(Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

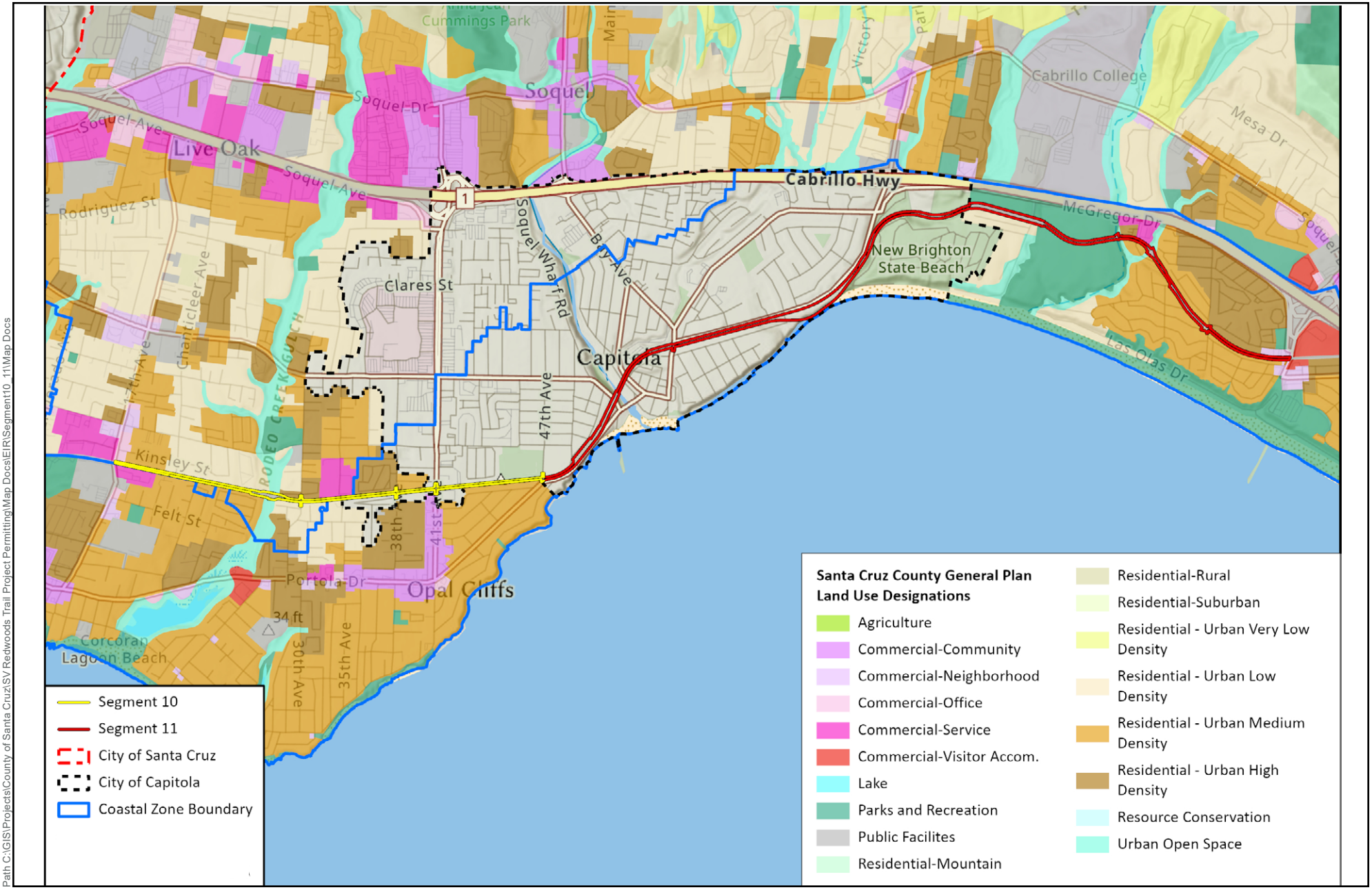
NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: RRM Design 2023.

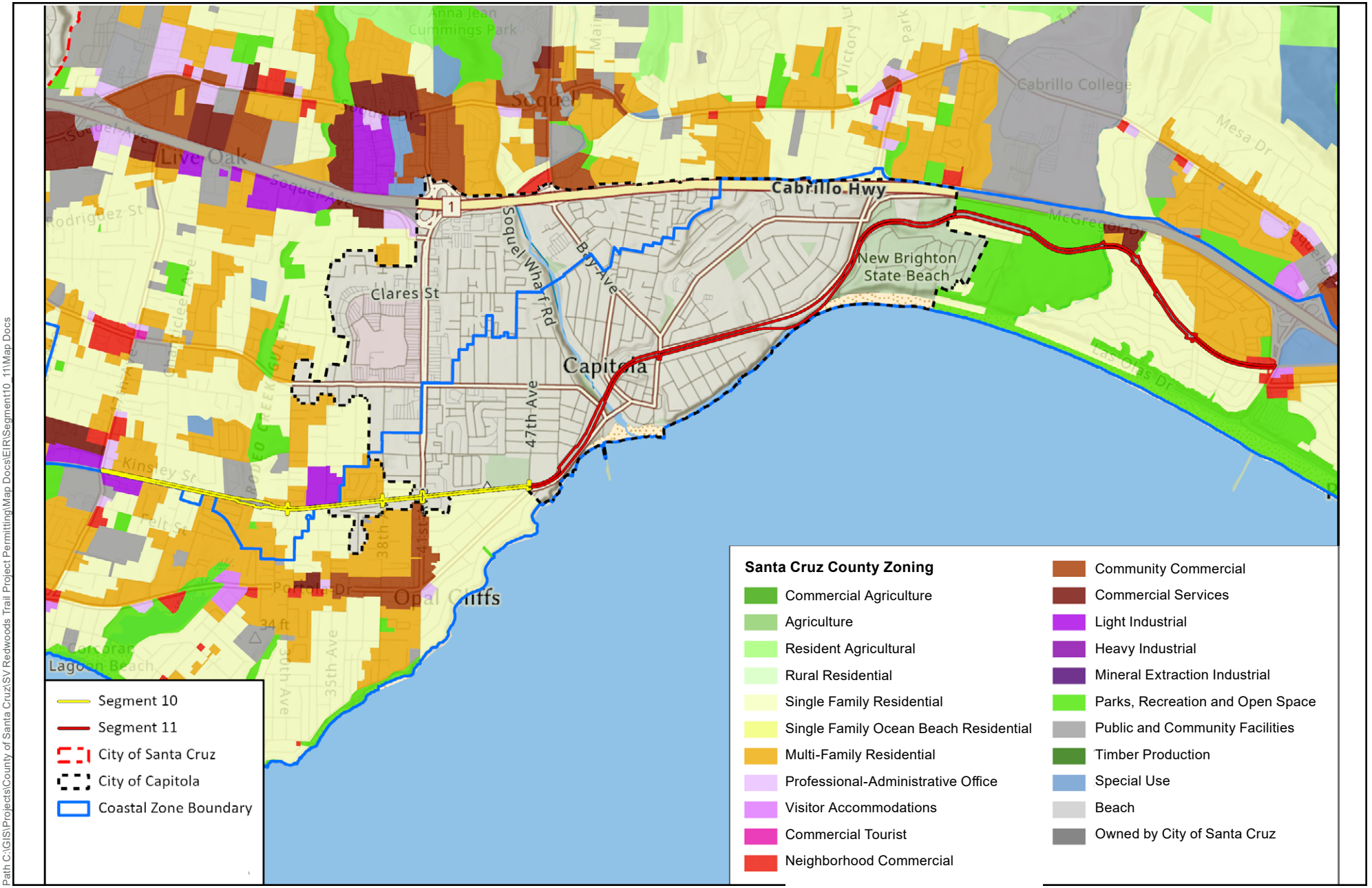
Harris & Associates

N

0 0.25 0.5
Miles

Figure 3.9-1

County of Santa Cruz General Plan Land Use Designations



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: RRM Design 2023.

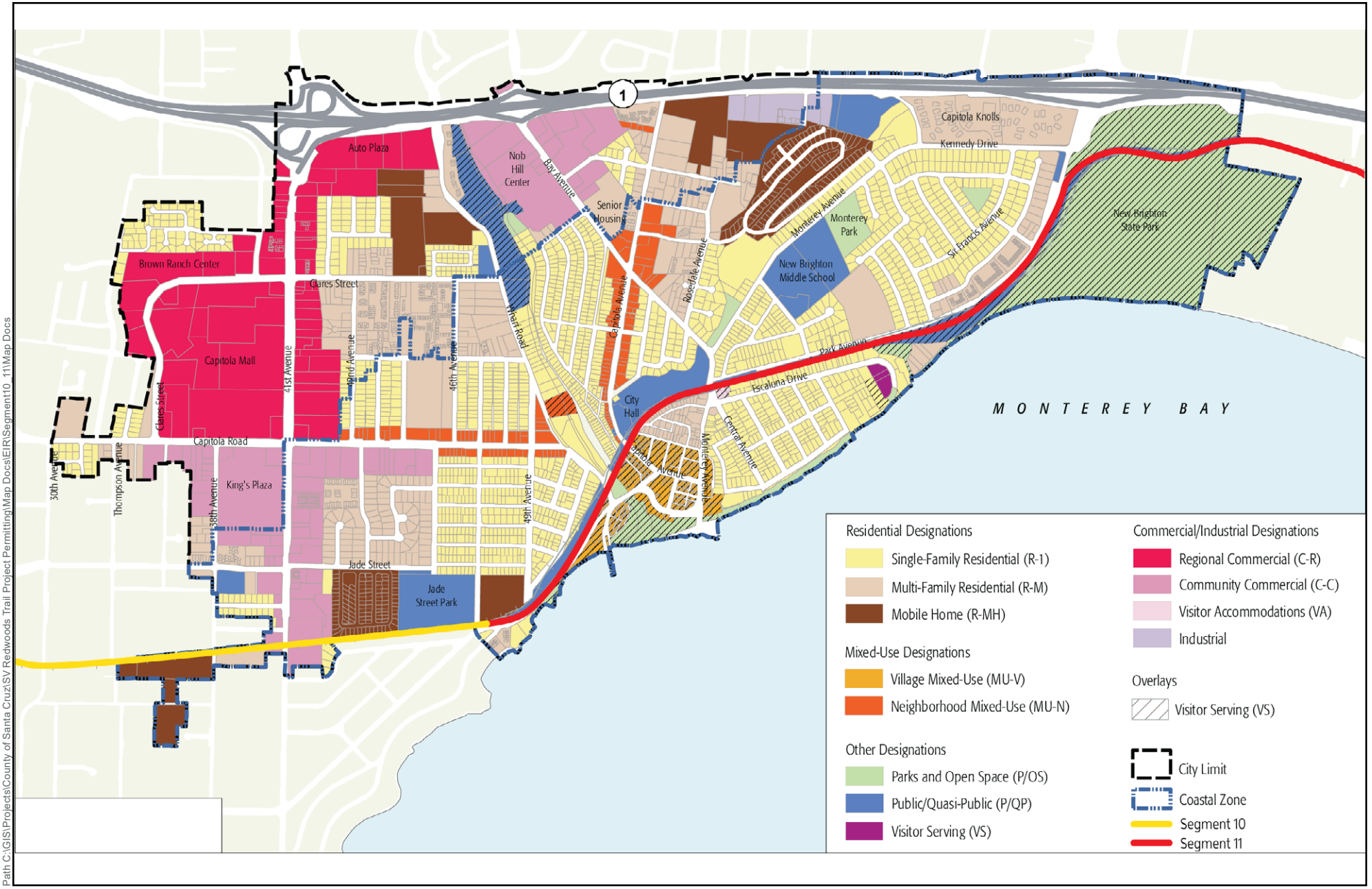
Harris & Associates

N

0 0.25 0.5
Miles

Figure 3.9-2

County of Santa Cruz Zoning Districts



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: City of Capitola 2018.

Harris & Associates

N

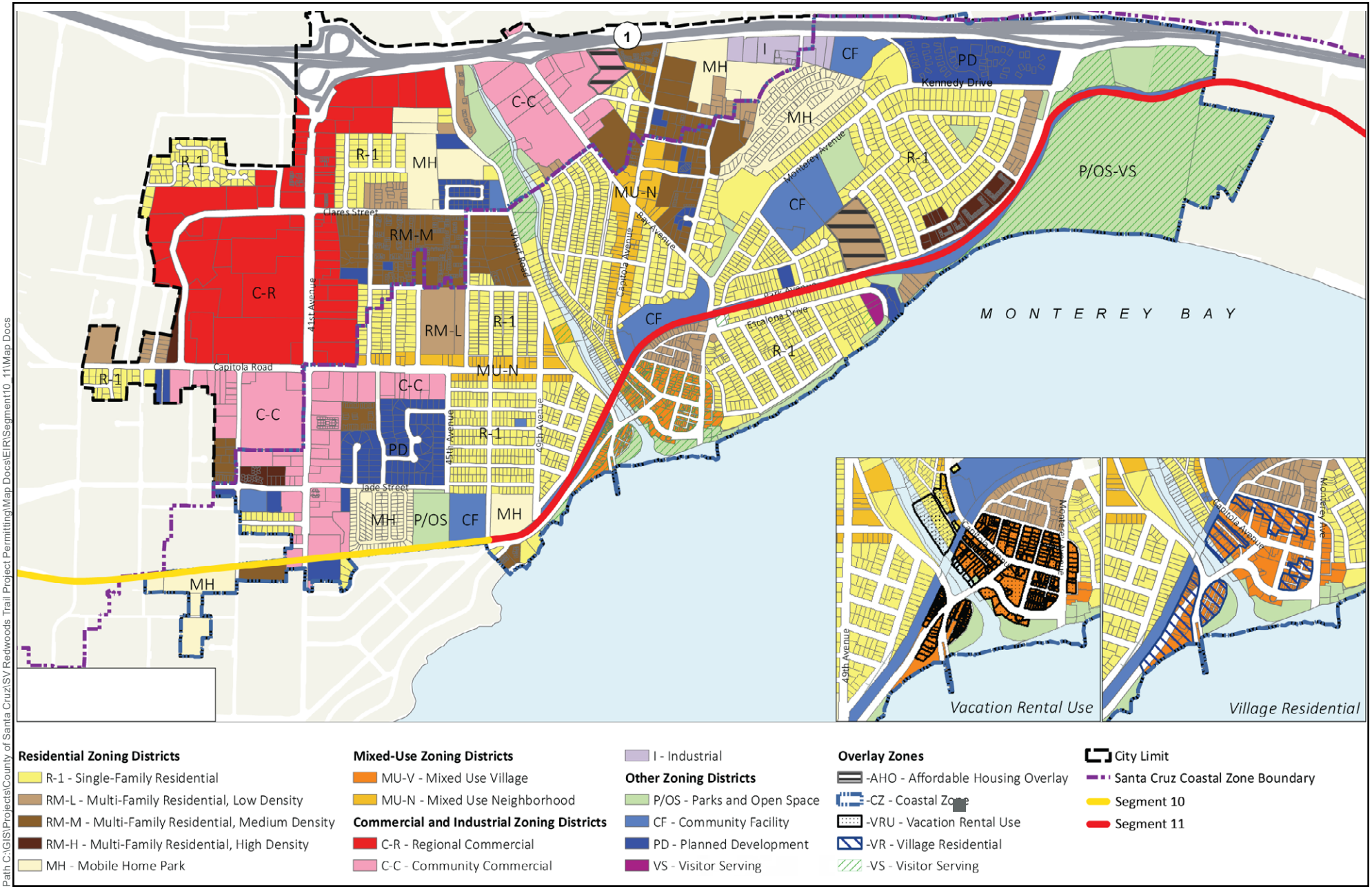
0 1000 2000

Feet

Figure 3.9-3

City of Capitola General Plan Land Use Designations

Coastal Rail Trail Segments 10 and 11



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: City of Capitola 2021.

Harris & Associates

N

0 1000 2000

Feet

Figure 3.9-4

City of Capitola Zoning Districts

Coastal Rail Trail Segments 10 and 11

3.10 Noise

This section describes the existing noise conditions and the regulatory framework applicable to noise and identifies potential noise impacts resulting from the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* construction and operation. **Table 3.10-1** summarizes identified impacts related to noise.

Table 3.10-1 Summary of Project Impacts Related to Noise[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
N-1. Construction may result in a substantial temporary increase in noise levels.	Potentially Significant	N-1	Less than Significant
N-2. Operation of the Project would not expose persons to or generate excessive noise levels.	Less than Significant	None Required	Less than Significant
N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Potentially Significant	N-3	Less than Significant

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.10.1 Existing Conditions

Overview of Noise

Sound is described technically in terms of the loudness (amplitude) of the level and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear (RTC 2013).

Decibels are based on the logarithmic scale. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, a sound 20 dBA higher is four times as loud, and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud). In general, a 3 dB change in noise levels is noticeable, while 1–2 dB changes are generally not perceived. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness. Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources, such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance (RTC 2013).

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period are more likely to be an annoyance or cause direct physical damage or environmental stress. Several rating scales have been developed to account for the known effects of noise on people. Based on these effects, the observation has been made that the potential for noise to impact people depends on the total acoustical energy content

of the noise. A number of noise scales have been developed to account for this factor. These scales include the Equivalent Noise Level (Leq), the Day-Night Noise Level (Ldn), and the Community Noise Equivalent Level (CNEL) (RTC 2013).

Leq is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. Leq is the "energy" average noise level during the time period of the sample. Leq can be measured for any time period but is typically measured for 15 minutes, 1 hour, or 24 hours.

Ldn is a 24-hour, time-weighted average noise level. Time-weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. In the Ldn scale, those events that take place during the night (10:00 p.m. to 7:00 a.m.) are penalized by 10 dBA. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of day, where sleep is the most probable activity.

CNEL is similar to the Ldn scale except that it includes an additional 5 dBA penalty for events that occur during the evening (7:00 p.m. to 10:00 p.m.) time period. Thus, both the Ldn and CNEL noise measurements represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

Overview of Vibration

Vibration is defined as dynamic excitation of an elastic system, such as the ground or a structure, that results in oscillatory movement of the system (Caltrans 2013). Typical human-made causes of earthborne vibration include trains and construction activities such as blasting, pile driving, and operation of heavy earthmoving equipment. The resulting waves transmitted through solid material are referred to as structure-borne or groundborne vibration. Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Because the effects of vibration elicit a greater response than the vibration itself, vibration is typically only perceptible to people inside buildings (FTA 2018).

Vibration levels are typically expressed in terms of the peak particle velocity (PPV) and root mean square amplitude, both in inches per second. PPV is most appropriate for evaluating building damage potential. The California Department of Transportation estimates that continuous vibration levels of less than 0.08 PPV and single-event vibration levels of less than 0.12 PPV do not result in damage to even the most fragile historic buildings (Caltrans 2013). PPV but does not account for human response to vibration. The root mean square amplitude is used to represent average vibration amplitude, which accounts for the time it takes for the human body to respond to vibration signals. The root mean square amplitude is also given in decibel notation, referenced as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration relative to human response (FTA 2018). The general human response to different levels of groundborne vibration velocity levels is described in **Table 3.10-2**.

Table 3.10-2 Human Response to Groundborne Vibration

Vibration Velocity Level	Noise Level[a]	Human Reaction
65 VdB	40 dBA	Approximate threshold of perception for many people. Mid-frequency sound may disturb sleep.
75 VdB	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is annoying. Mid-frequency noise disturbs sleep and is considered annoying in more quiet areas.
85 VdB	60 dBA	Vibration acceptable only if there is an infrequent number of events per day. Low-frequency noise disturbs sleep, and mid-frequency noise can be annoying to daytime noise-sensitive land uses, such as schools.

Source: FTA 2018.

[a] Approximate noise level when vibration spectrum peak is near 60 hertz (Hz).

dBA = A-weighted decibel; VdB = vibration decibel

The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Groundborne noise is often perceived as louder than community noise sources (broadband noise) at the same noise level. This is accounted for by setting the limits for groundborne noise lower than those set for broadband noise. The relationship between groundborne vibration and groundborne noise depends on the frequency content of the vibration and the acoustical absorption of the receiving room. If the vibration spectrum peaks at 30 hertz (Hz), the A-weighted sound level will be approximately 40 dBA lower than the velocity level. Correspondingly, if the vibration spectrum peaks at 60 Hz, the A-weighted sound level will be about 25 dBA lower than the velocity level (FTA 2018). The same human reaction corresponds to a given vibration velocity level and its resulting noise level; therefore, for simplicity, this analysis refers only to a source's vibration velocity level (VdB) to describe potential human response to groundborne vibration and noise.

Sensitive Receptors

Noise level allowances for various types of land uses reflect the varying noise sensitivities associated with those uses. In general, noise-sensitive land uses (called "sensitive receptors") are any residence, hospital, school, hotel, library, office, or similar facility where quiet is an important attribute of the environment. Such uses have more stringent noise level allowances than most commercial or agricultural uses that are not subject to impacts such as sleep disturbance.

Passive parks are generally considered noise-sensitive because they typically involve activities that would be sensitive to noise, such as reading or conversation. On the other hand, parks used for active recreation purposes, such as a multi-use trail or public beaches, are generally not considered noise-sensitive because they usually involve sport activities or other active recreational pursuits.

The Project alignment extends through developed portions of the County of Santa Cruz (County) and the City of Capitola (City), including residential, commercial, industrial, and recreational land uses, as well as New Brighton State Beach open space. The nearest noise-sensitive receptors are the residences located adjacent to the Project corridor in Segments 10 and 11 and the Inn at Depot Hill at the Park Avenue/Monterey Avenue intersection in Segment 11. There are also residences and hotels along Cliff Drive and Monterey Avenue, where trail users are directed through Capitola Village.

Existing Noise Levels

The ambient noise environment along the Project corridor is defined by vehicular traffic. 17th Avenue is identified as a noise source in the Project corridor in the County General Plan (Santa Cruz County

2020). Primary roadways that generate the most noise in the City in the Project area include 41st Avenue, Capitola Avenue, Capitola Road, Monterey Avenue, and Park Avenue (City of Capitola 2019).

3.10.2 Regulatory Setting

This section describes the federal, state, and local plans, policies, and laws relevant to noise for the Project.

Federal

Federal Transit Administration Vibration Guidelines

Although the Federal Transit Administration standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the Transit Noise and Vibration Impact Assessment Manual (FTA 2018) are routinely used for projects proposed by local jurisdictions. The manual includes guideline criteria for assessing the impacts of groundborne vibration, presented in **Table 3.10-3**.

Table 3.10-3 Federal Transit Administration Groundborne Vibration Impact Criteria

	Impact Levels (VdB)		
Land Use Category	**Frequent Events[a]**	**Occasional Events[b]**	**Infrequent Events[c]**
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: FTA 2018.

[a] "Frequent Events" are defined as more than 70 vibration events of the same source per day.

[b] "Occasional Events" are defined as between 30 and 70 vibration events of the same source per day.

[c] "Infrequent Events" are defined as fewer than 30 vibration events of the same source per day.

Vibration levels are measured in or near the vibration-sensitive use.

VdB = vibration decibel

State

As required by Section 65302 of the California Government Code, desirable noise levels are stated in the Noise Element of General Plans prepared by counties and cities. Division 28 of the California Health and Safety Code requires that the State Office of Noise Control in the Department of Health Services develop model elements and model noise ordinances to guide local jurisdictions in developing noise standards. The objective of noise standards is to provide the community with a means of judging the noise environment that it deems to be generally acceptable. The state has also adopted guidelines for land use compatibility and community noise environment in the State of California General Plan Guidelines, published by the State Governor's Office of Planning and Research (OPR 2017). Noise levels up to 60 dBA CNEL are considered normally acceptable for low-density residential land use, and noise levels up to 70 dBA CNEL are conditionally acceptable with incorporation of noise insulation features. Noise levels up to 70 dBA CNEL are normally acceptable for schools and commercial land use.

Local

Santa Cruz County General Plan and Local Coastal Program

According to the County General Plan Public Safety and Noise Element, noise-sensitive land uses include residential (residences, hotels, and motels), institutional (schools, libraries, museums, hospitals, personal care, meeting halls, and churches), and office (office buildings, business commercial, and professional). The recommended exterior noise limit for all noise-sensitive land uses is 60 dB Ldn (or CNEL), and the recommended maximum interior noise level is 45 dB Ldn (or CNEL). The County General Plan Public Safety and Noise Element includes goals and policies to regulate noise sources. In addition, the Circulation Element of the County General Plan and Local Coastal Program includes Policy 3.7.2, which regulates noise from rail facilities. The following policies apply to noise in the County (Santa Cruz County 2020):

- **Policy 6.9.6.** Evaluate vibrations from rail activities for future development within 200 feet of the railroad tracks as part of environmental review
- **Policy 6.9.7.** Require mitigation of construction noise as a condition of future project approvals
- **Policy 6.10.1.** Require environmental review of all proposed transportation projects which may increase the average day/night noise levels including any increased or new uses of the Southern Pacific Railroad right-of-way
- **Policy 6.10.2.** Require the evaluation of mitigation measures for any project that would cause significant degradation of the noise environment by:
  (a) Causing the Ldn in existing residential areas to increase by 5 dB or more and remain below 60 dB
  (b) Causing the Ldn in existing residential areas to increase by 3 dB or more and, thereby, exceed an Ldn of 60 dB
  (c) Causing the Ldn in existing residential areas to increase by 3 dB or more if the Ldn currently exceeds 60 dB
- **Policy 3.7.2.** Require the design of new development near existing rail lines to minimize the impact of existing and potential rail system noise and maximize setbacks for new development

Santa Cruz County Code

Chapter 8.30, *Noise*, of the County Code establishes noise regulations in Santa Cruz County. Section 8.30.010 of the County Code states that "offensive noise" shall not be permitted between the hours of 10:00 p.m. and 8:00 a.m. Section 8.30.010 of the County Code states that daytime noise that exceeds 75 dB at the property line of the property from which the sound is broadcast should be considered offensive. The ordinance also states that the necessity of the noise should be taken into consideration in determining whether a noise is in violation of the code (8.30.010[C][5]) (Santa Cruz County 2021).

City of Capitola General Plan

The Capitola General Plan Safety and Noise Element establishes noise compatibility standards for land use categories in the City. Noise levels up to 60 dBA Ldn are considered normally compatible with single family residential development, and noise levels up to 65 dBA Ldn are normally compatible with multi-family residences and hotels. Capitola General Plan Policy SN-7.4 requires preparation of an acoustical analysis to apply these standards to new development and requires mitigation when the standards would be exceeded (City of Capitola 2019).

City of Capitola Municipal Code

The Capitola Noise Ordinance is Chapter 9.12 of its Municipal Code. Section 9.12.010 of the Capitola Noise Ordinance prohibits loud, boisterous, irritating, penetrating or unusual noise within 200 feet of any residence, hotel, apartment house, cabin, cottage, cottage court, lodging facility, or any building or place regularly used for sleeping purposes in the City between the hours of 10:00 p.m. and 8:00 a.m. of any day or days. Construction noise is subject to a construction noise curfew and prohibited between the hours of 9:00 p.m. and 7:30 a.m. on weekdays. Construction noise is also prohibited on weekends with the exception of Saturday work between 9:00 a.m. and 4:00 p.m. or emergency work.

3.10.3 Methodology and Significance Thresholds

Methodology

The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with operation of the proposed trail. For construction noise, short-term noise levels are estimated using the Federal Highway Administration Roadway Construction Noise Model (RCNM). The potential for exposure of persons to excessive groundborne vibration from construction is evaluated using reference vibration levels provided in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (FTA 2018).

Significance Thresholds

The introduction at the beginning of Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *California Environmental Quality Act (CEQA) Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of noise and the other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this Environmental Impact Report, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
B. Generation of excessive groundborne vibration or groundborne noise levels.
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, exposure of people residing or working in the project area to excessive noise.

The Project is not located within the vicinity of a private airstrip or an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, potential impacts related to proximity of an airport and potential exposure of people residing or working in the Project area to excessive noise levels (Threshold C) were found to be less than significant, and this impact discussion is in Section 3.15, *Effects Found to be Less than Significant*.

3.10.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact N-1 CONSTRUCTION MAY RESULT IN A SUBSTANTIAL TEMPORARY INCREASE IN NOISE LEVELS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Impact N-2 OPERATION OF THE PROJECT WOULD NOT EXPOSE PERSONS TO OR GENERATE EXCESSIVE NOISE LEVELS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

The potential for the Project to generate noise during construction and operation is addressed below.

Construction

The operation of heavy equipment during project construction would result in temporary increases in noise in the immediate vicinity. Construction equipment and vehicles could include backhoes; loaders; tractors; cranes; lifts; concrete trucks and pump; paving machines; compactors/rollers; and trucks for demolition, grading, and materials delivery. Power tools could include jackhammers, air compressors, generators, concrete saws, power drills, welding equipment, painting equipment, power and impact wrenches, and the like. Drilling would be required for retaining wall and viaduct or bridge installation, but there would be no pile driving. **Table 3.10-4** provides average noise levels associated with equipment that may be required for Ultimate Trail Configuration construction.

Table 3.10-4 Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) 50 Feet from Source	Typical Noise Level (dBA) 150 Feet from Source	Typical Noise Level (dBA) 275 Feet from Source
Backhoe	77.6	68	63
Loader	80	71	65
Tractor	84	75	69
Crane	80.6	71	66
Lift	74.7	65	60
Dump Truck	76.5	67	62
Concrete Pump Truck	81.4	72	67
Paver	77.2	68	62
Compactor/Roller	83.2	74	68
Jackhammer	88.9	79	74
Air Compressor	77.7	68	63
Generator	80.6	71	66
Concrete Saw	89.6	80	75
Pneumatic Tools	85.2	76	70
Rock Drill	81	72	66
Drill Rig	84.4	75	70

Source: FHWA 2006 for noise levels at 50 feet. Noise levels at other distances assume attenuation rate of 6 dBA for every doubling of distance.
dBA = A-weighted decibel

As described in Section 2.6, *Project Construction,* construction of the Ultimate Trail Configuration is estimated to begin in 2026 and would continue for approximately 48 months as shown in **Table 2-1**. Construction activities would include excavation of material sources; clearing and grubbing; tree removal; grading; retaining wall construction; drainage improvements; placement of crushed aggregate base and paved surface; revegetation; and installation of fencing, signs, and other trail- and safety-related features. There would be drilling associated with construction of the retaining walls and viaducts or clear span bridge but no pile driving.

Noise levels from Ultimate Trail Configuration construction were determined based on typical equipment noise levels determined by the Federal Highway Administration RCNM. The construction area for the Project is linear and limited in width, which would limit the number of pieces of construction equipment in operation at once. The two noisiest pieces of construction equipment with the potential to operate simultaneously in the same location (jackhammer and concrete saw) were modeled using the RCNM and would have the potential to generate average noise levels up to 89 dBA at 50 feet from the construction site. Similar equipment would be required throughout the 48-month construction duration. Noise levels from point sources, such as construction sites, typically attenuate at a rate of about 6 dBA per doubling of distance (Caltrans 2013).

Construction would take place during daytime hours and therefore would be consistent with the Capitola Noise Ordinance. However, construction noise levels would have the potential to exceed

the County Noise Ordinance standard of 75 dBA for offensive noise up to approximately 150 feet from the construction area for most equipment and up to 275 feet for the noisiest pieces of equipment. This standard for offensive noise is conservatively applied to sensitive receptors in both the City and County to screen for potential nuisance impacts from construction equipment.

Residences are located throughout the Project corridor. Residences would be within the 150-foot screening distance for standard construction equipment and the 275-foot screening distance for the noisiest pieces of construction equipment in Segments 10 and 11. A hotel (Inn at Depot Hill) is also located within the 150-foot screening distance at Monterey Avenue in the Segment 11 corridor.

The County Noise Ordinance states that the necessity of the noise should be taken into consideration in determining whether a noise is in violation of the code (8.30.010[C][5]). Permitted construction is specifically listed as an example. The Project would be consistent with the Capitola Noise Ordinance and exempt from the County Noise Ordinance. However, to conservatively evaluate the impact to the experience of nearby residences related to construction noise exposure, the County Noise Ordinance is considered in this analysis. The noise levels in the ordinance have been established to determine whether construction noise levels would be considered acceptable to the community. Construction would occur during daytime hours, when residences and hotels are less sensitive to noise. Additionally, due to the linear nature of project construction, individual receptors would only be exposed to construction noise for short periods during the 48-month construction period. However, because construction noise would have the potential to exceed the noise level typically considered a nuisance in the County, a potentially significant impact would occur. This impact would be reduced by implementing noise-reducing measures where the use of construction equipment occurs within 275 feet of residences or hotels.

Therefore, this impact of the Ultimate Trail Configuration would be **less than significant with mitigation** (Mitigation Measure N-1). Implementation of Mitigation Measure N-1, described below, would muffle construction equipment to minimize levels at nearby sensitive receptors.

Mitigation Measure N-1: Implement Noise-Reducing Measures for Construction Equipment Used within 275 Feet of Residences or Hotels[1]

The County of Santa Cruz shall include the following in the construction specifications. During construction, the construction contractor shall employ the following noise-reducing measures where use of construction equipment occurs within 275 feet of residences or hotels:

- Use acoustical shelters around any air compressors, generators, and any other stationary construction equipment not fitted with baffled enclosures
- Use baffling around stationary construction equipment to reduce noise and vibration levels
- Properly muffle and maintain all construction equipment powered by internal combustion engines
- Prohibit unnecessary idling of internal combustion engines
- Whenever feasible, use electrical power to run air compressors and similar power tools

Operation

Operation of the Project would not generate a net increase in vehicle trips in the Project area (refer to Section 3.12, *Transportation*). The Project is anticipated to primarily serve existing County and

[1] This is a refinement of Mitigation Measure N-1b (Acoustical Shelters) and Mitigation Measure N-1c (Construction Equipment) from the Monterey Bay Sanctuary Scenic Trail Network Master Plan Environmental Impact Report (RTC 2013). The original measures have been revised to consider Project-specific details, the specific locations of nearby sensitive receptors, and specific local noise concerns and regulation (County Noise Ordinance).

City residents and would not include any new parking lots or other amenities or facilities to accommodate new vehicle trips. Maintenance of the trail would be incorporated into existing underlying jurisdiction maintenance schedules for existing facilities, and vehicle trips would be minimal and intermittent. Therefore, operation of the Project would not result in a permanent increase in ambient vehicle noise levels.

Additionally, operational noise levels along the trail alignment would be influenced by the sound of trail users talking, occasional animal sounds (e.g., dogs on leash), and occasional trail maintenance. In areas where trail use would overlap with existing active transportation and recreational facilities, such as through Capitola Village from Cliff Drive to Monterey Avenue, noise levels would be similar to existing conditions. Capitola Village is currently a well-traveled area that is regularly subject to vehicle noise, as well as pedestrian and bicycle noise, similar to noise anticipated for the Project. Along the Project corridor where the trail would provide a new transportation and recreational facility, the new noise sources would be intermittent and typically limited to normal conversation. Normal conversation typically results in a noise level of 65 dBA Leq at 3 feet (Caltrans 2013) and attenuates to below 50 dBA Leq at 15 feet. As such, intermittent noise at conversational levels would not be considered excessive at nearby receptors.

Although electric bicycles with a rating limited to 20 miles per hour would be allowed on the trail in accordance with California law (Assembly Bill 1096), motorized vehicles would not be allowed. Electronic skateboards and other personal mobility devices with a rating limited to 20 miles per hour would be allowed as well. Although electric bicycles and skateboards generate some motor and/or chain noise, the noise levels are typically similar to traditional bicycles and below normal conversation levels at surrounding receptors (Trek 2023a, 2023b). The normal operating hours would be dawn to dusk, with public "pass through" at all times to allow for early morning and evening commuting and transportation use. Due to the linear nature of the Project, receptors would be exposed to noise from individual trail users only while users are passing the receptors.

Regular maintenance activities could include but not be limited to occasional repairs and litter and debris (e.g., dirt or sand) removal that would potentially involve the use of power equipment. Refer to Section 2.5, *Project Operation and Maintenance*. It is currently unknown what specific type of equipment would be used for occasional repairs. However, maintenance would be occasional, limited in duration, and similar to existing noise levels generated by maintenance and landscape equipment used to maintain residential and commercial properties and the rail corridor. Thus, maintenance of the Project would not be expected to generate a noticeable increase in ambient noise levels compared to those under existing conditions.

Operational impacts of the Project would be **less than significant** because the Ultimate Trail Configuration would not generate noise levels that would be substantially different from those under existing conditions. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Similar to the Ultimate Trail Configuration described above, construction of the Optional Interim Trail, which includes demolition of the rail and construction of the Optional Interim Trail (Part 1), would require the operation of heavy construction equipment and result in temporary noise increases in the immediate vicinity during construction. Although the types of construction activities would vary between construction of the Optional Interim Trail and the Ultimate Trail Configuration, construction of the Optional Interim Trail would require a similar construction fleet, and the

maximum noise levels described under Impact N-1 for the Ultimate Trail Configuration would also be anticipated for the Optional Interim Trail (Part 1).

Similar to the Ultimate Trail Configuration, construction noise levels from implementing the Optional Interim Trail (Part 1) would have the potential to exceed the County Noise Ordinance standard of 75 dBA for offensive noise up to approximately 150 feet from the construction area for most equipment and up to 275 feet for the noisiest pieces of equipment. Residences are located throughout the Optional Interim Trail corridor. Residences would be within the 150-foot screening distance for standard construction equipment and the 275-foot screening distance for the noisiest pieces of construction equipment in Segments 10 and 11. The Optional Interim Trail includes the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11, which would result in exposure of additional residential and hotel receptors to construction noise in Segment 11.

Similar to the Ultimate Trail Configuration, this impact could be reduced to a less than significant level by implementing noise-reducing measures where the use of construction equipment occurs within 275 feet of residences and hotels. This impact would be **less than significant with mitigation** (Mitigation Measure N-1)**.**

Operation of the Optional Interim Trail as an active transportation route would be similar to the operation of the Ultimate Trail Configuration, as described for Impact N-2. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to the Ultimate Trail Configuration and implementation of the Optional Interim Trail (Part 1) described above, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would require the operation of heavy construction equipment and result in temporary increases in noise in the immediate vicinity during construction. Part 2 would require a similar construction fleet, and the maximum noise levels described under Impact N-1 for the Ultimate Trail Configuration would also be anticipated for this effort.

Similar to the Ultimate Trail Configuration and implementation of the Optional Interim Trail (Part 1), construction noise levels from demolishing the Optional Interim Trail and rebuilding of the rail line (Part 2) would have the potential to exceed the County Noise Ordinance standard of 75 dBA for offensive noise up to approximately 150 feet from the construction area for most equipment and up to 275 feet for the noisiest pieces of equipment. Demolition would include the additional 0.5-mile section between Opal Street and Monterey Avenue in Segment 11 that includes additional residential and hotel receptors compared to the Ultimate Trail Configuration. Similar to the Ultimate Trail Configuration, this impact could be reduced to a less than significant level by implementing noise-reducing measures where the use of construction equipment occurs within 275 feet of residences and hotels. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measure N-1).

Following these construction activities, this part of the Optional Interim Trail (Part 2) would not operate as an active transportation corridor because there would be no trail; thus, there would be no operational noise sources and **no impact**.

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as part of the Optional Interim Trail (Part 3) would be similar to that described above for Ultimate Trail Configuration. Refer to the discussion

above for Impacts N-1 and N-2 under *Ultimate Trail Configuration (Trail next to Rail Line)*. The construction-related Impact N-1 would be **less than significant with mitigation** (Mitigation Measure N-1). The operational Impact N-2 would be **less than significant**, and no mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

When Optional Interim Trail Parts 1, 2, and 3 are considered together, the construction-related noise effects would be greater because three parts requiring similar construction activity would be required, and additional receptors would be impacted by the additional 0.5-mile section between Opal Street and Monterey Avenue in Segment 11. However, construction of the three parts would take place over decades and would be unlikely to result in a cumulative annoyance. As described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)*, the timing for implementing Parts 2 and 3 is uncertain, and it is estimated that the Optional Interim Trail (Part 1) could be in place for approximately 25 years before it is removed (Part 2). Once Part 2 is implemented and the Optional Interim Trail is removed, the Ultimate Trail Configuration could be constructed the following year, resulting in a longer potentially continuous construction period that could be considered a cumulative annoyance. Nonetheless, the construction-related noise (Impact N-1) would be **less than significant with mitigation** (Mitigation Measure N-1).

When Optional Interim Trail Parts 1, 2, and 3 are considered together, the operational noise (Impact N-2) would be similar to the operational noise under the Ultimate Trail Configuration and would not result in excessive noise. Impact N-2 would be **less than significant**, and no mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Similar to construction of the Optional Interim Trail, this design option would include additional construction near sensitive receptors (residences) along the rail corridor between Opal Street and Monterey Avenue in Segment 11 that would result in the exposure of additional residences and hotels (e.g., Capitola Beach Suites and Capitola Venetian Hotel on Cliff Drive and Wharf Road) to construction noise. However, Impact N-1 would still be **less than significant with mitigation** (Mitigation N-1). Operation of the Project would be the same with or without this design option, and this impact would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact would increase the distance between the construction area and residences located south of the proposed alignment, which would reduce potential construction noise exposure, and decrease the distance between the construction area and residences located north of the proposed alignment, which would increase potential construction noise exposure. However, Impact N-1 would still be **less than significant with mitigation** (Mitigation N-1). Operation of the Project would be the same with this design option, and this impact would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with the Optional Interim Trail would result in greater total exposure of sensitive receptors to construction noise compared to the Project without the Optional Interim Trail because additional sensitive receptors (residences) would be affected by construction activities on the 0.5-mile section including the Capitola Trestle Bridge and because total construction activities and duration would increase by an additional 96 months. However, Impact N-1 would still be **less than significant with mitigation** (Mitigation N-1). Operation of the Project with or without the Optional Interim Trail would be **less than significant**. No mitigation is required.

Threshold B: Generation of excessive groundborne vibration or groundborne noise levels.

Impact N-3 CONSTRUCTION WOULD POTENTIALLY EXPOSE PERSONS TO OR GENERATE EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Groundborne vibration and noise would be limited to the construction phase. Building damage and annoyance to receptors are the main concerns related to construction vibration. However, there are some potentially vibration-sensitive manufacturing uses located adjacent to the proposed alignment in Segment 10, east of 17th Avenue.

The peak particle velocity (PPV) metric, described in Section 3.10.1, *Existing Conditions*, is most appropriate for evaluating building damage potential associated with vibration. Typical vibration levels for available construction equipment required for the Ultimate Trail Configuration are provided in **Table 3.10-5**. The California Department of Transportation estimates that vibration levels less than 0.12 PPV do not result in damage to even the most fragile historic buildings (Caltrans 2013). As shown in **Table 3.10-5**, the highest level of construction-related vibration during operation of a vibratory roller would be below 0.12 PPV beyond 35 feet from the source. All other equipment would be below 0.12 PPV within 25 feet of equipment operation.

A roller would be required for trail construction throughout the alignment. It is currently unknown whether a vibratory roller would be required; therefore, use of one is conservatively assumed. Several residences are potentially located within 35 feet of the trail alignment in areas where the alignment is particularly narrow, such as west of Jade Street Park. However, the residences are not historic buildings that are particularly sensitive to damage from vibration. Additionally, due to the linear nature of construction, use of a vibratory roller, if required, would only be used in the area closest to individual receptors for a minimal amount of time. As such, vibration from construction would not be expected to result in building damage at nearby structures.

The vibration decibels (VdB), described above in Section 3.10.1, are most appropriate to describe vibration relative to human response and are used here to describe human response to groundborne vibration and its corresponding groundborne noise level (FTA 2018). As shown in **Table 3.10-5**, vibration levels would naturally reduce to below 85 VdB more than 50 feet from the construction area, which is the level that may be annoying to daytime noise-sensitive land uses. Sensitive receptors would be within 50 feet of the trail. The impact would only occur during operation of vibratory equipment, such as a vibratory roller, if required. Additionally, due to the linear nature of the Project, construction activities would only be within 50 feet of individual receptors for a short time. Additionally, construction would occur during the day and would not disturb sleep. However, if use of a vibratory roller is required, it could be an annoyance to adjacent

receptors. As shown in **Table 3.10-5,** vibration levels would reduce to below 65 VdB more than 235 feet from the construction area, which is the level that may interfere with vibration-sensitive manufacturing uses. Manufacturing uses are located within 235 feet of the construction area. Impacts to residences and manufacturing uses would be reduced by notifying potential receptors of potential vibration exposure. Impacts of the Ultimate Trail Configuration related to groundborne vibration during construction would be **less than significant with mitigation** (Mitigation Measure N-3). Implementation of Mitigation Measure N-3 would reduce impacts by minimizing the potential nuisance of vibration by allowing surrounding uses time to prepare for a potential nuisance.

Table 3.10-5 Vibration Source Levels for Construction Equipment

Construction Equipment	Approximate PPV/VdB at 25 Feet[a]	Approximate PPV/VdB at 35 Feet[a]	Approximate PPV/VdB at 50 Feet[a]	Approximate PPV/VdB at 235 Feet[a]
Large Bulldozer	0.089/87	0.05/83	0.031/78	0.003/58
Loaded Truck	0.076/86	0.05/82	0.027/77	0.003/57
Small Bulldozer	0.003/58	0.002/54	0.001/45	0.0001/29
Jackhammer	0.035/79	0.02/75	0.01/70	0.001/50
Vibratory Roller	0.210/94	0.12/90	0.074/85	0.007/65

Source: FTA 2018.

[a] Based on the formula VdB = VdB (25 feet) – 30log(d/25) provided by the FHWA (2006).

PPV = peak particle velocity; VdB = vibration decibel

Mitigation Measure N-3: Provide Notification of Construction Vibration to Residential Units and Manufacturing Operations within 235 Feet

The County of Santa Cruz shall ensure that the construction specifications include the following noticing requirement. The construction contractor shall provide written notification at least 1 week prior to the start of any construction activities involving the use of vibratory equipment to all residential units located within 50 feet or manufacturing uses within 235 feet of the construction area that would produce the vibration. The notice shall inform residents of the estimated start date and duration of daytime vibration-generating construction activities and provide a point of contact for vibration exposure complaints.

Optional Interim Trail (Trail on the Rail Line)

Similar to the Ultimate Trail Configuration, groundborne vibration and noise associated with the Optional Interim Trail would be limited to project construction, not operation.

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail (Part 1) would require a similar construction fleet as the Ultimate Trail Configuration, and the vibration levels described above under Impact N-3 would also be anticipated for the Optional Interim Trail. If vibratory equipment is required for construction, vibration levels could result in a nuisance to nearby residences within 50 feet and manufacturing uses within 235 feet. The Optional Interim Trail would include additional construction between Opal Street and Monterey Avenue in Segment 11 that would result in the exposure of additional residences to potential vibration. Like for the Ultimate Trail Configuration, if use of a vibratory roller is required, it could be an annoyance to adjacent receptors, and this impact would be reduced by notifying

residences and manufacturing uses of potential vibration exposure. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measure N-3).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to the Ultimate Trail Configuration and implementation of the Optional Interim Trail (Part 1) described above, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would require a similar construction fleet, and the maximum vibration levels described above under Impact N-3 could also be anticipated for this effort. Use of vibratory equipment, if required, would have the potential to result in nuisance vibration up to approximately 50 feet from equipment operation and impacts to manufacturing uses up to 235 feet. Demolition would include potential impacts to the additional receptors between Opal Street and Monterey Avenue. Like for the Ultimate Trail Configuration, if use of a vibratory roller is required, it could be an annoyance to adjacent receptors, and this impact would be reduced by notifying residences and manufacturing uses of potential vibration exposure. Therefore, this impact would be **less than significant with mitigation** (Mitigation Measure N-3).

3) Construction of the Ultimate Trail Configuration

Construction and operation of the Ultimate Trail Configuration as part of the Optional Interim Trail would be similar to that described above for Ultimate Trail Configuration, with impacts to additional receptors between Opal Street and Monterey Avenue. Refer to the discussion above for Impact N-3 under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant with mitigation** (Mitigation Measure N-3).

Combined Effect of Interim Trail Parts 1, 2, 3

When Optional Interim Trail Parts 1, 2, and 3 are considered together, the construction-related vibration effects would be greater because three separate parts requiring construction activity would be required, and additional receptors along the rail corridor between Opal Street and Monterey Avenue in Segment 11 would potentially be exposed to construction vibration. However, construction would take place over decades and would be unlikely to result in a cumulative annoyance. The impact would still be **less than significant with mitigation** (Mitigation Measure N-3).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Similar to construction of the Optional Interim Trail, this design option would include additional construction along the rail corridor between Opal Street and Monterey Avenue in Segment 11 that would result in the potential exposure of additional residences to vibration. The impact would still be less than significant with mitigation (Mitigation Measure N-3).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. This design option would result in construction located farther from the residences south of the trail alignment, which would potentially decrease vibration exposure, and closer to the residences north of the trail alignment in this section, which would potentially increase vibration exposure. The impact would continue to be **less than significant with mitigation** (Mitigation Measure N-3).

Comparison of Proposed Project Impact with/without Optional Interim Trail

Total exposure to construction vibration would increase with the Optional Interim Trail because total construction would increase by an additional 96 months, and additional receptors would be within the potential impact area along the rail corridor in Segment 11 between Opal Street and Monterey Avenue. The impact would still be **less than significant with mitigation**.

3.10.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
N-1. Construction may result in a substantial temporary increase in noise levels.	**LTSM** MM N-1	**LTSM** Similar, slightly greater MM N-1	**LTSM** Similar, slightly greater MM N-1	**LTSM** Similar, slightly greater MM N-1
N-2. Operation of the Project would not expose persons to or generate excessive noise levels.	LTS	LTS Substantially similar	LTS Substantially similar	LTS Substantially similar
N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	**LTSM** MM N-3	**LTSM** Similar, slightly greater MM N-3	**LTSM** Similar, slightly greater MM N-3	**LTSM** Similar, slightly greater MM N-3

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

3.11 Public Safety and Services

This section identifies and evaluates impacts related to public safety and services that may arise through implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* along the Santa Cruz County Regional Transportation Commission (RTC)-owned Santa Cruz Branch Rail Line corridor in central Santa Cruz County (County), partially in the City of Capitola (City) and partially in the unincorporated County. The analysis addresses existing public safety features and services in addition to measures that have been included in the design of the Project to retain and enhance public safety and services following Project implementation. Public services analyzed in this section include emergency response, fire protection, police protection, parks, and healthcare facilities. Impacts to schools, libraries, and recreation are discussed in Section 3.15, *Effects Found to be Less than Significant*. **Table 3.11-1** summarizes identified impacts related to public safety and services.

Table 3.11-1 Summary of Impacts on Public Safety and Services[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
PUB-1. The Project would not result in the need for additional fire protection facilities or emergency medical services response to maintain acceptable service ratios or response times.	Less than Significant	None Required	Less than Significant
PUB-2. The Project would not result in the need for additional police protection or law enforcement facilities to maintain acceptable service ratios or response times.	Less than Significant	None Required	Less than Significant
PUB-3. The Project would not result in the need for the construction of new or additional park facilities or in the degradation of existing facilities.	Less than Significant	None Required	Less than Significant
PUB-4. The Project would not result in the need for the construction of new or additional health service facilities.	Less than Significant	None Required	Less than Significant
Beneficial Effect: The Project would provide a new alternative transportation and recreational facility and would improve access to New Brighton State Beach and other parks and recreation facilities, such as the Simpkins Family Swim Center, Jade Street Park, Capitola Beach, and other beaches. Additionally, the Project would improve access to the rail line for police, fire, and emergency response medical services.			

[a] The impacts apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted after the impact statement.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.11.1 Existing Conditions

Regional and Project Corridor Setting

A wide range of state and local government entities provide extensive public services to the County and City related to fire and police protection, public health and safety, education, parks, and general public resources, including healthcare facilities.

Agencies that provide services throughout the Project corridor are discussed below. Due to the cross-jurisdictional nature of the trail corridor, some public service providers would differ depending on the segment (i.e., whether the segment is in the unincorporated County or the City).

Emergency Response Services

Emergency response services are provided under the provisions established through the County Emergency Medical Service Plan that is administered by the County Public Health Department under the Santa Cruz County Health Services Agency (SCR911 2022). Public safety services are overseen by Santa Cruz Regional 9-1-1 (SCR911), formally the Santa Cruz Consolidated Emergency Communications Center, a joint powers authority that has been established for the County. All 911 calls are received by Santa Cruz Regional 9-1-1 and routed to the American Medical Response (AMR), which provides 24-hour American Life Support ambulance transport throughout the County or the appropriate fire or police department depending on the emergency being reported. The appropriate first responder is determined by the requirements of the emergency being reported and the provisions available to provide first response services in addition to the location and requirements for accessing the reported emergency.

Fire Protection Services

Fire protection in California is the responsibility of the federal, state, or local government, depending on the individual jurisdiction. The State of California is responsible for fire protection in the rural unincorporated areas of the County through Cooperative Fire Protection Agreements with California Department of Forestry and Fire Protection (CAL FIRE). The Project corridor is located in a Local Responsibility Area. The Central Fire District of Santa Cruz County (CFD) provides service to the entire Project corridor. The CFD services the communities of Live Oak, Soquel, Capitola, Aptos, Rio Del Mar, and La Selva Beach. The CFD has seven stations and 120 active employees (CFD 2022). Three fire stations are located along the Project corridor: Station 1 at 930 17th Avenue in the unincorporated community of Live Oak, approximately 250 feet south of the rail corridor; Station 4 at 405 Capitola Avenue in Capitola, approximately 250 feet north of the rail corridor; and Station 5 at 6934 Soquel Drive in the unincorporated community of Aptos, approximately 0.4 mile north of the rail corridor.

Police Protection Service

Police protection is provided throughout the Project corridor by a combination of Capitola Police Department (CPD) and County Sheriff's Office, which is supported by California Highway Patrol (CHP) and California Department of Fish and Wildlife (CDFW) as discussed below.

CAPITOLA POLICE DEPARTMENT

The CPD provides police protection services to the residents and visitors of the City. The CPD is divided into two divisions: Field Operations and Support Services (CPD 2022). The Project corridor would be served by the police station at 422 Capitola Avenue in Capitola, approximately 200 feet northwest of the rail corridor.

SANTA CRUZ COUNTY SHERIFF'S OFFICE

The County Sheriff's Office provides primary law enforcement services in the unincorporated portions of the County, along most of the Project corridor excluding the Capitola area. There are six County Sheriff's service centers in the County, with the headquarters at the Live Oak/Soquel Service

Center at 5200 Soquel Avenue in the unincorporated community of Live Oak, approximately 1.1 miles north of the Project corridor.

CALIFORNIA HIGHWAY PATROL

The CHP is responsible for patrolling state highways and county roadways, enforcing traffic regulations, responding to traffic accidents, and providing service and assistance to drivers in disabled vehicles. The CHP maintains a mutual aid agreement with the County Sheriff's Office and assists local governments during emergencies when requested (Fish 2018). The County is located in the CHP Coastal Division, whose service area includes 325 miles along the Central Coast. The area office in the County (Office 720) is located at 10395 Soquel Drive in the unincorporated community of Aptos, approximately 3 miles east of the Project corridor.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

CDFW provides two to three wardens throughout all of the County, including New Brighton State Beach adjacent to the Project corridor in Capitola. CDFW wardens cover an extensive area as the County supports special-status species, jurisdictional waterways, and areas where hunting may occur, either legally or illegally. Therefore, law enforcement provisions are coordinated between CDFW wardens and the local sheriff's department to determine the most efficient and effective mode of response for each reported emergency (Fish 2018).

Healthcare Facilities

The Public Health Department of the Santa Cruz County Health Services Agency has contracted emergency ambulance services for unincorporated Santa Cruz County to AMR since 1990 (Santa Cruz County 2023a). The AMR provides 24-hour Advanced Life Support ambulance transport and maintains 10 ambulance stations throughout the County. The closest AMR station to the Project corridor is approximately 1.0 mile east at 3914 Alameda Avenue in Capitola. Between four and eight ambulances are deployed to station locations, depending on anticipated demand. AMR also deploys additional units during peak demand times, such as holidays.

The major hospitals in the County include Dominican Hospital and Watsonville Community Hospital, which both operate emergency rooms. There are also a number of additional City, County, and privately operated medical facilities, including urgent care facilities provided, such as Doctors on Duty (urgent care facility). The closest emergency or urgent care facilities to the Project corridor (from west to east) include Dominican Hospital at 1555 Soquel Drive (1.3 miles north of the Project corridor), Dignity Health Urgent Care at 1820 41st Avenue (0.5 mile north of the Project corridor), and Doctors on Duty at 6800 Soquel Drive (0.4 mile north of the Project corridor). Additionally, Kaiser Permanente planned to construct a large outpatient facility with an urgent care clinic to be located at 5940 Soquel Avenue in the unincorporated community of Live Oak, approximately 1 mile north of the rail corridor. The medical facility was planned to be open in 2024, but in May 2023, Kaiser indicated in a press statement that they no longer intend to construct this facility because they have increased their primary and specialty care services at the Kaiser medical offices in Santa Cruz, Scotts Valley, and Watsonville (Santa Cruz Sentinel 2023).

Parks

The Project corridor is mostly developed within the RTC owned Santa Cruz Branch Rail Line corridor right-of-way (ROW). From west to east, the Project corridor is located adjacent to or near Simpkins Family Swim Center, Felt Street County Park, Brommer Street County Park, Jade Street Park, Soquel

Creek Park, Esplanade Park, Capitola Beach, Monterey Avenue Park, Cortez Park, McGregor Park, New Brighton State Beach, Seacliff Village County Park, and Seacliff State Beach. State and local parks near the corridor are discussed below and shown on **Figures 3.11-1a** and **1b**, Parks and Recreation Facilities along Project Corridor.

STATE

The State of California owns and operates 14 state parks throughout the County. Of these, the Project corridor extends through New Brighton State Beach. New Brighton State Beach extends for approximately 0.5 mile along the Capitola coast (**Figures 2-1a** and **2-1b**, Project Location). The Project corridor traverses New Brighton State Beach facilities, which feature a day use area, a parking lot, campground, and walking and hiking trails. Additionally, Twin Lakes State Beach Park is located approximately 1,000 feet west of the Segment 10 terminus at 17th Avenue, and Seacliff State Beach Park is located approximately 500 feet south of the Segment 11 terminus at State Park Drive.

LOCAL

Local parks located within the vicinity of the Project corridor are managed by the Santa Cruz County Parks, Open Space and Cultural Services Department, and by the City of Capitola Parks, a division of the Public Works Department.

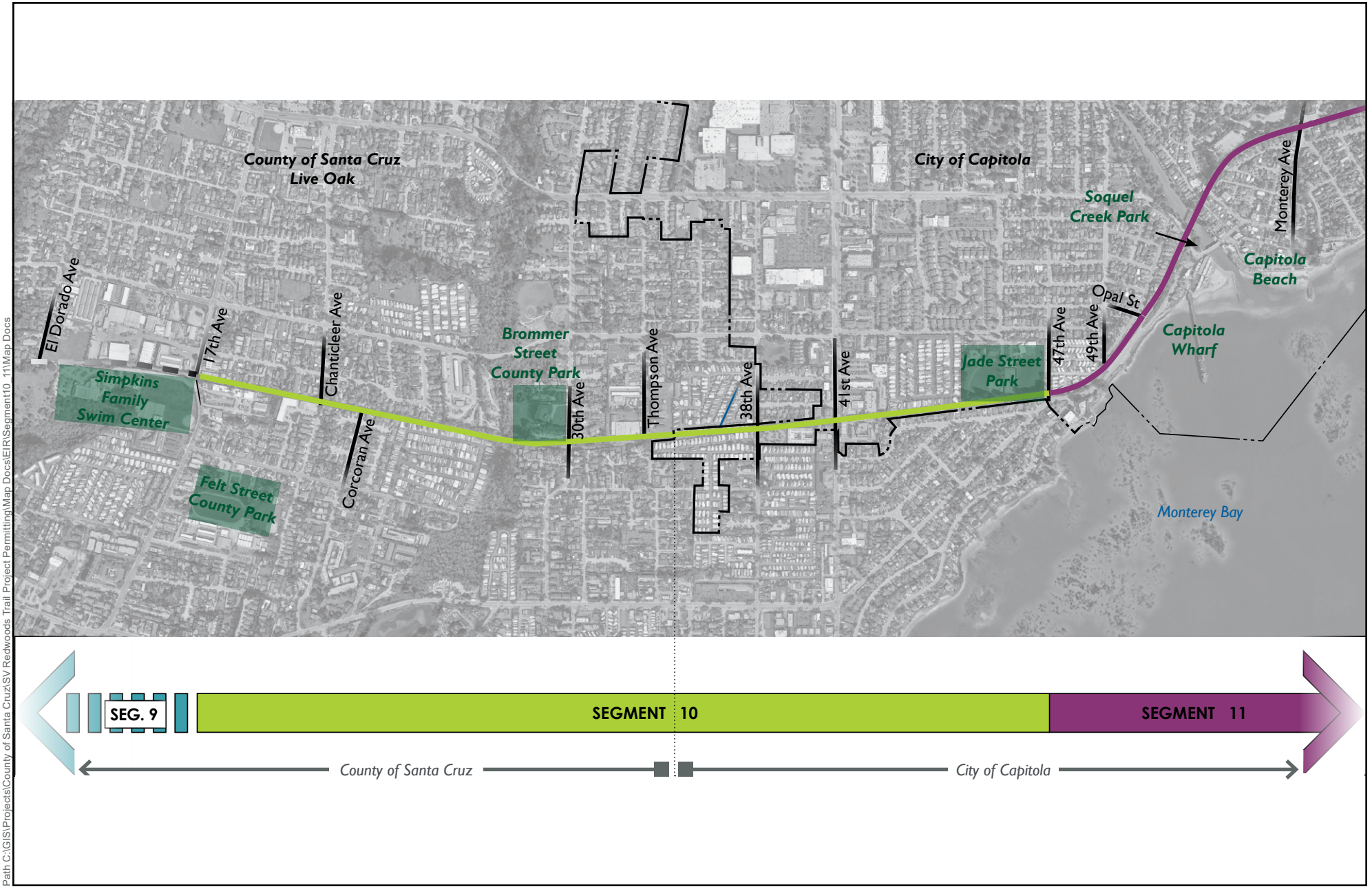
The Santa Cruz County Parks, Open Space and Cultural Services Department, maintains 38 neighborhood, community, regional, and rural parks; 27 coastal access points; and a regional swim center (Simpkins Family Swim Center). There are approximately 223 miles of bikeways throughout the County, which include 196 miles of bicycle lanes and 27 miles of separated bicycle paths (Santa Cruz County 2022). A sampling of the recreational opportunities in the County includes hiking, cycling, surfing, sailing, equestrian use, and nature viewing. According to the County's "Park Finder" map, the following facilities are close to the Project corridor (from west to east): Simpkins Family Swim Center, approximately 0.1 mile southwest of the Project corridor; Felt Street County Park, approximately 0.1 mile south of the Project corridor; Brommer Street County Park, approximately 0.2 mile north of the Project corridor; and Seacliff Village County Park, less than 0.1 mile north of the Project corridor (Santa Cruz County 2023b).

The Capitola Parks Division manages eight parks within the City. The Project corridor is immediately adjacent to Jade Street Park, Soquel Creek Park, and McGregor Park (City of Capitola 2023a). Additionally, the Public Works Department maintains and operates all City-owned facilities, including the Jade Street Community Center, Esplanade Park, Capitola Beach, and Municipal Wharf, which are all within 0.1 mile of the Project corridor (City of Capitola 2023b).

Schools

There are 10 public school districts serving approximately 40,000 students in kindergarten through 12th grade (K–12) in the County (Santa Cruz County Office of Education 2023).

The western portion of the Project corridor is within the Live Oak School District. The closest schools to the Project corridor include Shoreline Middle School at 855 17th Avenue, less than 0.1 mile south of the Project corridor, Del Mar Elementary School at 1959 Merrill Street, approximately 0.2 mile south of the Project corridor, and Live Oak Elementary School at 1916 Capitola Road, approximately 0.4 mile north of the Project corridor (Live Oak School District 2023).



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: RRM Design 2022.

Harris & Associates

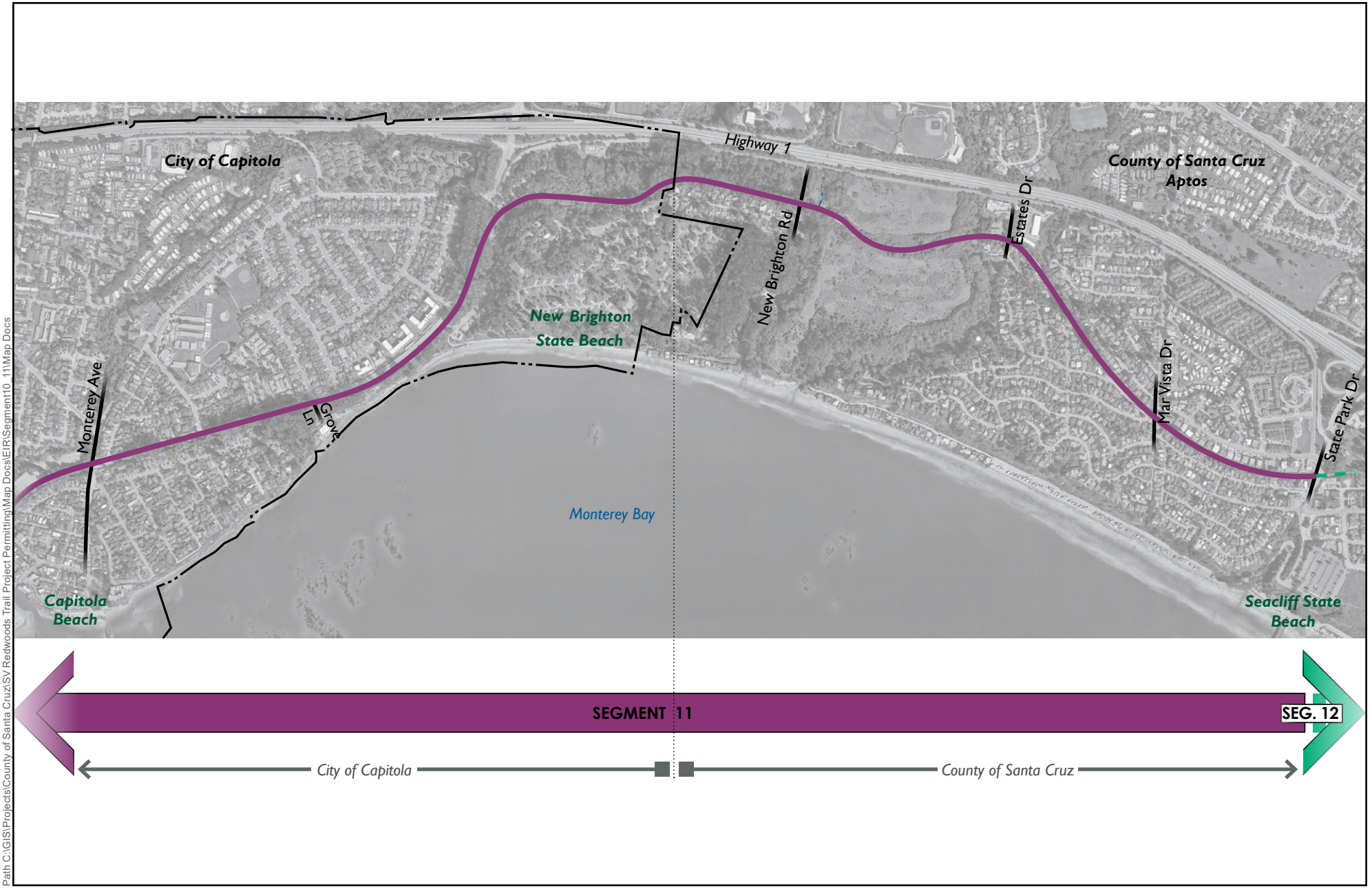
N

0 800 1600
Feet

Figure 3.11-1a

Parks and Recreation Facilities along Project Corridor

Coastal Rail Trail Segments 10 and 11



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segment10_11\Map Docs

Source: RMM Design 2022.

Harris & Associates

N

0 800 1600
Feet

Figure 3.11-1b

Parks and Recreation Facilities along Project Corridor

Coastal Rail Trail Segments 10 and 11

The central portion of the Project corridor is within the Soquel Union Elementary School District. The closest schools to the Project corridor include Opal Cliff School at 4510 Jade Street, less than 0.1 mile north of the Project corridor, and New Brighton Middle School at 250 Washburn Avenue, approximately 0.4 mile north of the Project corridor (Soquel Union Elementary School District 2023).

The far eastern portion of the Project corridor (from approximately Estates Drive to State Park Drive) is within the Pajaro Valley Joint Unified School District. The closest school to the Project corridor is Mar Vista Elementary School at 6860 Soquel Drive, located on the northern side of Highway 1 approximately 1,000 feet north of Segment 11 where it crosses Estates Drive.

Libraries

Santa Cruz City–County library system serves the County and City. The Santa Cruz County Public Libraries system includes 10 neighborhood branches. The closest libraries to the Project corridor include the forthcoming Live Oak Library Annex, located at 979 17th Avenue, approximately 0.1 mile south of the Project corridor; Live Oak Branch Library, located at 2380 Portola Drive in the unincorporated community of Live Oak, approximately 0.4 mile south of the Project corridor; and the Capitola Branch Library, located at 2005 Wharf Road in Capitola, approximately 0.4 mile southeast of the Project corridor (SCPL 2023).

3.11.2 Regulatory Setting

The following section summarizes the state, regional, and local policies and regulations applicable to the Project. There are no relevant federal regulations regarding public services applicable to the Project.

State

California Master Mutual Aid Agreement

The California Master Mutual Aid Agreement is a framework agreement between the State of California and local governments for aid and assistance by the interchange of services, facilities, and equipment, including but not limited to fire, police, medical and health, communication, and transportation services and facilities for emergency rescue, relief, evacuation, rehabilitation, and reconstruction services. The Project corridor is covered by a mutual aid agreement between the State and Santa Cruz County to provide fire and emergency response services, and the U.S. Bureau of Land Management, CDFW, CHP, California State Parks Department, and County Sheriff's Office to provide police services throughout the County.

Regional

Santa Cruz County Regional Transportation Commission 2045 Regional Transportation Plan

The Santa Cruz County RTC is responsible for developing, implementing, and regularly updating the Regional Transportation Plan (RTP) for the County. The RTP is a state-mandated plan that identifies transportation needs in the County over the next 20+ years. The Santa Cruz County RTC most recently approved a 2045 RTP in June 2022. The RTP estimates the amount of funding that will be available over this time frame and identifies a financially constrained priority list of projects. The 2045 RTP includes goals, targets, and policies that are relevant to the Project, such as the following:

- **Goal 1.** Establish livable communities that improve people's access to jobs, schools, recreation, healthy lifestyles and other regular needs in ways that improve health, reduce pollution and retain money in the local economy.
  - □ **Target 1.A.** Improve people's ability to meet most of their daily needs without having to drive. Improve access and proximity to employment centers.
  - □ **Target 1.B.** Re-invest in the local economy by reducing transportation expenses from vehicle ownership, operation and fuel consumption. Reduce smog-forming pollutants and greenhouse gas emissions.
  - □ **Target 1.C.** Improve the convenience and quality of trips, especially for walk, bicycle, transit, freight and carpool/vanpool trips.
  - □ **Target 1.D.** Improve health and reduce greenhouse gas emissions by increasing the percentage of trips made using active transportation options, including bicycling, walking and transit.
    - **Policy 1.1, Transportation Demand Management**. Expand demand management programs that decrease the number of vehicle miles traveled and result in mode shift.
    - **Policy 1.3, Transportation Infrastructure.** Improve multimodal access to and within key destinations for all ages and abilities.
    - **Policy 1.4, Transportation Infrastructure.** Ensure network connectivity by closing gaps in the bicycle, pedestrian and transit networks.
- **Goal 2**
  - □ **Target 2.A.** Improve transportation safety, especially for the most vulnerable users.
    - **Policy 2.1, Safety.** Prioritize funding for safety projects and programs that will reduce fatal or injury collisions.
    - **Policy 2.3, Emergency Services.** Support projects that provide access to emergency services.
    - **Policy 2.4, System Design.** Reduce the potential for conflict between bicyclists, pedestrians, and vehicles.
    - **Policy 2.5, Security.** Incorporate transportation system security and emergency preparedness into transportation planning and project/program implementation.

Local

Santa Cruz County General Plan

The County General Plan provides a framework for development and growth in the County (Santa Cruz County 1994). The Parks, Recreation, and Public Facilities Element includes objectives and policies for the adequate provision of public services to support existing and future populations. Key parks and public facilities policies and objectives relevant to the Project include objectives to provide adequate public services including fire, emergency response, police and schools, and safe recreational areas and passive natural open spaces for the residents of the County. Examples of these policies that pertain to adequate public services including fire, emergency response, police and schools, and safe recreational areas and passive natural open spaces are located in Chapter 7, *Parks, Recreation, and Public Facilities*, of the County General Plan. Relevant policies are listed below:

- **Policy 7.1.4, Local Recreation Opportunities**. Provide a variety of local recreational facilities which serve all segments of the population based on the standards of the National Recreation and Parks Association, with priority given to facilities which can be utilized for youth recreation programs.

- **Policy 7.1.5, Access to Recreation Facilities**. Provide physical access to all recreation facilities through provision of public transportation, trail system development, protection of prescriptive rights to beach access trails, and recreation programs.
- **Policy 7.16.1, Reviewing New Development for Fire Protection**. Require review of all new developments, including building permits on existing parcels of record, by the County Fire Marshal or local fire agency, and require adequate access, water supply and location with respect to fire stations and Critical Fire Hazard Areas in order to ensure adequate fire protection.
- **Policy 7.16.2, Development to be Consistent With Fire Hazards Policies**. Allow development approvals only if adequate water supply, access, and response time for fire protection can be made available in accordance with the Fire Hazards policies found in section 6.5.
- **Policy 7.17.2, Maintaining Adequate Levels of Service**. Provide adequate levels of police service to protect County residents and businesses.

Santa Cruz County Parks Department Strategic Plan

The Santa Cruz County Parks Department Strategic Plan (Santa Cruz County 2018) provides a 10-year roadmap for the department that will assist in adapting and growing the support for a healthy, connected, and culturally vibrant Santa Cruz County. It also creates a resource for understanding what the department does and how the department serves the community. The strategic plan provides guidance for partnering and collaborating with other relevant agencies, describes a collective vision for the County Parks Department, and establishes goals and objectives within the 10-year time frame. The goals of the plan include maintaining and enhancing the quality of parks facilities and improving access between existing parks and programs.

Santa Cruz Public Libraries Facilities Master Plan

The Santa Cruz Public Libraries Facilities Master Plan 2014–2023 (SCPL 2013) was developed to create modern library facilities that provide updated library service for the entirety of the County. The library system throughout the County includes 10 branch libraries, a bookmobile, and a headquarters facility that work together as an integrated system, sharing resources, programs, and administration. The master plan includes three planning stages for each library facility, including the Capital Maintenance, Gain, and Attain Plans. These plans identify funding mechanisms and growth opportunities for each library facility in addition to measures to provide overall general maintenance, improvements, and eventual building and program replacement to provide modern library services at each location.

Santa Cruz County Code

The County Code, Chapter 15.03, establishes parks and recreation development impact fees to expand the County system of parks and recreation facilities through an assessment on new development projects authorized through the approval of building permits for commercial and residential development in the unincorporated portions of the County. Specifically, Chapter 15.03 requires five separate parks and recreation Mitigation Fee Act park dedication funds to receive collected revenues from any fees or exactions. The County Code, Chapter 15.02, similarly requires financing for school facilities with development fees and dedications consistent with state law.

City of Capitola General Plan

Capitola General Plan, adopted in June 2014 and last amended in March 2019, guides development in the City for 20 to 30 years by providing a vision for the future and establishing a framework for maintaining the City's identity. Relevant goals, policies, and actions related to the provision of public safety and services include the following (City of Capitola 2019):

- **Goal LU-13.** Provide high-quality public parks that cater to the diverse needs and interest of Capitola residents and visitors.
  - **Policy LU-13.4, New Brighton State Beach.** Cooperate with the California Department of Parks and Recreation and other agencies to maintain, improve, and preserve New Brighton State Beach in a natural state to serve the region with a variety of nature-oriented and passive recreational opportunities.
  - **Policy LU-13.5, Ocean Recreation.** Maintain and enhance access to the waters of Monterey Bay and Capitola Beach as recreational amenities for residents and visitors.
  - **Policy LU-13.8, Intergovernmental Cooperation.** Maintain partnerships and shared service agreements with local school districts and neighboring communities in order to enhance the range of opportunities available to Capitola residents and achieve cost savings.
  - **Policy LU-13.11, Soquel Creek Access.** Maintain, enhance, and expand public access to Soquel Creek within Capitola Village.
- **Goal LU-14.** Support recreational programs and community events that contribute to a high quality-of-life.
  - **Action LU-14.1, Trails and Pathways.** Maintain existing trails and pathways.
  - **Action LU-14.2, Regional Trails.** Cooperate with the Regional Transportation Commission to encourage connections with regional trails such as the Monterey Bay Sanctuary Scenic Trail.
  - **Policy SN-3.4, Development Review.** Encourage early review of proposed development project plans by the Central Fire Protection District.
- **Goal SN-6.** Maintain a safe environment in Capitola through the enforcement of the law.
  - **Policy SN-6.1, Police Services.** Maintain adequate police staffing, performance levels, and facilities to serve Capitola's existing population as well as future growth.
  - **Policy SN-6.2, New Development.** Identify and mitigate law enforcement concerns during the project review and approval process.
  - **Policy SN-6.3, Physical Site Planning.** Require physical site planning that prevents crime by locating walkways, open spaces, landscaping, parking lots, parks, play areas, and other public spaces in areas that are visible from buildings and streets.
  - **Policy SN-6.4, Lighting Plans.** Require lighting plans that support crime prevention, including adequate lighting for parking lots, sidewalks, and street.

3.11.3 Methodology and Significance Thresholds

Methodology

The assessment of impacts to public safety and services is based on a review of emergency response, fire and police protection services, and parks and consideration of potential changes in the level of service that may be required as a result of the addition of a new trail along Segments 10 and 11 of the Project corridor.

Significance Thresholds

The California Environmental Quality Act (CEQA) does not treat impacts on service ratios or responses times to be adverse effects on "the environment" (*City of Hayward v. Board of Trustees of the California State University* [2015] 242 Cal.App.4th 833, 843). Rather, what matters under CEQA is whether, in order to maintain adequate service ratios or response times, a city, county, or other service provider would have to build new or expanded physical facilities, which themselves could result in environmental effects (Id. at pp. 843–844; see also *Goleta Union School Dist. v. Regents of University of California* [1995] 37 Cal.App.4th 1025, 1032–1033 [CEQA is not concerned with school overcrowding, which is a socioeconomic effect but is concerned with the impacts of school construction needed to alleviate overcrowding.]). Thus, under CEQA, the environmental analysis relating to the provision of the above-mentioned services should be limited to possible construction-related impacts, if any, associated with the services.

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of public safety and services and the other environmental topics. Thus, the thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this Environmental Impact Report, a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* or the *Optional Interim Trail (Trail on the Rail Line)* resulted in any of the following conditions:

A. Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   - Fire protection
   - Police protection
   - Schools
   - Parks
   - Other public facilities, including healthcare facilities and libraries

The Project would not generate population that would use schools or libraries. Therefore, schools and libraries are not included in the analysis below. The Project would result in the construction of a new recreational facility; thus, significance thresholds regarding substantial physical deterioration of recreational facilities or necessitation of construction of new recreational facilities are similarly not included in the analysis below. Additional analysis related to schools, libraries, and recreation are included in Section 3.15.

3.11.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection Police protection Parks

Impact PUB-1 THE PROJECT WOULD NOT RESULT IN THE NEED FOR ADDITIONAL FIRE PROTECTION FACILITIES OR EMERGENCY MEDICAL SERVICES RESPONSE TO MAINTAIN ACCEPTABLE SERVICE RATIOS OR RESPONSE TIMES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Impacts related to fire protection or emergency response are limited to operational impacts. Construction of the Project would be temporary in nature, and the provision of fire protection or emergency response facilities and services would not be substantially impacted. As stated in Section 2.6, *Project Construction*, under *Best Management Practices*, a traffic control plan would be prepared and implemented during construction, and emergency personnel would be notified in advance of construction-related lane closures. Construction of the Project would result in the temporary closure of an existing fire road within New Brighton State Beach. However, this closure would be intermittent, during the non-peak fire season, and alternative emergency access would be provided during construction. This impact would be **less than significant.** No mitigation is required.

Operation

The Project would introduce a paved multi-purpose trail along the rail corridor. As stated in Section 2.5, *Project Operation and Maintenance*, it is estimated that there could be 500–1,500 trail users daily (refer to Section 2.5 under *Trail Use*). The increased human activity along the Project corridor could result in additional calls for fire protection and emergency medical response services to this area of the County and City.

The Project is a trail and does not include the construction of buildings or other facilities that present unique challenges for fire protection and emergency response services.

Increased use of the corridor by trail users and the potential for additional calls are not expected to adversely affect response times or generate a need for emergency services and/or additional personnel that warrants the expansion of existing facilities or construction of new facilities (e.g., construction of new fire stations or other emergency response facilities) (Mack 2022), which could then result in indirect environmental impacts.

Additionally, the increased visibility through vegetation removal and trail installment could reduce loitering or inappropriate activities along the Project corridor that can start fires, which could reduce the need for CFD services along the corridor (Mack 2022).

The trail width would be sufficient for emergency access by responders and first response equipment, such as ambulances and fire trucks limited to H-10 loading vehicles.[1]

Emergency vehicles could access the trail from the roadway crossings and trail connections listed in Section 2.4, *Project Characteristics*. The CFD indicated that 8 feet is the minimum sufficient width for ambulances to access an area, and ambulances can navigate 7-foot-wide chokepoints when necessary and if approved by the department. When an ambulance cannot reach a certain area, foot access with a wheeled gurney is an acceptable access method. Fire vehicle access requires a minimum width of 9 feet 6 inches (Mack 2022).

The trail widths meet the Monterey Bay Sanctuary Scenic Trail Network Master Plan trail classification of a Class I bikeway. Based on the design criteria for Class I bikeways, the minimum combined paved width would be 12 feet, including paved shoulders, or narrower at structures for stream crossings and areas with constrained ROW within the rail corridor, as allowed in the California Department of Transportation (Caltrans) Chapter 1000, Bicycle Transportation Design (July 1, 2020), and California Manual of Uniform Traffic Control Devices.[2] The typical width of the paved trail would be 12 to 14 feet with striping in the middle to separate eastbound and westbound. The trail width would be reduced at several locations, including roadway crossings, to slow trail users and improve safety at intersections. The narrowest portion of the trail would range from 8 to 12 feet along a 50-foot stretch approaching the eastern side of Monterey Avenue. For further details regarding trail width, refer to Section 2.4, under *Trail Width and Materials*.

Trail widths would accommodate ambulances and fire vehicles. Additionally, as stated by the CFD, the trail would generally improve emergency access along the railroad tracks by providing paved access along the corridor (Mack 2022).

If ambulance transportation service is required, AMR would be contacted. AMR has a number of facilities in the County, the closest of which to the Project corridor is located at 3914 Alameda Avenue in Capitola. This facility serves the Project corridor, and ambulance availability fluctuates between four and eight ambulances depending on the expected needs and prior season fluctuations in the County (Santa Cruz County 2023a). AMR does not anticipate that the expansion of the proposed recreational opportunities on all segments of the Monterey Bay Sanctuary Scenic Trail Network would require additional ambulance service to continue to effectively serve their service area because none of these projects, including the Project, would result in a permanent increase in the overall population (RTC 2013).

The Project would not directly or indirectly generate additional residents or employees; as such, there would be no population increase associated with the Project that would adversely impact response times. The Project would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response. This impact would be **less than significant.** No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The impacts related to fire protection or emergency medical response from implementation of the Optional Interim Trail would be similar to those discussed above for the *Ultimate Trail Configuration*

[1] An H-10 loading vehicle is a vehicle with a load capacity of 20,000 pounds.

[2] Trail paved widths may be reduced with the recommended striping per Caltrans Chapter 1000, Section 1000.3(3), Clearance to Obstructions, and recommended bicycle warning signs in CA MUTCD Chapter 9, Section 9B.19, Other Bicycle Warning Signs.

(Trail next to Rail Line). Implementation of the Optional Interim Trail would include removing the rail tracks/ties and constructing the Optional Interim Trail on the rail bed. Similar to the Ultimate Trail Configuration, impacts related to fire protection or emergency response are limited to operational impacts. Construction of the Optional Interim Trail would be temporary in nature, and the provision of fire protection or emergency response facilities and services would not be substantially impacted.

Operational impacts of the Optional Interim Trail would be similar to the operational impacts described above for the Ultimate Trail Configuration. The Optional Interim Trail would have a similar design and estimated number of trail users along the same corridor. Implementation of the Optional Interim Trail would not result in the construction of buildings or other facilities that present unique challenges for fire protection and emergency response services. Trail users are not expected to generate a need for emergency services that would warrant the expansion of existing facilities or emergency response services or the construction of new fire stations or other emergency response facilities. Although the minimum width for a Class I path is 12 feet, the typical width of the Optional Interim Trail would be 16 feet, including paved shoulders, or narrower at structures for stream crossings and areas with constrained ROW, as allowed. As such, the trail width of the Optional Interim Trail would be sufficient to support emergency vehicles, such as ambulances and fire trucks limited to H-10 loading vehicles. The Optional Interim Trail would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response services. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line would remove the trail and re-install the rail tracks/ties on the rail bed. Demolition of the Optional Interim Trail and rebuilding of the rail line would be temporary in nature, and the provision of fire protection or emergency response facilities and services would be reduced because there would no longer be recreational users along the trail, which is expected to minimize loitering or inappropriate activities that can start fires. Further, with the trail removed, there would be fewer emergency calls from trail users. Therefore, this impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Impacts from the construction of the Ultimate Trail Configuration would be the same as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Construction and operation of the Ultimate Trail Configuration would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response services. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effect of the Optional Interim Trail on facilities to maintain acceptable fire protection or emergency response services would be **less than significant**. The Optional Interim Trail would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response services. The Optional Interim Trail would not generate a permanent population. Trail users are not expected to generate a need for emergency services that would warrant the expansion of existing facilities or emergency response services or the construction of new fire stations or other emergency response facilities. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Impacts related to fire protection or emergency response from implementation of this design option would be similar to those discussed above for the Ultimate Trail Configuration and would be limited to operational impacts. Construction of this design option would be temporary in nature, and the provision of fire protection or emergency response facilities and services would not be substantially impacted.

During operation, the design option would have a similar design and estimated number of trail users along the same corridor. Implementation of this design option would not result in the construction of buildings or other facilities that present unique challenges for fire protection and emergency response services. Trail users are not expected to generate a need for emergency services that would warrant the expansion of existing facilities or emergency response services or the construction of new fire stations or other emergency response facilities. Although the Capitola Trestle Bridge would not be designed to support emergency vehicles, emergency vehicles would be able to park at either end of the bridge and access the bridge on foot with a wheeled gurney. The CFD indicated that foot access with a wheeled gurney is an acceptable access method when an ambulance cannot reach a certain area (Mack 2022). Therefore, this design option would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response services. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Impacts related to fire protection or emergency response from implementation of this design option would be similar to those discussed above for the Ultimate Trail Configuration and would be limited to operational impacts. Construction of this design option would be temporary in nature, and the provision of fire protection or emergency response facilities and services would not be substantially impacted. During operation, the design option would have a similar design and estimated number of trail users along the same corridor (i.e., similar number of trail users with or without this design option). Implementation of this design option would not result in the construction of buildings or other facilities that present unique challenges for fire protection and emergency response services. Trail users are not expected to generate a need for emergency services that would warrant the expansion of existing facilities or emergency response services or the construction of new fire stations or other emergency response facilities. Additionally, the trail width of this design option would be sufficient to support emergency vehicles, such as ambulances and fire trucks limited to H-10 loading vehicles. This design option would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response o services. The impact associated with this design option would be similar to

impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

Impacts from the Project with and without the Optional Interim Trail would be similar. There would be a similar number of estimated trail users, and neither scenario would result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable fire protection or emergency response services. Impacts from the Project with and without the Optional Interim Trail would be **less than significant**.

Impact PUB-2 THE PROJECT WOULD NOT RESULT IN THE NEED FOR ADDITIONAL POLICE PROTECTION OR LAW ENFORCEMENT FACILITIES TO MAINTAIN ACCEPTABLE SERVICE RATIOS OR RESPONSE TIMES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Impacts related to police protection and law enforcement are limited to operational impacts. Construction of the Project would be temporary in nature, and the provision of police protection or law enforcement facilities and services would not be substantially impacted. As stated in Section 2.6 under *Best Management Practices*, a traffic control plan would be prepared and implemented during construction, and emergency personnel would be notified in advance of construction-related lane closures. This impact would be **less than significant**. No mitigation is required.

Operation

As described for Impact PUB-1, the Project would introduce a paved multi-purpose trail along the rail corridor, and it is estimated that there could be 500–1,500 trail users daily (refer to Section 2.5 under *Trail Use*). The increased human activity along the Project corridor, including the potential for increased number of persons who are unhoused, loitering, or trespassing onto adjacent lands, could result in additional calls from the public for police protection or law enforcement service.

Police protection services are provided by the CPD and County Sheriff's Office, with support from the CHP and CDFW. The Project would not require the construction of additional CPD or County Sheriff's stations or the expansion of services currently provided by the CPD or the County Sheriff's Office, because the Project would not result in an increase in population. Further, the potential for increased calls is not anticipated to require hiring additional personnel that would require expansion of facilities (e.g., police/sheriff stations).

Potential safety issues associated with the Project include trespassing on adjacent lands, vandalism, and the establishment of encampments, all of which may increase crime. However, there would be no bathrooms as part of the Project, which would help prevent vandalism and loitering around the facilities. The Project would include installation of safety fencing to separate trail users from the rail, as needed, and in other areas for safety and security. These design features would likely further aid in minimizing vandalism and loitering that may occur along the Project corridor because they also encourage trail users from staying on the established trail.

If illegal encampments were established along the Project corridor, the County Sheriff's Office or CPD would respond upon being informed of their presence. It is the duty of the County Sheriff's

Office or CPD to both cite and relocate those who illegally camp in the City and unincorporated County public lands. The County Sheriff's Office or CPD would relocate the individual and all belongings to the appropriate facility in the County in coordination with the Homeless Services Center and remove debris and waste from the site. The County would provide appropriate services for individuals including transitional shelters, permanent housing programs, and income and employment support with the goal of reducing the overall unhoused population throughout the County (Fish 2018). If ongoing illegal camping is identified along the Project corridor, regular patrol of the alignment by the County Sheriff's Office or CPD would be instated to ward off the establishment of permanent illegal campers.

The County Sheriff's Office predicts that the trail would improve safety, considering that the increased visibility along the Project corridor would reduce loitering and camping by unhoused individuals (Hop and Baldrige 2022). Additionally, several measures would occur to prevent camping or loitering altogether. The Sheriff's Office indicated that lighting, fencing, and signage would be useful to reduce crime in the Project corridor (Hop and Baldrige 2022). New lighting and fencing could be installed along the Project corridor, as outlined in Section 2.4, under *Trail Features*, of the Project Description. Signage would be posted indicating that camping is prohibited, and loitering is prohibited from dusk to dawn. Further, the Project would increase access for police patrol by clearing the areas around the existing rail and adding access points, enhancing overall safety (Hop and Baldrige 2022).

The Project would not directly or indirectly generate additional residents or employees that would adversely impact police response times. The planned increase in people using the rail corridor for transportation and recreation would not require additional police protection services, considering that most trail users would already be present in the service area using different roads, sidewalks, bike lanes, and modes of transportation for travel. Therefore, additional police protection services or facilities would not be necessary to serve trail users.

In summary, existing police services, Project features (such as lighting, fencing, and signage), and improved access to the Project corridor are expected to minimize potential illegal activities such as vandalism, trespassing, and the establishment of illegal encampments. In addition to trail users, there could be unhoused people resting or loitering. The Project is not expected to result in the need for additional police protection or law enforcement facilities, as there are existing services to address infrequent occurrences of criminal activity. Therefore, the Project would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable police protection or law enforcement services. This impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Impacts related to police protection or law enforcement services from implementation of the Optional Interim Trail would be similar to those discussed above for the *Ultimate Trail Configuration (Trail next to Rail Line)* because the trail would be in the same general location and the anticipated use would be the same. The increased human activity along the Project corridor, including the potential for persons experiencing homelessness loitering or trespassing onto adjacent lands, could result in additional calls for police protection or law enforcement service. However, the construction of additional facilities would not be required to maintain the provision of law enforcement services, as discussed directly above for the Ultimate Trail Configuration.

Compared to the *Ultimate Trail Configuration (Trail next to Rail Line)*, impacts to trespassing and vandalism would be similar. Impacts would be limited through Project features such as lighting, fencing, and signage and improved police access to the Project corridor. There would also be fencing between the trail and adjacent land uses in areas where no existing natural barriers occur. Therefore, implementation of the Optional Interim Trail would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable police protection or law enforcement services. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

The impacts of demolition of the Optional Interim Trail and rebuilding of the rail line would be similar to those described above for the Ultimate Trail Configuration. Demolition of the Optional Interim Trail and rebuilding of the rail line would be temporary in nature, and the provision of police protection or law enforcement facilities and services would be reduced because there would no longer be recreational users along the trail requiring police services. This impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

The impacts of the implementation construction of the Ultimate Trail Configuration would be the same as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. The increased human activity along the Project corridor, including the potential for loitering or trespassing onto adjacent lands, could result in additional calls for police protection or law enforcement service. However, the Project would not directly or indirectly generate additional residents or employees that would adversely impact police response times. The planned increase in people using the rail corridor for transportation and recreation would not require additional police protection services, considering that most trail users would already be present in the service area using different roads, sidewalks, bike lanes, and modes of transportation for travel. Therefore, additional police protection services or facilities would not be necessary to serve trail users. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

When considered together, the Optional Interim Trail Parts 1, 2, and 3 would not result in a substantial impact to police protection or law enforcement facilities and services. There are adequate police protection and law enforcement facilities in the region to serve the Optional Interim Trail once it is constructed (Part 1), and this is expected to be the case in the future when the Ultimate Trail Configuration is constructed (Part 3). Therefore, impacts related to police protection or law enforcement facilities and services would be **less than significant**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Impacts related to police protection or law enforcement services from implementation of this design option would be similar to those discussed above for

the Ultimate Trail Configuration because the trail would be in the same general location and the anticipated use would be the same. The increased human activity along the Project corridor, including the potential for persons experiencing homelessness loitering or trespassing onto adjacent lands, could result in additional calls for police protection or law enforcement service. However, the construction of additional facilities would not be required to maintain the provision of law enforcement services, as discussed above for the Ultimate Trail Configuration. Compared to the Ultimate Trail Configuration, impacts to trespassing and vandalism would be similar. Impacts would be limited through Project features such as lighting, fencing, and signage and improved police access to the Project corridor. There would also be fencing between the trail and adjacent land uses in areas where no existing natural barriers occur. Therefore, implementation of this design option would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable police protection or law enforcement services. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Impacts related to police protection or law enforcement services from implementation of this design option would be similar to those discussed above for the Ultimate Trail Configuration because the trail would be in the same general location and the anticipated use would be the same. The increased human activity along the Project corridor, including the potential for persons experiencing homelessness loitering or trespassing onto adjacent lands, could result in additional calls for police protection or law enforcement service. However, the construction of additional facilities would not be required to maintain the provision of law enforcement services, as discussed above for the Ultimate Trail Configuration. Compared to the Ultimate Trail Configuration, impacts to trespassing and vandalism would be similar. Impacts would be limited through Project features such as lighting, fencing, and signage and improved police access to the Project corridor. There would also be fencing between the trail and adjacent land uses in areas where no existing natural barriers. Therefore, implementation of this design option would not result in substantial adverse physical impacts associated with the provision of new or expanded facilities to maintain acceptable police protection or law enforcement services. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts to police protection or law enforcement facilities. Both options would be in the same general location, and the anticipated number of users would be the same. Existing police services; project features such as lighting fencing, and signage; and improved access to the Project corridor are anticipated to minimize potential illegal activities such as vandalism, trespassing, and illegal camping. Impacts from the Project with and without the Optional Interim Trail would be **less than significant**.

Impact PUB-3 THE PROJECT WOULD NOT RESULT IN THE NEED FOR THE CONSTRUCTION OF NEW OR ADDITIONAL PARK FACILITIES OR IN THE DEGRADATION OF EXISTING FACILITIES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Project construction activities would have the potential to temporarily impact 100 square feet of Jade Street Park. Existing access to Jade Street Park would be maintained during the duration of Project construction, and existing trees at the southwest corner of Jade Street Park would be protected in place.

Project construction would also have the potential to temporarily impact 5,723 square feet of New Brighton State Beach. There would be intermittent closure of the informal Oak Trail rail crossing on weekdays during the non-peak visitor season, and flaggers would be present to provide public access as feasible during active construction. Safety fencing would be provided to allow users to cross the trail when construction activities are not actively occurring. Construction of the Project would also result in the temporary closure of an existing fire road within New Brighton State Beach. However, this closure would be intermittent, during the non-peak fire season, and alternative emergency access would be provided during construction.

In the western portion of New Brighton State Beach, the Project would construct a 100-foot-long clear span bridge with a fiberglass reinforced polymer deck over New Brighton State Beach Road, the only public access to the State Beach and its facilities. All construction activities associated with the bridge over New Brighton State Beach Road would occur within the RTC owned ROW but would temporarily disrupt access and use of New Brighton State Beach Road. As stated in Section 2.6 under *Best Management Practices*, it is anticipated that New Brighton State Beach Road would be temporarily closed for approximately 12 hours overnight on a weekday during the off-peak camping season to allow for the prefabricated bridge to be set in place. Emergency egress from/ingress to New Brighton State Beach Campground would be provided via the private New Brighton Road residential and maintenance road, which is typically not accessible by the public but would be made accessible for emergencies during construction. Construction activities in New Brighton State Beach would be scheduled to avoid concurrent closure of New Brighton State Beach Road and New Brighton Road.

No other existing parks would be impacted by Project construction. Construction activities at Jade Street Park and New Brighton State Beach would result in construction-related dust, emissions from construction equipment and worker vehicles, and erosion, all of which could disturb park users. Construction activities would temporarily disrupt access and use of the existing Oak Trail. However, alternate access to the New Brighton State Beach and its remaining facilities would be maintained during Project construction. In addition, best management practices, as identified in Section 2.6, include construction-related dust, emissions, and erosion control measures. The Project would not significantly affect the use of Oak Trail once the improvements, such as paving, are completed. Construction of the Project would not result in the need for additional parks, the construction of which could cause significant environmental effects or result in the degradation of existing park facilities and resources within and near the Project corridor. This impact would be **less than significant**. No mitigation is required.

Operation

The physical environmental effects of developing a new trail (the Project) are addressed in other sections of this Environmental Impact Report; therefore, this discussion focuses on the potential impacts to existing parks and trails.

The Project would have the potential to permanently impact 417 square feet of Jade Street Park. Specifically, Segment 10 would include a trail connection to 47th Avenue with a curb ramp, trash receptacles, and associated drainage improvements constructed on approximately 417 square feet of Jade Street Park property (**Appendix A.1**, sheet CP-1.14). Drainage improvements would consist of a new natural drainage swale south of the trail outside the Jade Street Park property. The trail connection at 47th Avenue would provide a direct connection from the proposed trail to Jade Street Park.

The Project would also have the potential to permanently impact 18,835 square feet of New Brighton State Beach. Specifically, Segment 11 would result in associated improvements in three separate areas of California Department of Parks and Recreation jurisdiction, including near the intersection of Coronado Street and Park Avenue, east of Oak Trail, and between New Brighton Road and Borregas Creek (**Appendix A.1**, sheets CP-1.23 to CP-1.33). An operating agreement between the RTC and California Department of Parks and Recreation would be required for any portion of the proposed trail that is within New Brighton State Beach currently under California Department of Parks and Recreation's jurisdiction. The existing Oak Trail crossing of the rail line would be formalized within the RTC owned ROW as part of the Project by adding concrete track panels across the rail line and paving a portion of the trail abutting the rail line to prevent trail erosion.

The Project would be located adjacent to several existing parks and extend through established communities via the existing railroad ROW. The proposed improvements within the Project corridor would increase connectivity and access to surrounding communities and adjacent parks by allowing formal use of the corridor for transportation and recreation purposes. Therefore, the Project would improve access to parks adjacent to the Project corridor, including Jade Street Park, Soquel Creek Park, McGregor Park, and New Brighton State Beach, which could increase park users. Jade Street Park, McGregor Park, and New Brighton State Beach provide large open space areas that could accommodate additional users. Soquel Creek Park is smaller in comparison to the other parks; however, the park is already accessible along Cliff Drive, and it is not anticipated the Project will significantly increase park users compared to existing conditions. Trail use is transitory, and it is unlikely that the small, somewhat hidden Soquel Creek Park would be a common destination because it is not highly visible from the Project corridor. Although it is estimated that there could be 500–1,500 daily trail users in the Project corridor, only a small percentage of the users would use the improved trail access to these parks. Therefore, implementation of the Project would not degrade parks along the Project corridor, and impacts to the park would be **less than significant**.

There are no other parks within or adjacent to the Project corridor. However, there are several parks, including Felt Street County Park, approximately 0.1 mile south of the Project corridor, Seacliff Village County Park, approximately 0.1 mile north of the Project corridor, and Brommer Street County Park, approximately 0.2 mile north of the Project corridor, which may be visited by trail users. The number of trail users that would be new users of surrounding facilities would be minimal, and surrounding parks would not be degraded by the Project. Impacts to existing parks in the area would be **less than significant**.

Implementation of the Project would not result in the need for additional parks, the construction of which could cause significant environmental effects, or result in the degradation of existing park

facilities and resources within and near the Project corridor. This impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Impacts to parks from implementation of the Optional Interim Trail would be similar to impacts discussed above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. The trail alignment would be in the same general location, and the anticipated trail use and number of trail users would be the same as those for the Ultimate Trail Configuration. Implementation of the Optional Interim Trail would not result in the need for additional parks, the construction of which could cause significant environmental effects, or result in the degradation of existing park facilities and resources within nearby parks. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

The demolition of the Optional Interim Trail and rebuilding of the rail line would involve demolishing the trail and associated fencing and guardrails, retaining walls, and other supporting features. Trail users would lose access to the trail during this phase of construction. Therefore, there would be reduced access to and slightly less use of nearby park facilities. Therefore, impacts to park facilities and the degradation of existing facilities would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Impacts from construction of the Ultimate Trail Configuration would be the same as described above for *Ultimate Trail Configuration (Trail next to Rail Line)*. The Ultimate Trail Configuration would enhance access to nearby park facilities by improving the existing trail that would provide connectivity for recreational users. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effect of the Optional Interim Trail Parts 1, 2, and 3 would not require additional park facilities and would not degrade existing facilities. Implementation of the Optional Interim Trail would require two additional construction periods (construction and demolition of the Optional Interim Trail [Parts 1 and 2]) as compared to construction of the Ultimate Trail Configuration (Part 3). Trail users would lose access to the trail during construction. Therefore, the combined effect of the Optional Interim Trail Parts 1, 2, and 3 would have a greater impact related to reduced access and slightly less use of nearby park facilities. However, implementation of the Optional Interim Trail would not result in the need for additional parks, the construction of which could cause significant environmental effects, or result in the degradation of existing park facilities and resources along the Project corridor and surrounding parks. This impact would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Impacts to parks from implementation of this design option would be

similar to those discussed above for the Ultimate Trail Configuration. The trail alignment would be in the same general location, and the anticipated trail use and number of trail users would be the same as those for the Ultimate Trail Configuration. Implementation of this design option would not result in the need for additional parks, the construction of which could cause significant environmental effects, or result in the degradation of existing park facilities and resources within nearby parks. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Impacts to parks from implementation of this design option would be similar to impacts discussed above for the Ultimate Trail Configuration. The trail alignment would be in the same general location, and the anticipated trail use and number of trail users would be the same as those for the Ultimate Trail Configuration. Implementation of this design option would not result in the need for additional parks, the construction of which could cause significant environmental effects, or result in the degradation of existing park facilities and resources within nearby parks. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration and would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts to park facilities. Under either scenario, the trail would be in the same general location with the same number of estimated trail users that could use surrounding parks. Under either scenario, the trail would provide additional access to nearby park facilities by improving the existing trail and connectivity to parks. Although the Optional Interim Trail would require two additional construction periods, which would have a greater impact related to reduced access of nearby park facilities than construction of the Ultimate Trail Configuration alone, impacts from the Project with and without the Optional Interim Trail would be **less than significant**.

Impact PUB-4 THE PROJECT WOULD NOT RESULT IN THE NEED FOR THE CONSTRUCTION OF NEW OR ADDITIONAL HEALTH SERVICE FACILITIES. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Impacts related to health service facilities are limited to operational impacts. Construction of the Project would be temporary in nature, and the provision of health service facilities would not be impacted. There would be **no impact** to health service facilities from Project construction**.** No mitigation is required.

Operation

The Project would not result in an increase in the permanent population that would need healthcare services and thus would not result in the need for new healthcare facilities or the expansion of

existing facilities. The Project would result in an increase in the use of the rail corridor by bicyclists, walkers, and runners using the trail for transportation and recreation.

The Project and increased use of the Project corridor and other nearby recreation facilities accessible by Segments 10 and 11 could result in an increase in injuries and/or medical emergencies (e.g., bike accident, sprained ankle). Injuries and/or medical emergencies would be treated by the existing healthcare facilities within the vicinity of the Project corridor, including Dominican Hospital (1.3 miles north of the Project corridor), Dignity Health Urgent (0.5 mile north of the Project corridor), and Doctors on Duty (0.4 mile north of the Project corridor), and other healthcare facilities in the City and County. Existing user conflicts within the Project corridor primarily occur along Segment 11 along Cliff Drive and in Capitola Village on roadways, sidewalks, and crossings where pedestrian, bicycle, and vehicular traffic is intermixed.

A variety of design features have been incorporated into the Project for safety and to reduce the potential for user conflicts. Specifically, most roadway crossings would include chicanes to slow trail users before the intersection and ensure safety for users approaching the intersection. LED-W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons would be placed in advance of the trail crossing in each direction on 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista Drive to warn vehicular drivers of the potential for bicyclist and pedestrian crossings. In addition, bulb-outs would be located along 30th Avenue, 41st Avenue, and 47th Avenue to extend the sidewalk into the parking lane to provide additional pedestrian space and visibility and reduce crossing distance for trail users. New Brighton State Beach Road would be traversed using a clear span bridge to avoid user conflicts. Pedestrian infrastructure, such as crosswalk striping and sidewalk extensions, would be improved along 41st Avenue (sidewalk extension to Melton Street), 47th Avenue (crosswalk striping), Park Avenue (sidewalk extension from Grove Lane to Park Avenue) and Mar Vista Drive (new crosswalk) to improve pedestrian safety. The trail widths and design are consistent with the California Department of Transportation standards for a Class I bike path, as described in Highway Design Manual, Section 1003.1, and safety fencing would only be constructed on both sides of the trail where necessary in areas with adjacent high edges or slopes (Caltrans 2020). Safety fencing would not be placed between the rail and trail if it is not deemed necessary for safety (e.g., if there is no active rail). Furthermore, there are several roadways and other trail crossings along the corridor that would provide formal opportunities to enter or exit the trail, as described in Section 2.4. As discussed further in Section 3.12, *Transportation*, the Project could increase pedestrian and bicycle traffic along Cliff Drive and through Capitola Village, which could increase user conflicts (i.e., conflicts between vehicles, pedestrians, and/or bicyclists). However, the proposed striping modifications along Cliff Drive and through Capitola Village (refer to Section 2.4.1, Cliff Drive Plaza/Capitola Village Connection) would improve the visibility of existing delineated bicycle lanes and improve safety for both bicyclists and pedestrians. The striping modifications along Cliff Drive and through Capitola Village would offset the potential for increased conflicts between vehicles, bicyclists, and/or pedestrians along this portion of the Project corridor by improving the existing interactions between all users through this area. Further, the Project's creation of a multi-use path separate from vehicle traffic is expected to reduce conflicts between vehicles and pedestrians or bicyclists in the vicinity of the project. In addition, there are existing healthcare facilities with adequate capacity to serve injuries and/or medical emergencies. The potential impacts to emergency response providers are addressed above in Impact PUB-1.

Temporary population influxes throughout the County, including the City, are common because the County supports a wide variety of amenities, both constructed and natural, that draw many visitors year-round. Any increase in the use of healthcare facilities as a result of the Project would not be

substantial enough to require construction of new healthcare facilities or the expansion of existing healthcare facilities. Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. Therefore, impacts would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

The impacts from implementation of the Optional Interim Trail would be similar to those described above for the Ultimate Trail Configuration *Trail next to Rail Line* because the Optional Interim Trail would not result in an increase in the permanent population that would need healthcare services and thus would not result in the need for new healthcare facilities or the expansion of existing facilities. Like the Ultimate Trail Configuration, the Optional Interim Trail would result in an increase in the use of the rail corridor by bicyclists, walkers, and runners using the trail for transportation and recreation. The Optional Interim Trail and increased use of other nearby recreation facilities accessible from the trail could result in an increase in injuries and/or medical emergencies. In addition, the Optional Interim Trail would not include the additional striping modifications along Cliff Drive and through Capitola Village; therefore, the Optional Interim Trail would also not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment. Nonetheless, there are existing healthcare facilities with adequate capacity to serve injuries and/or medical emergencies. Any increase in the use of healthcare facilities as a result of the Optional Interim Trail would not be expected to be substantial enough to require construction of new healthcare facilities or the expansion of existing healthcare facilities. Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. Therefore, impacts would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line would remove the trail, rebuild the rail bed and re-install the rail tracks/ties on the rail bed. With removal of the trail, there would be no trail users who would require healthcare facilities. Impacts would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration would be the same as described above for the Ultimate Trail Configuration *(Trail next to Rail Line)*. Although there would be an increase in people using the trail in the rail corridor for transportation and recreation, the Ultimate Trail Configuration would not result in an increase in the permanent population that would need healthcare services and thus would not result in the need for new healthcare facilities or the expansion of existing facilities. Impacts would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effect of the Optional Interim Trail Parts 1, 2, and 3 would not result in the need for the construction of new or additional health service facilities. Any increase in the use of healthcare facilities as a result of the Optional Interim Trail would not be expected to be substantial enough to require construction of new healthcare facilities or the expansion of existing healthcare facilities.

Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. Therefore, impacts would be **less than significant**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Impacts from implementation of this design option would be similar to those described above for the Ultimate Trail Configuration because this design option would not result in an increase in the permanent population that would need healthcare services and thus would not result in the need for new healthcare facilities or the expansion of existing facilities. Like the Ultimate Trail Configuration, this design option would result in an increase in the use of the rail corridor by bicyclists, walkers, and runners using the trail for transportation and recreation. This design option and increased use of other nearby recreation facilities accessible from the trail could result in an increase in injuries and/or medical emergencies. However, this design option would also not include the additional striping modifications along Cliff Drive and through Capitola Village; therefore, the Optional Interim Trail would also not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment. Nonetheless, there are existing healthcare facilities with adequate capacity to serve injuries and/or medical emergencies. Any increase in the use of healthcare facilities as a result of this design option would not be expected to be substantial enough to require construction of new healthcare facilities, or the expansion of existing healthcare facilities. Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. The impact associated with this design option would be similar to the impacts discussed above for the Ultimate Trail Configuration and would be **less than significant.** No mitigation is required.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Impacts from implementation of this design option would be similar to those described above for the Ultimate Trail Configuration because this design option would not result in an increase in the permanent population that would need healthcare services and thus would not result in the need for new healthcare facilities or the expansion of existing facilities. Like the Ultimate Trail Configuration, this design option would result in an increase in the use of the rail corridor by bicyclists, walkers, and runners using the trail for transportation and recreation. Similar to the Proposed Project, increased use of the Project corridor and other nearby recreation facilities accessible from the trail under this design option. There are existing healthcare facilities with adequate capacity to serve injuries and/or medical emergencies. Any increase in the use of healthcare facilities as a result of this design option would not be expected to be substantial enough to require construction of new healthcare facilities or the expansion of existing healthcare facilities. Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. The impact associated with this design option would be similar to impacts discussed above for the Ultimate Trail Configuration. Regardless, impacts under this design option would be **less than significant**. No mitigation is required.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project with and without the Optional Interim Trail would have similar impacts to healthcare facilities because both scenarios would have the same number of trail users and would be in the same general location. Any increase in the use of healthcare facilities would not be expected to be substantial enough to require construction of new healthcare facilities or the expansion of existing healthcare facilities. Thus, there would be no physical effects on the environment from construction of new or expanded healthcare facilities. Impacts from the Project with and without the Optional Interim Trail would be **less than significant**. No mitigation is required**.**

3.11.5 Summary Comparison

Comparison of Impacts for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
PUB-1. The Project would not result in the need for additional fire protection facilities or emergency medical services response to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar	LTS Similar
PUB-2. The Project would not result in the need for additional police protection or law enforcement facilities to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar	LTS Similar
PUB-3. The Project would not result in the need for the construction of new or additional park facilities or in the degradation of existing facilities.	LTS	LTS Similar	LTS Similar	LTS Similar
PUB-4. The Project would not result in the need for the construction of new or additional health service facilities.	LTS	LTS Similar	LTS Similar	LTS Similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

This page intentionally left blank.

3.12 Transportation

This section evaluates the potential environmental effects associated with implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* on transportation in the vicinity of the Project corridor. Existing transportation facilities within and near the Project corridor are identified to assess the impacts that the Project could have on the circulation system. Portions of the impact analysis contained herein are based on the Coastal Rail Trail Segments 10 and 11 Traffic Technical Memorandum (**Appendix G**). A summary of the potential impacts related to transportation is presented in **Table 3.12-1**.

Table 3.12-1 Summary of Project Impacts on Transportation[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
T-1. The Project would meet the screening criteria set by the OPR, Caltrans, Santa Cruz County, and City of Capitola and thus would not conflict or be inconsistent with *CEQA Guidelines*, Section 15064.3(b).	Less than Significant	None Required	Less than Significant
T-2. Neither construction nor operation of the Project would substantially increase hazards due to a geometric design feature or incompatible use.	Less than Significant	None Required	Less than Significant
Beneficial Effect: The Project would provide the option for alternative transportation modes along the Project corridor, resulting in an overall reduction in vehicle miles traveled (VMT) that would ultimately improve the existing circulation system. Furthermore, the Project would implement new striping and sidewalk extensions to crosswalks across Park Avenue and Coronado Street along Segment 11, reducing user conflicts and providing an improved connection from the residential neighborhoods to New Brighton State Beach.			

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Caltrans = California Department of Transportation; OPR = Governor's Office of Planning and Research

3.12.1 Existing Conditions

Regional Setting

Santa Cruz County (County) contains a diverse multi-modal transportation network composed of state highways, local streets and roads, an extensive bus system, specialized transport for older adults and people with disabilities, bikeways, sidewalks, the Santa Cruz Branch Rail Line (SCBRL), and an airport in the City of Watsonville. The County contains three major corridors that provide regional north–south access, including State Route 1 (SR-1 or Highway 1), Soquel Avenue/Drive, and the rail corridor.[1] The transportation network within the County facilitates the movement of private automobiles, transit vehicles, bicycles, pedestrians, goods and services, and emergency vehicles (RTC 2022). The County's main transportation corridors are constrained by the region's physical barriers, including the Santa Cruz Mountains and the Pacific Ocean (Monterey Bay). Overall, the patterns of travel in the County are dependent on the number of people who live, work, and visit the region.

[1] Due to the topography of the Monterey Bay, State Route 1 and the rail corridor generally run east–west and northwest–southeast within the Project limits and the County but regionally provide north–south access to the neighboring counties of San Mateo County to the north and Monterey County to the south.

Road Network

According to the Santa Cruz County Regional Transportation Commission's (RTC's) 2045 Regional Transportation Plan (RTP), transportation through the County is facilitated by a total of 1,064 miles of publicly maintained roadways, including seven state highways: SR-1, SR-9, SR-17, SR-35, SR-129, SR-152, and SR-236 (RTC 2022). SR-1 extends through the most heavily populated areas of the region and acts as the County's primary thoroughfare. As such, SR-1 has the highest average daily traffic volume of any local street or state highway in the County.

SR-9 is a mountainous roadway that connects the City of Santa Cruz to towns throughout the San Lorenzo Valley and provides an alternate route through the Santa Cruz Mountains. SR-17 straddles both Santa Cruz County and Santa Clara County, traverses the Santa Cruz Mountains, and connects Santa Cruz County with the San Francisco Bay Area. SR-17 is the primary connection between Santa Cruz County and Santa Clara County and other parts of the San Francisco Bay Area.

SR-35 is often referred to as "Skyline Boulevard" because it follows the ridge of the Santa Cruz Mountains and weaves between Santa Cruz County and Santa Clara County. Due to its scenic vistas, SR-35 sees a high volume of recreational motoring and bicycling use. SR-129 and SR-152 double as main streets through the City of Watsonville. These state highways connect Santa Cruz County with neighboring counties to the south and with U.S. Route 101 and the Central Valley to the east. SR-129 is often used for the movement of goods due to its link between Santa Cruz County and U.S. Route 101 since U.S. Route 101 is a major goods movement corridor. Finally, SR-236 is an 18-mile loop connecting SR-9 in Boulder Creek to Big Basin Redwoods State Park (RTC 2022). The local street networks throughout Santa Cruz County include approximately 900 miles of roadways, bridges, curbs and gutters, sidewalks, access ramps, bicycle lanes, stop signs, and traffic signals. This local network is a critical component of the region's transportation system, as the majority of travel is done on local streets and roads (RTC 2022). Soquel Avenue/Drive is a predominately 4-lane collector road[2] that generally runs northwest–southeast within the unincorporated County and provides north–south regional access[3] (Santa Cruz County 1994).

Public Transit

The Santa Cruz Metropolitan Transit District (METRO) buses serve approximately 400 miles of roadways throughout the County. METRO provides three primary services: 26 local fixed-route bus services, the SR-17 Express Bus service, and ParaCruz services. METRO also operates four transit centers in the Santa Cruz County area. The SR-17 Express Bus is jointly operated by METRO, Amtrak, and the Santa Clara Valley Transportation Authority, and it provides a connection to the San José Diridon station. METRO ParaCruz services provide Americans with Disabilities Act-mandated complimentary paratransit service to any destination within Santa Cruz County that is within 0.75 mile of an operating bus route. Community Bridges Lift Line, a nonprofit organization, provides similar paratransit services in the region. Santa Cruz County is also connected to Monterey County by the Monterey–Salinas Transit bus service and to other parts of California by Greyhound interregional bus services. Six Park and Ride lots are strategically located throughout the County and provide commuters with pickup spots where they can park their cars during the work or school day to meet a carpool, vanpool, or bus ride. Most facilities are located along highways or near transit centers (RTC 2022).

[2] A collector road or distributor road is a low-to-moderate capacity road which serves to move traffic from local streets to arterial roads.

[3] Due to the topography of the Monterey Bay, State Route 1 and the rail corridor generally run both east–west and northwest–southeast within the Project limits and the County but regionally provide north–south access to the neighboring counties of San Mateo County to the north and Monterey County to the south.

Rail

The primary existing rail line in the County is the 32-mile SCBRL that extends between the unincorporated communities of Davenport on the north and Pajaro on the south. This rail corridor is owned by the RTC and traverses Santa Cruz County's north coast between Davenport and Wilder Ranch State Park, the Santa Cruz Beach area near downtown Santa Cruz, Capitola Village, Aptos Village, and downtown Watsonville, providing linkages to major activity centers in the region. Currently, freight service only operates on the SCBRL from the western boundary of the City of Watsonville east to the town of Pajaro just outside the Santa Cruz County line, where it connects to the Union Pacific main line (RTC 2022). Additionally, the Felton Branch Line extends 8 miles from the unincorporated community of Felton to Center Street in the City of Santa Cruz. Roaring Camp provides recreational passenger service seasonally (twice daily during summer months) between Felton and the Santa Cruz Beach Boardwalk. This recreational passenger services runs on the Felton Branch Line and a small portion of the Santa Cruz Branch Line from the wye at Pacific Avenue to the eastern end of the Boardwalk.

Active Transportation

There are approximately 223 miles of bicycle lanes and bicycle paths in the County, composed of an estimated 196 miles of Class II or III bicycle paths and 27 miles of Class I and IV bicycle paths. These bicycle lanes generally follow the region's primary transportation corridors and can be found on most arterials and collector roads. Sidewalks and other pedestrian facilities are also an important part of the transportation network (RTC 2022).

Project Corridor Setting

This section includes a description of the local transportation network in the vicinity of the Project corridor.

Road Network

The nearest State Route to the Project is SR-1, which parallels the Project corridor to the north at varying distances, between 400 feet near New Brighton State Beach and 1.2 miles near 17th Avenue. SR-1 provides vehicular access to the County, including the City of Capitola (City), from the San Francisco Bay Area to the northwest via SR-17 and from the City of Watsonville and Monterey County to the south via SR-1.

East of the SR-1/SR-17 junction near the Project corridor, SR-1 generally has two travel lanes in each direction, plus an existing or planned third auxiliary lane in each direction (intended for local access on and off the freeway without entry to the main travel lanes).

From SR-1, the following roadways (from west to east) provide vehicular access to the Project corridor:

- Soquel Avenue (SR-1 Exit 439) extends to 17th Avenue, which intersects the westernmost extent of Segment 10
- 41st Avenue (SR-1 Exit 438) provides direct access to Segment 10
- Bay Avenue (SR-1 Exit 437) extends to Monterey Avenue and provides direct access to the westernmost extent of Segment 11, east of Capitola Village
- Park Avenue (SR-1 Exit 436) provides direct access to the portion of Segment 11 along Park Avenue and extends to McGregor Drive, which provides direct access to the portion of Segment 11 that traverses New Brighton State Beach
- State Park Drive (SR-1 Exit 435) provides direct access to the easternmost extent of Segment 11

The Project corridor can be accessed from several other local roadways within the County and City road network (refer to **Figures 2-1a** and **2-1b**, Project Location).

Project Corridor

From west to east, Segment 10 of the Project corridor extends from the eastern side of 17th Avenue until the eastern side of 47th Avenue, where Segment 10 ends and continues as Segment 11. From 47th Avenue, Segment 11 extends to the northeastern end of the Cliff Drive Parking Lot at a point on Cliff Drive approximately 0.15 mile southwest of Wharf Road. From the Cliff Drive Parking Lot where a plaza would be constructed as part of the Project, there are existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village along Cliff Drive, the Stockton Avenue Bridge, Capitola Avenue, and Monterey Avenue. From the Monterey Avenue and Park Avenue intersection, Segment 11 continues until the western side of State Park Drive, where Segment 11 ends. Segment 12 is under development and is located between State Park Drive and Rio Del Mar Boulevard in Aptos a distance of approximately 0.5 mile south of the Project area. Segments 13 through 20 are being developed as part of RTC's Zero Emission Passenger Rail and Trail Project.

As shown on **Figures 2-1a** and **2-1b** and in **Appendices A.1** and **A.2**, several local roads, from west to east, lead to and intersect with the Project corridor: 17th Avenue, 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Grove Lane, New Brighton State Beach Road, New Brighton Road, Estates Drive, Mar Vista Drive, and State Park Drive.

Traffic Safety

Existing user conflicts within the Project corridor and its vicinity primarily occur along Segment 11 on roadways, sidewalks, and crossings where pedestrian, bicycle, and vehicular traffic is intermixed. These areas include but are not limited to the Cliff Drive parking area, Capitola Village, and along Park Avenue where pedestrians and bicyclists cross from residential neighborhoods on the inland side of the tracks to New Brighton State Beach on the coastal side of the tracks. According to data from the Statewide Integrated Traffic Record System, collisions involving bicyclists or pedestrians are common along roadways within the vicinity of the Project corridor (UC Berkeley 2023a). For example, in the Live Oak area along 17th Avenue, between Capitola Road (approximately 0.5 mile north of the Project corridor) and Portola Drive (approximately 0.5 mile south of the Project corridor), six collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkeley 2023a). One collision involving bicyclists or pedestrians occurred between 2017 and 2021 at the intersection of 41st Avenue and Portola Drive (approximately 0.3 mile south of the Project corridor) (UC Berkeley 2023a). Two collisions involving bicyclists or pedestrians occurred between 2017 and 2021 in Capitola Village at the intersection of Stockton Avenue and Capitola Avenue (UC Berkeley 2023a). Five collisions involving bicyclists or pedestrians occurred between 2017 and 2021 along State Park Drive between the Project corridor and Soquel Drive (UC Berkeley 2023a).

Similarly, several roadways with Class II or Class III bicycle lanes parallel the Project corridor within proximity to the Project alignment. Collisions are common along these routes. Specifically, in the Live Oak area along Brommer Street (approximately 0.15 mile north of the Project corridor) between 17th Avenue and 41st Avenue, six collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkley 2023b). Along Capitola Road (approximately 0.15 to 0.5 mile north of the Project corridor) between 17th Avenue and Wharf Road, two collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkley 2023b). Along Portola Drive (approximately 60 feet to 0.5 mile south of the Project corridor) between 17th Avenue and 47th Avenue, 10 collisions involving bicyclists or pedestrians occurred between 2017 and 2021

(UC Berkley 2023b). In the City of Capitola along Cliff Drive (approximately 70 feet to 225 feet south of the Project corridor) between 47th Avenue and Wharf Road, two collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkley 2023b). Along Park Avenue (approximately 70 feet south to 265 feet west of the Project corridor) between Monterey Avenue and Kennedy Drive, three collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkley 2023b). Along McGregor Drive (approximately 265 feet west to 140 feet north of the Project corridor) between Kennedy Drive and State Park Drive, two collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkley 2023b).

Public Transit

Several METRO bus routes provide direct access to the Project corridor as follows (from west to east):

- METRO Route 66 extends from the Santa Cruz METRO Center (Pacific Station) in downtown Santa Cruz through the community of Live Oak to the Capitola Mall Transit Center and provides service to a transit stop at the intersection of 17th Avenue and Kinsley Street, approximately 250 feet north of the Project corridor's westernmost extent. Route 66 also provides service to a transit stop on 38th Avenue at Capitola Manor, an assisted living facility adjacent to the Project corridor.
- METRO Route 68 also extends from the Santa Cruz METRO Center (Pacific Station) through the community of Live Oak to the Capitola Mall Transit Center and provides service to a transit stop on 41st Avenue at the Begonia Plaza shopping center, approximately 200 feet north of the Project corridor.
- METRO Route 55 extends from the Capitola Mall Transit Center through Capitola Village and the communities of Soquel, Aptos, Rio Del Mar, and Seacliff. Transit stops near the Project corridor include the intersection of Stockton Avenue and Esplanade in Capitola Village and the intersection of State Park Drive and Hillcrest Drive, adjacent to the Project corridor's easternmost extent (METRO 2023).

Rail Operations

The SCBRL is an active rail line; however, no regular freight or passenger services currently occur along the RTC-owned rail line north of the City of Watsonville. As described in Section 1.2.2, *Rail Operation and Maintenance*, the RTC owns the existing rail right-of-way (ROW). However, the RTC has an Administration, Coordination, and License Agreement with a rail operator that owns a freight easement over the rail tracks, and the rail operator is designated as the common carrier by the Surface Transportation Board. Currently, freight service is only provided at the southern end of the rail line in the City of Watsonville.

Pedestrian and Bicyclist Circulation

The Project corridor crosses multiple roadways that have existing sidewalks and Class II or Class III bicycle lanes/routes. Therefore, bicycle activity occurs along various parts of the Project corridor, most notably along bicycle lanes at the intersections of major cross streets, as well as on streets with Class II and Class III bicycle lanes/routes that parallel the Project corridor such as Brommer Street, Capitola Road, Portola Road, Cliff Drive, Park Avenue, and McGregor Drive (RTC 2023). McGregor Drive is the only designated bicycle and pedestrian route between Aptos to the south and Capitola to the north south of SR-1, and it currently contains a Class II bicycle lane but no pedestrian facilities. There are formal bicycle lanes within the Project corridor along 17th Avenue, 30th Avenue, 41st Avenue, 47th Avenue, Cliff Drive, Stockton Avenue, Capitola Avenue, Monterey Avenue, and State Park Drive (RTC 2023). Bicyclists may also use informal bicycle paths within New Brighton State

Beach and other roadways without bicycle infrastructure that the Project corridor intersects. Currently, most pedestrian activity near the Project corridor occurs in Live Oak near 17th Avenue and Simpkins Swim Center; in Capitola along 41st Avenue, near Cliff Drive, and through Capitola Village (Wharf Road, Stockton Avenue, Capitola Avenue and Monterey Avenue), where pedestrians may access Capitola Beach or surrounding commercial uses; and along Park Avenue and New Brighton State Beach, where pedestrians may access recreational features associated with the beach and campground (**Appendix G**).

3.12.2 Regulatory Setting

This section describes the state, regional, and local plans, policies, and laws relevant to transportation for the Project. There are no relevant federal regulations related to transportation for the Project.

State

Senate Bill 743

Senate Bill (SB) 743 (2013) changed the way that public agencies evaluate the transportation impacts of projects under California Environmental Quality Act (CEQA), recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see California Public Resources Code, Section 21099(b)(2) ["Automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA]"].)

Under SB 743, the Governor's Office of Planning and Research (OPR) established vehicle miles traveled (VMT) as the most appropriate metric to determine the significance of transportation impacts in place of vehicle level of service or related measures thereof. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of the OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, as of July 1, 2020, is the required metric statewide (OPR 2018).

SB 743 provides opportunities to streamline CEQA for qualifying multi-modal transportation networks that provide clean, efficient access to destinations and improve public health through active transportation. A multi-modal transportation or active transportation project can be exempt from CEQA if it is consistent with a Specific Plan for which an Environmental Impact Report was prepared and is also consistent with the use, intensity, and policies of a Sustainable Community Strategy (SCS) or Alternative Planning Strategy that is certified by the California Air Resources Board as meeting its greenhouse gas reduction targets. Furthermore, under SB 743, parking impacts are no longer considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service.

Regional

2045 Association of Monterey Bay Area Governments Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act, also known as SB 375, was passed by the California Legislature in 2008. SB 375 requires each Metropolitan Planning Organization to develop an SCS in order to demonstrate how the region will meet greenhouse gas reduction targets set by

the state. In 2022, the Association of Monterey Bay Area Governments (AMBAG) adopted the 2045 Metropolitan Transportation Plan/SCS (2045 MTP/SCS). The 2045 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045. The 2045 MTP/SCS plans more focused growth in high-quality transit corridors and more travel choices, as well as a safe and efficient transportation system with improved access to jobs and education. The Project is identified as a regionally significant project in the Projects List in Appendix C of the MTP/SCS (AMBAG 2022).

The RTC, Transportation Agency for Monterey County, and San Benito County Council of Governments are the three Regional Transportation Planning Agencies under AMBAG; Regional Transportation Planning Agencies have a critical role in development of the MTP/SCS and are also responsible for implementing an RTP for their respective county (AMBAG 2022).

Local

2045 Santa Cruz County Regional Transportation Plan

As discussed above, as a Regional Transportation Planning Agency under AMBAG, the RTC is responsible for developing an RTP for Santa Cruz County. The 2045 RTP, adopted on June 16, 2022, is intended to guide transportation planning decisions in Santa Cruz County. The RTP includes broad transportation goals and policies, a program of short- and long-range transportation projects, and a financial plan for funding projects. Goals, targets, and policies included in the 2045 RTP applicable to the Project are listed below (RTC 2022):

- **Goal 1.** Establish livable communities that improve people's access to jobs, schools, recreation, healthy lifestyles, and other regular needs in ways that improve health, reduce pollution and retain money in the local economy.
    - **Target 1.A.** Improve people's ability to meet most of their daily needs without having to drive. Improve access and proximity to employment centers.
    - **Target 1.A.1.** Increase the length of urban bikeway miles relative to total urban arterial and collector roadway miles to 85 percent by 2030 and to 100 percent by 2045.
    - **Target 1.C.** Improve the convenience and quality of trips, especially for walk, bicycle, transit, freight, and carpool/vanpool trips.
    - **Target 1.C.2.** Improve multimodal network quality for walk and bicycle trips to and within key destinations by increasing the percentage of buffered/separated bicycle and multiuse facilities to 42 percent of bikeway miles by 2030 and to 64 percent by 2045.
    - **Target 1.D.** Improve health and reduce greenhouse gas emissions by increasing the percentage of trips made using active transportation options, including bicycling, walking and transit.
    - **Policy 1.4.** Transportation Infrastructure: Ensure network connectivity by closing gaps in the bicycle, pedestrian and transit networks.
    - **Policy 2.4.** Reduce the potential for conflict between bicyclists, pedestrians, and vehicles.

The 2045 RTP Project List includes the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Design, Environmental Clearance, and Construction. The 2045 RTP Project List also specifically includes portions of the Rail Trail from 17th Avenue to Jade Street and from Monterey Avenue to Aptos Creek Road (RTC 2022).

Monterey Bay Sanctuary Scenic Trail Network Master Plan

The MBSST Network Master Plan was adopted in 2013 and identifies the alignment of the 32-mile planned Coastal Rail Trail along the SCBRL. In the Master Plan, the MBSST network is described as a two-county pedestrian and bicycle pathway system that is intended to establish a continuous alignment. The MBSST network is differentiated into the Coastal Rail Trail portion and associated spur trails. The Coastal Rail Trail portion of the MBSST network is planned within the SCBRL corridor ROW to serve as the trail spine to provide multi-use alternative transportation and coastal access. The network of associated spur trails is intended to connect the spine with other origins, destinations, and activity sites in the region (RTC 2014).

The MBSST Network Master Plan includes design standards for the Coastal Rail Trail within the context of existing physical constraints of the railroad, coastal access requirement, highway, and public street rights-of-way. The Project would consist of Segment 10 and Segment 11 of the planned Coastal Rail Trail described in the MBSST Network Master Plan.

Santa Cruz County General Plan and Local Coastal Program

The Transportation and Circulation Element of the County General Plan and Local Coastal Program, adopted in 1994, includes objectives and policies that address the bikeway system, pedestrian travel, and roadway capacity (Santa Cruz County 1994). Key policies relevant to the Project are listed below:

- **Objective 3.8a, System Development.** To develop a bikeway network maximizing the safety and convenience of users of all levels of experience within that system. The network should be primarily for commuter travel designed to increase the potential of combining bicycle travel with other forms of transportation and also include the opportunity for recreational use.
- **Objective 3.8b, Coordination.** To coordinate the County's bikeway planning efforts with local cities and adjacent counties and other agencies to provide an integrated regional bikeway system and to actively seek all available means of financing bikeways including state and federal grants.
- **Policy 3.8.5, Regional Continuity.** Coordinate with other jurisdictions to adopt a system of bikeways that is functional throughout the County and region.
- **Policy 3.8.7, Recreation.** Plan bicycle routes to facilitate access to recreational areas such as regional parks, beach areas, and major tourist commercial/recreational facilities. Promote recreational bicycle routes to promote "eco-tourism."
- **Policy 3.8.8, Trail Network.** Plan, develop, and maintain a network: of countywide regional trails in both incorporated and unincorporated areas, through cooperative efforts with cities, property owners, and other interested persons in Santa Cruz County.
- **Policy 3.8.9, Right-of Way.** Utilize existing and abandoned public rights-of-way along flood control channels, parks, and roads, and utility and railroad rights-of-way wherever possible, and where consistent with the MPCB [Master Plan of County Bikeways].
- **Objective 3.10, Pedestrian Travel.** To encourage pedestrian travel as a viable means of transportation, by itself and in combination with other modes, to achieve at least 7% of all trips through walking, by increasing and improving pedestrian facilities, particularly in urban areas and reducing the conflicts between pedestrians and other modes of travel.
- **Policy 3.10.8, Americans with Disabilities Act (ADA) Requirements.** Americans with Disabilities Act (ADA) Requirements Incorporate ADA standards in design of new projects and reconstruction where applicable.

Santa Cruz County Code

The County Code, Title 9, focuses on regulations and requirements for roads, vehicles, and traffic. Specifically, Chapter 9.08 establishes speed limits for certain roadways; Chapter 9.16 designates limited access throughfares that are not intended for vehicular travel and are, instead, available for limited purposes, such as bicycle paths; Chapter 9.36 through Chapter 9.46 establish a range of parking regulations; Chapter 9.52 establishes regulations for the operation of off-road motor vehicles on both public and private property; and Chapter 9.54 establishes regulations for the operation of motorized bicycles and motorized scooters.

Santa Cruz County Sustainability Policy and Regulatory Update (Sustainability Update)

The Sustainability Update is a comprehensive update to the County General Plan and Local Coastal Program and to the County Code. The update is intended to make the County General Plan and County Code consistent with new state laws, regional plans, and local plans related to sustainable development. The County approved the Sustainability Update in December 2022. Adopted documents are pending final certification from the California Coastal Commission.

The Sustainability Update involves amendments to the County General Plan and Local Coastal Program, amendments to the County Code, and creation of the Santa Cruz County Design Guidelines. Key updates to the County General Plan include incorporation of 2040 as the document's planning horizon year and amendments to goals and policies to align with state law and recently adopted local plans such as the County's Climate Action and Adaptation Plan, Economic Vitality Strategy, and Parks Strategic Plan. Several amendments to the County Code were made to align with changes to the County General Plan, including amendments to Title 5 (Business Regulations), Title 12 (Building Regulations), Title 13 (Planning and Zoning Regulations), Title 15 (Community Facilities), Title 16 (Environmental Resource Protection), and Title 18 (Procedures). Finally, the Sustainability Update resulted in the creation of the Santa Cruz County Design Guidelines, which were developed to guide new development in the County to be attractive, functional, context sensitive, and to align with community goals and objectives.

The Sustainability Update involves revisions to several County General Plan goals and policies that encourage or address the Project. The Sustainability Update revised Policy PPF-2.7.1, Trails Master Plan, which encourages implementation of the MBSST, and Implementation Policy PPF-2.7f, which encourages incorporation of the MBSST into a trails system and future County Trails Master Plan.

Santa Cruz County Active Transportation Plan

The County Active Transportation Plan (ATP) was adopted by the County in May 2022 as an update to the 2011 Santa Cruz County Bicycle Plan. The ATP is intended to provide community-identified needs and recommendations for infrastructure projects or programs that support walking and bicycling in unincorporated Santa Cruz County. Overall, the ATP aims to support a healthy community, improve affordable transportation options for low-income and vulnerable residents, and help the County achieve statewide goals to address climate change by reducing VMT (Santa Cruz County 2022). Other relevant regional documents were consulted as part of the ATP development to ensure consistency with their recommendations, such as MBSST Network Master Plan. The ATP details the Coastal Rail Trail as a current project consisting of a shared-use path that will span the County from Davenport to the Monterey County line and describes the environmental, design, and ROW work for Segments 10 and 11 as currently in progress. The ATP also shows the

MBSST and the Coastal Rail Trail as partially completed and partially planned in its Short-Term Corridor Recommendations (Santa Cruz County 2022).

City of Capitola Local Coastal Program

The City of Capitola's Local Coastal Program is a comprehensive long-term plan for land use and physical development within the City's Coastal Zone. The Local Coastal Program describes the land use plans, zoning ordinance, zoning district maps, and other implementing actions, which, when taken together, meet the requirements and implement the provisions and policies of the California Coastal Act of 1976. Key policies relevant to the Project are listed below (City of Capitola 2005):

- **Policy II-1.** It shall be the policy of the City of Capitola to provide safe and adequate pedestrian access to and along the shoreline as designated in the Shoreline Access Plan.
- **Policy II-4.** Provide for a safe pedestrian and bicycle path and/or sidewalk on or along Cliff Drive, and provide improvements including landscaping, benches, etc., and parking turn-out areas to facilitate both pedestrian and auto use.
- **Policy II-12.** Develop a scheme for safe bicycle connection between Cliff Drive and Park Avenue and improve bicycle parking facilities.
- **Policy II-17.** Designate Park Avenue and the Southern Pacific Railroad right-of-way along the bluff top as the lateral coastal accessway between Capitola Village and New Brighton and develop vista points and connecting pathways in cooperation with Southern Pacific Railroad and State Parks.

City of Capitola General Plan

Capitola General Plan is a comprehensive long-range planning document that describes the City's goals and policies to promote sustainability, improve protections of residential neighborhoods and historical resources, and enhance economic vitality. The *Mobility* chapter of the Capitola General Plan, which corresponds to the required Circulation Element, establishes a framework for a balanced transportation system in Capitola that meets the needs of residents, workers, and visitors and aims to support a range of transportation choices, including vehicle travel, transit, bicycling, and walking. Key goals, policies, and actions relevant to the Project are listed below (City of Capitola 2019):

- **Goal MO-1.** Provide a balanced multi-modal transportation system that enhances mobility in a safe and sustainable manner.
    - **Policy MO-1.3.** Support regional efforts to increase alternatives which reduce single occupant vehicle trips, conserve energy, and reduce air pollution.
    - **Action MO-1.2.** Participate with Santa Cruz County Regional Transportation Commission (RTC), the Association of Monterey Bay Area Governments (AMBAG), and Santa Cruz County to create and implement programs that coordinate the multimodal transportation needs and requirements across jurisdictions, including but not limited to the Regional Transportation Plan, the Metropolitan Transportation Plan, and the Monterey Bay Sanctuary Scenic Trail Master Plan.
    - **Policy MO-2.5.** Support opportunities to repurpose existing rights-of-way or create new rights-of-way to enhance connectivity for pedestrians, bicyclists, and transit.
- **Goal MO-4.** Provide a roadway system that enhances community aesthetics and promotes a high quality of lif**e.**
    - **Policy MO-4.1, General Design.** Ensure that new and reconfigured roadways and roadway improvements are safe, functional, and attractive.

- **Goal MO-6.** Enhance access to and mobility within Capitola Village.
    - **Policy MO-6.5.** Encourage visitors to enter the Village using non-automotive modes of transportation, including by walking, biking, and taking public transit.
    - **Policy MO-6.6.** Enhance bicycle and pedestrian connections to the Village from surrounding residential neighborhoods and commercial areas.
    - **Policy MO-6.7, General Environment.** Maintain an environment within the Village that prioritizes the safety and convenience of pedestrians and bicyclists.
- **Goal MO-8.** Provide a complete network of bikeways and bicycle facilities in Capitola.
    - **Policy MO-8.2.** Ensure that the bikeways in Capitola are well integrated with existing and proposed regional bikeways in Santa Cruz County.
    - **Policy MO-8.3.** Ensure that bikeways in Capitola are safe and convenient for bicyclists of all ages and abilities.
    - **Policy MO-8.4, Safety.** Improve public safety by minimizing conflicts between bicyclists and motor vehicles on Capitola's roadways.
    - **Action MO-8.3.** Actively participate in efforts to implement new bicycle pathways in Capitola identified in the Monterey Bay Sanctuary Scenic Trail Plan. Ensure that bicyclists can safely cross Soquel Creek when traveling through the Village.
- **Goal MO-9.** Provide high quality pedestrian facilities that support walking and the enjoyment of the outdoors in Capitola.
    - **Policy MO-9.1.** Maintain a complete system of sidewalks to provide for safe, attractive, and convenient pedestrian circulation in Capitola.
    - **Policy MO-9.2.** Maintain and improve pedestrian pathways in Capitola, particularly pathways providing pedestrian access to natural areas and scenic vistas.
    - **Policy MO-9.3** Priority Investment. Prioritize pedestrian facility improvements that address public safety concerns, complete gaps in the existing pedestrian circulation system, and enhance pedestrian mobility in high-use areas.

City of Capitola Municipal Code

Capitola Municipal Code, Title 10, focuses on regulations and requirements for vehicles and traffic, while Title 12 focuses on regulations and requirements for streets, sidewalks, and public places. Specifically, Chapter 10.12 establishes regulations for traffic control devices, Chapter 10.32 establishes regulations for the designation and maintenance of crosswalks by appropriate devices and marks or lines on roadway surfaces, Chapter 10.40 establishes speed limits for certain roadways, Chapter 10.44 establishes regulations for bicycles and personal transportation devices, Chapter 14.40 establishes regulations for public parks located within the City, and Chapter 12.52 establishes the prohibition of skateboarding in specific areas street sections.

City of Capitola Bicycle Transportation Plan

The Capitola Bicycle Transportation Plan was adopted in 2011 for the purpose of increasing the safety and convenience of bicycle commuting in the area. The plan is intended to improve network connectivity, address dangerous or hazardous areas, and increase education and bicycle resource while prioritizing bicycle improvement projects that focus on bicycle commuting, recreation, tourism, and safety. Specific policies relevant to the Project are listed below (City of Capitola 2011):

- **Policy 1.3.** Coordinate with other jurisdictions to adopt a system of bikeways that complements the County system.
- **Policy 1.4.** Coordinate the planning, design and construction of bikeway facilities with all implementing agencies.

The MBSST is described in Chapter 5, *Bicycle Plan Projects,* of the Capitola Bicycle Transportation Plan, where the City commits to coordinate with the trail efforts to ensure an effective and efficient bicycle facilities system. In addition, the plan's Proposed Projects List indicates the entire length of the MBSST Network through the City as a high priority (City of Capitola 2011).

3.12.3 Methodology and Significance Thresholds

Methodology

This analysis considers the potential impacts of the Project on transportation resources along the Project corridor. Portions of this analysis are based on the technical guidance described below and the Coastal Rail Trail Segments 10 and 11 Traffic Technical Memorandum (**Appendix G**).

Governor's Office of Planning and Research Technical Advisory

Following the adoption of SB 743 in 2013, the OPR released technical guidance on addressing VMT in CEQA documents in its Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018). The OPR's technical guidance identifies several criteria that may be used to identify types of projects that are unlikely to have a significant VMT impact and can thus be "screened" from further analysis. The OPR recommends a per-capita or employee VMT that is 15% below that of existing development as an achievable target for a variety of project types (OPR 2018). The OPR also recommends several screening thresholds for land use projects, including the following:

- **Small Project Screening:** Projects that generate or attract fewer than 110 vehicular trips per day
- **Map-Based Screening:** Projects located in areas of low VMT that incorporate similar features
- **Transit Screening:** Projects located within one-half mile of a major transit stop, or a stop along a high-quality transit corridor, pursuant to state definitions for such facilities, unless any of the following factors are exhibited by the project:
    - Floor Area Ratio (FAR) of less than 0.75
    - Inconsistent with the applicable SCS
    - Provides more parking than required by the jurisdiction
    - Replaces affordable housing with a fewer number of moderate- or high-income residential units
- **Retail Project Screening:** Projects that are less than 50,000 square feet shall be presumed to have a less than significant VMT impact if the retail is locally serving
- **Affordable Housing Screening:** Projects with 100 percent affordable housing

The OPR also provides a list of projects that are not likely to lead to a substantial or measurable increase in vehicle travel and do not require an induced travel analysis, including the following:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity

- Roadside safety devices or hardware installation such as median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left-turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, bicyclists, and, if applicable, transit
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation of traffic metering systems, detection systems, cameras, changeable message signs, and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bicycle paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel

California Department of Transportation Guidance

The California Department of Transportation (Caltrans) released its own framework for transportation analysis in September 2020 to guide the implementation of SB 743 (Caltrans 2020a). The framework heavily relies on the OPR's recommendations. However, according to the guidance document, the use of VMT as the CEQA transportation metric would impact only capacity-increasing projects. If a project is unlikely to induce travel, then a qualitative narrative can be presented to screen out the project from further analysis. A quantitative analysis would not be warranted for the Project because the type of project is expected to decrease or have no impact on VMT. Caltrans Transportation Impact Study Guide similarly relies on the OPR's recommendations. The Transportation Impact Study Guide also includes bicycle and pedestrian facilities improvements as examples of mitigation to reduce project VMT (Caltrans 2020b).

County of Santa Cruz and City of Capitola VMT Guidelines

The County adopted VMT guidelines within the SB 743 Implementation Guidelines for the County of Santa Cruz, Analyzing Vehicle Miles Traveled for CEQA Compliance (Santa Cruz County 2020). The City of Capitola adopted VMT guidelines in June 2020 that substantially match the County VMT guidelines. The City has deferred to using the County of Santa Cruz VMT guidelines as the threshold for VMT impacts under SB 743 (Mozumder 2023). Although the County guidelines closely follow the OPR's recommendations, they include additional screening criteria requirements specific to the County. The County's screening criteria are as follows:

- **Small Projects:** Projects that generate fewer than 110 vehicular trips per day and are also consistent with the SCS, as determined by Santa Cruz County.
- **Projects Near High-Quality Transit:** Projects that are located within one half mile of an existing major transit stop. Currently, there are no existing major transit stops in the unincorporated County, so no projects in the unincorporated County would meet this screening criteria.

- **Local-Serving Retail:** Projects that include a single store on-site which does not exceed 50,000 square feet and is local-serving as determined by Santa Cruz County. Local-serving retail projects may not be regionally focused, as determined by Santa Cruz County.
- **Affordable Housing**: Projects that provide a high percentage of affordable housing. Projects do not need to be 100% affordable housing, but a high percentage must be affordable as determined by the City or County Planning Department.
- **Local Essential Service:** Projects that include local essential services such as a daycare center, public K–12 school, police or fire facility, local serving medical/dental office, or government office. Local essential services projects may not be regionally focused, as determined by Santa Cruz County.
- **Map-Based Screening:** Projects located within an area of development that is under the VMT threshold as shown on a County screening map and as allowed by Santa Cruz County.
- **Redevelopment Projects:** Projects that replace an existing VMT-generating land use and do not result in a net overall increase in VMT.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, explains that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of transportation and circulation along with the other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For the purposes of this Environmental Impact Report, a significant transportation impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* resulted in any of the following conditions:

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

B. Conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b).

C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

D. Result in inadequate emergency access.

As described in Section 3.12.2, *Regulatory Setting*, the Project is identified in the RTC's 2045 RTP and MBSST Network Master Plan, County's ATP, and City's ATP (RTC 2014, 2022; Santa Cruz County 2022; City of Capitola 2011). Furthermore, the Project would be consistent with the goals and policies of both the County General Plan and Capitola General Plan (Santa Cruz County 1994; City of Capitola 2019). Therefore, impacts related to conflicts with a program, plan, ordinance, or policy addressing the circulation system (Threshold A) are not included in the analysis below. Furthermore, the Central Fire District of Santa Cruz County indicated that the Project corridor would allow sufficient emergency access for responders and first response equipment (Mack 2022). Therefore, impacts related to inadequate emergency access (Threshold D) are similarly not included in the analysis below. Additional analysis related to Thresholds A and D and these less than significant transportation impacts are included in Section 3.15, *Effects Found to be Less than Significant*.

3.12.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold B:	Conflict or be inconsistent with *CEQA Guidelines* section 15064.3, subdivision (b).

Impact T-1 THE PROJECT WOULD MEET THE SCREENING CRITERIA SET BY THE OPR, CALTRANS, SANTA CRUZ COUNTY, AND CITY OF CAPITOLA AND THUS WOULD NOT CONFLICT OR BE INCONSISTENT WITH *CEQA GUIDELINES*, SECTION 15064.3(B). (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Transportation impacts during project construction would be primarily associated with the presence of large construction equipment, machinery, worker vehicles, and truck deliveries accessing the Project corridor. The following trips are estimated for each phase of construction of the Ultimate Trail Configuration.

- **Grubbing and Land Clearing**
  - 24 round trips per day for workers accessing the Project area
- **Grading and Excavation**
  - 57 round trips per day for workers accessing the Project area
  - One round trip per day for vendor deliveries
  - Two round trips per day for the export of materials from the Project area
- **Drainage Installation and Road Base Construction**
  - 45 round trips per day for workers accessing the Project area
  - Two round trips required per day for aggregate hauling
- **Asphalt and Concrete Installation**
  - 34 round trips per day for workers accessing the area
  - One round trip per day for asphalt and concrete hauling

These estimates were developed for the air quality analysis (refer to **Appendix E**, Air Quality and GHG Modeling Assumptions), based on the construction estimates presented in Section 2.6, *Project Construction*, in Chapter 2, *Project Description*. Truck activity and haul routes associated with project construction would be limited to arterial and collector roads where feasible. Any increase in the number of trips taken on roadways in the vicinity of the Project corridor, as well as any disrupted pedestrian and bicycle access to existing facilities, due to construction of the Project would be temporary in nature and would cease to occur once the construction period is over. Construction impacts related to VMT would be **less than significant**.

Operation

Operation of the Project would provide a bicycle and pedestrian trail inaccessible to unauthorized vehicular traffic. There would be periodic inspections and maintenance of the trail, as well as emergency vehicle access, which would be incorporated into the County and City facility maintenance schedule and would not add substantial vehicle trips within the vicinity of the Project corridor.

Development of the Project is anticipated to result in a net reduction of VMT within the vicinity of the Project corridor, as the trail would provide an alternative means of travel. Therefore, any increase in vehicular trips to the trail by recreational users would be offset by the availability of the alternative travel mode, and the Project would result in an overall improvement to the existing circulation system. Furthermore, the Project does not include the addition of parking or bathroom facilities, both of which could generate additional trips to the Project corridor. The Project involves a net reduction in parking from 46 to 34 spaces in the City of Capitola as a result of the reconfiguration of the existing diagonal parking along Cliff Drive to parallel parking. The Project would modify existing parking along Cliff Drive by repaving and restriping the existing diagonal parking spaces to parallel parking spaces, ultimately decreasing the delineated parking spaces from 46 to 34. Therefore, the Project is not anticipated to generate trips through the addition of parking or bathroom facilities, induce travel by increasing vehicular capacity, or result in a net increase in VMT. Because the Project is not anticipated to increase total daily vehicle trips during operation, the Project would meet OPR, County, and City small project screening criteria of fewer than 110 vehicular trips per day. Similarly, according to Caltrans guidance, the Project would not require additional CEQA transportation analysis since the Project is not anticipated to induce travel.

Segments 10 and 11 would be located in both the County and City and are therefore subject to the County and City VMT guidelines. Although the Project is considered a small project pursuant to OPR Guidelines, the Project would also need to be consistent with AMBAG's 2045 MTP/SCS to fulfill the County-specific small project screening criteria. The Project is consistent with AMBAG's 2045 MTP/SCS because the Project would reduce vehicle travel on area roadways. Trip reduction would help to achieve Targets 1A through 1F in the MTP/SCS, supporting Goal 1 to establish livable communities in ways that improve health and reduce pollution. The Project is also consistent with the OPR's examples of projects that do not require induced travel analysis. Specifically, the proposed bicycle and pedestrian trail would be primarily located within existing rights-of-way (except for minor improvements in Jade Street Park and New Brighton State Beach), would be a Class I trail, and would serve non-motorized travel.

Although evaluation of effects on parking is not required by CEQA, it is anticipated that the project would not have a substantial or adverse effect on existing parking. It is anticipated that the trail would be used primarily by local residents for transportation and recreation, and most would bike or walk from their residence. For those who drive to the trail, there are several places to park along the alignment, including informal and on-street parking at many locations (e.g., along 30th Avenue, 41st Avenue, 47th Avenue, and various residential streets), and several large public parking areas (e.g., the Cliff Drive parking area, the Capitola Village parking lot, and the New Brighton State Beach parking lot). Furthermore, the proposed trail is anticipated to reduce vehicle trips by providing the opportunity to ride bicycles or walk instead of driving, resulting in improved public access to the Pacific coast and important community destinations for bicycle users and pedestrians, which would ultimately reduce the need for vehicle parking.

Overall, the Project would be consistent with VMT screening criteria set forth by the OPR, Caltrans, County, and City. Specifically, the Project would be consistent with the small project screening

criteria of fewer than 110 vehicular trips per day, is not anticipated to substantially induce travel, would be consistent with the MTP/SCS, and would satisfy the conditions of several OPR example projects that would not require induced demand analysis. Therefore, operational impacts related to VMT would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

CONSTRUCTION

The Optional Interim Trail would replace the existing rail line with a trail. Accordingly, Part 1 of implementing the Optional Interim Trail includes demolition of the rail and construction of the Optional Interim Trail on the rail line. The following trips are estimated for each phase of construction during implementation of the Optional Interim Trail:

- **Grubbing and Land Clearing**
  - 22 round trips per day for workers accessing the Project area
- **Grading and Excavation**
  - 55 round trips per day for workers accessing the Project aera
  - One round trip per day for vendor deliveries
  - 10 round trips per day for the export of materials from the Project area
- **Drainage Installation and Road Base Construction**
  - 44 round trips per day for workers accessing the Project area
  - Four round trips required per day for aggregate hauling
- **Asphalt and Concrete Installation**
  - 33 round trips per day for workers accessing the area
  - Three round trips per day for asphalt and concrete hauling

These estimates were developed for the air quality and greenhouse gas modeling assumptions analysis (refer to **Appendix E**) based on the construction estimates presented in Section 2.6. Any increase in the number of trips taken on roadways in the vicinity of the Project corridor due to demolition of the rail or construction of the Optional Interim Trail would be minimal and temporary in nature and would cease to occur once the construction period is over. Therefore, construction VMT impacts would be **less than significant**.

OPERATION

The Optional Interim Trail would not include any restrooms or additional parking that may induce new vehicle trips. Therefore, similar to the Ultimate Trail Configuration, operation of the Optional Interim Trail is not anticipated to result in an increase in VMT and rather would result in an overall improvement to the existing circulation system due to the reduction in vehicular traffic and option for alternative transportation modes. Implementation of the Optional Interim Trail would be consistent with VMT criteria set forth by the OPR, Caltrans, County, and City. Specifically, the Optional Interim Trail would be consistent with the small project screening criteria of fewer than 110 vehicular trips per day, is not anticipated to induce travel, would be consistent with AMBAG's MTP/SCS for the same reasons as the Ultimate Trail Configuration, and would satisfy the conditions of several OPR example projects that would not require induced demand analysis. Therefore, impacts related to VMT during implementation of the Optional Interim Trail would be **less than significant.** No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Part 2 of implementing the Optional Interim Trail includes demolition of the Optional Interim Trail and rebuilding of the rail line. The following trips are estimated for each phase of construction during demolition of the Optional Interim Trail and rebuilding of the rail line.

- **Grubbing and Land Clearing**
  - 15 round trips per day for workers accessing the Project area
- **Grading and Excavation**
  - 27 round trips per day for workers accessing the Project area
  - 1 round trip per day for vendor deliveries
  - 6 round trips per day for the export of materials from the Project area
- **Drainage Installation and Road Base Construction**
  - 25 round trips per day for workers accessing the Project area
  - 2 round trips required per day for soil hauling
- **Asphalt and Concrete Installation**
  - 24 round trips per day for workers accessing the area
  - 17 round trips per day for asphalt and concrete hauling

Any increase in the number of trips taken on roadways in the vicinity of the Project corridor due to demolition of the Optional Interim Trail or reconstruction of the rail line would be minimal and temporary in nature and would cease to occur once the demolition and construction periods are over. Removal of the Optional Interim Trail would temporarily remove the option for active transportation along the Project corridor. Demolition of the Optional Interim Trail would therefore increase VMT in the vicinity of the Project corridor by reverting to existing conditions until the trail is rebuilt, as described under *Construction of the Ultimate Trail Configuration* (Part 3) below. The increase in VMT would be similar to existing conditions in the City and County because currently no trail is along the SCBRL corridor. Demolition of the Optional Interim Trail and rebuilding of the rail line would be consistent with VMT criteria for small projects set forth by the OPR, Caltrans, County, and City. The small project screening criteria applies to projects that would generate fewer than 110 vehicular trips per day, are not anticipated to induce travel, and would be consistent with AMBAG's MTP/SCS. Demolition activities would facilitate the construction of the Ultimate Trail Configuration, which would permanently reduce vehicle travel on area roadways. Therefore, impacts related to VMT during demolition of the Optional Interim Trail and rebuilding of the rail line would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

The potential impacts for constructing the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be substantially similar to those described above for the Ultimate Trail Configuration. Refer to the discussion under *Ultimate Rail Configuration (Trail next to Rail Line)* above.

Construction of the Ultimate Trail Configuration would result in a temporary increase in VMT due to large construction equipment, machinery, worker vehicles, and truck deliveries accessing the Project corridor and surrounding area. The number of round trips anticipated during construction of the Ultimate Trail would be the same as the number of trips identified above for the Ultimate Trail Configuration. Similarly, any increase in the number of trips taken on roadways in the vicinity of the Project corridor due to construction of the Project would be minimal, temporary in nature, and would cease to occur once the construction period is over. Construction VMT impacts would be **less than significant**. No mitigation is required.

Operation of the Ultimate Trail is not anticipated to result in an increase in VMT. Rather, operation of the Ultimate Trail would result in an improvement to the existing circulation system due to the reduction in vehicular traffic and option for alternative transportation modes. Overall, the Ultimate Trail Configuration would be consistent with VMT screening criteria set forth by the OPR, Caltrans, City, and County. Specifically, both the Optional Interim Trail and the Ultimate Trail Configuration would be consistent with the small project screening criteria of fewer than 110 vehicular trips per day, are not anticipated to induce travel, would be consistent with the MTP/SCS for the same reasons as the Ultimate Trail Configuration, and would satisfy the conditions of several OPR example projects that would not require induced demand analysis. Therefore, impacts related to VMT during construction of the Ultimate Trail would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would result in an overall increased amount of construction-related traffic due to the two additional construction phases associated with the Optional Interim Trail. However, the three construction phases would occur over three separate timelines, and construction trips associated with the three larger phases would be distributed over time. As discussed in Section 2.6.2, it is estimated for the purposes of analysis that the three construction phases would occur between 2026 and 2027, 2056 and 2060, and 2060 and 2064. Any increase in the number of trips taken on roadways in the vicinity of the Project corridor during any of the construction phases associated with the Optional Interim Trail would be minimal and temporary in nature and would cease to occur once the construction period is over. Operation of the Optional Interim Trail would reduce VMT in the Project region because the Optional Interim Trail would result in development of a trail that would reduce overall vehicle trips by increasing opportunities for active transportation. Implementation of the Optional Interim Trail would meet criteria set forth by the OPR, Caltrans, the County, and the City. Specifically, the Optional Interim Trail would be consistent with the small project screening criteria of fewer than 110 vehicular trips per day, is not anticipated to induce travel, would be consistent with the MTP/SCS for the same reasons as the Project, and would satisfy the conditions of several OPR example projects that would not require induced demand analysis. Therefore, the combined impacts related to VMT would be **less than significant**.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would require structural repairs and replacement of the ballast, tracks, and ties with fiber-reinforced polymer decking on the Capitola Trestle Bridge (refer to Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line)* under *Capitola Trestle Bridge*). Approximately 30 to 40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. The impact of this design option would be slightly greater than that of the Ultimate Trail Configuration and the Optional Interim Trail due to the increased number of trips required during construction of the bridge repairs. However, any increase in the number of trips on roadways in the vicinity of the Project corridor during construction of the design option would be minimal and temporary in nature and would cease to occur once the construction period is over. Operation of the Ultimate Trail Configuration with the design option

would reduce vehicle trips by providing opportunities for active transportation. Additionally, the Proposed Project with Design Option A would meet OPR, Caltrans, County, and City screening criteria. Therefore, impacts related to VMT for this design option would also be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option for the Ultimate Trail Configuration, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City. The impact of this design option would be similar to those of the Ultimate Trail Configuration and the Optional Interim Trail. Any increase in the number of trips on roadways in the vicinity of the Project corridor during construction of the design option would be minimal and temporary in nature and would cease to occur once the construction period is over. Operation of the Proposed Project with the design option would reduce vehicle trips by providing opportunities for active transportation. Additionally, the Ultimate Trail Configuration with Design Option B would meet OPR, Caltrans, County, and City screening criteria. Therefore, impacts related to VMT for this design option would also be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

Construction of the Proposed Project with the Optional Interim Trail would result in a greater amount of truck trips than construction of the Proposed Project without implementing this optional first phase due to the increased amount of construction-related traffic associated with the two additional construction phases. However, any increase in the number of trips on roadways in the vicinity of the Project corridor during the two additional construction periods would be minimal and temporary in nature and would cease to occur once the construction periods are over. Operation of the Proposed Project, both with and without the Optional Interim Trail, would provide a regional trail and thus would reduce vehicle trips by providing opportunities for active transportation. Additionally, the Proposed Project with and without the Optional Interim Trail would meet OPR, Caltrans, County, and City screening criteria. Therefore, impacts related to VMT for the Proposed Project, with and without the Optional Interim Trail, would be **less than significant**.

Threshold C:	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact T-2 NEITHER CONSTRUCTION NOR OPERATION OF THE PROJECT WOULD SUBSTANTIALLY INCREASE HAZARDS DUE TO A GEOMETRIC DESIGN FEATURE OR INCOMPATIBLE USE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction of the Project could introduce a temporary hazard due to the potential for conflict between construction vehicles and existing traffic (vehicular, bicycle, pedestrian) and due to potential temporary lane closures that could occur periodically during project construction (e.g., constructing the trail's roadway crossings). Where construction necessitates sidewalk and/or bicycle

lane closures at roadway crossings or where the Project corridor diverts from the rail corridor, pedestrian and bicycle traffic would be detoured to the opposite side of the roadway.

Construction truck activity and haul routes would be limited to arterial and collector roads where feasible. In most cases, construction-related roadway closures would not result in vehicle detours or require closure of one lane and temporary one-way traffic or narrowed roadways; instead, directional signage would be used. In locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur, construction signage and a flagger or police officer would be present as needed to maintain public safety while facilitating the necessary equipment and vehicular access to the Project corridor.

The proposed trail would cross New Brighton Road, a private road used to access residential roads and a maintenance road associated with New Brighton State Beach. As such, trail construction activities may temporarily disrupt private access and use of New Brighton Road, which would be temporarily closed (except for emergency vehicle access) for up to 1 week. Alternative maintenance access would be available through the State Beach's main public entrance.

A 100-foot-long clear span bridge with a fiberglass reinforced polymer deck would be constructed over New Brighton State Beach Road. It is anticipated that New Brighton State Beach Road would be temporarily closed for approximately 12 hours during project construction to allow for the prefabricated bridge to be set in place. Closure of the roadway would take place on a weekday in the off-season; and, if possible, the closure would occur overnight. Emergency egress and ingress would be temporarily available through New Brighton Road, a private residential and maintenance road. Construction activities would be scheduled to avoid concurrent closure of New Brighton State Beach Road and New Brighton Road.

In addition, an existing fire road crossing of the rail line located just east of New Brighton Road would be formalized within the RTC-owned ROW by adding concrete track panels across the rail line and paving a portion of the trail abutting the rail line to prevent erosion of the fire road. Construction at the fire road crossing would result in intermittent closure of the fire road during the non-peak fire season. Alternative emergency access would be provided during construction. Overall, construction activities are not anticipated to result in any long-term road or lane closures.

Construction staging, equipment staging, and stockpiling would take place on existing disturbed or paved areas along the rail corridor within the RTC-owned ROW or at the designated staging areas identified in Section 2.6. All equipment and materials would be stored, maintained, and refueled in clearly defined and designated portions of the staging areas in accordance with permit requirements. Construction staging would be temporary in nature, and any equipment utilized during construction would be removed after completion of the Project. Therefore, construction impacts related to hazards or incompatible uses would be **less than significant**. No mitigation is required.

Operation

As described in Section 3.12.1, *Existing Conditions*, existing user conflicts occur near the Project corridor on roadways, sidewalks, and crossings where pedestrian, bicycle, and vehicular traffic is intermixed. In Capitola Village, no new trail would be constructed. Instead, wayfinding signage would direct trail users to the existing on-street bicycle lanes and pedestrian sidewalks. The Project could increase pedestrian and bicycle traffic along Cliff Drive and through Capitola Village, which could increase existing user conflicts (i.e., conflicts between vehicles, pedestrians, and/or bicyclists). However, as described in Section 2.4.1, *Ultimate Trail Configuration (Trail next to Rail Line)*, under *Cliff Drive Plaza/Capitola Village Connection*, additional wayfinding signage and striping

modifications would be implemented along Cliff Drive and through Capitola Village on Stockton Avenue, Capitola Avenue, and Monterey Avenue. These would improve the visibility of existing delineated bicycle lanes and improve safety for both bicyclists and pedestrians. Specifically, for an approximately 350-foot portion of Cliff Drive where pedestrians and bicyclists currently share the coastal Class II bicycle lane, the width of the existing bicycle and vehicular lanes would be revised to allow for demarcation of a separate four-foot-wide pedestrian path on the coastal side of the Class II bicycle lane. This would allow for separation of pedestrians and bicyclists where they are currently intermixed. In addition, the existing white striping would be re-painted and green pavement painting would be added to the existing Class II bicycle lanes, and white sharrow markings with green backgrounds would be installed along the Class III bicycle routes where bicycles and vehicles share the lane. Further, the improved pedestrian and bicycle infrastructure provided by the project is expected to reduce vehicle trips in the vicinity of the project. Therefore, although additional pedestrians and bicyclists could be added to Cliff Drive and Capitola Village along this segment of the Project alignment, the Project would not substantially increase hazards associated with user conflicts due to a geometric design feature or incompatible use. Rather, project improvements would generally be expected to offset any increase in potential conflicts between pedestrians and vehicles and/or bicyclists along the Project corridor by improving the existing interactions between all users through this area.

Existing conflicts also occur at Park Avenue where pedestrians and bicyclists cross from residential neighborhoods on the inland side of the trail to New Brighton State Beach on the coastal side of the trail. Near the Park Avenue/Coronado Street intersection, the Project includes a new trail crossing with concrete track panels across the rail line to the inland side of the trail with a new switchback ramp connecting the trail to crosswalks across Park Avenue and Coronado Street. These improvements would reduce conflicts by providing new striping and sidewalk extensions at the crosswalk in addition to an improved connection from the residential neighborhoods to New Brighton State Beach.

User conflicts could occur between bicyclists and pedestrians both using the trail in areas where the trail narrows due to various constraints. The trail widths and design are consistent with Caltrans standards for a Class I bicycle path, as described in Caltrans Highway Design Manual, Section 1003.1, and safety fencing would only be constructed on both sides of the trail where necessary in areas with adjacent high edges or slopes (Caltrans 2020c). Safety fencing would not be placed between the rail and trail if it is not deemed necessary for safety. Furthermore, several roadways and other trail crossings along the corridor would provide formal opportunities to enter or exit the trail, as described in Section 2.4, *Project Characteristics*.

Operation of the Project could affect vehicular, bicycle, and pedestrian safety at the many roadway crossings (30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Grove Lane, New Brighton State Beach Roadway, New Brighton Road, Estates Drive, and Mar Vista Drive). However, a variety of design features have been incorporated into the Project for safety and to reduce the potential for user conflicts. Specifically, roadway crossings would include signage, pavement markings, trail narrowing and/or chicanes to slow trail users before the intersection. Flashing LED-W11-15 pedestrian/bicycle signs or rectangular rapid-flashing beacons would be placed in advance of the trail crossing in each direction on 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista Drive to warn drivers of the potential for bicyclist and pedestrian crossings. In addition, bulb-outs would be located along 30th Avenue, 41st Avenue, and 47th Avenue to extend the sidewalk into the parking lane to provide additional pedestrian space and visibility and reduce crossing distance for trail users. The New Brighton State Beach roadway would be traversed using a clear span bridge to avoid user

conflicts. Pedestrian infrastructure, such as crosswalk striping and sidewalk extensions, would be improved along 41st Avenue (sidewalk extension to Melton Street), 47th Avenue (crosswalk striping), Park Avenue (sidewalk extension from Grove Lane to Park Ave) and Mar Vista Drive (new crosswalk) to improve pedestrian safety.

In addition to the design features described above, the Project would include other safety features to keep trail users from conflicts along the railway and adjacent roadways. As described in Section 2.4.1, retaining walls would be located in several locations along the alignment to provide the required safety distance between the trail and existing rail line to avoid potential user conflicts due to incompatible use if and when there is rail service on the rail line. Safety fencing would be installed to separate trail users from the rail, and fencing and guardrails would be installed along the sides of bridges and other areas along the trail alignment for safety and security, as needed.

Overall, the implementation of such project safety design features, along with additional signage and striping modifications on Cliff Drive and through Capitola Village, would minimize potential operational impacts related to user conflicts. The Project is not expected to substantially increase hazards associated with user conflicts between pedestrians, bicyclists, and/or vehicles compared to existing conditions because it would be providing a Class I multi-use trail for active transportation that is separated from vehicular traffic and would improve existing striping along Cliff Drive and through Capitola Village, thereby reducing the potential for conflict between pedestrians, bicyclists, and vehicles. Operational impacts related to hazards or incompatible uses would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

CONSTRUCTION

Implementation of the Optional Interim Trail would require the removal of the rails and ties from the eastern side of 17th Avenue to the western side of State Park Drive. During the removal process, heavy equipment and hauling trucks would be limited to arterial and collector roads where feasible, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Construction of the Optional Interim Trail after removal of the rail line would be similar to construction of the Ultimate Trail, as described above. Specifically, construction truck activity and haul routes would be limited to arterial and collector roads where feasible, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur.

OPERATION

Operation of the Optional Interim Trail could affect vehicular, bicycle, and pedestrian safety at roadway crossings. However, the Optional Interim Trail would include similar safety design features as described for the Ultimate Trail Configuration above, minimizing the potential for user conflicts along the proposed trail. However, the Optional Interim Trail would not increase pedestrian traffic along Cliff Drive and through Capitola Village because the trail would follow the existing rail line and would not direct trail users to use existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village. However, the Optional Interim Trail would also not include striping modifications

along Cliff Drive and through Capitola Village; therefore, the Optional Interim Trail would also not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment. Furthermore, the Project corridor does not include an active rail line, as no regular freight or passenger services currently occur along the RTC-owned rail line. Therefore, impacts related to hazards or incompatible uses during implementation of the Optional Interim Trail would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail would result in removal of the trail and reconstruction of the rail line. Removal of the Optional Interim Trail would include the demolition and removal of paving, fiberglass panels, retainer curbs, fencing, retaining walls, benches, signage, and other supporting features throughout the trail alignment. As such, demolition of the Optional Interim Trail and reconstruction of the rail line would result in an increase in the presence of heavy equipment and hauling trucks on public roadways in the vicinity of the Project corridor, which could temporarily increase user conflicts. These impacts would be similar to the impacts described above for implementation of the Optional Interim Trail. Truck activity and haul routes associated with demolition and construction activities would be limited to arterial and collector roads, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Demolition of the Optional Interim Trail could also result in a temporary increase in user conflicts due to increased use of on-street bicycle lanes and sidewalks until the Ultimate Trail Configuration is constructed and operational. However, user conflicts under this phase would be similar to existing conditions with no trail. Therefore, impacts related to hazards or incompatible uses during demolition of the Optional Interim Trail would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

The potential impacts for constructing the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be substantially similar as described above for the Ultimate Trail Configuration. Construction of the Ultimate Trail Configuration could create temporary user conflicts between construction vehicles and existing traffic on roadways near trail construction. Construction truck activity and haul routes would be limited to arterial and collector roads, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. The Ultimate Trail Configuration would include wayfinding signage and striping modifications along Cliff Drive and through Capitola Village to offset the potential for increased conflicts between vehicles, bicyclists, and/or pedestrians along the Project corridor by improving the existing interactions between all users through this area. Therefore, impacts related to hazards or incompatible uses during construction of the Ultimate Trail would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of the Optional Interim Trail (Parts 1, 2, and 3) would introduce a greater number of potential user conflicts within the vicinity of the Project corridor due to the increased but temporary presence of trucks and heavy equipment on local roadways, a consequence of the two additional phases of project construction. However, construction truck activity and haul routes

during all phases would be limited to arterial and collector roads, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Furthermore, the three construction phases associated with the Optional Interim Trail would take place over three separate timelines, and user conflicts associated with these phases would be distributed between 2026 and 2027, 2056 and 2060, and 2060 and 2064. Operation of the Optional Interim Trail (Part 1) and the Ultimate Trail Configuration (Part 3) would include the same safety design features and the Ultimate Trail Configuration (Part 3) would include the same wayfinding signage and striping modifications along Cliff Drive and Capitola Village as described for the *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration)*, reducing the potential for user conflicts during operation. Further, the Ultimate Trail Configuration includes safety fencing to separate trail users from the rail, as needed, so if and when there is rail service, operation of the Project would not result in user conflicts due to incompatible use. Therefore, the combined impacts related to hazards or incompatible uses would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would not increase pedestrian traffic along Cliff Drive and through Capitola Village because bicyclists and pedestrians bypassing Capitola Village would use the trail on Capitola Trestle Bridge. However, the design option would also not include the striping modifications along Cliff Drive and through Capitola Village; therefore, the design option would not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment. Furthermore, the Project corridor does not include an active rail line, as no regular freight or passenger services currently occur along the RTC-owned rail line. However, construction of the design option could still create temporary user conflicts between construction vehicles and existing traffic on roadways near trail construction. Construction truck activity and haul routes would be limited to arterial and collector roads where feasible, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Therefore, impacts related to hazards or incompatible uses for Design Option A would also be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. The impact of this design option would be similar to those of the Ultimate Trail Configuration and the Optional Interim Trail. Construction of the design option could create temporary user conflicts between construction vehicles and existing traffic on roadways near trail construction. However, construction truck activity and haul routes would be limited to arterial and collector roads where feasible, and construction signage and a flagger or police officer would be present as needed in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Operation of the design option could also affect vehicular, bicycle, and

pedestrian safety at roadway crossings. However, this design option would include similar safety design features as described for the Ultimate Trail Configuration and Optional Interim Trail above, minimizing the potential for user conflicts. Therefore, impacts related to hazards or incompatible uses for Design Option B would also be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

Construction of the Project with the Optional Interim Trail would result in an increased number of potential user conflicts compared with construction of the Project without the optional first phase due to the increased but temporary presence of trucks and heavy equipment on local roadways during the two additional construction phases. The potential user conflicts associated with implementing the three parts of the Optional Interim Trail would take place over three separate time frames rather than all at once. Furthermore, construction conflicts associated with the Project, both with and without the Optional Interim Trail, would be minimized by the presence of construction signage and a flagger or police officer in locations where temporary single-lane closures are anticipated or where substantial construction equipment or activity is expected to occur. Operation of the Optional Interim Trail would not increase pedestrian traffic along Cliff Drive and through Capitola Village because the trail would follow the existing rail line and would not direct trail users to use existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village. However, the Optional Interim Trail would also not include the striping modifications along Cliff Drive and through Capitola Village; therefore, the Optional Interim Trail would not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment. Operational conflicts, both with and without the Optional Interim Trail, would be minimized by safety design features incorporated into the Project. Therefore, impacts related to hazards or incompatible uses with and without the Optional Interim Trail would be **less than significant**. No mitigation is required.

3.12.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
T-1. The Project would meet the screening criteria set by the OPR, Caltrans, Santa Cruz County, and City of Capitola and thus would not conflict or be inconsistent with *CEQA Guidelines*, Section 15064.3(b).	LTS	LTS Substantially similar	LTS Substantially similar	LTS Substantially similar
T-2. Neither construction nor operation of the Project would substantially increase hazards due to a geometric design feature or incompatible use.	LTS	LTS Substantially similar	LTS Slightly more	LTS Substantially similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

PS = Potentially Significant

SU = Significant and Unavoidable

MM = Mitigation Measure

This page intentionally left blank.

3.13 Tribal Cultural Resources

This section includes an analysis of potential impacts to tribal cultural resources based on the results of consultation with local California Native Americans. This work is conducted pursuant to Assembly Bill (AB) 52, which serves to increase the involvement of native peoples in California Environmental Quality Act (CEQA) analytical work. Potential impacts of the *Ultimate Trail Configuration (Trail next to Rail Line* and the *Optional Interim Trail (Trail on the Rail Line)* related to tribal cultural resources are presented in **Table 3.13-1**.

Table 3.13-1 Summary of Project Impacts on Tribal Cultural Resources[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	Potentially Significant	TCR-1a, TCR-1b	Less than Significant

[a] The impacts and mitigation measures apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.13.1 Existing Conditions

Ethnographic Setting

The Project corridor lies within an area traditionally occupied by the Ohlone (or Costanoan) people. Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento Rivers merge into the San Francisco Bay to Point Sur. Their inland boundary was limited to the interior California Coast Ranges (Kroeber 1925: 462). The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region (Kroeber 1925:462). It is divided into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon (Jones 2015), with the Project corridor being located within the areas of Awaswas speaking Uypi tribes (Kroeber 1925:465; Milliken et al. 2009: 138).

The pre-contact Ohlone were semi-sedentary, with a settlement system characterized by base camps and seasonal reserve camps composed of tule reed houses with thatched roofs made of matted grass (Schick 1994; Skowronek 1998). Just outside the base camps, large sweat houses were built into the ground near stream banks and used for spiritual ceremonies and possibly hygiene (Schick 1994; Jones 2015). Villages were divided into small polities, each of which was governed by a chief responsible for settling disputes, acting as a war leader during times of conflict, and supervising economic and ceremonial activities (Skowronek 1998; Kroeber 1925:468). Social organization appeared flexible to ethnographers, and any sort of social hierarchy was not apparent to mission priests (Skowronek 1998).

Archaeological investigations inform Ohlone mortuary rituals. Cemeteries were set away from villages and visited during the annual mourning anniversary (Leventhal and DiGiuseppe 2009). Ceremonial human grave offerings might include *Olivella* beads, as well as tools like drills, mortars, pestles, hammerstones, bone awls, and utilized flakes (Leventhal and DiGiuseppe 2009). Ohlone mythology included animal characterization and animism, which was the basis for several creation

narratives. Ritually burying of animals, such as a wolf, squirrel, deer, mountain lion, gray fox, elk, badger, grizzly bear, blue goose, or bat ray, was commonly practiced. Similar to human burials, ceremonial offerings, like shell beads, ornaments, and exotic goods, were added to ritual animal graves (Kroeber 1925; Field and Leventhal 2003; Jones 2010).

Ohlone subsistence strategies were based on hunting, gathering, and fishing (Kroeber 1925:467; Skowronek 1998). Larger animals, like bears, might have been avoided, but smaller game was hunted and snared on a regular basis (Schick 1994:17). Similar to the rest of California, the acorn was an important staple and was prepared by leaching acorn meal in openwork baskets and in holes dug into the sand (Kroeber 1925:467). The Ohlone also practiced controlled burning to facilitate plant growth (Kroeber 1925:467; Skowronek 1998). During specific seasons or in times of drought, the reserve camps would be used for gathering seasonal food and accessing food storage (Schick 1994). Fishing would be done with nets and gorge hooks out of tule reed canoes (Schick 1994:16–17). Mussels were a particularly important food resource. Sea mammals such as sea lions and seals were hunted, and beached whales were used (Kroeber 1925:467).

Seven Franciscan missions were built within Ohlone territory in the late 1700s, and all members of the Ohlone group were eventually brought into the mission system (Kroeber 1925:462; Skowronek 1998). After the establishment of the missions, Ohlone population dwindled from roughly 10,000 people in 1770 to 1,300 by 1814 (Skowronek 1998). In 1973, the population of people with Ohlone descent was estimated at fewer than 300. The descendants of the Ohlone united in 1971 and have since arranged political and cultural organizations to revitalize aspects of their culture (Skowronek 1998).

3.13.2 Regulatory Setting

This section describes the state and local policies and laws relevant to tribal cultural resources for the Project. There are no federal plans, policies, or laws specifically related to tribal cultural resources. For a list of policies related to archaeological resources and human remains, including those of Native American origin, refer to Section 3.4, *Cultural Resources.*

State

Assembly Bill 52

AB 52 expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource when feasible (PRC 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and that meet either of the following criteria:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments and with respect to the interests and roles of project proponents, it is the intent of AB 52 to accomplish all of the following:

(1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities

(2) Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation

(3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible

(4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated (Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.)

(5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, early in the CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency

(6) Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA

(7) Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process

(8) Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources

(9) Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

Local

Santa Cruz County General Plan

The Conservation and Open Space Element of the County General Plan includes objectives and policies to protect tribal cultural resources. Key policies from the County General Plan pertaining to tribal cultural resources are listed below (County of Santa Cruz 1994):

- **Policy 5.19.1, Evaluation of Native American Sites.** Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites without an appropriate permit. Maintain the Native American Cultural Sites ordinance.
- **Policy 5.19.5, Native American Cultural Sites.** Prohibit any disturbance of Native American Cultural Sites without an archaeological permit which requires, but is not limited to, the following:
    - A statement of the goals, methods, and techniques to be employed in the excavation and analysis of the data, and the reasons why the excavation will be of value.
    - A plan to ensure that artifacts and records will be properly preserved for scholarly research and public education.
    - A plan for disposing of human remains in a manner satisfactory to local Native American Indian groups.

Santa Cruz County Code

Title 16, *Environmental and Resource Protection*, Chapter 16.40, *Native American Cultural Sites*, of the County Code outlines criteria for Native American cultural studies. These criteria also serve as the implementing ordinance of the Local Coastal Program. Chapter 16.40 defines when archaeological surveys and reports are required and the necessary actions when Native American cultural sites or human remains are discovered during the review of a proposed project or during excavation or other ground-disturbing activities.

3.13.3 Methodology and Significance Thresholds

Methodology

Analysis of tribal cultural resources included a review of the ethnographic setting of the Project corridor and a consideration of the results of AB 52 consultation between the County and local Native Americans. A record search of the Sacred Lands File was received from the Native American Heritage Commission (NAHC) on February 17, 2022. In accordance with AB 52, the County, as the lead agency, conducted AB 52 consultation. This consultation included written communication with the following tribes identified by the NAHC as being traditionally and culturally affiliated with the Project vicinity: the Amah Mutsun Tribal Band, the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Costanoan Ohlone Rumsen-Mutsen Tribe, the Indian Canyon Mutsun Band of Costanoan, and the Wuksache Indian Tribe/Eshom Valley Band. The AB 52 letters were sent via email on April 14, 2023. The email sent to the Indian Canyon Mutsun Band of Costanoan was returned as undeliverable. As such, the County sent a subsequent letter via certified mail, which was delivered on April 28, 2023. To provide the Indian Canyon Mutsun Band of Costanoan with a 33-day response window, the County extended the response window through May 30, 2023. No Native American tribes requested consultation under AB 52 within the response window.

Significance Threshold

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes a number of factual inquiries related to the subject of tribal cultural resources and the other environmental topics. Thus, the thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

Appendix G of the *CEQA Guidelines* indicates that a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
    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 Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.13.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

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

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
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 Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact TCR-1 THE PROJECT MAY CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT WITH MITIGATION; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT WITH MITIGATION)

Ultimate Trail Configuration (Trail next to Rail Line)

The Sacred Lands File search results received from the NAHC on February 17, 2022, were positive for known sacred sites within the vicinity of the Project corridor. However, as stated in Section 3.13.3, *Methodology and Significance Thresholds*, the County did not receive any responses for additional consultation under AB 52 within the response window. As such, no tribal cultural resources have been identified by local Native American tribes as present within the Project corridor.

Although no tribal cultural resources have been identified within the Project corridor, the positive Sacred Lands File results received from the NAHC indicate that Santa Cruz County in general has a high sensitivity to containing Native American habitation sites. Project construction involves excavation and ground-disturbing activities up to 6 feet deep and drilling up to 20 feet deep. Ground disturbance during project construction has the potential to encounter unknown tribal cultural resources. Therefore, the Project has the potential to significantly impact tribal cultural resources through ground disturbance and subsequent damage of encountered resources. Implementation of Mitigation Measures TCR-1a and TCR-1b would ensure that any unanticipated discoveries of tribal cultural resources are avoided, or where avoidance is infeasible, impacts to resources are reduced. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Mitigation Measure TCR-1a: Conduct Native American Monitoring during Construction in Previously Undisturbed Native Soils

The County of Santa Cruz and/or their construction contractor shall retain a Native American monitor to be present during excavation activities within previously undisturbed native soils.

In the event that cultural resources of Native American origin are identified during construction, the Native American monitor shall have the authority to halt and redirect ground disturbance away from the find. The County and/or tribal liaison, as appropriate, shall consult with a qualified archaeologist and begin or continue Native American consultation procedures. If the County and/or tribal liaison, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under the California Environmental Quality Act, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with Native American groups. The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.

Mitigation Measure TCR-1b: Implement Protocol for Unanticipated Discovery of Tribal Cultural Resources if Native American Monitor is Not Present

If cultural resources of Native American origin are identified during project construction while the Native American monitor is not present, the County of Santa Cruz and/or their construction contractor shall cease all earth-disturbing work within 50 feet of the find and desist until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. Staking of the area of discovery shall be implemented with stakes no more than 10 feet apart, forming a circle having a radius of no less than 100 feet from the point of discovery. If the County, in consultation with local Native American tribes, determines that the resource is a tribal cultural resource and thus significant under the

California Environmental Quality Act, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with local Native American groups. The plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include but are not limited to protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, and/or performing heritage recovery.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Project construction involves excavation and ground-disturbing activities up to 6 feet deep for implementation of the Optional Interim Trail, which includes removal of the rail and construction of the Optional Interim Trail (Part 1). Although no known tribal cultural resources are present within the Project corridor, it is possible that ground disturbance during construction of the Optional Interim Trail could encounter unknown tribal cultural resources. Impacts to tribal cultural resources for implementation of the Optional Interim Trail would be similar to the impacts described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Compliance with Mitigation Measures TCR-1a and TCR-1b, as described above, would reduce impacts to unknown tribal cultural resources. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding the rail line (Optional Interim Trail Part 2) would involve excavation and ground-disturbing activities up to 6 feet deep. Although no known tribal cultural resources are present within the Project corridor, it is possible that ground disturbance during project construction could encounter unknown tribal cultural resources during this phase. Impacts to tribal cultural resources during this phase of the Optional Interim Trail would be similar to the impacts described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and Optional Interim Trail Part 1. Compliance with Mitigation Measures TCR-1a and TCR-1b, as described above, would reduce impacts to unknown tribal cultural resources. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

3) Construction of the Ultimate Trail Configuration

Impacts from the construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would be similar to that described above for *Ultimate Trail Configuration (Trail next to Rail Line)*. Construction of the Ultimate Trail Configuration would have the potential to unearth tribal cultural resources, and Mitigation Measures TCR-1a and TCR-1b would be required. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Combined Effect of Interim Trail Parts 1, 2, 3

The combined effects of Optional Interim Trail Parts 1, 2, and 3 would involve three instances of ground disturbance. There is always the possibility of unearthing unknown tribal cultural resources during ground-disturbing activities for construction. With multiple phases of ground disturbing work involved with the Optional Interim Trail, the likelihood of discovering unknown tribal cultural resources would increase, and impacts would be potentially significant. Therefore, the Optional

Interim Trail would be required to implement Mitigation Measures TCR-1a and TCR-1b during all three parts. These measures require a Native American monitor and evaluation and protection of tribal cultural resources encountered during construction. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Approximately 30–40% of the vertical posts (or piles) would be replaced on the timber bridges of the Capitola Trestle Bridge. Pile installation typically does not allow for monitoring or recovery of tribal cultural resources. Regardless, grading and excavation activities associated with the Project with this design option would be similar to, but slightly greater than, the Project without the design option because there would be additional grading and excavation to construct the Optional Interim Trail on each side of the Capitola Trestle Bridge and thus would have slightly more potential to unearth and disturb unknown tribal cultural resources, if present. Mitigation Measures TCR-1a and TCR-1b would be implemented under this design option, which would require a Native American monitor and evaluation and protection of tribal cultural resources encountered during construction. Impacts to unknown tribal cultural resources would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City of Capitola. Grading and excavation activities associated with this trail connection would be similar to the Project and would have the potential to unearth and disturb unknown tribal cultural resources, if present. Mitigation Measures TCR-1a and TCR-1b would be implemented under this design option, which would require a Native American monitor and evaluation and protection of tribal cultural resources encountered during construction. Impacts to unknown tribal cultural resources would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project, with and without the Optional Interim Trail, would have similar impacts on tribal cultural resources. Both scenarios would require ground-disturbing activities that have the possibility of unearthing unknown tribal cultural resources. However, the Optional Interim Trail would require more ground-disturbing activity because there would be two additional phases of construction. Therefore, impacts from the Optional Interim Trail could be greater than those from the Ultimate Trail Configuration. However, both scenarios would be required to implement Mitigation Measures TCR-1a and TCR-1b requiring a Native American monitor and evaluation and protection of tribal cultural resources encountered during construction. Impacts would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

3.13.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Tail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	**LTSM**	**LTSM** Similar, but slightly more	**LTSM** Substantially similar	**LTSM** Substantially similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

This page intentionally left blank.

3.14 Utilities and Service Systems

This section evaluates potential impacts to wastewater, water, stormwater, and solid waste infrastructure and services that may arise through the implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)*. Whereas wastewater conveyance and water supply are evaluated in this section, Section 3.8, *Hydrology and Water Quality*, provides a more detailed analysis of runoff patterns and surface water quality. **Table 3.14-1** presents a summary of Project impacts regarding utilities and service systems.

Table 3.14-1 Summary of Impacts on Utilities and Service Systems[a]

Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
UTIL-1. The Project would require the relocation or replacement of water, wastewater, electricity, gas, and telecommunications conveyance infrastructure.	Less than Significant	None Required	Less than Significant
UTIL-2. Sufficient water supplies are available to serve construction and operation of the Project.	Less than Significant	None Required	Less than Significant
UTIL-3. The Project would not generate wastewater in excess of existing treatment capacity.	Less than Significant	None Required	Less than Significant
UTIL-4. The Project would not generate solid waste in excess of local landfill capacity and would comply with applicable regulations related to solid waste.	Less than Significant	None Required	Less than Significant

[a] The impacts and mitigation apply to both the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line),* as well as Ultimate Trail Configuration Design Options A and B, unless otherwise noted.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

3.14.1 Existing Conditions

Water Supply

Santa Cruz Water Department

The Santa Cruz Water Department (SCWD) supplies potable water to the City of Santa Cruz as well as adjoining unincorporated areas of the Santa Cruz County (County) and a portion of the City of Capitola (City). This service area constitutes approximately 20 square miles, providing water service to approximately 96,000 people (City of Santa Cruz 2017). The portion of Segment 10 between 17th Avenue to the west and 41st Avenue to the east falls within the SCWD service area. Segment 10 is within both the unincorporated County (the western portion of Segment 10) and the City (the eastern portion of Segment 10).

The County is isolated from the water infrastructure associated with the San Francisco Bay and other nearby areas. As there is no connection to outside water systems, SCWD does not import water for use and distribution in its service area. Therefore, SCWD's entire water supply comes from either local surface or groundwaters (City of Santa Cruz 2017). Approximately 95% of water supply is sourced from local surface waters. SCWD's primary surface water source is the San Lorenzo River, which accounts for approximately 47% of the SCWD's water supply. Other surface water supplies are sourced from several north coast streams, such as Majors Creek, Laguna Creek, and Liddell

Spring. These surface water sources make up approximately 32% of SCWD's water supply (City of Santa Cruz 2023a). The SCWD's main surface water storage facility is the Loch Lomond Reservoir (City of Santa Cruz 2017). Only about 5% of SCWD's water supply is sourced from groundwater. Groundwater is extracted through the Beltz well system from the Purisima Formation of the Santa Cruz Mid-County Groundwater Basin, which is shared by other neighboring water agencies including Soquel Creek Water District (SqCWD) (City of Santa Cruz 2021). For more information related to water and groundwater, refer to the discussion in Section 3.8, *Hydrology and Water Quality*.

Overall, SCWD's distribution system consists of three water treatment plants, including: the Graham Hill Water Treatment Plant and two groundwater treatment plants related to the Beltz well system; four raw water pump stations; 10 treated water pump stations; 15 distribution tanks with a total maximum capacity of 21.2 million gallons of treated water storage; seven surface water diversions; seven production wells; and approximately 300 miles of treated and raw water pipelines interconnecting the entire system through approximately 25,000 different service connections (City of Santa Cruz 2021). The Graham Hill Water Treatment Plant, which primarily treats SCWD's surface water sources, is located at 715 Graham Hill Road approximately 3 miles north of the Project corridor. It is located adjacent to the San Lorenzo River within the incorporated City of Santa Cruz but is surrounded by unincorporated County lands. The plant produces approximately 10 million gallons of water per day; daily water production fluctuates between 6 and 12 million gallons of water per day based on seasonal demands. Due to the high elevation of the Graham Hill Water Treatment Plant compared to the SCWD service area, the water distribution system is almost entirely gravity fed, resulting in lower energy usage during distribution (City of Santa Cruz 2017).

The City of Santa Cruz adopted an Urban Water Management Plan (UWMP) in November 2021 for the SCWD service area. According to the UWMP, water demand in 2020 within the SCWD service area was approximately 2.6 billion gallons. Current projections forecast that total water use (potable and non-potable) will reach approximately 2.8 billion gallons per year by 2045 when considering population growth. The UWMP analyzes three different hydrological conditions to determine the reliability of water supplies: average/normal water year, single dry water year, and multiple dry water year periods. The UWMP indicates that water supplies under the average/normal year and single dry water year hydrological conditions will be sufficient to meet demand through 2045. In an extreme multiple dry water year hydrological condition, the UWMP indicates that the estimated water supply available to the SCWD service area in the near term (2025) during the fourth year would meet over 99% of projected demand, but during the fifth year only 73% of projected demand would be met. However, with implementation of planned water infrastructure projects by 2030, along with proposed water rights modifications, SCWD's projected water supply would meet projected water demand during all years except for small projected shortages during the fifth year of the extended drought in the 2040–2045 time frame. During this period in the fifth year of the extended drought, the water supply is projected to be able to meet 98% of demand (City of Santa Cruz 2021).

Soquel Creek Water District

The SqCWD supplies potable water to approximately 40,600 people throughout portions of the City and unincorporated County, including Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, and Soquel (SqCWD 2023). The portion of Segment 10 east of 41st Avenue and all of Segment 11 fall within the SqCWD service area. Segment 11 is within both the City (the western portion of Segment 11) and unincorporated County (the eastern portion of Segment 11).

All of SqCWD's water supply comes from groundwater. Groundwater is extracted through the Beltz well system from the Purisima Formation of the Santa Cruz Mid-County Groundwater Basin.

SqCWD's distribution system includes approximately 167 miles of distribution pipeline, 20 production groundwater wells (including 16 active, two on standby, and two inactive), 18 water tanks, and 80 groundwater monitoring wells (SqCWD 2023).

According to SqCWD's UWMP, which was adopted in June 2021, water demand in 2020 within the SqCWD service area was approximately 1.1 billion gallons. Current projections forecast that total water use (potable and non-potable) will reach approximately 1.2 billion gallons per year by 2040 when considering population growth. The UWMP analyzes three different hydrological conditions to determine the reliability of water supplies: average/normal water year, single dry water year, and multiple dry water year periods. The UWMP indicates that water supplies under the average/normal year, single dry water year, and 5-year drought hydrological conditions will be sufficient to meet demand through 2040 (SqCWD 2021).

Wastewater

The Santa Cruz Wastewater Treatment Facility (WWTF), a regional facility operated by the City of Santa Cruz, is located at 110 California Street approximately 2.5 mile west of the westernmost extent of the Project corridor. The WWTF is expanding its current production and use of recycled water through a recently initiated regional partnership between the City of Santa Cruz and the SqCWD. This partnership will allow the WWTF to provide source water to the Pure Water Soquel Project. The goal of this project is to contribute a reliable supplemental water supply to the Santa Cruz Mid-County Groundwater Basin to prevent seawater from contaminating existing groundwater sources (City of Santa Cruz 2023b). Overall, the Pure Water Soquel Project will include the installation of approximately 8 miles of new pipeline underneath streets between the City of Santa Cruz to the west and Capitola and the unincorporated communities to the east. These pipelines would carry recycled water from the WWTF to the planned Chanticleer Water Purification Center in the unincorporated community of Live Oak. The pipelines will then carry purified water from the planned Chanticleer Water Purification Center to three seawater intrusion prevention wells, where the purified water will be pumped into the groundwater basin (City of Santa Cruz 2023b).

The Santa Cruz County Sanitation District (SCCSD) provides wastewater collection, treatment, and disposal services to the City and unincorporated communities, including Live Oak, Soquel, and Aptos, through a system of wastewater infrastructure that includes approximately 234 miles of sanitary sewer lines and 35 pump stations (SCCSD 2021). The Santa Cruz WWTF provides wastewater treatment and ocean outfall disposal services to the SCCSD (City of Santa Cruz 2023b). As such, the WWTF would be the receiving facility for any liquid waste generated by the Project. SCCSD has a service agreement with the City of Santa Cruz to treat its sewage at the WWTF because the SCCSD has no WWTF of its own. Through this agreement, the SCCSD has treatment capacity rights for 8 million gallons of wastewater per day (gpd) at the WWTF (SCCSD 2019).

Treatment capacity at the WWTF has been expanded several times to accommodate addition of flows from the SCCSD and to improve the treatment system. The current rated design capacity is 17 million gpd. The WWTF is also designed to accommodate a wet weather flow of 81 gpd (City of Santa Cruz 2012). The SCCSD's customers currently generate between 5 and 6 million gpd, and the WWTF typically has an average daily flow of approximately 12 million gpd (SCCSD 2019). Treated wastewater is ultimately discharged into the Monterey Bay through an ocean outfall (City of Santa Cruz 2012).

Stormwater Drainage

Stormwater runoff in unincorporated Santa Cruz County is typically conveyed through human-made runoff conveyance systems that drain to the Monterey Bay. Rainfall runoff flows overland via streets

to storm drain inlets, which range from older inlets to more modern gutter grates (Schaaf and Wheeler 2013). The City of Capitola Public Works Department maintains a system of storm drains that collect stormwater runoff from City streets along gutters and through underground pipes; five storm drain outfalls discharge stormwater into Soquel Creek, three outfalls flow directly to the beach, and four outfalls discharge stormwater onto the coastal cliffs (City of Capitola 2019). The system is designed for the control of flooding and does not provide any treatment of the stormwater runoff. Stormwater runoff from the crossings and adjacent streets in both Segments 10 and 11 currently drains directly into the rail corridor or to existing storm drain systems. Stormwater runoff from the rail corridor in both Segments 10 and 11 drains along the existing topography and discharges to existing waterways or storm drain systems within the County or City.

Electric Power and Natural Gas

Both electric power and natural gas services in the City of Capitola and unincorporated County are provided by Pacific Gas & Electric (PG&E). The City of Capitola and County are also part of the Central Coast Community Energy, a community choice aggregate program that provides electricity primarily from clean and renewable sources to those within the County who do not opt out of the program(Central Coast Community Energy 2022).

Solid Waste

Santa Cruz County Recycling and Trash Services, a division of the County Community Development and Infrastructure Department, is responsible for the operation and administration of solid waste diversion and disposal in the unincorporated areas of Santa Cruz County. In the City, the City's Public Works Department oversees waste disposal and recycling. Both the City and unincorporated County contract with Green Waste Recovery for the collection of refuse, recycling, and yard waste.

Santa Cruz County Recycling and Trash Services operates the County's two solid waste facilities, the Buena Vista Drive Sanitary Landfill (Buena Vista Landfill) located west of Watsonville, approximately 6.7 miles southeast of the Project corridor's easternmost extent at State Park Drive, and the Ben Lomond Transfer Station located in the San Lorenzo Valley, approximately 10.2 miles north of the Project corridor (Santa Cruz County 2023). The Buena Vista Landfill is a Class III facility with a maximum permitted throughput of 838 tons of solid waste per day and a remaining capacity of 1,766,005 cubic yards. Materials accepted at the Buena Vista Landfill include wood waste, tires, biosolids, mixed municipal wastes, metals, inert wastes, industrial wastes, green materials, dead animals, contaminated soil, construction and demolition wastes, and agricultural wastes (CalRecycle 2023a). The Ben Lomond Transfer Station is a permitted large-volume transfer and processing facility with a maximum permitted throughput of 300 tons per day. Materials accepted at the Ben Lomond Transfer Station include industrial waste, construction/demolition waste, tires, green materials, and mixed municipal wastes (CalRecycle 2023b). Waste disposed of at the Ben Lomond Transfer Station is periodically transferred to the Buena Vista Landfill. The Buena Vista Landfill is anticipated to cease operations in July 2031. Therefore, the County is in the process of developing transfer facilities at Buena Vista Landfill to have solid waste transported to the Monterey Peninsula Landfill, which has capacity to accept solid waste for approximately 100 years (Steel, pers. comm. 2022).

The Monterey Peninsula Landfill is located approximately 20 miles south of the Project corridor in the City of Marina and would serve the City and the unincorporated County following the closure of the Buena Vista Landfill in 2031. The Monterey Peninsula Landfill is a Class III facility with a maximum permitted throughput of 3,500 tons of solid waste per day and a remaining capacity of 48,560,000

cubic yards. Materials accepted at the Monterey Peninsula Landfill include mixed municipal wastes, biosolids, construction and demolition wastes, and agricultural wastes (CalRecycle 2023c).

Altamont Landfill and the Vasco Road Sanitary Landfill, both located in Livermore approximately 60 miles northeast of the Project corridor, are Waste Discharge Requirement Class II facilities. The Forward Landfill, located in Stockton approximately 80 miles northeast of the Project corridor, is a Waste Discharge Requirement Class III facility. All three of these facilities, as well as the Buena Vista Landfill, accept contaminated soils depending on the concentration of contamination. For further discussion on the disposal of contaminated soils, refer to Section 3.7, *Hazards and Hazardous Materials*.

3.14.2 Regulatory Setting

This section describes the federal, state, regional, and local plans, policies, and laws relevant to utilities and service systems for the Project.

Federal

Federal Clean Water Act

The primary goals of the federal Clean Water Act (CWA) (33 USC 1251, et seq.) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. The CWA forms the basic national framework for the management of water quality and the control of pollutant discharges. The CWA sets objectives to achieve the above-mentioned goals. The CWA objectives include regulating pollutant and toxic pollutant discharges; providing for water quality that protects and fosters the propagation of fish, shellfish, and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources pollution.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in 1972 under the federal CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

The Municipal NPDES program is administered by the State Water Resources Control Board (SWRCB) through the Regional Water Quality Control Boards (RWQCBs) and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The federal CWA prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California and adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order 2022-0057-DWQ). Containment and spill cleanup requirements are encompassed in the Stormwater Pollution

Prevention Plan, developed for the Construction General Permit. This includes inspections for spills, a requirement that chemicals be stored in watertight containers with secondary containment to prevent spillage or leakage, and procedures for addressing hazardous and non-hazardous spills, including a spill response and implementation procedure, on-site equipment for cleanup and spills, and spill training for construction personnel.

Safe Drinking Water Act

The Safe Drinking Water Act, enacted in 1974, ensures the quality of drinking water. The law requires actions to protect drinking water and its sources (e.g., rivers, lakes, reservoirs, springs, and groundwater wells) and applies to public water systems that have at least 15 service connections or serve at least 25 people for at least 60 days a year. It authorizes the U.S. Environmental Protection Agency to set national standards for drinking water to protect against health effects from exposure to naturally occurring and human-made contaminants. In addition, the U.S. Environmental Protection Agency works with states, localities, and water suppliers that implement the standards. The U.S. Environmental Protection Agency standards are set under the National Primary Drinking Water Regulations, which include legally enforceable primary standards and treatment techniques that apply to public water systems.

State

Water

Drinking water quality in California is regulated by the California Department of Public Health, the California SWRCB, and the nine RWQCBs. The Project corridor is within the boundaries of the Central Coast RWQCB. The California Code of Regulations, Title 22 (State Drinking Water Standards), is the primary body of state legislation providing water system standards, including those for water supply, storage capacity, and water quality. Other considerations include the Porter-Cologne Water Quality Control Act, the Safe Drinking Water Act, and the SWRCB Non-degradation Policy. Refer to Section 3.8.2, *Regulatory Setting*, in Section 3.8 for additional information.

Senate Bill (SB) 610 (2002) amended the California Water Code to require detailed analysis of water supply availability of certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies and ensuring that land use decisions for certain types of development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a Water Supply Assessment for a project that is subject to the California Environmental Quality Act (CEQA) and involves any of the following:

- Residential development of 500 or more dwelling units
- Shopping centers or businesses employing more than 1,000 people or having more than 500,000 square feet of floor space
- Commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space
- Hotel, motel, or both, having more than 500 rooms
- Industrial, manufacturing, or processing facility, or industrial park planned to house more than 1,000 people, occupying more than 40 acres of land, or having more than 650,000 square feet of floor space

- Mixed-use project including one or more of the projects specified in California Water Code, Section 10910
- Any project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project

Because the Project does not fall under any of the above screening criteria, the requirements under SB 610 do not apply.

Assembly Bill (AB) 1881, the Model Water Efficient Landscape Ordinance, required cities and counties to adopt landscape water conservation ordinances by January 31, 2010, or to adopt a different ordinance that is at least as effective in conserving water as the ordinance. The County adopted Chapter 13.13, *Water Conservation – Water Efficient Landscaping*, of the County Code pursuant to AB 1881. Similarly, the City adopted Chapter 17.72, *Landscaping*, of the Capitola Municipal Code, which requires that all applicable development comply with the applicable water landscape water use efficiency ordinance. Executive Order B-29-15 required the State to revise the Model Water Efficient Landscape Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, and on-site stormwater capture and by limiting the portion of a landscape that can be covered in turf. Executive Order B-29-15 also requires reporting on the implementation and enforcement of local ordinances. However, the Project does not include any landscaping that would require watering.[1] Therefore, AB 1881, County Code, Chapter 13.13, and the Capitola Municipal Code, Chapter 17.72, would not apply.

Wastewater

The RWQCBs set the specific requirements for community and individual wastewater treatment, disposal, and reuse facilities through the issuance of waste discharge requirements under the California Water Code, Section 13260. Requirements for disposal are set to protect present and potential beneficial uses of the water that receive the treated effluent. The California Department of Public Health sets specific requirements for treated effluent reuse, or recycled water, through Title 22 of the California Code of Regulations. These requirements are primarily set to protect public health.

California Code of Regulations, Title 22, Division 4, Chapter 3, Sections 60301 through 60355, are used to regulate recycled wastewater and are administered jointly by the California Department of Public Health and the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from non-disinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for dairy animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

Solid Waste

The California Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties throughout the state to divert 50% of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. To help achieve this, the act required that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

[1] Areas disturbed by construction activities would be revegetated with native species and would be watered periodically until established (e.g., by hand or small water truck) in accordance with recommendations made by a qualified biologist.

In 2007, SB 1016 subsequently amended AB 939 such that it now entails the 50% diversion requirement to be calculated in a per capita disposal rate equivalent. The California Department of Resources Recycling and Recovery (CalRecycle) sets a target per capita disposal rate for each jurisdiction, and each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate. AB 341 was passed in 2011, setting a state policy goal whereby no less than 75% of solid waste generated be source reduced, recycled, or composted by 2020.

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code. Section 4.408, *Construction Waste Reduction Disposal and Recycling*, mandates that in the absence of a more stringent local ordinance, a minimum of 50% of non-hazardous construction and demolition debris must be recycled or salvaged. The code requires the applicant to have a waste management plan for on-site sorting or construction debris that is submitted to the county for approval.

Local

Santa Cruz County General Plan

The Parks, Recreation, and Public Facilities Element of the County General Plan, adopted in 1994, includes objectives and policies relating to the use and provision of public utilities (Santa Cruz County 1994). Key policies relevant to the Project are listed below:

- **Objective 7.18b, Water Supply Limitations.** To ensure that the level of development permitted is supportable within the limits of the County's available water supplies and within the constraints of community-wide goals for environmental quality.
- **Policy 7.18.1, Linking Growth to Water Supplies.** Coordinate with all water purveyors and water management agencies to ensure that land use and growth management decisions are linked directly to the availability of adequate, sustainable public and private water supplies.
- **Policy 7.18.3, Impacts of New Development on Water Purveyors.** Review all new development proposals to assess impacts on municipal water systems, County water districts, or small water systems. Require that either adequate service is available or that the proposed development provide for mitigation of its impacts as a condition of project approval.
- **Policy 7.18.6, Water Conservation Requirements.** Utilize the best available methods for water conservation in new developments. Work with all water purveyors to implement demand management programs and water conservation measures. In areas where shortage or groundwater overdraft has been substantiated by the water purveyor, require water conservation measures for new and existing uses. Require the use of water-saving devices such as ultra low-flow fixtures and native drought-resistant planting in new development projects to promote ongoing water conservation.
- **Policy 7.19.1, Sewer Service to New Development.** Concurrent with project application, require a written commitment from the service district. A written commitment is a letter, with appropriate conditions, from the service district guaranteeing that the required level of service for the project will be available prior to issuance of building permits, or in the case of a subdivision, prior to filing the Final Map or Parcel Map. The County decision making body shall not approve any development project unless it determines that such project has adequate sewage treatment plant capacity.

- **Policy 7.23.1, New Development.** Require new discretionary development projects to provide both on and off-site improvements to alleviate drainage problems before considering on-site detention of storm water. Require runoff levels to be maintained at predevelopment rates for a minimum design storm as determined by Public Works Design Criteria to reduce downstream flood hazards and analyze potential flood overflow problems, where applicable. Require on-site retention and percolation of increased runoff from new development in Water Supply Watersheds and Primary Groundwater Recharge Areas, and in other areas as feasible.
- **Policy 7.23.3, On-Site Stormwater Detention.** Where it is not possible to alleviate drainage problems through on- and off-site improvements required by Policy 7.23.1, require on-site stormwater detention sufficient to maintain, at a minimum, post-development peak flows at predevelopment levels for the selected design rainstorm for all development projects greater than one acre in area, and to alleviate current drainage problems, if feasible. When on-site detention is used, the development projects shall be conditioned to ensure ongoing operation and maintenance of the detention basins.
- **Policy 7.24.9, Storage Requirements for Recyclable Materials.** Require all projects, except single family dwellings, to provide sufficient and accessible space for the storage and collection of recyclable materials separate from, and in addition to, space for refuse storage and collection. Encourage owners of existing buildings to provide such space, where feasible.
- **Policy 7.25.4, Buena Vista Landfill.** Continue the use of the Buena Vista Landfill for landfill disposal and the Ben Lomond Transfer Station for solid waste transfer to Buena Vista. Utilize disposal methods and diversion practices at the Buena Vista Landfill to extend the landfill lifespan as long as possible.

Santa Cruz County Code

Title 7, *Health and Safety*, of the County Code regulates topics including solid waste, wastewater, water, and stormwater. Chapter 7.20 focuses on regulations and requirements for solid waste. Specifically, Section 7.20.010 requires garbage collection services to be properly licensed, Sections 7.20.017 and 7.20.095 prohibit the mixing of recyclables and garbage, and Sections 7.20.110 and 7.20.130 require timely retrieval of garbage from garbage containers. Chapter 7.38 addresses requirements for the installation and use of sewage treatment and disposal facilities in the County. Chapter 7.71 regulates water delivery for domestic use. Chapter 7.79 discusses storm drain system requirements related to runoff and pollution control.

City of Capitola General Plan

The Open Space and Conservation Element of Capitola General Plan includes goals and policies relating to the use and provision of public utilities. Key goals and policies relevant to the Project are listed below (City of Capitola 2019):

- **Goal OSC-9.** Promote water conservation.
    - **Policy OSC-9.1, Water Use.** Maximize the conservation and efficient use of water in new and existing residences and businesses.
    - **Policy OSC-9.2, Drought-Tolerant Landscaping.** Utilize native, drought-tolerant plants for all City landscaping activities.

- **Goal OSC-11.** Reduce solid waste originating in Capitola.
    - **Policy OSC-11.1, Solid Waste Diversion.** Work with Green Waste Recovery to increase community diversion of solid waste to 60 percent by 2020.
    - **Policy OSC-11.2, City Diversion Rate.** Increase the City government waste diversion rate to 75 percent by expanding reduction, recycling, and composting programs; practicing reuse; conducting waste audits; and promoting the purchase of environmentally friendly office products.
    - **Policy OSC-11.3, Demolition Material Recycling.** Continue to require mandatory recycling of building demolition materials.

Additionally, the Safety and Noise Element of Capitola General Plan includes the following policy related to storm drain infrastructure (City of Capitola 2019):

- **Policy SN-1.5, Storm Drainage Infrastructure.** Improve and maintain City storm drainage infrastructure in a manner that minimizes public exposure to flood hazards.

City of Capitola Municipal Code

Title 8, *Health and Safety*, of the Capitola Municipal Code regulates solid waste and recycling within the City. Specifically, Chapter 8.04, *Solid Waste and Edible Food Recovery*, focuses on regulations and requirements for solid waste accumulation, disposal, and collection. Chapter 8.06, *Recycling*, sets requirements related to recycling while also discouraging unauthorized scavenging of recyclable materials from designated collection locations. Title 16, *Public Services*, focuses on regulations and requirements related to water, sewers, underground utilities, and stormwater.

3.14.3 Methodology and Significance Thresholds

Methodology

This analysis considers the potential environmental impacts of the Project on utilities and service systems. Assessment of impacts to utilities and service systems is based on a review of site information, existing conditions, and proposed uses. The analysis presented herein is also based upon state, County, and City information regarding the capacity and features of existing utility infrastructure, including potable water, wastewater, and solid waste infrastructure and facility capacity.

Significance Thresholds

The introduction in Chapter 3, *Environmental Impact Analysis*, states that the significance thresholds used in this analysis are based on Appendix G of the *CEQA Guidelines*, which provides a sample Initial Study checklist that includes number of factual inquiries related to the subject of utilities and service systems, as well as other environmental topics. Thus, the letters and thresholds presented below correspond with the questions in the Appendix G Initial Study checklist.

For purposes of this Environmental Impact Report (EIR), a significant impact would occur if implementation of the *Ultimate Trail Configuration (Trail next to Rail Line)* and the *Optional Interim Trail (Trail on the Rail Line)* would result in any of the following conditions:

A. 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 or relocation of which could cause significant environmental effects.

B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

D. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.14.4 Project Impact Analysis

For each impact, the analysis for the Ultimate Trail Configuration is presented first, followed by the analysis for the Optional Interim Trail. The analysis of the Optional Interim Trail has a separate impact discussion for each of the following three parts: (1) implementation of the Optional Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Optional Interim Trail and rebuilding of the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail.

Threshold A:	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 or relocation of which could cause significant environmental effects.

Impact UTIL-1 THE PROJECT WOULD REQUIRE THE RELOCATION OR REPLACEMENT OF WATER, WASTEWATER, ELECTRICITY, GAS, AND TELECOMMUNICATIONS CONVEYANCE INFRASTRUCTURE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction of the Project would necessitate the relocation, modification, and/or replacement of existing water, wastewater, storm water drainage, electricity, and telecommunications facilities infrastructure, as shown in **Table 3.14-2**. The County would engage in advanced planning and coordination with utility providers to minimize the duration of disrupted services to the extent practical. Expected construction impacts to water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications facilities are discussed below.

Table 3.14-2 Utility Relocations, Modifications, and Replacements for the Ultimate Trail

Owner	Service Type	Location (all locations adjacent to ROW)	Work Planned
Segment 10			
Santa Cruz County Flood Control District	Storm Drain	47th Avenue	Modification to storm drain inlet location on east side
Pacific Gas & Electric	Electricity	47th Avenue	Relocation of electrical wire due to proposed rail realignment and signal equipment relocation
Santa Cruz County Flood Control District	Storm Drain	Approximately 585 feet east of 41st Avenue	Modification to connect culvert into storm drain line
City of Santa Cruz	Water	41st Avenue West	Potential modification due to proposed bulb-out and new curb ramp
Soquel Creek Water District	Water	41st Avenue East	Potential modification due to proposed bulb-out and new curb ramp
Pacific Gas & Electric	Electricity	41st Avenue	Potential modification due to proposed bulb-out and new curb ramp
Pacific Gas & Electric	Electricity	41st Avenue West	Relocation of electrical wire due to proposed rail realignment and signal equipment relocation
Santa Cruz County Flood Control District	Storm Drain	Between Thompson Avenue and 38th Avenue	Replacement of drainage pipe with new culverts due to proposed rail realignment and retaining walls
Pacific Gas & Electric and California State Parks	Electricity	Thompson Avenue	Potential relocation of electrical wire due to proposed rail realignment
City of Santa Cruz	Water	Thompson Avenue	Potential relocation of water pipeline due to proposed rail realignment
Pacific Gas & Electric and California State Parks	Electricity	Chanticleer Avenue to Paget Avenue	Potential relocation of electrical wire due to proposed rail realignment
Segment 11			
County of Santa Cruz	Storm Drain	State Park Drive	Modification of storm drainage pipe and connection to existing storm drain
County of Santa Cruz	Storm Drain	Poplar Street	Replacement of existing 24-inch culvert with 5-foot by 5-foot junction box
Pacific Gas & Electric	Electricity	New Brighton Road	Potential relocation of electrical wire due to proposed retaining walls
Pacific Telephone	Telephone	Capitola	Potential relocation of telephone wire
Pacific Gas & Electric and California State Parks	Electricity	New Brighton Road	Potential relocation of electrical wire due to proposed retaining walls
State of California	Water	Capitola	Potential relocation of water pipeline
Soquel Creek Water District	Water	Coronado Street	Potential relocation of water pipeline
City of Capitola	Storm Drain	Coronado Street to New Brighton State Beach	Replacement of storm drain culvert

Table 3.14-2 Utility Relocations, Modifications, and Replacements for the Ultimate Trail

Owner	Service Type	Location (all locations adjacent to ROW)	Work Planned
Santa Cruz County Sanitation District	Wastewater	Coronado Street	Potential relocation of sewer pipeline
City of Capitola	Wastewater	West side of Cliff Drive parking area	Potential relocation of sewer pipeline due to proposed parking improvements
City of Capitola	Storm Drain	West side of Cliff Drive parking area	Potential relocation of storm drain due to proposed parking improvements
Santa Cruz County Sanitation District	Wastewater	Capitola	Potential relocation of sewer pipeline due to proposed parking improvements

ROW = right-of-way

WATER

Table 3.14-2 identifies the proposed relocation and modification of existing water infrastructure that would be implemented as part of the Project. The Project would potentially require the relocation of three water lines and the modification of two water pipelines. The County would engage in advanced planning and coordination with utility providers, including the City of Santa Cruz, SqCWD, and the State of California, to minimize the duration of disrupted services to the extent practical. Although the Project would require the relocation and modification of existing water infrastructure, these improvements are included as part of the Project, and impacts are analyzed throughout this EIR. Once implemented, the proposed water improvements would be similar to existing conditions and adequate for water needs such that new or expanded facilities would not be necessary. Therefore, the relocation and modification of existing water infrastructure included as part of the Project would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

WASTEWATER

Table 3.14-2 identifies the proposed relocation of existing wastewater infrastructure that would be implemented as part of the Project. The Project would potentially require the relocation of three wastewater pipelines. The County would engage in advanced planning and coordination with utility providers, including SCCSD and the City of Capitola, to minimize the duration of disrupted services to the extent practical. Although the Project would require the relocation and modification of existing wastewater infrastructure, these improvements are included as part of the Project, and impacts are analyzed throughout this EIR. Once implemented, the proposed wastewater improvements would be similar to existing conditions and adequate for wastewater needs such that new or expanded facilities would not be necessary. Therefore, the relocation of existing wastewater infrastructure included as part of the Project would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

STORMWATER DRAINAGE

Table 3.14-2 identifies the proposed relocation, modification, and replacement of existing stormwater drainage infrastructure that would be implemented as part of the Project. The Project would potentially require the relocation of one storm drain, the modification of three storm drains,

and the replacement of three storm drains. The County would engage in advanced planning and coordination with utility providers, including SCCSD, the County, and the City of Capitola, to minimize the duration of disrupted services to the extent practical. Although the Project would require the relocation, modification, and replacement of existing stormwater drainage infrastructure, these improvements are included as part of the Project, and impacts are analyzed throughout this EIR. Compliance with the Construction General Permit and implementation of the Stormwater Pollution Prevention Plan would ensure that the relocation, modification, and replacement of stormwater drainage facilities as part of the Project would not require the construction of new or expanded stormwater drainage facilities that could result in significant environmental impacts. Once implemented, the proposed stormwater drainage improvements would be similar to existing conditions and adequate for stormwater drainage needs such that new or expanded facilities would not be necessary. Therefore, the relocation, modification, and replacement of existing stormwater drainage infrastructure included as part of the Project would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

ELECTRICITY

Table 3.14-2 identifies the proposed relocation and modification of existing electrical infrastructure that would be implemented as part of the Project. The Project would potentially require the relocation of six electricity lines and the modification of one electricity line. The County would engage in advanced planning and coordination with utility providers, including PG&E, to minimize the duration of disrupted services to the extent practical. Although the Project would require the relocation and modification of existing electrical infrastructure, these improvements are included as part of the Project, and impacts are analyzed throughout this EIR. Once implemented, the proposed electrical improvements would be similar to existing conditions and adequate for energy needs such that new or expanded facilities would not be necessary. Therefore, the relocation and modification of existing electrical infrastructure included as part of the Project would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

NATURAL GAS

Project construction would not require natural gas usage and would not involve the relocation, modification, or replacement of natural gas infrastructure. Therefore, there would be **no impact**, and no mitigation is required.

TELECOMMUNICATIONS

Table 3.14-2 identifies the proposed relocation of an existing telecommunications line that would be implemented as part of the Project. As shown therein, the Project would potentially require the relocation of one telephone wire. The County would engage in advanced planning and coordination with utility providers, including Pacific Telephone, to minimize the duration of disrupted services to the extent practical. Although the Project would require the relocation of existing telecommunications infrastructure, these improvements are included as part of the Project and impacts are analyzed throughout this EIR. Therefore, the relocation, modification, and replacement of existing telecommunications infrastructure included as part of the Project would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

Operation

WATER

Operation of the Project would not result in a permanent demand for water, as the Project does not propose additional bathrooms, water fountains, irrigation, or other water-dependent uses and features. The Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City that could result in increased water demand. Therefore, operation of the Project would not result in the relocation or construction of new or expanded water facilities that could cause significant environmental effects. There would be **no impact**, and no mitigation is required.

WASTEWATER

As stated previously, operation of the Project would not result in a permanent demand for water, and consequently would also not result in a permanent demand for the treatment of wastewater. The Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City which could result in increased demand for wastewater treatment. Therefore, operation of the Project would not result in the relocation or construction of new or expanded wastewater facilities that could cause significant environmental effects. There would be **no impact**, and no mitigation is required.

STORMWATER DRAINAGE

As described in **Table 3.14-2** and in Section 2.6, *Project Construction*, under *Stormwater Drainage*, the Project includes a variety of drainage improvements. During operation of the Project, stormwater would generally flow from the new impervious surfaces into the existing drainage system (i.e., existing culvert, pipe, and/or creek), proposed drainage system, and/or natural material swale included in the trail design and existing vegetated areas adjacent to the trail. A 2-foot-wide natural swale is proposed between the track and trail for most of Segments 10 and 11.

These drainage systems (e.g., swales, V ditches, pipes) would comply with County Design Criteria Standards and Capitola Design Criteria Standards, which require that drainage improvements are designed to convey a minimum 10-year storm, and flood overflows conveyed from the site would be per the 25-year storm return period. Any trail-generated flows and off-site flows that exceed the capacity (i.e., overflows) of the proposed swales would be diverted to a proposed storm drainpipe system under the trail.

Any off-site flows that would be intercepted by existing or proposed storm drain infrastructure in the Project area would be piped in the new storm drain system under the proposed trail to an outlet structure at an existing storm drain system or creek downstream. Stormwater treatment devices (e.g., gross solids removal device, hydrodynamic separators, trash screens, and flow through water quality treatment devices) would be installed, as determined appropriate by the County and/or City, with the proposed storm drain system treating tributary off-site flows from the streets before they ultimately discharge to a creek or ocean, improving water quality.

Due to these built-in design features, operation of the Project would not require the additional relocation or construction of stormwater drainage facilities that could result in significant environmental impacts. The proposed stormwater drainage improvements would be adequate for future drainage conditions such that new or expanded water drainage facilities beyond those

proposed would not be necessary. Therefore, operational impacts associated with stormwater drainage would be **less than significant**. No mitigation is required.

ELECTRICITY

The Project could result in the installation of new lighting along the Project alignment for safety purposes. The entire trail alignment could be illuminated as determined necessary for trail user safety, either from existing light sources along adjacent roadways and crossings or by installing new 20-foot-tall light fixtures every 100 feet. On bridges and viaducts and in environmentally sensitive areas, there would be low-level lighting, similar to that on the San Lorenzo River Trestle Bridge for Segment 8. Solar lighting would be used where feasible. The Project would result in the addition of new flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons at the 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista Drive crossings. These additions would also be installed and operated with extensions from the existing electric system. Operation of the Project would not involve any other components requiring electrical service to the Project corridor. The increase in energy demands associated with Project operation would be minimal and would be met by existing energy supplies through existing energy infrastructure. Therefore, operation of the Project would not require the relocation or construction of new electricity infrastructure, and a **less than significant impact** would occur. No mitigation is required.

NATURAL GAS

Operation of the Project would not require use of natural gas or the relocation or construction of new natural gas infrastructure. Therefore, there would be **no impact**, and no mitigation is required.

TELECOMMUNICATIONS

Operation of the Project would not involve any components requiring telecommunications infrastructure and would not involve the relocation of existing telecommunications facilities. Additionally, the Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City that could result in the need for expanded telecommunications infrastructure. In the future, new telecommunications fiber could be installed under the trail or in the rail corridor as part of a separately funded project, but this activity is not included as part of the Project. Therefore, operation of the Project would not result in the relocation or construction of telecommunications infrastructure, and there would be **no impact**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) would result in similar impacts to water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications infrastructure as described above under *Ultimate Trail Configuration (Trail next to Rail Line)*. **Table 3.14-3** shows the proposed relocation, modification, and removal of existing water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications infrastructure that would be implemented as part of the Optional Interim Trail.

Table 3.14-3 Utility Relocations, Modifications, and Removals for the Optional Interim Trail

Owner	Service Type	Location (all locations adjacent to ROW)	Work Planned
Segment 10			
Pacific Gas & Electric	Electricity	47th Avenue	Potential removal of electrical wires with proposed removal of rail equipment
Santa Cruz County Flood Control District	Storm Drain	Approximately 585 feet east of 41st Avenue	Modification to connect culvert into storm drain line
Pacific Gas & Electric	**Electricity**	**41st Avenue**	**Potential removal of electrical wires with proposed removal of rail equipment**
Pacific Gas & Electric	Electricity	41st Avenue West	Potential removal of electrical wires with proposed removal of rail equipment
Santa Cruz County Flood Control District	Storm Drain	Between Thompson Avenue and 38th Avenue	Modification to connect culvert into storm drain line
Pacific Gas & Electric and California State Parks	Electricity	Thompson Avenue	Potential relocation of electrical wires with proposed removal of rail equipment
City of Santa Cruz	Water	Thompson Avenue	Potential relocation of water pipeline due with proposed removal of rail equipment
Pacific Gas & Electric	**Electricity**	**30th Avenue**	**Potential removal of electrical wires with proposed removal of rail equipment**
Pacific Gas & Electric and California State Parks	Electricity	Chanticleer Avenue to Paget Avenue	Potential relocation of electrical wire with proposed removal of rail equipment
Segment 11			
County of Santa Cruz	Storm Drain	State Park Drive	Modification of storm drainage pipe and connection to existing storm drain
Pacific Gas & Electric	**Electricity**	**State Park Drive**	**Potential removal of electrical wires with proposed removal of rail equipment**
Pacific Gas & Electric	**Electricity**	**Mar Vista Drive**	**Potential removal of electrical wires with proposed removal of rail equipment**
City of Capitola	Storm Drain	Coronado Street to New Brighton State Beach	Replacement of storm drain culvert
Pacific Gas & Electric	**Electricity**	**Monterey Avenue**	**Potential removal of electrical wires with proposed removal of rail equipment**

Note: Text shown in **bold** indicates that these relocations, modifications, and removals would only be required as part of construction of the Optional Interim Trail and would not be required as part of the Ultimate Trail Configuration.
ROW = right-of-way

Overall, the construction of the Optional Interim Trail would require fewer relocations, modifications, and removals of existing utility infrastructure than the Ultimate Trail Configuration. Some of these relocations, modifications, and removals are different than those required under the Ultimate Trail Configuration, as shown in **Table 3.14-3** in bold text. Although the Optional Interim Trail would require the relocation, modification, and removal of existing infrastructure, these improvements are included as part of the Project, and impacts are analyzed throughout this EIR. Once implemented, the proposed improvements would be similar to existing conditions and adequate for needs such that new or expanded facilities would not be necessary. Therefore, the relocation, modification, and replacement of existing water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications infrastructure included as part of the Optional

Interim Trail would not cause significant environmental effects that are not already considered in this EIR and would result in a **less than significant impact**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

The proposed relocation, modification, and removal of existing water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications infrastructure would have been made in conjunction with implementation of the Optional Interim Trail such that additional improvements would not be required during this phase. While some stormwater drainage infrastructure could need additional modification, these modifications would be temporary and/or done in conjunction with those needed for construction of the Ultimate Trail Configuration. Therefore, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would not result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. There would be **no impact**, and no mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Refer to the discussion under *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

The proposed relocation, modification, and removal of existing water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications infrastructure that would be implemented as part of the Optional Interim Trail would only occur during this phase (Part 1) and would result in reduced impacts to infrastructure as described above under *Ultimate Trail Configuration (Trail next to Rail Line),* because fewer utility relocations would be necessary. Although the construction of the Optional Interim Trail would require fewer relocations, modifications, and removals of existing utility infrastructure overall than the Ultimate Trail Configuration, some of these relocations, modifications, and removals are different that those required under the Ultimate Trail Configuration. Construction of the Ultimate Trail Configuration as Part 3 of the Optional Interim Trail would require the same utility relocations, modification, and replacement as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)* and shown in **Table 3.14-2**. As shown in **Table 3.14-3**, implementation of the Optional Interim Trail (Parts 1, 2, and 3) would result in five more utility removals than the Ultimate Trail Configuration. Therefore, the combined impacts of implementing the Optional Interim Trail (Parts 1, 2, and 3) would be greater than the impact of only implementing the Ultimate Trail Configuration but would remain **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village (**Appendix A.3**). This design option would have substantially

similar utility impacts as the Ultimate Trail Configuration. This design option would result in substantially similar relocation, modification, and/or replacement of existing water, wastewater, stormwater drainage, electricity, and/or telecommunications infrastructure as the Ultimate Trail Configuration. While some stormwater drainage infrastructure could need additional modification, these modifications would be temporary and/or done in conjunction with those needed for construction of the Ultimate Trail Configuration. Therefore, these impacts would be similar to the Project and would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in the City (**Appendix A.4**). This design option would have similar utility impacts as the Ultimate Trail Configuration. This design option would not result in any additional relocation, modification, and/or replacement of existing water, wastewater, stormwater drainage, electricity, and/or telecommunications infrastructure compared to the Ultimate Trail Configuration. Therefore, these impacts would be similar to the Project and would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project, with and without the Optional Interim Trail, would have similar utility impacts. The proposed relocation, modification, and replacement of existing water, wastewater, stormwater drainage, electricity, and telecommunications infrastructure would occur to substantially the same extent under either scenario. While some stormwater drainage infrastructure could need additional modification, these modifications would be temporary and/or done in conjunction with those needed for construction of the Ultimate Trail Configuration. Therefore, impacts related to the construction of new or expanded stormwater drainage, electric power, natural gas, or telecommunications facilities for the Project with and without the Optional Interim Trail would be **less than significant**.

Threshold B:	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact UTIL-2 SUFFICIENT WATER SUPPLIES ARE AVAILABLE TO SERVE CONSTRUCTION AND OPERATION OF THE PROJECT. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

The Project would require water usage during construction for dust suppression and revegetation of disturbed areas. This minimal amount of water required for Project construction would be similar to other construction projects in the region and would result in a minimal temporary impact to water supply. SCWD would provide water for construction of the western portion of Segment 10, and SqCWD would provide water for the eastern portion of Segment 10 and all of Segment 11. As described in Section 3.14.1, *Existing Conditions*, SCWD water supplies would be sufficient to meet demand in its service area through 2045 under the average/normal year and single dry water year hydrological conditions. In the extreme multiple dry water year hydrological condition, SCWD's projected water supply would meet projected water demand during all years, except for small

projected shortages during the fifth year of the extended drought in the 2040–2045 time frame. During the period in the fifth year of the extended drought, it is anticipated that supply would meet 98% of demand in the SCWD service area (City of Santa Cruz 2021). SqCWD water supplies are anticipated to meet water demand under all scenarios analyzed in the UWMP (SqCWD 2021). Construction of the Project is estimated to begin in 2026 and would continue for approximately 48 months, as detailed in Section 2.6 in Chapter 2, *Project Description*. Therefore, considering the minimal amount of water required for Project construction and the available water supply from SCWD and SqCWD, adequate water supplies would be available to serve Project construction and reasonably foreseeable future development during normal, dry, and multiple dry years. This impact would be **less than significant**. No mitigation is required.

Operation

Operation of the Project would not result in a permanent demand for water, as the Project does not propose additional bathrooms, water fountains, irrigation, or other water-dependent uses and features. Furthermore, the Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City. Any landscaping or vegetated areas disturbed by Project construction activities would be replaced with a native, drought-tolerant, non-irrigated seed mix. These revegetated areas would require periodic watering until fully established and would not require irrigation after established. Watering of revegetated areas would take place either by truck or by hand. Water requirements for revegetation would be minimal and temporary in nature until plants are established. Therefore, adequate water supplies would be available to serve Project operation and reasonably foreseeable future development during normal, dry, and multiple dry years. This impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail in its place) would result in similar water supply demands as described for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Specifically, the Optional Interim Trail would require minimal amounts of water during construction, but it would not result in a permanent increase in water demand. Construction of the Optional Interim Trail is estimated to occur in 2026–2027, as described in Section 2.6.2, *Optional Interim Trail (Trail on the Rail Line).* Therefore, considering the minimal amount of water required for construction of the Optional Interim Trail and the available water supply from SCWD and SqCWD, adequate water supplies would be available to serve construction and reasonably foreseeable future development during normal, dry, and multiple dry years. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to construction of the Ultimate Trail Configuration *(Trail next to Rail Line)* and implementation of the Optional Interim Trail Part 1, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would result in a minimal and temporary increase in demand for water during demolition and rebuilding activities, such as dust suppression and revegetation of disturbed areas. Demolition of the Optional Interim Trail and rebuilding of the rail line is estimated to occur in 2056–2060, as described in Section 2.6.2. The SCWD's and SqCWD's most recent UWMPs only analyze the adequacy of water supply through 2045 and 2040, respectively. However, due to

the minimal and temporary nature of the water demands associated with this part of implementing the Optional Interim Trail, it is anticipated that there would be sufficient water supply to serve the demolition of the Optional Interim Trail and rebuilding of the rail line. Therefore, this impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the Ultimate Trail Configuration *(Trail next to Rail Line)*. Construction of the Ultimate Trail Configuration (Part 3) is estimated to occur in 2053–2057, as described in Section 2.6.2. The SCWD's and SqCWD's most recent UWMPs only analyze the adequacy of water supply through 2045 and 2040, respectively. However, due to the minimal and temporary nature of the water demands associated with this part of implementing the Optional Interim Trail, it is anticipated that there would be sufficient water supply to serve the construction of the Ultimate Trail. The impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would result in a minimal and temporary amount of water that would be required for activities such as dust suppression and revegetation of disturbed areas during implementation of the Optional Interim Trail, demolition of the Optional Interim Trail and rebuilding of the rail line, and construction of the Ultimate Trail Configuration. Considering the minimal water demand associated with the Optional Interim Trail, it is anticipated that there would be sufficient water supply to serve the minimal and temporary water requirements associated with implementation of all three parts of the Optional Interim Trail. Therefore, these combined impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would have similar impacts related to water facilities and the sufficiency of water supplies as compared to the Ultimate Trail Configuration. The minimal amount of water required for construction would be similar to other construction projects in the region and would result in a minimal temporary impact to water supply. Although construction of the Optional Interim Trail on each side of the Capitola Trestle would require slightly more water, the amount would be negligible. Operation of this design option, similar to the Project, would not result in a permanent demand for water. Overall, adequate water supplies would be available to serve construction and operation of the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, these impacts would be similar to the Project and would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in Capitola. This design option would have similar impacts related to water facilities and the sufficiency of water supplies as the Ultimate Trail Configuration. This design option would require water usage during construction for dust suppression and revegetation of disturbed areas. This minimal amount of water required for construction would be similar to other construction projects in the region and would result in a minimal temporary impact to water supply. Operation of this design option, similar to the Project, would not result in a permanent demand for water. Overall, adequate water supplies would be available to serve construction and operation of the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, these impacts would be similar as compared to the Project and would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project, with and without the Optional Interim Trail, would have similar impacts related to water facilities and the sufficiency of water supplies. Under either scenario, the Project would require a minimal and temporary amount of water during activities such as construction dust suppression and revegetation of disturbed areas upon operation. However, the Project with the Optional Interim Trail would result in slightly increased demands for water compared to the Project without the Optional Interim Trail (Ultimate Trail Configuration) due to additional construction and demolition phases. Considering the implementation of planned water infrastructure projects by 2030, such as the Pure Water Soquel Project, along with proposed water rights modifications, it is anticipated that there would be sufficient water supply to serve the minimal water demands associated with both construction of the *Ultimate Trail Configuration (Trail next to Rail Line)* and all phases of the Optional Interim Trail. Overall, these impacts would be **less than significant** for both the Proposed Project with or without and the Optional Interim Trail.

Threshold C:	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Impact UTIL-3 THE PROJECT WOULD NOT GENERATE WASTEWATER IN EXCESS OF EXISTING TREATMENT CAPACITY. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction of the Project could generate wastewater through the use of portable toilets by construction workers. Any wastewater generated during Project construction would be minimal and temporary in nature and would be collected on site via vacuum service truck and ultimately disposed of at the WWTF. As described under Section 3.14.1, the WWTF's current design capacity is 17 million gpd with a wet weather flow capacity of 81 million gpd. The WWTF averages a daily flow of approximately 12 million gpd. As such, the WWTF has adequate capacity to serve the Project's construction phase demand in addition to existing commitments. These impacts would be **less than significant**. No mitigation is required.

Operation

The Project would not result in the addition of bathrooms or potable water fixtures that would generate a permanent demand for wastewater treatment. Although it is expected that trail users would use existing public restrooms and thus contribute to wastewater production, any increase in wastewater generation would be negligible. Furthermore, the Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City, which could generate increased demand for wastewater treatment infrastructure. Therefore, operation of the Project would not generate wastewater in excess of existing treatment capacity, and impacts would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

Implementation of the Optional Interim Trail Part 1 (demolishing the rail line and constructing the Optional Interim Trail) would result in similar wastewater treatment demands as described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. Specifically, implementation of the Optional Interim Trail would generate wastewater through the use of portable toilets by construction workers. Any wastewater generated during construction of the Optional Interim Trail would be minimal and temporary in nature and would ultimately be disposed of at the WWTF, which has adequate capacity to serve projected demand in addition to existing commitments. Implementation of the Optional Interim Trail would not result in the addition of bathrooms or potable water fixtures that would generate a permanent demand for wastewater treatment. This impact would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Similar to construction of the *Ultimate Trail Configuration (Trail next to Rail Line)* and implementation of the Optional Interim Trail Part 1, demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would generate wastewater through the use of portable toilets by construction workers. Demolition of the Optional Interim Trail and rebuilding of the rail line would not result in a permanent demand for wastewater treatment. Any wastewater generated during demolition of the Optional Interim Trail and rebuilding of the rail line would be minimal and temporary in nature and would be collected on site via vacuum service truck and ultimately disposed of at the WWTF, which has adequate capacity to serve projected demand in addition to existing commitments. This impact would be **less than significant**. No mitigation is required.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. This impact would **be less than significant.** No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would generate a minimal amount of wastewater through the use of portable toilets by construction workers during all three parts (implementation of the Optional Interim Trail, demolition of the Optional Interim Trail and rebuilding of the rail line, and construction of the Ultimate Trail

Configuration). The Optional Interim Trail would not result in the addition of bathrooms or potable water fixtures that would generate a permanent demand for wastewater treatment. Any wastewater generated during construction activities would be disposed of at the WWTF, which has adequate capacity to serve these needs. Therefore, these combined impacts would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. This design option would generate wastewater through the use of portable toilets by construction workers. This design option would not result in the addition of bathrooms or potable water fixtures that would generate a permanent demand for wastewater treatment. Any wastewater generated during construction activities would be disposed of at the WWTF, which has adequate capacity to serve these needs. Overall, wastewater impacts related to this design option would be similar to the Ultimate Trail Configuration and would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in Capitola. This design option would generate wastewater through the use of portable toilets by construction workers. This design option would not result in the addition of bathrooms or potable water fixtures that would generate a permanent demand for wastewater treatment. Any wastewater generated during construction activities would be disposed of at the WWTF, which has adequate capacity to serve these needs. Overall, wastewater impacts related to this design option would be similar to the Ultimate Trail Configuration and would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Project, with and without the Optional Interim Trail, would have similar impacts related to wastewater facilities and wastewater treatment capacity. Under either scenario, the Project would generate a minimal amount of wastewater through the use of portable toilets by construction workers, which would be disposed of at the WWTF. Although construction of the Optional Interim Trail would generate slightly more wastewater due to the multiple construction periods than the Ultimate Trail Configuration, the amount would be negligible. As discussed above, the WWTF would have adequate capacity to serve the projected demand for the Project with or without the Optional Interim Trail. Furthermore, the Project with or without the Optional Interim Trail would not result in an increase in permanent population or introduce unanticipated growth in the City of Capitola or County, which could result in the need for expanded wastewater infrastructure. Overall, the impact of the Project, with or without the Optional Interim Trail, would be **less than significant**. No mitigation is required.

Threshold D:	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
Threshold E:	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact UTIL-4 THE PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF LOCAL LANDFILL CAPACITY AND WOULD COMPLY WITH APPLICABLE REGULATIONS RELATED TO SOLID WASTE. (ULTIMATE TRAIL CONFIGURATION: LESS THAN SIGNIFICANT; OPTIONAL INTERIM TRAIL: LESS THAN SIGNIFICANT)

Ultimate Trail Configuration (Trail next to Rail Line)

Construction

Construction waste generated by the Project in both the City and unincorporated County would likely be disposed of at the Buena Vista Landfill. The Buena Vista landfill is anticipated to cease operations in 2031; however, Project construction is anticipated to begin in 2026 and would last approximately 48 months. As such, the Buena Vista Landfill would likely be open for the duration of Project construction. As described under Section 3.14.1, the Buena Vista Landfill has an estimated remaining capacity of 1,766,005 cubic yards (CalRecycle 2023a). The regional Monterey Peninsula Landfill in Marina also has capacity to receive waste, if necessary, during Project construction or following closure of the Buena Vista Landfill, when solid waste would be transferred to the Monterey Peninsula Landfill. The Monterey Peninsula Landfill has an estimated remaining capacity of 48,560,000 cubic yards and is anticipated to be operational past the year 2100 (CalRecycle 2023c).

As described in **Table 2-2** in Chapter 2, the Project would generate an estimated 11,811 cubic yards of construction-related waste. The total amount of construction waste generated by the Project would equate to less than 1% of the Buena Vista Landfill's remaining daily capacity.[2] Any excess construction waste could be disposed of at the Monterey Peninsula Landfill, which has an even greater remaining capacity than the Buena Vista Landfill. Therefore, the Project would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Furthermore, any solid waste receiving facilities that would serve the Project currently operate under State of California Solid Waste Facilities Permits issued by CalRecycle, and therefore comply with applicable solid waste statutes and regulations described in Section 3.14.2, *Regulatory Setting*. Therefore, construction impacts associated with the generation of solid waste would be **less than significant**.

Operation

During operation, solid waste would be generated by trail users. Several areas along the Project corridor have existing trash receptacles, including Simpkins Family Swim Center, Jade Street Park, Cliff Drive Parking Lot, the Capitola Village, and New Brighton State Beach. Trash receptacles would be added to the Project corridor, including recycling receptacles and dog waste stations at Corcoran Avenue, 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Cliff Drive Plaza, the Monterey Avenue crossing, Grove Lane, the Park Avenue/Coronado Street ramp, Mar Vista Drive, and State Park Drive. This would result in approximately 11 new trash and recycling receptacle locations proposed along the Project corridor that would be available to collect operational solid waste. Although the frequency of waste collection would be determined by the County and City for their respective jurisdictions along the trail, it is reasonable to

[2] 11,811 cubic yards/1,766,005 cubic yards = 0.67%

assume the trash receptacles would be emptied twice a week during peak periods to accommodate the anticipated volume of trail users. As stated in Section 2.5, *Project Operation and Maintenance*, it is estimated there could be 500-1,500 trail users daily. However, the Project would not result in an increase in permanent population or introduce unanticipated growth in the County or City. As such, any waste generated along the Project corridor would not be considered new waste added to the waste stream; rather, the Project would result in waste being collected from new locations. Therefore, the Buena Vista Landfill would have the daily throughput capacity to receive all solid waste generated during operation of the Project until closure of the landfill (anticipated to be 2031). Following closure of the Buena Vista Landfill, operational waste would be transferred from the Buena Vista Landfill to the Monterey Peninsula Landfill, which also has the daily throughput capacity to receive all solid waste generated during operation of the Project. Therefore, the Project would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Furthermore, any solid waste receiving facilities that would serve the Project currently operate under State of California Solid Waste Facilities Permits issued by CalRecycle, and therefore comply with applicable solid waste statutes and regulations described in Section 3.14.2. Therefore, operation impacts associated with the generation of solid waste would be **less than significant**.

In summary, the impact would be **less than significant**. No mitigation is required.

Optional Interim Trail (Trail on the Rail Line)

1) Implementation of Interim Trail

As stated in **Table 2-3**, implementation of the Optional Interim Trail (Part 1), which includes demolition of the rail and construction of the Optional Interim Trail, would generate approximately 36,670 cubic yards of construction-related waste. As the railroad ties are formally designated as treated wood waste by the California Department of Toxic Substances Control, they would be transported and disposed of in accordance with the alternative management standards established by the Legislature in AB 1353 (2004), Treated Wood Waste Management in California. Project waste would likely be disposed of at the Buena Vista Landfill, which has been authorized by the SWRCB to accept treated wood waste (SWRCB 2023). The estimated 36,670 cubic yards of construction waste generated by implementation of the Optional Interim Trail (Part 1) would equate to approximately 2.1% of the Buena Vista Landfill's remaining capacity.[3] In addition, excess construction waste could be disposed of at other landfills outside the area, such as the Monterey Peninsula Landfill, which is also approved to accept treated wood waste (SWRCB 2023).

Operation of the Optional Interim Trail would generate a similar volume of operational waste from trail users as described above under the *Ultimate Trail Configuration (Trail next to Rail Line)*, because the same number of trail users are expected and the same number of trash and recycling collection facilities would be provided along the trail. Therefore, implementation of the Optional Interim Trail would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Solid waste impacts associated with implementation of the Optional Interim Trail (Part 1) would be **less than significant**. No mitigation is required.

2) Demolition of the Interim Trail and Rebuilding of the Rail Line

Demolition of the Optional Interim Trail and rebuilding of the rail line would also generate construction waste. As stated in **Table 2-3**, demolition of the Optional Interim Trail and rebuilding of

[3] 36,670 cubic yards/1,766,005 cubic yards = 2.08%

the rail line (Part 2) would generate approximately 41,295 cubic yards of construction-related waste. Since the Buena Vista Landfill is anticipated to cease operations in 2031, construction-related waste for Part 2 (which is anticipated to occur in 2056–2060) would be diverted to the Monterey Peninsula Landfill. The estimated 41,295 cubic yards of construction waste generated by demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would equate to less than 1% of the Monterey Peninsula Landfill's remaining daily capacity.[4] Therefore, demolition of the Optional Interim Trail and rebuilding of the rail line would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. There would be no operational waste associated with demolition of the Optional Interim Trail and rebuilding of the rail line. Solid waste impacts associated with demolition of the Optional Interim Trail and rebuilding of the rail line (Part 2) would be **less than significant**.

3) Construction of the Ultimate Trail Configuration

Construction of the Ultimate Trail Configuration as Part 3 of implementing the Optional Interim Trail would be similar to that described above for the *Ultimate Trail Configuration (Trail next to Rail Line)*. As stated in **Table 2-3**, construction of the Ultimate Trail Configuration (Part 3) would generate approximately 11,811 cubic yards of construction-related waste. Since the Buena Vista Landfill is scheduled to close permanently in 2035, construction-related waste for Part 3 (which is anticipated to occur in 2053–2057) would be diverted to the Monterey Peninsula Landfill. The estimated 11,811 cubic yards of construction waste generated by construction of the Ultimate Trail Configuration (Part 3) would equate to less than 1% of the Monterey Peninsula Landfill's remaining daily capacity.[5] Therefore, construction of the Ultimate Trail Configuration would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. There would be no operational waste associated with construction of the Ultimate Trail Configuration. This impact would be **less than significant**. No mitigation is required.

Combined Effect of Interim Trail Parts 1, 2, 3

Overall, the combined effects of implementing the Optional Interim Trail (Parts 1, 2, and 3) would generate approximately 89,776 cubic yards of combined construction waste, including the removed railroad ties. After applying the 75% solid waste diversion rate to the applicable wastes, solid waste generated by the Optional Interim Trail would be reduced to approximately 22,444 cubic yards of construction-related waste, as shown in **Table 3.14-4**. Construction-related waste would be distributed over an estimated 35-year period within three separate construction phases, as described in Section 2.6.2.

[4] 41,295 cubic yards/48,560,000 cubic yards = 0.09%

[5] 11,811 cubic yards/48,560,000 cubic yards = 0.02%

Table 3.14-4 Summary of Solid Waste Generation during Construction of the Interim Trail

Optional Interim Trail (Trail on the Rail Line)	Total Amount of Solid Waste (cubic yards)
Implementation of Optional Interim Trail	36,670
Demolition of the Optional Interim Trail and Rebuilding of the Rail Line	41,295
Construction of the Ultimate Trail Configuration	11,811
Total Over 35 Years	89,776
County Buena Vista Landfill Remaining Capacity	1,766,005[a]
Monterey Peninsula Landfill Capacity	48,560,000[b]

[a] CalRecycle 2023a.

[b] CalRecycle 2023c.

Similar to the Ultimate Trail Configuration, it is estimated that that Optional Interim Trail could have 500-1,500 trail users daily. The Optional Interim Trail would also not result in an increase in permanent population or introduce unanticipated growth in the City of Capitola or County. As such, the amount of operational waste generated by the Optional Interim Trail would be similar to the Ultimate Trail Configuration. Therefore, the Buena Vista Landfill would have the capacity to receive all solid waste generated by operation of Part 1 of the Optional Interim Trail. Any excess waste could be disposed of at the Monterey Peninsula Landfill for Parts 2 and 3 once the Buena Vista Landfill is anticipated to cease operations in 2031. Therefore, the Optional Interim Trail would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. The combined solid waste impacts associated with the Optional Interim Trail would be **less than significant**. No mitigation is required.

Ultimate Trail Configuration Design Options

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Under this design option, the Ultimate Trail Configuration would be modified to transition from the Ultimate Trail Configuration alongside the rail line to the Optional Interim Trail on the rail line for a 0.5-mile section including the Capitola Trestle Bridge instead of directing trail users to bicycle lanes and sidewalks through Capitola Village. Additional waste would be generated under this design option due to the proposed rehabilitation of the Capitola Trestle Bridge, as well as the additional demolition of rail on each side of the bridge where the Ultimate Trail alongside the rail line transitions to the Optional Interim Trail on the rail line. This design option would generate approximately 12,964 cubic yards of construction-related waste (1,153 cubic yards of waste more than the Ultimate Trail Configuration). Project waste would likely be disposed of at the Buena Vista Landfill. The estimated 12,964 cubic yards of construction waste generated by this design option and the Project would equate to less than 1% of the Buena Vista Landfill's remaining daily capacity.[6] In addition, excess construction waste could be disposed of at other landfills outside the area, such as the Monterey Peninsula Landfill, which also has sufficient capacity to serve this design option. Construction waste and treated wood waste generated by this design option would likely be disposed of at the Buena Vista Landfill until it ceases operations in 2031, with excess waste disposed of at the Monterey Peninsula Landfill. Both the Buena Vista Landfill and Monterey Peninsula Landfill have been authorized by the SWRCB to accept treated wood waste (SWRCB 2023). Operation of this design option would generate a similar volume of operational waste from trail users as described above

[6] 12,964 cubic yards/1,766,005 cubic yards = 0.73%

for the Ultimate Trail Configuration, because the same number of trail users are expected and the same number of trash and recycling collection facilities would be provided along the trail. Therefore, implementation of this design option would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Overall, solid waste impacts related to this design option would be similar to the Ultimate Trail Configuration and would be **less than significant**.

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

Under this design option, the trail would be located on the inland side of the rail (instead of the coastal side) between Grove Lane and Coronado Street in Capitola. This design option would generate approximately 12,692 cubic yards of construction-related waste (881 cubic yards of waste more than the Ultimate Trail Configuration). Project waste would likely be disposed of at the Buena Vista Landfill. The estimated 12,964 cubic yards of construction waste generated by this design option and the Project would equate to less than 1% of the Buena Vista Landfill's remaining daily capacity.[7] In addition, excess construction waste could be disposed of at other landfills outside the area, such as the Monterey Peninsula Landfill, which also has sufficient capacity to serve this design option. Operation of this design option would generate a similar volume of operational waste from trail users as described above for the Ultimate Trail Configuration, because the same number of trail users are expected and the same number of trash and recycling collection facilities would be provided along the trail. Therefore, implementation of this design option would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Overall, solid waste impacts related to this design option would be similar to the Ultimate Trail Configuration and would be **less than significant**.

Comparison of Proposed Project Impact with/without Optional Interim Trail

The Ultimate Trail Configuration (Project without the Optional Interim Trail) would result in a total of 11,811 cubic yards of construction-related waste. The Optional Interim Trail (Project with the Optional Interim Trail) would result in a total of 89,776 cubic yards of construction-related waste, approximately 760% more construction waste than the Ultimate Trail Configuration.[8] This increase in construction-related waste is attributed to the removal of railroad ties and other rail hardware (rail, tie plates, anchors), which would be removed to accommodate the Optional Interim Trail. As stated previously, construction waste and treated wood waste generated by the Project would likely be disposed of at the Buena Vista Landfill until it ceases operations in 2031, with excess waste disposed of at the Monterey Peninsula Landfill. Both the Buena Vista Landfill and Monterey Peninsula Landfill have been authorized by the SWRCB to accept treated wood waste (SWRCB 2023).

Therefore, the Optional Interim Trail would result in substantially more construction-related waste than Ultimate Trail Configuration due to the two additional construction and demolition activities. Any excess construction waste could be disposed of at the Monterey Peninsula Landfill, as needed, or for Parts 2 and 3 once the Buena Vista Landfill is closed. Under either scenario, the Project would generate a total amount of construction waste that would not exceed the Buena Vista Landfill or the Monterey Peninsula Landfill's remaining capacity.

[7] 12,692 cubic yards/1,766,005 cubic yards = 0.72%

[8] 89,776 cubic yards/11,811 cubic yards = 760.11%

Operation of the Project, with and without the Optional Interim Trail, would generate a similar amount of operational waste from trail users because both options would have a similar estimated number of trail users, and trash and recycling collection facilities would be provided along the trail.

Therefore, the Project, with and without the Optional Interim Trail, would not generate solid waste in excess of the capacity of local infrastructure or otherwise impair the attainment of solid waste reduction goals. Overall, solid waste impacts would be **less than significant**. No mitigation is required.

3.14.5 Summary Comparison

Comparison of Impacts[a] for Ultimate Trail Configuration (Trail next to Rail Line) with/without Optional Interim Trail (Trail on the Rail Line)

Impacts	Ultimate Trail Configuration (Trail next to Rail Line)	Optional Interim Trail (Trail on the Rail Line)		
		1) Implementation of Interim Trail	2a) Demolition of Interim Trail	2b) Rebuilding of the Rail Line
UTIL-1. The Project would require the relocation or replacement of water, wastewater, electricity, gas, and telecommunications conveyance infrastructure.	LTS	LTS Similar	LTS Similar	LTS Similar
UTIL-2. Sufficient water supplies are available to serve construction and operation of the Project.	LTS	LTS Similar	LTS Similar	LTS Similar
UTIL-3. The Project would not generate wastewater in excess of existing treatment capacity.	LTS	LTS Similar	LTS Similar	LTS Similar
UTIL-4. The Project would not generate solid waste in excess of local landfill capacity and would comply with applicable regulations related to solid waste.	LTS	LTS Similar but more	LTS Similar but more	LTS Similar

[a] The impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)* are presented in the first column with the impact determination presented in the second column using the abbreviations identified below. Potentially significant impacts requiring mitigation or determined significant and unavoidable are presented in **bold** with the required mitigation measure indicated below.

The anticipated impacts for the *Optional Interim Trail (Trail on the Rail Line)* are presented and described in comparison to the *Ultimate Trail Configuration (Trail next to Rail Line)* (e.g., similar, more, less), with the reasoning presented in the text discussion.

The impacts of Optional Interim Trail Part 3 (Construction of the Ultimate Trail Configuration) would be the same or substantially similar to that identified for *Ultimate Trail Configuration (Trail next to Rail Line)* in the second column. Therefore, a column for Part 3, Construction of the Ultimate Trail Configuration, of the *Optional Interim Trail (Trail on the Rail Line)* is not included unless there are notable differences.

NI = No Impact

LTS = Less than Significant without Mitigation

LTSM = Less than Significant with Mitigation

SU = Significant and Unavoidable

MM = Mitigation Measure

3.15 Effects Found to be Less than Significant

Section 15128 of the *California Environmental Quality Act (CEQA) Guidelines* requires an Environmental Impact Report (EIR) to briefly describe any possible significant effects that were determined not to be significant and, therefore, were not discussed in detail. This section addresses the potential environmental effects of the Project that clearly would not be significant and are not addressed in the preceding sections of this EIR.

The discussion is based on the thresholds contained in Appendix G, *Environmental Checklist Form*, of the *CEQA Guidelines*, as well as the Initial Study prepared for the Project (**Appendix C**). As described under "Significance Thresholds" in the preceding Sections 3.1 through 3.14, the letters and thresholds correspond with the questions in Appendix G of the *CEQA Guidelines*. Any items not addressed in this section are addressed in Sections 3.1 through 3.14 of this EIR.

3.15.1 Aesthetics

The following threshold pertaining to Aesthetics (from Appendix G of the *CEQA Guidelines*) was excluded from discussion in Section 3.1, *Aesthetics*. Refer to Section 3.1 for the discussions relevant to Thresholds A, C, and D.

Would the Project:

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

In Santa Cruz County (County), State Route 1 (SR-1 or Highway 1) is designated as the Cabrillo Highway and is considered eligible for state scenic highway designation, but it is not officially designated by the California Department of Transportation (Caltrans 2023). The trail alignment would be located 0.1 mile from SR-1, the nearest eligible state scenic highway, and views of the trail would not be visible from SR-1. Therefore, the Proposed Project with or without the Optional Interim Trail would not damage scenic resources within a state scenic highway (Threshold B), and there would be **no impact**. No mitigation is required.

3.15.2 Agriculture and Forestry Resources

All thresholds pertaining to Agriculture and Forestry Resources (from Appendix G of the *CEQA Guidelines*) are discussed below.

Would the Project:

A. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

B. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

C. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

D. Result in the loss of forest land or conversion of forest land to non-forest use?

E. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Project corridor is classified as Urban and Built-Up Land and Other Land, pursuant to the California Department of Conservation Farmland Mapping and Monitoring Program Map. The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The Project corridor is not zoned for agricultural use and does not conflict with any Williamson Act contracts. Additionally, the Project corridor is in a predominately developed urban environment.

The Project would not conflict with existing zoning for forest land, timberland, or timberland production. The Project would not involve any changes to the existing environment that could impact the conversion of Farmland or forest land to non-agriculture or non-forest use.

The Project with or without the Optional Interim Trail would result in **no impact** to agriculture and forestry resources (Thresholds A–E). No mitigation is required.

3.15.3 Energy

All thresholds pertaining to Energy (from Appendix G of the *CEQA Guidelines*) are discussed below.

Would the Project:

A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction of the Project would involve the use of energy. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, generators for power tools, and truck trips for the import and export of material. Temporary grid power may also be provided to construction trailers or electric construction equipment, depending on the location and construction activity.

Construction activity is necessary for Project implementation. The Project would require typical construction practices and would not include any components that would result in wasteful or inefficient use of energy during construction. The Project with the Optional Interim Trail would result in greater energy consumption than without the Optional Interim Trail because there would be two additional construction phases, thus increasing total construction and energy use. However, energy would be consumed as necessary for construction and would not be wasteful or inefficient.

Following construction, operation of the Project would be an active transportation and recreation corridor for bicycles and pedestrians. It would increase the feasibility of non-motorized transportation and would contribute to a regional net decrease in fuel consumption from vehicle trips. New lighting could be installed and would be solar powered where feasible. Lighting connected to the electrical grid would be energy-efficient light-emitting diodes (LEDs). Therefore, operation of the Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. The Project would likely result in a net benefit to regional energy consumption.

The Project with or without the Optional Interim Trail would not conflict with or obstruct plans for renewable energy or energy efficiency. Impacts related to energy (Thresholds A–B) would be **less than significant**. No mitigation is required.

3.15.4 Geology and Soils

The following thresholds pertaining to Geology and Soils (from Appendix G of the *CEQA Guidelines*) were excluded from discussion in Section 3.5, *Geology and Soils*. Refer to Section 3.5 for the discussions relevant to Thresholds A (2–4), B, C, D, and F.

Would the Project:

A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    1. 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?

E. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Threshold A. The Project corridor is located in a seismically active area that would experience strong seismic ground shaking following an earthquake along any one of several nearby faults, including the Ben Lomond fault, Monterey Bay-Tularcitos fault, Zayante-Vergeles fault, San Andreas (Santa Cruz Mountains) fault, and Sargent fault located approximately 5 miles, 6.5 miles, 5.5 miles, 8.5 mile, and 10.5 miles, respectively, from the Project area (Pacific Crest Engineering 2021). However, known earthquake faults are not present directly within the Project corridor. Therefore, the rupture of a known earthquake fault, as delineated on the Alquist-Priolo Earthquake Fault Zoning Maps, would not be expected. Furthermore, implementation of the Project with or without the Optional Interim Trail would not include construction of habitable structures and, therefore, would not expose residents to a risk of injury or death involving fault rupture.

Proposed trail infrastructure (e.g., viaducts, bridge, retaining walls) would incorporate seismic design parameters developed from the California Department of Transportation Seismic Design Criteria, Version 2.0, dated April 2019, as stated on the design plans included in **Appendix A** (sheet BP-1.01). In addition, the proposed fencing, guardrails, and retaining walls would be constructed in accordance with the requirements of the California Building Code and would be designed to withstand adverse effects from strong ground shaking. Therefore, ground rupture and impacts that would be associated with this phenomenon on human life are not anticipated.

Threshold E. Implementation of the Project would not include or create a need for the use of septic tanks and would not require alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Therefore, the impact of the Project with or without the Optional Interim Trail would be **less than significant** (Thresholds A1 and E). No mitigation is required.

3.15.5 Hazards and Hazardous Materials

The following thresholds pertaining to Hazards and Hazardous Materials (from Appendix G of the *CEQA Guidelines*) were excluded from discussion in Section 3.7, *Hazards and Hazardous Materials*. Refer to Section 3.7 for the discussions relevant to Thresholds B and C.

Would the Project:

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?

F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Threshold A. Routine construction-related hazardous materials would be used, transported, and disposed of during construction. However, the use, transport, and disposal of hazardous materials would be subject to federal, state, and local regulations pertaining to the transport, use, storage, and disposal of hazardous materials. The Toxic Substances Control Act, Resource Conservation and Recovery Act, Hazardous Waste Control Act, and Capitola Local Hazard Mitigation Plan would minimize risks associated with the storage, disposal, and transport of hazardous materials. The U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, regulates the transportation of hazardous materials, as described in the Code of Federal Regulations, Title 49, and California Code of Regulations, Title 13. This provides additional regulation for the transportation of hazardous materials by designating appropriate hazard label shipping preparation, vehicle loading, and hazardous materials registration, among other requirements. Documentation of compliance with hazardous materials regulations codified in Titles 8, 22, and 26 of the California Code of Regulations is required for all hazardous materials and hazardous waste transport. Additionally, the California Building and Fire Code requirements detail standards for the safe management of materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards. Compliance with all applicable federal, state, and local requirements related to the routine transport, use, or disposal of hazardous materials would maximize containment through safe handling and storage practices and provide for prompt and effective cleanup if an accidental release occurs. Additionally, impacts of moving hazardous materials would be limited via compliance with applicable California Department of Toxic Substances Control and California Division of Occupational Safety and Health regulations. Once constructed, the trail would be used by pedestrians and bicyclists for active recreation and transportation. Standard recreational and transportation uses that would take place along the trail would not involve the routine transport, use, or disposal of hazardous materials. Therefore, the Project would not cause a significant hazard to the public. This impact would be **less than significant** (Threshold A). No mitigation is required.

Threshold D. According to the Cortese list pursuant to California Government Code, Section 65962.5, the trail alignment is not listed on hazardous materials sites (DTSC 2023; SWRCB 2023). As such, the

trail alignment would not create a significant hazard to the public or the environment beyond the impacts discussed under other criteria in this section. In addition, eight sites that are on a list of hazardous materials sites are within 1/8 mile of the Project corridor. However, the Phase I Initial Site Assessment (WHA 2023) concluded that these sites do not appear to have the potential to have resulted in hazardous contamination in the Project area. Because the trail alignment is not on a site that is included on a list of hazardous materials sites compiled pursuant to California Government Code, Section 65962.5, **no impact** would occur (Threshold D). No mitigation is required.

Threshold E. The closest airport to the trail alignment is the Monterey Bay Academy Airport, a private airport, approximately 6 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County near the City of Watsonville. The Monterey Bay Academy Airport does not have an adopted Airport Land Use Plan. The closest public airport to the trail alignment is the Watsonville Municipal Airport, located approximately 7 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County in the City of Watsonville. The Project alignment would not be within the Watsonville Municipal Airport Master Plan area (Watsonville Municipal Airport 2003) or within 2 miles of a public airport or public use airport. Therefore, construction personnel and trail users associated with the Project would not experience safety hazards or excessive noise related to proximity to an airport, and there would be **no impact** (Threshold E). No mitigation is required.

Threshold F. The County Operational Area Emergency Management Plan addresses the planned response to large-scale emergencies affecting the unincorporated area of the County (County of Santa Cruz 2015). Emergencies in the City of Capitola (City) are covered under the Santa Cruz County Operational Area Emergency Management Plan. The trail alignment would not impair implementation of or physically interfere with either of these existing emergency plans because the trail alignments would not alter existing emergency plan routes or existing transportation facilities that have been identified as emergency routes or otherwise identified for use during an emergency. The trail alignments would intersect existing roadways (e.g., 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, New Brighton State Beach roadway, New Brighton Road, Estates Drive, and Mar Vista Drive); however, neither trail alignment proposes adding any physical elements that would block any existing emergency plan routes. Therefore, the impact would be **less than significant** (Threshold F). No mitigation is required.

Threshold G. The trail would be located within Incorporated and Unincorporated Local Responsibility Areas of the County that are not designated as Very High Fire Hazard Severity Zones (FHSZs) (CAL FIRE 2007a). None of the trail would be located in a State Responsible Area but would be less than 0.25 mile from High and Moderate FHSZs (CAL FIRE 2007b, 2022). However, the trail would be separated from the State Responsible Area FHSZs by SR-1. Because the trail alignment would not be located in an FHSZ and would be separated from nearby FHSZs by SR-1, Project implementation would not expose trail users to impacts from wildland fire. This impact would be **less than significant** (Threshold G). No mitigation is required.

3.15.6 Land Use and Planning

The following threshold pertaining to Land Use and Planning (from Appendix G of the *CEQA Guidelines*) was excluded from discussion in Section 3.9, *Land Use and Planning*. Refer to Section 3.9 for the discussion relevant to Threshold B.

Would the Project:

A. Physically divide an established community?

Threshold A. Project construction is anticipated to begin in 2026 and would last approximately 48 months. Construction staging would take place on existing disturbed or paved areas along the rail corridor within the Santa Cruz County Regional Transportation Commission (RTC)-owned right-of-way (ROW) or at the designated staging areas identified in Section 2.6, *Project Construction*. All equipment and materials would be stored, maintained, and refueled in clearly defined and designated portions of the staging areas in accordance with permit requirements. Construction activities and staging would be temporary in nature, and any equipment used during construction would be removed after completion of the Project. No existing communities are within the Project corridor and rail line ROW. The railroad ROW is an existing feature that is surrounded by developed communities, and construction activities within the railroad ROW would not physically divide communities along the Project corridor. Therefore, Project construction would not physically divide an established community, and impacts would be **less than significant** (Threshold A). No mitigation is required.

Once constructed, the trail alignments would not physically divide established communities because neither the *Ultimate Trail Configuration (Trail next to Rail Line)* alignment nor the *Optional Interim Trail (Trail on the Rail Line)* alignment would be physically large enough to divide a community. The Project would include safety fencing to separate trail users from the rail, as needed. Although installation of safety fencing would prevent people from crossing the rail corridor, any people crossing the rail line would be trespassing unless they are crossing at the legal roadway and approved crossings. In addition, even with installation of safety fencing, trail users could cross the rail corridor at the legal roadway and approved crossings. Because both trail alignments would follow the existing rail line, the alignments and safety fencing would not act as new dividing elements that were not already introduced by the Santa Cruz Branch Rail Line. As discussed in Section 2.5, *Project Operation and Maintenance*, it is estimated there could 500-1,500 trail users daily (refer to Section 2.5 under Trail Use)for transportation and recreation. Additionally, the trail would require intermittent maintenance, including but not limited to vegetation management, pavement sealing and repair, trash and recycling disposal, and fence repair and replacement. These trail use and maintenance activities would not result in the physical division of communities located along the Project corridor. The Project would create a multi-modal bicycle/pedestrian trail, which would encourage connections along the trail itself rather than create physical divisions. The trail would extend through established communities via the existing railroad ROW. The proposed improvements within the Project corridor would increase connectivity and access to surrounding communities by allowing formal use of the corridor for transportation and recreation purposes. As such, the Project would not physically divide an established community and would have a beneficial effect of increasing connectivity within the community. Therefore, the impact would be **less than significant** (Threshold A). No mitigation is required.

3.15.7 Mineral Resources

All thresholds pertaining to Mineral Resources (from Appendix G of the *CEQA Guidelines*) are discussed below.

Would the Project:

A. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

B. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Thresholds A and B. The Project would not result in loss of availability of a known mineral resource or a locally important mineral resource recovery site delineated on a local General Plan, Specific Plan, or other land use plan because no known mineral resources are located along the Project corridor, according to the Capitola and County General Plans (City of Capitola 2019; Santa Cruz County 1994). Implementation of the Project would also not result in a change in access or ability to recover known mineral resources within the City or County. Therefore, the Project with or without the Optional Interim Trail would result in **no impact** related to mineral resources (Thresholds A and B). No mitigation is required.

3.15.8 Noise

The following threshold pertaining to Noise (from Appendix G of the *CEQA Guidelines*) was excluded from discussion in Section 3.10, *Noise*. Refer to Section 3.10 for the discussions relevant to Thresholds A and B.

Would the Project:

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, expose people residing or working in the project area to excessive noise levels?

Threshold C. As stated under 3.15.5, *Hazards and Hazardous Materials*, the Project corridor is not included in an Airport Land Use Plan or within 2 miles of a public airport. The closest airport to the trail alignment would be the Monterey Bay Academy Airport, a private airport, approximately 6 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County near the City of Watsonville. The Monterey Bay Academy Airport does not have an adopted Airport Land Use Plan. The closest public airport to the trail alignment is the Watsonville Municipal Airport, located approximately 7 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County in the City of Watsonville. The trail alignment would not be located within the Watsonville Municipal Airport Master Plan area (Watsonville Municipal Airport 2003) or within 2 miles of a public airport or public use airport. Therefore, the Project with or without the Optional Interim Trail would result in **no impact** regarding the exposure of people using, constructing, or maintaining the trail to excessive noise related to the operation of either a private or public air strip (Threshold C). No mitigation is required.

3.15.9 Population and Housing

All thresholds pertaining to Population and Housing (from Appendix G of the *CEQA Guidelines*) are discussed below.

Would the Project:

A. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
B. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Threshold A. The Project does not include components that would induce unplanned population growth either directly by constructing new homes or businesses or indirectly by extending roads or other infrastructure that would support further population growth in the area. The new trail would enable the existing population to walk and use bicycles, instead of use their cars, as an alternative transportation mode and for recreation. Therefore, the Project with or without the Optional Interim Trail would not induce population growth, and there would be **no impact** (Threshold A). No mitigation is required.

Threshold B. The Project would be located primarily within the RTC-owned rail corridor ROW, City road ROW, or County road ROW. Temporary or permanent easements may be needed for construction, maintenance, and Project features such as trail connections and drainage improvements. These temporary and permanent easements would not result in the permanent displacement or relocation of people.

There may be existing structures that encroach into the RTC-owned ROW that conflict with the trail. These unauthorized encroachments will be resolved by the RTC per their Encroachment Policy, regardless of the Project, as part of a separate process prior to trail construction in this area. As part of this process, property owner options include but are not limited to physically moving the mobile homes several feet outside the RTC-owned rail corridor ROW and within the same mobile home park; if adequate space is not available to physically move an individual mobile home, property owners could modify or replace the mobile home with a slightly smaller structure that fits within the respective lot in the mobile home park or elsewhere on the owner's property, or they could move the mobile home to another nearby mobile home park that has space to accommodate it. Because the encroachments are unauthorized, residents would not be considered "displacees" as defined by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. However, the RTC would implement avoidance and minimization measure in accordance with their Encroachment Policy to reduce impacts to property owners and residents.

In summary, the Project would not result in the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the impact would be **less than significant** (Threshold B). No mitigation is required.

3.15.10 Public Safety and Services

The following threshold pertaining to Public Safety and Services (from Appendix G of the *CEQA Guidelines*) applies to several services, including fire protection, police protection, schools, parks, and other public facilities, including healthcare facilities and libraries. The discussion of schools and libraries was excluded from Section 3.11, *Public Safety and Services*, and is provided below. Refer to Section 3.11 for the discussions relevant to fire protection, police protection, and parks.

Would the Project result in:

A. Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   - Schools?
   - Libraries?

Threshold A. As a multi-use trail, the Project would not increase the residential or employment populations that would in turn use schools or libraries in unincorporated Santa Cruz County or the City of Capitola. Rather, it would provide recreational opportunities for current residents and an alternative to vehicle travel. While the trail is anticipated to accommodate an estimated 500-1,500 daily trail users, these trail users would not increase demand for schools or libraries because they would be primarily existing residents who already use these facilities. Therefore, the impact of the Project with or without the Optional Interim Trail would be **less than significant** (Threshold A). No mitigation is required.

3.15.11 Recreation

All thresholds pertaining to Recreation (from Appendix G of the *CEQA Guidelines*) are discussed below. The potential impact to park facilities is also discussed in Section 3.11.

Would the Project:

A. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

B. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Threshold A. The Project with or without the Optional Interim Trail would enhance recreation opportunities by providing new facilities (multi-use trail) along Segments 10 and 11. The new trail along Segments 10 and 11 would provide additional bicycle and pedestrian access to existing neighborhood and regional parks and recreational facilities along the Project corridor, including Simpkins Family Swim Center; Jade Street Park; and Capitola Beach, New Brighton State Beach, and other parks and beaches. Therefore, County and City residents and visitors currently using these parks and recreation facilities would have an additional non-vehicular means for traveling to and accessing these facilities. Although improved access could result in a minor increase in the use of these recreation facilities, it is not expected to be a substantial increase such that it could create or accelerate physical deterioration of these facilities. Additionally, as described under Section 3.15.9, *Population and Housing*, the Project would not result in additional population that would increase the demand on existing facilities. Therefore, the impact of the Project with or without the Optional

Interim Trail on existing recreational facilities would be **less than significant** (Threshold A). No mitigation is required.

Threshold B. The Project involves construction of a new recreational facility, as well as an alternative (non-vehicular) transportation facility for bicyclists and pedestrians, and the potential impacts of the new facility are addressed in Sections 3.1–3.15 of this EIR. The Project does not include additional recreational facilities or require the construction or expansion of additional recreational facilities that could result in adverse physical effects on the environment. Therefore, the impact of the Project with or without the Optional Interim Trail would be **less than significant** (Threshold B). No mitigation is required.

3.15.12 Transportation

The following thresholds pertaining to Transportation (from Appendix G of the *CEQA Guidelines*) were excluded from discussion in Section 3.12, *Transportation*. Refer to Section 3.12 for the discussions relevant to Thresholds B and C.

Would the Project:

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

D. Result in inadequate emergency access?

Threshold A. The Project would implement or conform to goals, policies, and objectives mentioned in the County General Plan Circulation Element, Capitola General Plan, and 2045 Santa Cruz County Regional Transportation Plan because it would include a formal multi-modal trail that would facilitate alternative transportation modes such as walking and bicycling along Segments 10 and 11, and because the trail alignments would expand existing alternative transportation networks by connecting the surrounding neighborhoods to the Coastal Rail Trail. In addition, the Project would implement safety design features that would enhance safety along the trail. The additional wayfaring signage and striping modifications along Cliff Drive and through Capitola Village would also increase awareness of other users, separate pedestrian and bicycle lanes along Cliff Drive, and improve the visibility of the existing delineated bicycle lanes by painting the lanes and sharrows green, which would improve safety for both bicyclists and pedestrians. The additional wayfaring signage and striping modifications would be consistent with Policy 2.4 in the 2045 Santa Cruz County Regional Transportation Plan, Policy MO-8.4 in the City of Capitola General Plan, and Policy II-4 in the City of Capitola Local Coastal Program. As shown through the goals, policies, and objectives included in relevant plans and policies addressing the circulation system, the Project would not conflict with the current relevant County or City plans and policies. Therefore, this impact is **less than significant** (Threshold A). No mitigation is required.

Threshold D. Minimum trail widths would be required to accommodate emergency vehicles. According to the 2021 International Fire Code, Appendix D, fire apparatus access roads shall be a minimum width of 20 feet, but the Project is not considered a fire apparatus access road. Under the *Ultimate Trail Configuration (Trail next to Rail Line)* alignment, the typical width of the paved trail would be 12 to 14 feet. However, the trail width could be reduced to as little as 8 feet approaching the eastern side of Monterey Avenue to slow trail users and improve safety at the intersection. Under the *Optional Interim Trail (Trail on the Rail Line)* alignment, the width of the trail would typically be 16 feet but could be reduced to 12 feet at some locations. The Central Fire District indicated that 8 feet is the minimum sufficient width for ambulances to access an area, and ambulances can navigate 7-foot-wide chokepoints when necessary and if approved by the district. When an ambulance cannot reach a certain area, foot access with a wheeled gurney is an

acceptable access method (Mack 2022). Therefore, adequate emergency access would be provided, and this impact is **less than significant** (Threshold D). No mitigation is required.

3.15.13 Wildfire

All thresholds pertaining to Wildfire (from Appendix G of the *CEQA Guidelines*) are discussed below.

Would the Project:

A. Substantially impair an adopted emergency response plan or emergency evacuation plan?

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

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

D. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Threshold A. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. The trail would be located within Incorporated and Unincorporated Local Responsibility Areas of Santa Cruz County that are not designated as Very High FHSZs (CAL FIRE 2007a). None of the trail would be located in a State Responsible Area but would be less than 0.25 mile from High and Moderate FHSZs (CAL FIRE 2007b, 2022). The Project corridor is along the RTC-owned rail corridor, which is routinely maintained including vegetation trimming and removal.

The Project with or without the Optional Interim Trail would not impair the County Operational Area Emergency Management Plan. The trail alignment would not alter existing emergency plan routes or existing transportation facilities that have been identified as emergency routes or otherwise identified for use during an emergency. The Project corridor would intersect existing roadways at 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, New Brighton State Beach roadway, New Brighton Road, Estates Drive, and Mar Vista Drive; however, neither trail alignment proposes adding any physical elements that would block any existing emergency plan routes. Therefore, the impact of the Project with or without the Optional Interim Trail relative to an Emergency Response Plan and Evacuation Plan would be **less than significant** (Threshold A). No mitigation is required.

Threshold B. The Project is an approximately 4.5-mile new multi-use bicycle and pedestrian trail proposed to extend along the RTC-owned railroad corridor from the eastern side of 17th Avenue at the western limits of the Project to the western side of State Park Drive at the eastern limits of the Project. A portion of the trail extends through New Brighton State Beach, which includes dense vegetation. The Project does not include housing or other structures that would result in permanent occupants along the Project corridor. There is ongoing vegetation trimming and removal along the RTC-owned rail corridor, which would continue. Once the trail is constructed, there would be additional routine maintenance of vegetated portions of the trail, including weed removal, tree/shrub trimming, and fallen tree removal (refer to *Trail Maintenance* under Section 2.5, *Project Operation and Maintenance*), that would prevent overgrowth that could potentially fuel wildfire. Therefore, the Project with or without the Optional Interim Trail would not expose Project occupants to pollutant concentrations from a wildfire, and the impact would be **less than significant** (Threshold B). No mitigation is required.

Threshold C. The Project would not require the installation or maintenance of infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that would exacerbate the fire risk or impact the environment. In addition, as described above, trail maintenance activities would involve routine maintenance of vegetated portions of the trail, including weed removal, tree/shrub trimming, and fallen tree removal, that would prevent overgrowth that could potentially fuel wildfire. Therefore, the Project with or without the Optional Interim Trail would not result in additional Project elements that would exacerbate wildfire risks, and the impact would be **less than significant** (Threshold C). No mitigation is required.

Threshold D. The Project would not 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 for the following reasons. The Project does not include permanent structures that would be occupied by people, and trail users would be transient with short-term exposure to any risks. As described above and in Section 3.15.5, *Hazards and Hazardous Materials*, the impact related to exposure of people or structures to loss, injury, or death involving wildland fires (Threshold G) would be less than significant. As described in Section 3.5, *Geology and Soils* (Impact GEO-2), there are no mapped landslides within the Project corridor, and the potential impact associated with landslides would be less than significant. As described in Section 3.8, *Hydrology and Water Quality* (Impact HYD-3), construction activities would result in ground disturbance that could cause localized alteration of drainage patterns and temporarily increase in erosion and sedimentation, but implementation of the best management practices and compliance with the National Pollutant Discharge Elimination System-required Stormwater Pollution Prevention Plan would reduce this impact to less than significant. After construction, stormwater would surface flow from the new and replaced impervious surfaces into the existing drainage system or natural material swales included in the trail design. All off-site flows would match existing condition drainage patterns. Any off-site flows that would be intercepted by existing or proposed storm drain infrastructure (e.g., catch basins, sidewalk underdrains, V ditches, swales) would be piped in the new storm drain system under the proposed trail to an outlet structure at an existing storm drain system or creek downstream. In addition, the Project corridor is relatively flat in nature and is far from any elevated features. Therefore, it is unlikely that any downslope or downstream impacts associated with post-fire slope instability would occur. Therefore, the Project with or without the Optional Interim Trail would not 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. The impact would be **less than significant** (Threshold D). No mitigation is required.

4 Other CEQA-Required Discussions

This chapter provides a cumulative impact analysis and discusses growth-inducing impacts, irreversible environmental impacts, and significant and unavoidable impacts that could be caused by the **Coastal Rail Trail Segments 10 and 11 Project** (Project).

4.1 Cumulative Impact Analysis

4.1.1 Methodology

The term "cumulative impacts" refers to "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (*California Environmental Quality Act [CEQA] Guidelines*, Section 15355).

A cumulative impact can result from the combination of two or more individually significant impacts or the combination of two or more impacts that are individually less than significant but constitute a significant change in the environment when considered together. To analyze a proposed project's contribution to cumulative impacts, CEQA requires the lead agency to identify past, present, and probable future projects within the vicinity, summarize their effects, identify the incremental contribution of the proposed project to any significant cumulative impacts occurring in the Project region, and recommend mitigation measures as appropriate (*CEQA Guidelines*, Section 15130[b]). Mitigation measures should focus on any cumulatively considerable incremental contribution from the proposed project to any significant cumulative effect created by the past, present, and probable future projects, together with the proposed project or alternative (*CEQA Guidelines,* Section 15130[a][3]; see also *CEQA Guidelines,* Section 15126.2[a][4]).

Section 15130 of the *CEQA Guidelines* permits two approaches for identifying cumulative projects to analyze. The first is the "list" approach, based on a list of past, present, and probable future projects that produce related or cumulative impacts. The list may include projects both within and outside the Rail Trail Segments 10 and 11 Project area. The second is the "projections" approach, based on a summary of projections contained in an adopted plan or related planning document, such as a General Plan, or in an Environmental Impact Report (EIR) prepared for such a plan. A reasonable combination of the two approaches may also be used.

This EIR uses a combination of the "list" and "projections" approaches. **Table 4-1** presents the list of cumulative projects that are considered in the discussions below for each environmental topic. The list of projects was provided by the County of Santa Cruz County (County), City of Capitola, City of Santa Cruz, and the Santa Cruz County Regional Transportation Commission (RTC).

In addition to the list of cumulative projects, the projections approach is used for some issue areas where appropriate. For this method, the analysis considers buildout of the County General Plan and Local Coastal Program (adopted May 1994), Capitola General Plan and Local Coastal Program (amended October 2019), and City of Santa Cruz General Plan and Local Coastal Program. The General Plans provide a framework and guide for making decisions about urban development and transportation improvements within the County and two cities. Accordingly, buildout is considered in this cumulative analysis.

The cumulative impact analysis for each environmental or resource topic considers the effects of cumulative projects located in an appropriate geographic area, which varies by resource topic. For example, the appropriate geographic area for aesthetic impacts is the viewshed from the Project corridor, which is the scope of human eyesight within the vicinity of the corridor. The appropriate geographic area for air quality impacts is the North Central Coast Air Basin, which covers an area of more than 5,100 square miles.

For each resource topic, cumulative impacts were determined in the following manner:

1. Determine whether there is a significant cumulative impact under future conditions with the Project; if yes, then
2. Determine the contribution to the identified significant cumulative impact.

The cumulative impacts for the resource topics analyzed in Chapter 3, *Environmental Impact Analysis*, are discussed in Sections 4.1.2 through 4.1.18 and summarized in **Table 4-2**. In the discussions, "Project" refers to the *Ultimate Trail Configuration (Trail next to Rail Line)*, as well as an *Optional Interim Trail (Trail on the Rail Line)*, which is part of the Project. Any differences in the cumulative impact are addressed in the discussion.

In summary, the Project's contribution to cumulative impacts would not be considerable except for the impacts to aesthetics (disruption of scenic quality and vistas from tree removal), biological resources (tree removal and fragmentation of habitat and wildlife corridors), and greenhouse gas (GHG) emissions (tree removal is inconsistent with GHG Reduction Plans).

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status
County of Santa Cruz Projects[a]			
Pure Water Soquel: Groundwater Replenishment and Seawater Intrusion Prevention Project	Multiple	Recycled water will be purified at the new Chanticleer Water Purification Center and transported via pipeline to seawater intrusion prevention wells. The project includes facilities in portions of Santa Cruz, Capitola, Live Oak, Soquel, and Aptos.	Construction 2022–2023.
Dominican Hospital Planned Unit Development	1555 Soquel Drive	Establishing a Planned Unit Development for construction of an approximately 84,000-square-foot addition to the existing hospital facility. Project includes construction of a new surgery center, reconfiguration of the existing emergency room, and construction of a three-story parking structure.	Project approved. Construction anticipated 2022–2024.
Arana Sewer Trunk Line Replacement Project	Soquel Avenue and La Fonda Avenue	The project involves replacement of approximately 2,900 linear feet of aging and deteriorated sewer trunk line and associated manholes between Brookwood Drive and La Fonda Avenue.	Project not yet approved. Construction anticipated 2023–2024.
Valencia Creek Sewer Relocation Project	Valencia Creek near Soquel Drive, Aptos	Approximately 535 feet of gravity sanitary sewer would be abandoned in-place. Approximately 1,355 feet of new gravity sanitary sewer would be constructed.	Project approved in 2021. Construction anticipated 2023.
Sustainability Policy and Regulatory Update	Santa Cruz County	Update of the County General Plan and Local Coastal Program and County Code (Sustainability Policy and Regulatory Update).	Environmental phase. No construction for General Plan update.
9041 Soquel Drive, Aptos Mixed Use Project	9041 Soquel Drive, Aptos	Construction of ~10,800-square-foot mixed-use building for office space and three residential units. A portion of the parking lot and an associated retaining wall encroach into the riparian corridor within the arroyo along Valencia Creek.	Environmental phase. Construction anticipated 2022–2024.
Live Oak Library Annex	979 17th Avenue, Santa Cruz	Construction of an ~2,000-square-foot library annex at the existing Simpkins Family Swim Center building and renovation of the existing community room.	Construction 2021–2023.
Aptos Branch Library	7695 Soquel Drive, Aptos	Demolition of existing library and construction of new larger library.	Construction 2022–2023.
Soquel Drive Buffered Bike Lane and Congestion Management Project	Soquel Drive, between La Fonda Avenue and State Park Drive	Pedestrian and bicycle improvements along 5.6 miles of the busiest segment of Soquel Drive from La Fonda Avenue to State Park Drive.	Construction anticipated 2023–2024.
Residential	Maciel Avenue	23 detached homes.	Application in process; not yet scheduled for hearing.
Residential	Mattison Lane	24 semi-detached units.	Application in process; not yet scheduled for hearing.

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status
Residential	Mattison Lane (north of Highway 1)	10 units on two lots were previously approved. A separate application would subdivide the development to create 10 lots and a common area parcel. Development would not proceed until the associated land division is approved.	Application to subdivide in process; not yet scheduled for hearing.
Residential	Trembley Lane (South County)	Seven lots	Application in process; not yet scheduled for hearing.
Mixed Use	1500 Capitola Road	Construction of 57 units of affordable housing and community health and dental clinics.	Construction 2021–2023.
Mixed Use	9041 Soquel Drive	10,981-square-foot building with office space on first floor and three residential apartment units on second floor.	Construction 2023–2024.
City of Capitola Projects[b]			
Residential	4401 Capitola Road	100% affordable housing development with 36 residential units.	Recently approved. Construction anticipated 2023–2024.
Residential	1098 38th Avenue	100% affordable housing development with 52 units.	Pre-application. Construction anticipated 2026.
Capitola Wharf Resiliency Project	1400 Wharf Road	The project involves repairs to the storm damaged sections of the wharf, new decking and railing, pile and utility repairs and replacements, and new permanent public restrooms.	Construction 2023–2024.
City of Santa Cruz Projects[c]			
Coastal Rail Trail Segment 7, Phase 2	Bay Street to Beach Street/Pacific Avenue roundabout	Bicycle/pedestrian multi-use path, as part of the MBSST Network Master Plan. Phase 1 between Natural Bridges Drive and Bay Street is already constructed.	Construction 2023–2024.
Coastal Rail Trail Segments 8 and 9	Pacific Avenue roundabout to 17th Avenue	Bicycle/pedestrian multi-use path, as part of the MBSST Network Master Plan.	Project approved in 2023. Construction anticipated 2025–2026.
Highway 1/9 Intersection Improvements	Highway 1/9 intersection	Intersection widening, adding turn lanes.	Construction 2021–2022.
Murray Street Bridge Seismic Retrofit/Barrier Rail	Murray Street over Santa Cruz Harbor	Bridge seismic retrofit, deck widening, barrier replacement, widening of the southern (coastal) side sidewalk to over 7.5 feet, and widening of the existing bike lanes to 6 feet wide.	Construction 2023–2025.
San Lorenzo River Lagoon Culvert	San Lorenzo River mouth	Culvert installation to provide a water height control system to prevent the unnatural flooding and reduce lagoon breaches.	Construction 2022.

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status
Wastewater Treatment Facility Water Treatment and Pure Water Soquel Pipe Conveyance	110 California Street and roadways between the Santa Cruz facility and Chanticleer Water Purification Center	Construction of a Title 22 treatment facility and installation of ~8 miles of pipeline to carry recycled water from the Santa Cruz facility to the upcoming Chanticleer Water Purification Center and three seawater intrusion prevention wells as part of the SqCWD's Pure Water Soquel Project.	Construction 2022–2023.
Downtown Library & Affordable Housing Project	Lot 4 between Cathcart, Cedar and Lincoln Streets	Construction of a new library, childcare facility, 100–125 housing units, and 310 parking spaces at City of Santa Cruz-owned Parking Lot 4.	In design. Construction anticipated 2024–2026.
Mixed Use	130 Center Street	Six-story, mixed-use building with 233 Single Room Occupancy units and 2,618 square feet of ground floor commercial space on a parcel.	Design approved. Construction anticipated 2023–2024.
Mixed Use	524 Center	Design permit for a mixed-use supportive housing development consisting of 2,210 square feet of commercial retail space, 65 residential units, and construction of a public paseo on property located in the Central Business District zoning district.	Design approved. Construction anticipated 2023–2024.
Mixed Use	119 Coral Street	Residential demolition authorization permit to demolish six transitional housing units and design and special use permits to construct 120 studio units to be used as permanent supportive housing and one manager's unit with a ground floor recuperative care center, behavioral health clinic, and residential lobby with shared residential space and service provision space in the Community Commercial zoning district.	Design approved. Construction anticipated 2023–2024.
Industrial	135 Dubois	Design permit, boundary adjustment, and sign permit to combine two parcels and construct a 107,845-square-foot self-storage building (Statutory Exemption).	Design approved. Construction anticipated 2023–2024.
Residential	126 Eucalyptus	Demolition of two existing school buildings (approximately 28,417 square feet) and construction of a 76-unit (including 15 full dwelling units) senior housing facility on site.	Pending design approval. Construction anticipated 2024–2025.
Mixed Use	530 Front	Permits to demolish existing commercial buildings and construct a mixed-use condominium building with 170 residential dwelling units and 10,338 square feet of commercial space on site.	Pending design approval. Construction anticipated 2024–2025.
Mixed Use	Pacific/Front	Demolition of five commercial buildings and construction of a six-story, 315,698-square-foot mixed-use building with 205 residential apartments and 10,656 square feet of ground floor.	Construction 2023–2024.

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status
Residential	1930 Ocean Street	32-unit residential condominium development.	Design approved. Construction anticipated 2024–2025.
Mixed Use	902 Pacific Avenue	Demolition of an existing structure and construction of a new downtown Santa Cruz Pacific Station Metro Station including 22 bus bays, pedestrian circulation and crosswalks, and solar array canopies on a parcel within the Central Business District/Coastal Zone Overlay District/Floodplain District zoning district and within the Front Street/Riverfront Corridor subareas of the Downtown Plan.	Design approved. Construction anticipated 2024–2025.
Mixed Use	818 Pacific Avenue	Demolition of three commercial buildings and construction of a seven-story, mixed-use building with 70 affordable residential apartments, 15,228 square feet of ground floor commercial and residential amenity space, and 15,665 feet of medical office space on the second floor.	Design approved. Construction anticipated 2023–2024.
Mixed Use	1013 Pacific Avenue	Demolition of the existing vacant mixed-use building, and construction of a four-story building with 17 residential condominiums and 4,342 square feet of ground floor commercial space.	Design approved. Construction anticipated 2023–2024.
Mixed Use	2035 Pacific Avenue	Design permit and slope variance to construct a mixed-use building that includes 3,777 square feet of ground floor office space and 26 units above.	Pending design approval. Construction anticipated 2024–2025.
Mixed Use	418 Front	Combination of five parcels, demolition of two commercial buildings, and construction of a seven-story, mixed-use building with 175 residential condos and 11,498 square feet of ground floor and levee front commercial space on site.	Design approved. Construction anticipated 2023–2024.
Mixed Use	513 Soquel	Demolition of existing structures and construction of three new buildings, including a five-story, mixed-use building, a five-story residential building, and a three-story residential building consisting of 43 residential units and 1,166 square feet of commercial space.	Pending design approval. Construction anticipated 2024–2025.
Mixed Use	831 Water Street	One four-story building and one five-story mixed-use building with 145 residential apartments and ground floor commercial space.	Construction anticipated 2024–2025.

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status
Mixed Use	190 West Cliff	Construct a four-story mixed-use project consisting of two levels of underground parking, approximately 14,000 square feet of ground level commercial, and 89 residential condominium units at 190 West Cliff Drive.	City of Santa Cruz permit approved. Appealed to Coastal Commission. Construction anticipated 2024–2025.
Santa Cruz County Regional Transportation Commissiond[d]			
Highway 1, 41st Avenue to Soquel Drive Auxiliary Lanes, Bus-on-Shoulder, and Chanticleer Avenue Bike/Pedestrian Overcrossing	Highway 1, between 41st Avenue and Soquel Drive	Construction of northbound and southbound auxiliary lanes and bus-on-shoulder improvements between the 41st Avenue and Soquel Avenue/Drive interchanges and construction of a new bicycle and pedestrian overcrossing at Chanticleer Avenue.	Construction anticipated 2022–2024.
Highway 1, Bay Avenue/Porter Street to State Park Drive Auxiliary Lanes, Bus-on-Shoulder, and Mar Vista Drive Bike/Pedestrian Overcrossing	Highway 1, between Bay/Porter and State Park Drive	Construction of northbound and southbound auxiliary lanes and bus-on-shoulder improvements between the Bay Avenue/Porter Street to State Park Drive and construction of a new bicycle and pedestrian overcrossing at Mar Vista Drive.	Construction anticipated 2023–2025.
Highway 1, State Park Drive to Freedom Boulevard Auxiliary Lanes, Bus-on-Shoulder, and Coastal Rail Trail Segment 12	Highway 1, between State Park Drive and Freedom Boulevard	Construction of northbound and southbound auxiliary lanes and bus-on-shoulder improvements between the State Park Drive and Freedom Boulevard interchanges, replacement of two existing railroad bridges between the State Park Drive and Rio Del Mar Boulevard interchanges, widen the Aptos Creek bridge, and construct Coastal Rail Trail Segment 12 from State Park Drive to Rio Del Mar Boulevard.	Environmental complete in 2023. Construction anticipated 2025–2026.
Coastal Rail Trail Segment 5	SCBRL, between Wilder Ranch and Davenport	Construct 7.5-mile multi-use bicycle and pedestrian trail, as part of the MBSST Network Master Plan.	Construction anticipated 2023–2024.
Coastal Rail Trail Segments 13–17, Segment 18 (Phases 2 and 3), Segments 19–20	Santa Cruz County, Rio Del Mar Boulevard to Pajaro River	Construct multi-use bicycle and pedestrian trail between Rio Del Mar Boulevard and Pajaro River as part of the MBSST Network Master Plan.	Construction 2025–2035.
Rail Service	SCBRL	The RTC is planning for development of electric passenger rail transit service on the SCBRL.	Project development 2023–2035.
Rail Corridor Maintenance Vegetation Trimming and Removal	SCBRL	Vegetation/tree trimming and/or removal, as needed to clear culverts, regrade ditches, remove damaged or fallen trees, and otherwise maintain the rail corridor. As part of the RTC's routine maintenance, there would be continued vegetation/tree trimming and removal, including potential removal of an unspecified number trees that present hazards or are in poor condition such that they are a threat to the integrity of the rail line, trail, and/or public safety.	Ongoing.

Table 4-1 List of Cumulative Projects

Project Name/Type	Location	Description	Status

[a] The list of projects was developed by first identifying projects listed on the Santa Cruz County website and then refined by the County's Public Works Department (Matt Machado). The list was then reviewed and updated by the County Planning Department and Rob Tidmore in spring/summer 2023.

[b] To come from the City of Capitola.

[c] The list of projects was first developed with input from the City of Santa Cruz Planning staff (Mike Ferry) and Public Works staff (Chris Schneiter) on July 7, 2022.

[d] The list of projects was first developed by identifying projects listed on the RTC's website and then refined by staff (Grace Blakeslee) on July 13, 2022.

MBSST = Monterey Bay Sanctuary Scenic Trail; RTC = Santa Cruz County Regional Transportation Commission; SCBRL = Santa Cruz Branch Rail Line; SqCWD = Soquel Creek Water District

Table 4-2 Summary of Project Contribution to Significant Cumulative Impacts

Resource Topic	Significant Cumulative Impact from Planned Development and Projects Listed in Table 4-1	Project Contribution
Aesthetics	Increased development in open space disrupting scenic vistas.	Considerable, from tree removal
	Increased light and glare.	Not considerable
Air Quality	Emission of criteria air pollutants from Project construction and operation.	Not considerable
Biological Resources	Loss of trees, including Heritage, Significant, and Protected Trees, and fragmentation of habitat and wildlife corridors.	Considerable, from tree removal and loss of wildlife movement habitat
Cultural Resources	No significant cumulative impact to archaeological resources. No significant cumulative impacts to the historical significance of the Santa Cruz Railroad. Potentially significant impacts to other historical resources within the City and County.	Not considerable
Energy	No significant cumulative impact.	No considerable
Geology and Soils	No significant cumulative impact.	Not considerable
GHG Emissions/Climate Change	Statewide GHG emissions.	Not considerable
	Not consistent with GHG Reduction Plan (County CAAP Strategy 18, increasing urban tree canopy).	Considerable, tree removal
Hazards and Hazardous Materials	No significant cumulative impact.	Not considerable
Hydrology and Water Quality	No significant cumulative impact.	Not considerable
Land Use and Planning	No significant cumulative impact.	Not considerable
Noise	Increased ambient vehicle noise levels.	Not considerable
Public Safety and Services	Increased use of public services could reduce available services.	Not considerable
Recreation	Increased use and deterioration of existing facilities and expansion of new recreational facilities.	Not considerable
Transportation	Increased VMT, traffic, potential hazards during construction, and emergency access impairment.	Not considerable
Tribal Cultural Resources	No significant cumulative impact.	Not considerable
Utilities and Service Systems	Increased impervious surface that could alter drainage patterns and require new or expanded drainage facilities.	Not considerable
Wildfire	No significant cumulative impact.	Not considerable

CAAP = Climate Action and Adaptation Plan; GHG = greenhouse gas; VMT = vehicle miles traveled

4.1.2 Aesthetics

The cumulative setting for aesthetics covers the entire coastal area visible to and from the Project corridor, stretching from State Route 1 (SR-1 or Highway 1) and adjacent lands to the coastline. This geographic extent is appropriate because the cumulative viewshed is limited to the scope of human eyesight within the vicinity of a project site.

IMPACT AES-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE AESTHETIC IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE EXCEPT FOR CUMULATIVE IMPACTS TO SCENIC QUALITY DUE TO THE REMOVAL OF MATURE TREES.

Scenic Vistas. Other projects that would occur along the Project corridor include the proposed 1098 38th Avenue residential development project in the City of Capitola and Coastal Rail Trail Segment 9 to the west and Segment 12 to the east. These adjacent projects could lead to the conversion of vacant areas along the Project corridor. Consequently, the increased development in vacant areas disrupting scenic vistas could result in a significant cumulative impact to scenic vistas. The Project would remove 803 trees that add to the scenic quality of enjoyed vistas in this area, Segment 9 would remove approximately 381 trees (City of Santa Cruz 2022), and Segment 12 would remove approximately 527 trees (RTC 2023). Therefore, there would be a significant cumulative impact related to scenic vistas, and the Project's contribution to this impact on scenic vistas **would be cumulatively considerable**.

Applicable Regulations. As detailed in **Table 4-1**, the past, present, and reasonably foreseeable projects are primarily related to infrastructure improvements and residential or mixed-use projects. Cumulative development in the Santa Cruz County region would be required to comply with any policies established by relevant planning documents that govern scenic quality, such as the County General Plan, County Code, Capitola General Plan, Capitola Municipal Code, City of Santa Cruz General Plan, and the City of Santa Cruz Municipal Code. Therefore, there would be no cumulative impact related to conflict with applicable regulations that govern scenic quality. Because the Project would also be required to comply with these policies, the Project's contribution to impacts regarding conflict with applicable regulations that govern scenic quality **would not be cumulatively considerable**.

Light and Glare. Cumulative effects of lighting are visible over a wide area, and collective lighting from denser development can create skyglow. Planned development would ultimately increase the effects of skyglow in the Santa Cruz region, and there would be a cumulative impact related to nighttime lighting. The Project corridor is located in an urbanized setting. As described under Impact AES-3 in Section 3.1, *Aesthetics*, implementation of the Project would introduce a minor amount of new lighting sources, such as exterior pedestrian lighting. However, any new lighting would be "dark sky compliant" in that it would minimize light pollution and offensive glare by directing light downward so it would not spill beyond the trail. Therefore, the Project's contribution to cumulative light and glare impacts **would not be cumulatively considerable.**

In summary, the Project would result in a **cumulatively considerable contribution** to the identified significant cumulative impact to the scenic quality of scenic vistas due to Project tree removal. The Project **would not result in a cumulatively considerable contribution** to impacts regarding conflict with applicable regulations or light and glare.

4.1.3 Air Quality

The geographic scope for considering cumulative impacts to air quality is the North Central Coast Air Basin, which is composed of Monterey, Santa Cruz, and San Benito Counties and covers an area of

more than 5,100 square miles. Air pollutants have impacts that are often, though not always, cumulative by nature. Any new source of pollution from foreseeable projects may contribute to violations of criteria air pollutant standards if the existing background sources cause non-attainment conditions, as they do according to the state standards for ozone and particulate matter in the Monterey Bay Air Resources District. Air districts manage attainment of the criteria air pollutant standards by adopting rules, regulations, and attainment plans, which make up a multifaceted programmatic approach to such attainment.

IMPACT AIR-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE AIR QUALITY IMPACT. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

The Monterey Bay Air Resources District CEQA Air Quality Guidelines include recommendations for the analysis of cumulative impacts pertaining to ozone and localized pollutants. Inconsistency with the Air Quality Management Plan (AQMP) is considered a cumulatively adverse air quality impact. Future development in the North Central Coast Air Basin would potentially exceed the AQMP growth assumptions and result in a significant cumulative impact. For example, several new residential mixed-use projects are proposed in the City of Santa Cruz, County of Santa Cruz, and City of Capitola, and potential future rail service on the Santa Cruz Branch Rail Line (SCBRL) within the Project vicinity could emit criteria air pollutants from construction and operation.

As discussed under Impacts AIR-1 and AIR-2 in Section 3.2, *Air Quality*, the Project would be consistent with the AQMP and, in fact, would help to implement the AQMP. Therefore, based on the Monterey Bay Air Resources District Guidelines, the Project's contribution to a cumulative air quality impact related to AQMP consistency would not be cumulatively considerable. In addition, as indicated in Impact AIR-3, the Project would not result in new vehicle trips and would not result in impacts related to carbon monoxide hotspots. Because the Project would be consistent with the AQMP and would result in less than significant impacts pertaining to criteria air pollutants, the Project's contribution to cumulative air quality impacts **would not be cumulatively considerable**.

4.1.4 Biological Resources

The cumulative setting for biological resources is the County of Santa Cruz from the North Coast, Big Basin Redwoods State Park, and Castle Rock State Park in the north to the Watsonville City limits at the Pajaro River in the south. This cumulative extent is appropriate because it encompasses the planning area for the County and provides the County, cities within the County, and the public with the opportunity to think broadly about regional land use planning and impacts on biological resources, including infill development; tree removal in the context of wildlife habitat, climate change, and the urban heat island effect; maintenance and establishment of parks, open spaces, and urban forest, with consideration of equitable distribution; retaining and enhancement of opportunities for wildlife movement locally and across the region; and mitigation opportunities on a regional scale.

This extent includes the planned developments that would impact biological resources, both within the City of Capitola and unincorporated County (Live Oak and Aptos and in the larger regional setting of open spaces and parks, creeks and drainages, natural communities, rangeland, coastal resources, and connectivity [links] between open spaces). This setting includes the length of the 32-mile, RTC-owned rail corridor.

The 4.5-mile-long Project corridor extends along the SCBRL, from 17th Avenue to State Park Drive, and intercepts a range of land uses and habitat types. Project activities would generally be limited to the Project corridor and rail right-of-way, access routes, and staging areas.

IMPACT BIO-C CUMULATIVE DEVELOPMENT WOULD RESULT IN SIGNIFICANT CUMULATIVE BIOLOGICAL RESOURCES IMPACTS. THE PROJECT'S CONTRIBUTION WOULD BE CUMULATIVELY CONSIDERABLE.

Cumulative projects in the County of Santa Cruz (as identified in **Table 4-1**) that are most relevant to cumulative impacts to biological resources are projects along the rail corridor, including the Coastal Rail Trail Segments 5, 10 through 20 (which implement the Monterey Bay Sanctuary Scenic Trail [MBSST] Network Master Plan), rail service, rail maintenance, and various urban infill redevelopment residential and commercial projects. Presumably, the permanent losses of sensitive biological resources associated with the projects listed in **Table 4-1** would be mitigated within each project's planning and approval process, as with the Project.

Habitat Modification. Projects that improve public access, as well as development and redevelopment projects, could modify the habitats along the SCBRL corridor and throughout the County in general as a result of disturbance from construction activities and the subsequent introduction of and/or substantial increase in public use, which could result in the following:

- Trampling and degradation of sensitive habitats.
- Disruption of habitat values associated with edge habitat.
- Degradation of wetlands, creeks, drainages, riparian habitat, water quality, associated habitat values and functions, and ecosystems services, including channelization of storm runoff that may increase stream flow, erosion, and sedimentation.
- Disruption of wildlife utilization of biological resources for foraging; hydration; cover, shelter, and aestivation/hibernacula[1]; nesting and breeding; movement, dispersal, and migration. Affected wildlife could include monarch butterfly, sensitive fish species, amphibians and reptiles, sensitive and native nesting birds, roosting bats, and San Francisco dusky-footed woodrat.
- Increased fragmentation of open spaces.
- Introduction or increases in litter (including human foods), urine and fecal matter, and off-leash dogs (causing harassment and mortality of wildlife).
- Removal of trees, including Heritage, Significant, Protected, and native trees, and their understory vegetation; conversion of urban forest into hardscape developments; loss of microclimate and climate mitigation effects from trees/urban forests (carbon sequestration); and loss of the ecological functions and values associated with mature woodlands and forest.

The Ultimate Trail Configuration would remove 803 trees. Additionally, there would be tree removal for other planned projects, including but not limited to other rail trail segments and rail line maintenance. For example, Segment 9 would remove approximately 381 trees (City of Santa Cruz 2022), and Segment 12 would remove approximately 527 trees (RTC 2023). Although most of the SCBRL is currently inactive, the RTC performs maintenance annually along the rail corridor to preserve the rail line infrastructure, provide access for maintenance vehicles and services, and protect public safety. The RTC also performs maintenance to repair rail infrastructure for rail operations as needed and based on funding availability. Annual maintenance may include tree trimming, limbing, or removal; vegetation management through mastication (i.e., reducing to small pieces), mowing, and herbicide application; and culvert cleanout and drainage ditch improvements through clearing and grading. Maintenance of the rail line by the RTC falls under the provisions of the 1995 Interstate Commerce Commission Termination Act,[2] which subjects these activities to

[1] Aestivation is a state of animal dormancy, similar to hibernation, although taking place in the summer rather than the winter. Hibernacula is a place where an animal seeks refuge.

[2] The act preempts the state and local regulation of matters directly regulated by the Surface Transportation Board, such as the construction, operation, and abandonment of rail lines.[2] State and local regulations could be used to deny a railroad the ability to perform

federal law; however, state and local laws and regulations are preempted. Therefore, removal and maintenance of larger trees and those within sensitive habitats (e.g., oak woodland, monarch roost sites) would not necessarily be protected by the Heritage, Significant, and Protected Tree Ordinances. Therefore, the undetermined number of trees that could be removed as part of future RTC maintenance activities, combined with tree removal that would be required for other planned projects listed in **Table 4-1**, would be cumulatively significant.

Taken cumulatively, impacts resulting from tree and vegetation removal would result in degradation and fragmentation of wildlife movement corridors, the suite of habitat types, and associated biological resources that occur within the cumulative setting, and result in overall diminished regional ecological functions and values. This would be a significant cumulative impact to biological resources in the region.

As described in Section 3.3, *Biological Resources,* the mature coast live oak and non-native trees along the rail corridor intersect the otherwise fragmented aquatic features, parks, and open spaces along the corridor and the associated sensitive biological resources. The Project would contribute to cumulative impacts by removing trees (803 trees) and disrupting/displacing sensitive habitats (including Environmentally Sensitive Habitat Areas, as defined by the California Coastal Commission) and wildlife movement corridors. Mitigation for biological impacts identified in this EIR include the preparation of a Project-specific Biological Resources Mitigation and Management Plan (MMP) that includes tree replacement and the development of alternate corridors for wildlife movement. However, there is a lack of available undeveloped land in locations that would allow for a reduction in habitat fragmentation or replacement of wildlife movement corridors. Additionally, it would take several decades for replacement trees to establish, mature, and create habitat with multi-tiered canopy, understory vegetation, established duff/soil/micro-organism environment and nutrient cycling, and the associated ecological attributes. Therefore, the Project impact would still be significant.

Cumulative impacts associated with the Optional Interim Trail would be similar to but greater than those of the Project without the Optional Interim Trail because there would be more tree removal (957 trees) and two additional construction periods when considering all three parts of implementing the Optional Interim Trail, and this would subject the habitats along the Project corridor to construction-related disturbances during each stage. Part 1 (rail removal and Optional Interim Trail construction) would remove 288 trees, Part 2 (Optional Interim Trail removal and rail construction) would remove zero trees, and Part 3 (Ultimate Trail Configuration construction) would remove 669 trees. In summary, the Project's contribution to the loss of trees and fragmentation of habitat and wildlife corridors **would be cumulatively considerable**.

To help mitigate the Project's contribution to significant cumulative impacts, Mitigation Measure BIO-C has been identified to require the Project-specific MMP (Mitigation Measure BIO-7b) to also include cumulative conservation goals.

Mitigation Measure BIO-C: Include Cumulative Conservation Goals and Objectives in the Project-Specific Biological Resources Mitigation and Management Plan (Mitigation Measure BIO-7b)

When developing the Project-specific Biological Resources MMP required for Mitigation Measure BIO-7b, the County and/or City of Capitola shall include specific goals, objectives, and qualitative

part of its operations or proceed with activities authorized by the Surface Transportation Board. The requirement to obtain state and local permits would interfere with the RTC's right to conduct operations, would prevent or delay the repair work, and would conflict with the RTC's obligations to make repairs necessary for freight as required by RTC's Agreement with their contracted rail carrier.

performance criteria to maintain functional connectivity between habitat patches and open spaces, including the functions and values of the existing linear feature composed of non-native forest, sensitive habitats, and aquatic features, for movement, dispersal, migration, and genetic exchange of native plants and animals through conservation of the following:

- Sensitive habitats and edge habitats
- Ecosystems services and water quality associated with wetlands, creeks, drainages, and riparian habitat
- Wildlife movement habitat, including resources for foraging; hydration; cover, shelter, and aestivation/hibernacula; nesting and breeding; and movement, dispersal, migration

The MMP shall include adaptive management strategies and shall include an evaluation of (and adaptive management as needed for) the effects of illegal camping, litter (including human foods), urine and fecal matter, and illegal off-leash dogs on biological resources.

4.1.5 Cultural Resources

The geographic scope for considering cumulative impacts to cultural resources is based on the historic, ethnographic, and prehistoric period use patterns of the Project area and surrounding region. The geographic extent of cumulative impacts for the historic period is the County of Santa Cruz. For the ethnographic period, the geographic extent includes the entire traditional Ohlone territory. The geographic context for the prehistoric period includes the City of Capitola and Santa Cruz County and nearby portions of adjacent counties.

IMPACT CR-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE CULTURAL RESOURCE IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

The Project, in conjunction with other nearby past, present, and reasonably foreseeable probable future projects in the region as shown in **Table 4-1**, could adversely impact cultural resources.

Existing and Unidentified Archaeological Resources and Human Remains. Cumulative development in the region, including projects listed in **Table 4-1**, would involve ground-disturbing activities during construction that could encounter and impact known or unknown archaeological resources and human remains given the cultural sensitivity of the Santa Cruz region. However, projects would be required to comply with Chapters 17.56 and 17.84 of the Capitola Municipal Code and Chapter 16.40 of the County Code, which would require evaluation and preservation of resources and stop work in the event of an unanticipated find until the resource is evaluated. Projects would also be subject to California Public Resources Code, Section 5097.98, and California Health and Safety Code, Section 7050.5, with respect to the discovery and handling of human remains. Therefore, the cumulative impact would be less than significant. However, there is still the potential that Project construction would unearth archaeological resources or human remains. The Project would adhere to Capitola Municipal Code, Chapters 17.56 and 17.84; County Code, Chapter 16.40; California Public Resources Code, Section 5097.98; and California Health and Safety Code, Section 7050.5. Additionally, the Project would be required to implement Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d, which require a Worker's Environmental Awareness Program, archaeological monitoring, Native American monitoring, and protocol for unanticipated discovery of cultural resources to reduce impacts related to the potential discovery of archaeological resources during Project construction. With compliance with existing regulation and Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d, the Project's contribution to cumulative impacts to archaeological resources **would not be cumulatively considerable**.

Historical Resources. As discussed in Section 3.4, *Cultural Resources,* two built environment historical resources are located within the Project corridor for the Ultimate Trail Configuration: the Santa Cruz Railroad and the Stockton Avenue Bridge. With Design Option A (Interim Trail on Capitola Trestle over Soquel Creek), there are two built environment historical resources located within the Project corridor: Santa Cruz Railroad and Capitola Trestle Bridge. With Design Option B (Inland Side of Track between Grove Lane and Coronado Street in Capitola), there are no additional built environment historical resources located within the Project corridor.

Three built environment historical resources are located within the Project corridor for the Optional Interim Trail: Santa Cruz Railroad, Stockton Avenue Bridge, and Capitola Trestle Bridge.

The Coastal Rail Trail Segments 7–20 would cumulatively impact the SCBRL by introducing a new feature (trail) in the rail corridor and, for some segments, through track relocation (for the Ultimate Trail Configuration) or removal (for the Optional Interim Trail). However, the track relocation or removal for these cumulative projects would not alter the overall route of the rail corridor (the primary contributing factor to its historical significance) or diminish the integrity of any significant historic features. Therefore, the Santa Cruz Railroad would retain sufficient integrity to convey its historical significance; therefore, the cumulative projects would not result in a combined significant cumulative impact to this resource. For Segments 10 and 11, the Ultimate Trail Configuration alignment would require the track relocation between 17th Avenue and 47th Avenue (1.5 miles), and the Optional Interim Trail alignment would involve removal of 4.7 miles of track and the modifications of some historic materials of the Santa Cruz Railroad (Capitola Trestle Bridge). However, the rail line would retain the character-defining alignment. In addition, these changes constitute 7% of the entire length of the 20.2-mile route of the Santa Cruz Railroad for the Ultimate Trail Configuration alignment and 23% for the Optional Interim Trail alignment. Therefore, the Ultimate Trail Configuration or Optional Interim Trail would not result in a cumulatively considerable contribution to cumulative impacts to the SCBRL.

Cumulative projects have the potential to result in cumulative impacts to other historical resources throughout the County and City. While the other cumulative projects would not impact the Stockton Avenue Bridge, Capitola Trestle Bridge, or contributing elements of the Santa Cruz Railroad, they have the potential to impact other historical resources in the County or City. Therefore, the combined cumulative impacts to historical resources would be potentially significant. As detailed above, the Ultimate Trail Configuration alignment and the Optional Interim Trail alignment would not result in significant impacts to the Santa Cruz Railroad. The Ultimate Trail Configuration and the Optional Interim Trail (Part 3) would involve additional signage and striping modifications to Stockton Avenue Bridge, which would alter this historic bridge but would not constitute a significant impact. The Optional Interim Trail and Ultimate Trail Configuration with Design Option A would require structural repairs and modifications to the Capitola Trestle Bridge. Mitigation Measure CR-1 would require a qualified historic preservation professional to prepare a Secretary of the Interior's Standards Project Review Memorandum to document the rehabilitation and rail trail improvement's compliance with the Secretary of the Interior's Standards. Implementation of this mitigation measure would reduce Project-level impacts to the Capitola Trestle Bridge to a less than significant level. Therefore, the Ultimate Trail Configuration and the Optional Interim Trail would not demolish or substantially alter a historical resource, alter the overall alignment of the rail corridor, or diminish the integrity of any significant historic features. Therefore, the Ultimate Trail Configuration or Optional Interim Trail would not result in a cumulatively considerable contribution to cumulative impacts to historical resources.

Therefore, the Project's contribution to cumulative impacts to historic resources **would not be cumulatively considerable**.

4.1.6 Energy

The geographic scope for considering cumulative impacts related to electricity and natural gas use are the Central Coast Community Energy and Pacific Gas & Electric (PG&E) service area. This scope is appropriate because cumulative projects in the service areas of the Project area energy providers would impact the ability of these providers to meet renewable portfolio standards. The geographic scope for fuel use includes the jurisdictions in the Association of Monterey Bay Area Governments because regional planning to reduce VMT and associated fuel use is guided by the Association of Monterey Bay Area Governments Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS).

IMPACT ENE-C CUMULATIVE DEVELOPMENT WOULD POTENTIALLY RESULT IN A SIGNIFICANT CUMULATIVE ENERGY USE IMPACT RELATED TO INEFFICIENT ENERGY USE. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

New development projects, including those listed in **Table 4-1**, would have the potential to result in regional energy demand, including electricity, natural gas, and fuel use. New structures would be required to comply with increasingly stringent Title 24 building energy use standards. Additionally, many of the cumulative projects, such as new mixed-use development in the City of Capitola, City of Santa Cruz, and County, are consistent with regional and state goals to prioritize compact infill development to reduce fuel use and VMT. The cumulative projects in **Table 4-1** also include other rail trail segments and roadway improvements to increase alternative transportation connections. Therefore, cumulative development would not be expected to result in wasteful, unnecessary, or inefficient energy use or energy use that would conflict with the MTP/SCS or utility provider plans to meet future energy consumption. The Project would provide a new alternative transportation facility and would support MTP/SCS goals to reduce regional fuel use. Similar to the Project, construction of cumulative projects would result in one-time energy use necessary for Project implementation. Therefore, energy impacts from the cumulative projects in **Table 4-1** would not result in a cumulative impact. Thus, the Project's contribution would **not be cumulatively considerable**.

4.1.7 Geology and Soils

The geographic scope for considering cumulative impacts to geology and soils is the Project corridor and the immediately adjacent areas. This scope is appropriate because geologic materials and soils occur at specific locales and are generally affected by activities directly on or immediately adjacent to the soils and not by activities occurring outside the area. In addition, any geologic impacts of the Project would be site specific.

IMPACT GEO-C CUMULATIVE DEVELOPMENT WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE GEOLOGY AND SOILS IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Geology and Soils. The geographic context for the analysis of impacts regarding seismic and other geological hazards is generally site specific rather than cumulative in nature because each development site has unique geologic considerations that would be subject to uniform site development and construction standards. Because of the site-specific nature of potential seismic and soil issues, any future development along the corridor would be required to address these issues on a case-by-case basis through preparation of required soils and geotechnical engineering studies and adherence to the recommendations therein. They would also be required to adhere to existing local and state laws and regulations, including the applicable standards and requirements, such as the American Association of State Highway and Transportation Officials and California

Department of Transportation. Thus, the cumulative geology and soils impact of planned development would not be significant. Furthermore, with adherence to the applicable laws and regulations and required mitigation, the Project's contribution to any cumulative geology and soils impacts **would not be cumulatively considerable**.

Paleontological Resources. Construction of the Project and other projects in the County of Santa Cruz could cumulatively contribute to the disruption or loss of significant paleontological resources because the region is sensitive to such resources. Therefore, the cumulative impacts to paleontological resources could be significant. As described in Section 3.5, *Geology and Soils,* the Project corridor is underlain by geologic units with high paleontological sensitivity. Therefore, ground-disturbing activities associated with Project construction may directly or indirectly destroy a unique paleontological resource or geologic feature in the Project corridor. Implementation of Mitigation Measure GEO-5 would reduce potential impacts to any paleontological resources present within the Project corridor because they would be identified, preserved, and curated at a location where they would be accessible for future research. Because impacts to paleontological resources would be less than significant with Mitigation Measure GEO-5, the Project's contribution to the cumulative effect on paleontological resources **would not be cumulatively considerable**.

In summary, there could be significant cumulative impacts to paleontological resources from planned development and projects, but the Project's contribution **would not be cumulatively considerable**.

4.1.8 Greenhouse Gas Emissions/Climate Change

Greenhouse gases (GHG) and climate change are, by definition, cumulative impacts. The geographic scope for considering cumulative impacts related to GHG emissions is the State of California. Although GHG emissions have worldwide repercussions, the Project's contribution to the impact is addressed in light of the goal to reduce statewide emissions.

IMPACT GHG-C CUMULATIVE STATEWIDE DEVELOPMENT WOULD RESULT IN A SIGNIFICANT CUMULATIVE GHG IMPACT. THE PROJECT'S CONTRIBUTION OF GHG EMISSIONS WOULD NOT BE CUMULATIVELY CONSIDERABLE. THE PROJECT'S CONTRIBUTION TO TREE REMOVAL WOULD BE CUMULATIVELY CONSIDERABLE AND UNAVOIDABLE.

Statewide GHG emissions are an existing significant cumulative impact. As such, the state has established the following statewide emissions reductions targets:

- By 2020, reduce GHG emissions to 1990 levels
- By 2030, reduce GHG emissions to 40% below 1990 levels
- By 2045, achieve carbon neutrality no later than 2045

Each of the planned projects, including those listed in **Table 4-1**, such as new residential and mixed-use development in the City of Capitola, City of Santa Cruz, and County of Santa Cruz would result in one-time GHG emissions during construction that would be a relatively small contribution to total GHG emissions. However, following construction, some of the projects would have operational emissions (e.g., vehicular traffic from mixed-use developments, potential future rail service in the rail corridor) and result in an ongoing increase in statewide GHG emissions if diesel or other fuel would be consumed, contributing to an existing cumulative impact.

Once constructed and in use, the Project would provide a new alternative transportation facility and would not contribute to this increase in GHG emissions from cumulative projects. The Project would implement a segment of the MBSST Network, which is consistent with the goals of the City of Capitola and County Climate Action Plans and the California Air Resources Board Scoping Plan to

increase pedestrian and bicycle facilities and reduce VMT. Therefore, the Project's cumulative GHG emissions impacts **would not be cumulatively considerable**. However, the Project would result in tree removal that would be inconsistent with County Climate Action and Adaptation Plan (2022 CAAP). The new development projects in County listed in **Table 4-1** would also likely contribute to cumulative tree loss. As described in Section 3.6, *Greenhouse Gas Emissions/Climate Change*, under Impact GHG-2, the 2022 CAAP includes Natural/Working Lands Strategies 17 and 18, whereby carbon sequestration is enhanced through conservation of natural habitats and increase of the urban tree canopy. The Project would not be consistent with this strategy identified in an applicable GHG Reduction Plan; thus, the contribution **would be cumulatively considerable and unavoidable.**

4.1.9 Hazards and Hazardous Materials

Cumulative impacts associated with hazards and hazardous materials are generally site specific. As such, the geographic scope for considering cumulative impacts to most hazards is the Project corridor, the immediately adjacent areas, and primary roadways used to transport hazardous materials.

Impact HAZ-C CUMULATIVE DEVELOPMENT WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE HAZARDS AND HAZARDOUS MATERIALS IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Within the geographic scope of cumulative impacts for hazards and hazardous materials, other projects that would occur along the Project corridor include the proposed 1098 38th Avenue residential development project in the City of Capitola and Coastal Rail Trail Segment 9 to the west and Segment 12 to the east. These projects pose the greatest potential for cumulative impacts involving hazardous materials given their proximity to the Project corridor.

Cumulative projects located along SR-1 or the rail corridor could cumulatively increase the potential for exposure of people to hazards from upset during material transport. For any project in **Table 4-1** that requires movement and disposal of hazardous materials, that movement would likely occur along SR-1. Although the transport of hazardous materials or waste could occur along SR-1, U.S. Environmental Protection Agency and U.S. Department of Transportation laws and regulations have been promulgated to track and manage the safe interstate transportation of hazardous materials and waste; thus, there would be no cumulative impact. Similarly, under authority delegated by the U.S. Secretary of Transportation, the Federal Railroad Administration administers a safety program that oversees the movement of hazardous materials throughout the U.S. rail transportation system. Regulations pertaining to the transport of hazardous materials on railroads include specialized training, container sealing and movement, labeling, and emergency response. Enforcement of these laws and regulations and rapid response by local agencies would reduce hazards to the public or environment from reasonably foreseeable upset and accident conditions involving the release of hazardous materials. Compliance with these existing regulations would generally limit the potential for hazardous materials exposure along the SR-1 corridor, rail corridor, and beyond such that the cumulative impact of the cumulative projects would not be significant. The Project itself would not significantly increase the quantity of hazardous materials being transported throughout the Santa Cruz region. Because impacts of the Project would be site specific, minimal in volume, and less than significant, they would not contribute to a significant cumulative effect. Therefore, the Project's contribution to this cumulative impact regarding reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment **would not be cumulatively considerable**.

Hazardous materials releases are generally specific to each project, and the geographic context for hazardous materials impacts focuses on the Project corridor and immediately adjacent lands. As

stated above, projects adjacent to the Project corridor include the City of Capitola's 1098 38th Avenue residential development project and Coastal Rail Trail Segments 9 and 12. The Project and other cumulative projects (such as Segment 9 of the Coastal Rail Trail) would be within 0.25 mile of the same sensitive receptors, including schools, and would undergo construction that could involve the use or release of hazardous materials at the same time as the Project (2026). Because of the site-specific nature of potential hazardous materials-related issues, any future development along the corridor would be required to address these issues on a case-by-case basis through project-specific permitting. Therefore, cumulative impacts associated with nearby projects would not be significant. As discussed in Section 3.7, *Hazards and Hazardous Materials*, under Impact HAZ-1, the Project could expose construction personnel, the public, and students at nearby schools to hazardous materials due to exposure to existing soil contaminants released during Project construction. However, implementation of Mitigation Measures HAZ-1a and HAZ-1b, as well as Mitigation Measure HAZ-1c for the Optional Interim Trail and Design Option A (associated with the Ultimate Trail Configuration), would reduce Project-specific impacts to a less than significant level by requiring soil sampling, remediation, and management. With implementation of Mitigation Measures HAZ-1a through HAZ-1c, exposure to potential hazardous materials, including at nearby schools, would be reduced so that the Project's contribution to a cumulative impact from exposure to soil contaminants **would not be cumulatively considerable**.

In summary, cumulative development could result in significant cumulative impacts concerning transport of hazardous materials, release of hazardous materials, and exposure to soil contaminants. However, the Project's contribution to hazards and hazardous materials impacts **would not be cumulatively considerable.**

4.1.10 Hydrology and Water Quality

The Arana Gulch-Rodeo Watershed and the Soquel Creek Watershed are the cumulative setting for surface water resources. The Arana Gulch-Rodeo Watershed drains a 3.5-square-mile area at the outer (eastern) edges of the City of Santa Cruz. Major waterways and water bodies in this watershed include Arana Gulch, Leona Creek, Schwan Lake, Rodeo Gulch, and several unnamed waterways. The Soquel Creek Watershed drains a 42-square-mile area. Major tributaries include the West Branch (Burns, Laurel, Hester Creek, Amaya Creek, Fern Gulch, Ashbury Gulch, Hinkley Creek, and numerous unnamed waterways) and the Main Branch (fed by Moore's Gulch, Grover Gulch, Love Creek, and Bate's Creek). Smaller tributaries include Noble Gulch, Porter Gulch, Tannery Gulch, and Borregas Creek.

The cumulative setting for groundwater resources is limited to the boundaries of the Santa Cruz Mid-County Groundwater Basin, which underlies the Project corridor.

IMPACT HYD-C CUMULATIVE DEVELOPMENT WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE HYDROLOGY AND WATER QUALITY IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Cumulative projects in **Table 4.1** could result in a substantial number of new impermeable surfaces that could increase runoff of stormwater pollutants, reduce groundwater recharge, and increase stormwater flows that would contribute to a cumulative increase in impacts on water quality. The projects would be subject to federal, state, and local regulations (e.g., the National Pollutant Discharge Elimination System permit) that are designed to reduce stormwater runoff from project sites by promoting infiltration, minimizing impervious, and requiring a no-net increase in flows over the existing condition through hydromodification processes to improve water quality. With the cumulative projects' compliance with applicable laws and regulations and their incorporation of required construction and operational best management practices, no significant cumulative

impacts are anticipated. The Project would be subject to the same applicable laws, and accordingly, the Project's contribution **would not be cumulatively considerable**.

The geographic context for the analysis of cumulative impacts for exposure inundation by flood, seiche, tsunami, or mudflow is site specific and not cumulative in nature. The exposure of one project to inundation is based on the upstream location of a seiche or mudflow or location on the coast for a tsunami and would not affect the location of another cumulative project. Future development projects that would be constructed in an inundation area would be required to incorporate applicable building standards related to flood hazards and tsunamis to minimize the impacts from these types of events. Therefore, no significant cumulative impacts are anticipated, and the Project's contribution **would not be cumulatively considerable.**

In summary, planned development would not result in significant cumulative impacts concerning violation of water quality standards or waste discharge requirements, decreased groundwater supplies or interference with groundwater recharge, alterations to existing drainage patterns, or conflicts with Water Quality or Groundwater Plans. The Project's contribution to hydrology and water quality impacts **would not be cumulatively considerable**.

4.1.11 Land Use and Planning

The cumulative setting for land use and planning includes the area within the vicinity of the Project corridor because it extends through the County. **Figures 3.9-1** through **3.9-4** in Section 3.9, *Land Use and Planning,* show that the land use designations and zoning districts in this area include residential, commercial, industrial, and public facilities uses. Land uses along the Project corridor include residential, commercial, industrial, public lands, and parks and recreation.

IMPACT LUP-C CUMULATIVE DEVELOPMENT WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE LAND USE IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

As shown in **Table 4-1**, past, present, and reasonably foreseeable projects are primarily infrastructure improvements and residential or mixed-use projects. Because the majority of land near the Project corridor is already developed or preserved open space (New Brighton State Beach), future development would be limited to redevelopment or infill projects.

Cumulative development projects would be required to comply with applicable policies established by the City of Santa Cruz General Plan, City of Santa Cruz Municipal Code, Capitola General Plan, Municipal Code, County General Plan, County Code, and other adopted planning documents that limit the bounds and extent of development, as described in Section 3.9. Projects would also need to support the common goal of enhancing existing communities, providing additional recreational opportunities, and protecting and preserving natural resources. Planned uses and development would result in additional visitors and employees to the areas surrounding the Project corridor but would not introduce new land uses that would conflict with existing residential, commercial, industrial, or recreational land uses; substantially change land use patterns; or conflict with relevant plans and policies. Therefore, cumulative development would not result in significant cumulative land use impacts.

The Project would introduce a multi-use trail along the existing rail corridor improving connectivity and accessibility within the City of Capitola and surrounding unincorporated area for existing and planned land uses, and providing an alternative transportation corridor and recreational land use. As described in Section 3.9, the addition of the trail would not physically divide an established community or conflict with applicable plans and policies, and the impact would be less than significant. Although

overall use of the lands surrounding the Project corridor could increase, the land use impact of the Project would be less than significant, would not result in a substantial contribution to an existing cumulative land use impact, and thus **would not be cumulatively considerable**.

4.1.12 Noise

The geographic extent for the analysis of cumulative construction noise, stationary noise, and vibration impacts is generally limited to areas within 0.5 mile of the Project corridor. Beyond this distance, impulse noise may be briefly audible, and steady noise from construction activity or Project operations would generally dissipate such that the level of noise would reduce to below applicable noise standards and/or blend in with the background noise level. Similarly, vibration is a localized phenomenon that reduces progressively as the distance from the source increases. As such, this geographic extent is appropriate for construction noise and vibration, as well as stationary noise. The geographic scope for ambient vehicle noise levels is the roadways serving the Project corridor and cumulative projects.

IMPACT N-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE NOISE IMPACTS TO AMBIENT VEHICLE NOISE. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Construction noise and groundborne vibration from planned development, including projects listed in **Table 4-1**, would be limited to the construction phase within the immediate vicinity (150–550 feet for noise and 50 feet for vibration) of the operation of construction equipment. Construction noise and vibration would cease after construction is complete. Due to the linear nature of Project construction, construction of the cumulative projects is unlikely to occur simultaneously within enough proximity to Project construction to result in cumulative construction noise or vibration exposure. Future rail service identified in **Table 4-1** would have the potential to generate ongoing noise and vibration within the immediate vicinity of the Project corridor. However, based on the planned construction time frame for the Project with or without the Optional Interim Trail, Project construction would cease prior to potential future rail operation. As such, vibration impacts would not combine with other cumulative development to generate cumulative noise or vibration impacts, including potential vibration generated by future rail operation. Therefore, planned development would not result in a significant cumulative impact during construction. Thus, the Project's contribution to a cumulative construction noise and vibration impact **would not be cumulatively considerable**.

The cumulative projects, such as new mixed-use development in the City of Santa Cruz, City of Capitola, and County, would introduce new stationary noise sources, such as heating, ventilation, and air conditioning equipment, that could potentially generate new stationary noise near sensitive receptors (e.g., residences, libraries, schools). However, new development would be required to demonstrate consistency with local standards, including applicable local Noise Ordinances. Therefore, planned development would not result in a significant cumulative impact. As discussed in Section 3.10, *Noise*, the Project would not generate significant on-site operational noise levels, and operation of the trail would result in minimal and incremental noise from human conversations. As such, the Project contribution to stationary noise impacts **would not be cumulatively considerable**.

A cumulative ambient vehicle noise impact would occur if cumulative development would result in an increase in ambient noise of 3 A-weighted decibels on area roadways compared to existing conditions. New land use development, such as new mixed-use projects, would likely result in an increase in vehicle trips that could increase traffic noise and ambient noise levels, which could be a significant cumulative impact. However, the Project would not result in new vehicle trips or other

ambient noise sources. Thus, the Project's contribution to ambient noise impacts **would not be cumulatively considerable**.

In summary, the Project, in combination with cumulative development, would not result in a significant cumulative impact related to construction noise and vibration or stationary noise sources. Cumulative development would have the potential to result in cumulatively considerable increases in ambient vehicle noise; however, the Project's contribution **would not be cumulatively considerable**.

4.1.13 Public Safety and Services

The cumulative setting for public safety and services includes the service areas for fire, emergency response, police, schools, parks and recreational facilities, and other general public services, including libraries. Many of these service areas are City of Capitola or County wide. Emergency service providers, park facilities, and health service facilities that serve the County are described in Section 3.11*, Public Safety and Services.*

IMPACT PUB-C CUMULATIVE DEVELOPMENT COULD RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO PUBLIC SAFETY AND SERVICES. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Cumulative projects, including those listed in **Table 4-1**, include infrastructure improvements and residential or mixed-use projects that would require public services, including emergency response, police and fire protection, and healthcare facilities. The extent of development would likely require additional services, including staff resources and possibly the construction of new facilities (e.g., fire or police stations), which could result in a potentially significant physical impact on the environment (e.g., increased air emissions, VMT, noise). Therefore, cumulative impacts to public safety and services, including police and fire protection, emergency response, and healthcare facilities, would be potentially significant.

The planned projects in **Table 4-1** include the Coastal Rail Trail Segments 5, 7 through 9, and 12 through 20. Although it is anticipated that the trail would be used primarily by County residents as a form of alternative transportation and recreation, the cumulative effect of constructing more segments could attract more visitors to the Santa Cruz region.

Police Protection: Cumulative development would increase the demand for police protection services because cumulative residential development projects would facilitate population increases. As the cities and unincorporated areas within the vicinity of the Project grow through development, the County Sheriff's Office monitors and adjusts the services provided to the citizens and visitors of Santa Cruz to meet the fluctuating needs of the public, including the increased use of recreational facilities, such as the Project. Similarly, the police protection services provided by the local jurisdictions along the Project corridor are anticipated to fluctuate to meet service needs as they arise without the need for additional police stations or other facilities that would cause impacts. Therefore, there would not be a significant cumulative impact related to police protection, and the Project's contribution to this impact **would not be cumulatively considerable**.

Fire Protection and Emergency Response: Cumulative development would increase the demand for fire protection and emergency response services as additional buildings are constructed and new residents are added to the population. However, increased use of the rail corridor by trail users is not expected to affect response times or generate a need for fire protection personnel that warrants expansion of existing facilities or construction of new facilities. The Project's trail width would be sufficient for emergency access. Additionally, similar to police protection, fire protection services provided by the local jurisdictions along the Project corridor are anticipated to fluctuate to

meet service needs as they arise without the need for additional fire stations or other facilities that would cause impacts. Therefore, there would not be a significant cumulative impact related to fire protection and emergency response, and the Project's contribution to this impact **would not be cumulatively considerable**.

Healthcare Facilities: Cumulative development would increase the demand for healthcare services as new residents are added to the population. However, injuries and/or medical emergencies would be treated by the existing healthcare facilities within the vicinity of the Project corridor, and the Project would not place substantial additional demand on healthcare facilities. Healthcare services provided by the local jurisdictions along the Project corridor are anticipated to fluctuate to meet service needs as they arise without the need for additional healthcare facilities that would cause impacts. Therefore, there would not be a significant cumulative impact related to healthcare facilities, and the Project's contribution to this impact **would not be cumulatively considerable**.

4.1.14 Recreation

The cumulative setting for recreation includes the City of Capitola, City of Santa Cruz, and County of Santa Cruz because it is anticipated that residents from these jurisdictions would be the primary users of neighborhood and regional parks and other recreation facilities.

IMPACT REC-C CUMULATIVE DEVELOPMENT COULD RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO RECREATION FACILITIES. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Cumulative projects, including those listed in **Table 4-1**, include infrastructure improvements and residential or mixed-use projects that would increase the population in the City of Capitola and County that would increase the use of recreation facilities such as neighborhood and regional parks. The extent of development would likely require the need for the expansion of parks, which could result in a potentially significant physical impact on the environment (e.g., increased air emissions, traffic, noise). Therefore, cumulative impacts to parks would be potentially significant.

The cumulative projects in **Table 4-1** include the Coastal Rail Trail Segments 5, 7 through 9, and 12 through 20. It is anticipated that the trail would be used primarily by County and City (Capitola and Santa Cruz) residents as a form of alternative transportation and recreation and thus could provide increased access to parks. However, constructing new segments would not result in accelerated deterioration of parks because buildout of the Coastal Rail Trail would not introduce a permanent population to the Santa Cruz region. Therefore, there would not be a permanent additional demand on existing parks due to a population increase or the need to expand parks. Rather, the Coastal Rail Trail would provide an alternative way to access park facilities for the existing population. The Project would not require the relocation or expansion of existing park facilities and is not anticipated to accelerate physical deterioration of parks due to increased use of the rail corridor by trail users. Therefore, there would not be a significant cumulative impact related to parks and recreation, and the Project's contribution to this impact **would not be cumulatively considerable**.

4.1.15 Transportation

The cumulative setting for transportation includes the greater Santa Cruz County region. This is an appropriate cumulative impact area for transportation because it is anticipated that most trips to the Project corridor would originate from within Santa Cruz County.

IMPACT T-C CUMULATIVE DEVELOPMENT WOULD RESULT IN SIGNIFICANT CUMULATIVE TRAFFIC IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Buildout of the cumulative projects listed in **Table 4-1** would result in growth that would contribute to VMT in the Santa Cruz County region. This increase in VMT could result in a potentially significant cumulative impact. However, the Project would provide a bicycle and pedestrian trail that is inaccessible to unauthorized vehicular traffic and that provides an alternative means of travel to key destinations throughout the region. For example, the Project would connect beaches, places of employment, residences, shopping and dining opportunities, and parks and recreation facilities, making it an ideal option for commuting in and around the Project area. Furthermore, the Project would not result in additional parking locations or bathroom facilities that would generate additional trips to the Project corridor. Therefore, the Project would not cumulatively contribute to regional VMT. Rather, because the Project would provide a pedestrian and bicycle connection through some of the growth projected in the region, it would potentially decrease future VMT in Santa Cruz County. Therefore, the Project's contribution to this potentially significant cumulative impact **would not be cumulatively considerable.**

Buildout of the cumulative projects listed in **Table 4-1** could also result in transportation-related hazards during construction. Depending on the timing, location, and duration of construction activities associated with cumulative projects, the potential for lane closures and heavy equipment operating on local roadways could result in a potentially significant cumulative impact involving roadway hazards. However, Construction Traffic Control Plans that include public notification, signage, flaggers, and traffic signal modifications would maintain public safety during construction of the Project, while implementation of safety design features would maintain public safety during Project operation. Therefore, the Project's contribution to potentially significant cumulative impacts involving roadway hazards would **not be cumulatively considerable** during either construction or operation.

In summary, planned development would result in significant cumulative impacts associated with increased VMT and potential roadway hazards. The Project's contribution **would not be cumulatively considerable**.

4.1.16 Tribal Cultural Resources

The geographic scope for considering cumulative impacts to tribal cultural resources is based on the historic, ethnographic, and prehistoric period use patterns of the Project area and surrounding region. Therefore, the cumulative setting for tribal cultural resources includes the greater Santa Cruz County region.

IMPACT TCR-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE TRIBAL CULTURAL RESOURCE IMPACTS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

The Project, in conjunction with other nearby past, present, and reasonably foreseeable probable future projects in the region as shown in **Table 4-1**, could adversely impact tribal cultural resources. Cumulative development within the vicinity of the Project would continue to disturb areas with the

potential to contain tribal cultural resources due to the high sensitivity of the Santa Cruz region to contain Native American habitation sites. Compliance with Assembly Bill 52 and continued involvement by local Native Americans in regional planning would generally minimize the destruction of tribal cultural resources throughout the Santa Cruz region. In addition, it is anticipated that potential impacts to identified or previously unidentified tribal cultural resources would be mitigated to a less than significant level on a project-by-project basis. Therefore, cumulative impacts to tribal cultural resources would not be significant.

As described in Section 3.13, *Tribal Cultural Resources*, under Impact TCR-1, no tribal cultural resources have been identified within the Project corridor. Potential impacts to previously unidentified tribal cultural resources would be reduced to a less than significant level with implementation of Mitigation Measures TCR-1a and TCR-1b, which require Native American construction monitoring, avoidance if feasible, and preservation of any resources discovered during construction. Because implementation of these measures would minimize adverse effects on any potential tribal cultural resources, the Project's contribution to this impact **would not be cumulatively considerable**.

4.1.17 Utilities and Service Systems

The geographic extent for the analysis of cumulative impacts to utilities and service systems is as follows:

- **Water:** Service area for the City of Santa Cruz Water Department (SCWD) and Soquel Creek Water District (SqCWD), as these would be the water providers for the Project.
- **Wastewater:** Service area for the SCWD and SqCWD in addition to the service area for the Santa Cruz County Sanitation District (SCCSD), as the City of Santa Cruz Wastewater Treatment Facility (WWTF) would receive any wastewater generated during construction of the Project. The WWTF provides wastewater treatment and ocean outfall disposal services to both the SCWD and the SCCSD service areas.
- **Stormwater Drainage:** Areas of the City of Capitola and the County of Santa Cruz adjacent to the Project corridor, as stormwater within the vicinity of the Project corridor would drain to either into the existing nearby drainage system or into the natural material swale proposed along Segment 11.
- **Solid Waste:** Service areas for City of Capitola and County solid waste collection and disposal, including the County's Buena Vista Landfill.
- **Electric Power and Natural Gas:** Service area for PG&E, as it is the electricity and gas provider for the City of Capitola and unincorporated County.
- **Telecommunications:** The County, to consider the broader coverage area impacted by the cumulative effects of multiple projects, which may extend beyond the immediate Project location.

Impact UTIL-C CUMULATIVE DEVELOPMENT MAY RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO UTILITIES AND SERVICE SYSTEMS. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

As detailed in **Table 4-1,** the past, present, and reasonably foreseeable projects are primarily related to infrastructure improvements and residential or mixed-use projects. Buildout of cumulative projects would increase demands on utility infrastructure.

Water. The SCWD anticipates that water supplies under the average/normal year and single dry water year hydrological conditions will be sufficient to meet demand through 2045 (City of Santa Cruz 2021). The SCWD anticipates that water supplies would meet projected water demand during all years, including an extreme multiple dry water year hydrological condition, except for small projected shortages during the fifth year of the extended drought, anticipated to be in the 2040–2045 time frame. During this period in the fifth year of the extended drought, the SCWD anticipates that water

supplies would meet 98% of demand (City of Santa Cruz 2021). The SqCWD water supplies are anticipated to meet water demand under all scenarios analyzed in the Urban Water Management Plan (SqCWD 2021). Because the projected water demand detailed in the Urban Water Management Plan is based on population projections developed through coordination with local jurisdictions and in accordance with the City of Santa Cruz's Long-Range Water Demand Forecast and the Association of Monterey Bay Area Governments' 2022 Regional Growth Forecast, any growth that would be generated by the cumulative residential and mixed-use projects listed in **Table 4-1** is accounted for in the Urban Water Management Plan water supply assessment. Therefore, cumulative impacts to water supply would be less than significant. The Project would only require a minimal and temporary amount of water during construction activities and would not result in a permanent increase in water demand. Therefore, the Project's contribution to cumulative impacts to water infrastructure and supply **would not be cumulatively considerable**.

Wastewater. The Santa Cruz WWTF provides service for the City of Santa Cruz, as well as the City of Capitola and County residents through an agreement with the SCCSD, and has a current rated design capacity of 17 million gallons of wastewater per day (gpd), with the ability to accommodate a wet weather flow of 81 million gpd (City of Santa Cruz 2012). The SCCSD's customers currently generate between 5 and 6 million gpd, and the WWTF typically has an average daily flow of approximately 12 million gpd (SCCSD 2019). Because both the SCCSD's customers and City of Santa Cruz residents currently generate between 5 and 6 million gpd each, it is reasonable to assume that the cumulative development projects listed in **Table 4-1** would generate less than 6 million gpd. Because of the Santa Cruz WWTF's remaining capacity of 5 million gpd, it can be assumed that the WWTF would adequately serve the cumulative projects listed in **Table 4-1**, and cumulative impacts to wastewater infrastructure would be less than significant. The Project would only generate wastewater temporarily through the use of portable toilets by construction workers. The Project would not result in a permanent demand for wastewater treatment. Therefore, the Project's contribution to cumulative impacts to wastewater infrastructure **would not be cumulatively considerable**.

Stormwater. Existing stormwater within the Project's vicinity drains to a series of gutters and underground pipes or to nearby streets before entering the underground pipes and other human-made runoff conveyance systems in the City of Capitola and Santa Cruz County. Buildout of the cumulative projects listed in **Table 4-1** would result in an increase in impervious surfaces that could alter drainage patterns and result in the inability for existing stormwater drainage infrastructure to adequately convey flows. However, any cumulative project disturbing more than 1 acre of land would be subject to the requirements of the Construction General Permit, resulting in the implementation of a Stormwater Pollution Prevention Plan and best management practices. Additionally, the County requires new discretionary development projects to provide both on- and off-site improvements for adequate drainage (County of Santa Cruz 1994). The County and City of Capitola would require adequate drainage facilities for new development through the review of proposed development projects such that the construction of cumulative projects would not result in the need for construction of new or expanded stormwater drainage facilities. With the cumulative projects' compliance with applicable laws and regulations and their incorporation of required operational best management practices, no significant cumulative impacts are anticipated. Nonetheless, implementation of the Project's built-in drainage improvements would convey stormwater runoff from the trail without overloading the existing storm drain system within its vicinity during operation. Further, the Project would not require new or expanded water drainage facilities beyond those proposed or modified as part of the Project, and the Project would be subject to the same applicable laws. Therefore, the Project's contribution to this cumulative impact to stormwater drainage facilities **would not be cumulatively considerable.**

Solid Waste. Cumulative projects listed in **Table 4-1** would generate waste during both construction and operational activities, which would likely be disposed at the County's Buena Vista Landfill, City of Santa Cruz Resource Recovery Facility (RRF) Landfill, or Monterey Peninsula Landfill in the City of Marina. Any future development, including the projects listed in **Table 4-1**, would be required to participate in current and planned solid waste reduction programs. Waste generated by development of projects within the County's jurisdiction would likely be disposed of at the Buena Vista Landfill, which is anticipated to have capacity until 2031. The Buena Vista Landfill has an estimated remaining capacity of 1,766,005 cubic yards of solid waste. Solid waste generated by the Project would represent less than 1% of this remaining capacity. According to the City of Santa Cruz General Plan, the RRF Landfill's permitted disposal area was increased from 40 to 67 acres in mid-1990. This increase, along with the waste reduction and recycling programs described above, extended the life of the RRF Landfill to approximately 2052 (City of Santa Cruz 2012). As such, the RRF Landfill would have the capacity to accept waste generated by cumulative projects within the City of Santa Cruz's jurisdiction, listed in **Table 4-1** through 2052. Additionally, excess construction waste may be disposed at the regional Monterey Peninsula Landfill in the City of Marina, which is anticipated to be operational past 2100. These landfills have adequate capacity to accept waste generated by the cumulative projects within the County's jurisdiction listed in **Table 4-1**. Therefore, cumulative impacts to solid waste infrastructure would be less than significant, and the Project's contribution **would not be cumulatively considerable**.

Electric Power and Natural Gas. Cumulative development would raise the demand for electricity and natural gas in the PG&E service area. However, cumulative development would not be expected to result in wasteful, unnecessary, or inefficient energy use; or energy use that would conflict with the utility provider plans to meet future energy consumption. As described in Section 3.15.3, *Energy*, the Project would likely result in net benefit to regional energy consumption. Cumulative impacts to electricity and natural gas infrastructure would be less than significant, and the Project's contribution **would not be cumulatively considerable**.

Telecommunications. Cumulative development would increase the demand for telecommunications infrastructure. However, there is extensive telecommunications infrastructure available throughout the City of Capitola and unincorporated County to serve cumulative development, and there would be no cumulative impact to telecommunications facilities. The Project would also use existing telecommunications facilities and would not substantially increase the demand for telecommunication facilities such that construction of a new facility would be required. The Project's contribution **would not be cumulatively considerable**.

In summary, planned development or buildout of cumulative projects would increase demands on utility infrastructure. However, there are no cumulative significant impacts anticipated from cumulative projects. The Project's contribution to utility and service system impacts **would not be cumulatively considerable.**

4.1.18 Wildfire

The geographic extent for the analysis of cumulative impacts to wildfire is Santa Cruz County and the service area for the emergency service providers that serve Santa Cruz County, as described in Section 3.11. The geographic context for the analysis of cumulative impacts that would 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, is the Project corridor and immediate surrounding areas.

IMPACT WIDF-C CUMULATIVE DEVELOPMENT WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO WILDFIRE. THE PROJECT'S CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

As shown in **Table 4-1**, past, present, and reasonably foreseeable projects are located in the City of Capitola and County and not within an identified State Responsibility Land or land classified as a Very High Hazard Severity Zone (CAL FIRE 2008).

Emergency Response Plan. Construction and operation associated with cumulative development could result in activities that could interfere with adopted Emergency Response or Emergency Evacuation Plans, such as temporary construction barricades or other obstructions that could impede emergency access. However, cumulative projects would be required to comply with the local requirements such that they would not impair implementation of or physically interfere with the County Operational Area Emergency Management Plan or City of Capitola and City of Santa Cruz traffic requirements and Emergency Operations Plans. Therefore, no significant cumulative impacts are anticipated, and the Project's contribution **would not be cumulatively considerable.**

Exposure to Pollutant Concentrations. Cumulative projects could potentially have an impact if several projects were to experience a wildfire simultaneously, causing pollutant concentrations to flow through the air at an unprecedented rate. However, the likelihood of this is low given that the projects are in a developed area and are outside the Very High Fire Hazard Severity Zone. Pursuant to applicable codes and regulations, including but not limited to the California Fire Code and California Department of Forestry and Fire Protection (CAL FIRE) fire-safe design requirements, all projects would be constructed and designed to minimize the potential for uncontrolled spread of wildfire that could expose project occupants to pollutant concentrations. The Project does not include housing or other structures that would result in permanent occupants along the Project corridor. There is ongoing vegetation trimming and removal along the RTC-owned rail corridor, which would continue. Therefore, no significant cumulative impacts are anticipated, and the Project's contribution **would not be cumulatively considerable**.

Exacerbated Risk from Infrastructure Installation. A cumulative impact could occur if multiple cumulative projects were to install infrastructure that would combine to exacerbate fire risk. Any new infrastructure would be required to comply with the necessary regulations, including the California Fire Code, CAL FIRE fire-safe design requirements, and the City of Capitola's Fire and Public Works Standards, to minimize any fire risks. Therefore, the cumulative impact would not be significant. The Project would not require the installation or maintenance of infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that would exacerbate the fire risk or impact the environment. Trail maintenance activities would involve routine maintenance of vegetated portions of the trail, including weed removal, tree/shrub trimming, and fallen tree removal, that would prevent overgrowth that could potentially fuel wildfire. Therefore, no significant cumulative impacts are anticipated, and the Project's contribution **would not be cumulatively considerable**.

Post-Fire Risks. A cumulative impact could occur if post-fire conditions such as hillside instability caused a landslide or flooding to occur. The Project corridor is generally flat and does not contain any mapped landslides. Construction of projects considered in the cumulative analysis would involve grading and other earthmoving activities that could result in temporary and short-term localized soil erosion or landslides. However, these site-specific impacts are not expected to combine with the effects of other regional activities because compliance with the National Pollutant Discharge Elimination System-required Stormwater Pollution Prevention Plan would control erosion and construction-related contaminants on each construction site. Therefore, no significant cumulative impacts are anticipated, and the Project's contribution **would not be cumulatively considerable**.

In summary, the potential cumulative impacts associated with wildlife would not be significant; therefore, the Project's contribution **would not be cumulatively considerable**.

4.2 Growth Inducement

Section 15126.2(e) of the *CEQA Guidelines* requires a discussion of a proposed project's potential to induce growth. Specifically, an EIR must discuss the ways in which a project could foster economic or population growth. Economic and population growth does not necessarily cause significant physical changes to the environment; however, depending upon the type, magnitude, and location of growth, it can result in significant environmental effects. A project's growth-inducing potential is therefore considered significant if growth generated by the Project could result in significant effects in one or more environmental issue areas.

4.2.1 Employment, Household, and Population Growth

Project implementation would not result in the construction of new homes or businesses. As a multi-use trail, the Project would not increase the residential or employment populations of Santa Cruz County. Rather, it would provide alternative transportation and recreational opportunities for residents and out-of-county visitors to walk and use bicycles, instead of their cars. The Project is not expected to meaningfully change or substantially increase the number of residents or visitors to the County of Santa Cruz and the City of Capitola.

The Project could directly generate short-term employment during construction of the trail; however, jobs created by this additional activity would likely be filled by the local workforce and would not result in a significant source of employment of economic growth.

Therefore, growth inducement impacts associated with the Project with or without the Optional Interim Trail would be **less than significant.**

4.2.2 Removal of Obstacles to Growth

The Project would result in the construction of a new multi-use trail that would provide an accessible bicycle and pedestrian path for active transportation, recreation, and nature education. The lack of a trail is not considered an obstacle to growth.

A common obstacle to growth is the lack of utilities (e.g., water supply, wastewater treatment capacity, roadways). However, the Project would not require the extension of utilities or otherwise remove obstacles to growth. As discussed in Chapter 2, *Project Description*, the Project does not include landscaping along the trail that would require the extension of water infrastructure, nor restrooms that require wastewater treatment. The Project includes a limited amount of new lighting along the trail alignment for safety purposes and would result in the installation of light-emitting diode (LED) W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons at the 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista Drive roadway crossings. These additions would be operated through existing energy infrastructure.

As such, the Project with or without the Optional Interim Trail would not remove an obstacle to growth. This impact would be **less than significant.**

4.3 Irreversible Environmental Effects

Section 15126.2(d) of the *CEQA Guidelines* requires a discussion of significant irreversible environmental changes that would occur as a result of a proposed project. This includes analysis of the use of non-renewable resources and irreversible environmental changes. In general, non-renewable resources imply energy resources but may also pertain to the permanent loss of agricultural, biological, mineral, or other natural resources.

The use of non-renewable resources during short-term construction and long-term operation of the Project may be irreversible and irretrievable. Implementation of the Project with or without the Optional Interim Trail would result in the irretrievable and irreversible commitment of non-renewable natural resources, including energy resources such as petroleum, coal, water resources, and mineral resources used for construction materials, such as gravel, sand, asphalt, and metals. This impact would be greater with implementation of the Optional Interim Trail because it requires two additional construction phases.

Construction and operation of the Project would result in the permanent loss of fossil fuels for the production of petroleum or natural gas to fuel construction and maintenance vehicles, and to provide electricity for construction lighting. As described in Section 2.6, *Project Construction* (**Tables 2-2** and **2-3**), construction of the Ultimate Trail Configuration would require approximately 5,278 cubic yards of imported aggregate and 8,123 square feet of concrete. Construction of the Optional Interim Trail would require approximately 7,878 cubic yards of imported aggregate and 7,038 square feet of concrete. Aggregate base is actively mined in the Monterey Bay Area, which is estimated to meet demand for 41 to 50 years (California Geological Survey 2012), and supplies for the Project are expected to come from local sources. The demand created by the Project with or without the Optional Interim Trail would not represent a significant impact on that supply.

As discussed in Section 3.14, *Utilities and Service Systems*, operation of the Project would not result in a permanent demand for water because the Project does not propose additional bathrooms, water fountains, irrigation, or other water-dependent uses and features.

As described above, construction and maintenance of the Project would consume building materials and energy, some of which are non-renewable resources. However, by providing opportunities for the use of active transportation modes, implementation of the Project may help reduce long-term dependence on automobiles and non-renewable petroleum resources. Consequently, the Project may have beneficial impacts related to the long-term use of non-renewable resources. Because of this potentially beneficial long-term impact, the consumption of non-renewable resources during construction and operation of the trail would be justified. Anticipated energy consumption of the Project is analyzed in further detail in Section 3.15.3.

With respect to agricultural resources and other mineral resources, the Project was determined to have a less than significant impact, as described in Section 3.15.2, *Agriculture and Forestry Resources*, and Section 3.15.7, *Mineral Resources*.

Finally, as described in Section 3.3 and Section 4.1.4, *Biological Resources*, the Project would result in significant impacts to biological resources from tree removal and fragmentation of habitat and wildlife corridors. Mitigation identified in Section 3.3 includes development of a Project-specific Biological Resources MMP for impacts to biological resources resulting from trail construction and operation (Mitigation Measure BIO-7b). Mitigation identified in Section 4.1.4 includes incorporating cumulative conservation goals into the MMP (Mitigation Measure BIO-C) to help reduce the Project's contribution to significant cumulative impacts. As described in Section 4.4, *Significant and*

Unavoidable Effects, even with mitigation, the impact of tree removal on monarch butterfly habitat and wildlife movement would be significant and unavoidable because the location of replacement trees is unknown at this time and because of the long duration for replacement trees to mature. However, in time, replacement trees and other measures identified in Mitigation Measure BIO-7b would mature and compensate such that these effects are not considered irreversible.

4.4 Significant and Unavoidable Effects

CEQA requires decision makers to balance the benefits of a proposed project against it unavoidable environmental risks in determining whether to approve a project. The analysis contained in this EIR identified the following significant and unavoidable impacts resulting from the Project with or without the Optional Interim Trail:

- Aesthetics
    - Adverse effect on scenic vistas through the removal of mature trees (Impact AES-1)
    - Inconsistency with policies that pertain to tree and vegetation removal (Impact AES-2)
    - Cumulative aesthetics impacts from increased development in open spaces, disrupting scenic vistas from tree removal (Impact AES-C)
- Biological Resources
    - Adverse effect on monarch butterfly and autumnal and/or wintering roost sites from tree removal (Impact BIO-1)
    - Interference with wildlife movement from tree removal and habitat fragmentation (Impact BIO-9)
    - Conflict with policies and ordinances protecting trees (Impact BIO-10)
    - Cumulative biological resources impacts from tree removal and fragmentation of habitat and wildlife corridors (Impact BIO-C)
- GHG Emissions
    - Inconsistency with applicable GHG reduction plans related to tree removal (Impact GHG-2)

This page intentionally left blank.

5 Project Alternatives

According to Section 15126.6 of the *California Environmental Quality Act (CEQA) Guidelines*, an Environmental Impact Report (EIR) shall describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project's basic objectives but that would avoid or substantially lessen identified significant environmental impacts of the project. CEQA does not require that an EIR present the alternatives analysis in the same level of detail as the assessment of the proposed project, and CEQA does not require that every conceivable alternative to a project be considered. Rather, an EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making.

To develop a reasonable range of alternatives to the **Coastal Rail Trail Segments 10 and 11 Project** (Project), the County of Santa Cruz (County) considered the following:

- Project Objectives
- Significant Impacts of the Proposed Project
- Alternatives Suggested during the Scoping Process
- Alternatives Considered during the Design Process

Through this process, the County identified 17 alternatives, including different project design options or features, for consideration. Of these, one was incorporated into the Proposed Project as an optional first phase called *Optional Interim Trail (Trail on the Rail Line)* and is evaluated in Chapter 3, *Environmental Impact Analysis*; two were identified as Project alternatives to be evaluated in this Chapter 5, in addition to the No Project alternative required by CEQA; four are covered all or in part by the evaluation of the Proposed Project in Chapter 3 or project alternatives in Chapter 5; and eleven were considered but dismissed from further evaluation because they did not reduce a significant effect of the Proposed Project, could result in additional impacts, or their feasibility is uncertain.

This chapter includes a description of how the Project alternatives were developed (Section 5.1, *Development of Alternatives*), an evaluation of the alternatives in comparison to the Proposed Project (Section 5.2, *Alternatives Evaluated in Draft EIR*), and identification of the environmentally superior alternative (Section 5.3, *Environmentally Superior Alternative*).

5.1 Development of Alternatives

5.1.1 Project Objectives

The project **purpose** is to provide an Americans with Disabilities Act (ADA)-accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing rail corridor.

The project **objectives** are based on and consistent with objectives and policies in the adopted Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

The project objectives include the following:

1. Provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County (Master Plan Objective 1.1)
2. Develop the trail so future rail transportation service along the corridor is not precluded (Master Plan Policy 1.2.4)
3. Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), coastal environment, local history, and affected communities (Master Plan Policies 1.1.2 and 1.1.4, Objective 2.1)
4. Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic (Master Plan Goal 1)
5. Minimize trail impacts to private lands, including agricultural, residential, and other land uses (Master Plan Objective 1.5)
6. Minimize trail impacts to sensitive habitat areas and special-status plant and animal species (Master Plan Objective 1.4, Policy 1.4.1)
7. Comply with requirements of local, state, and federal agencies with jurisdiction

5.1.2 Significant Impacts of Proposed Project

The *CEQA Guidelines*, Section 15126.6(f), states that "alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project."

As described in Sections 3.1 through 3.14 and summarized in **Table ES-1** in the *Executive Summary*, the Proposed Project would result in potentially significant impacts (before mitigation) for the following CEQA resource topics; therefore, brief summaries of the potentially significant impacts for these topics are presented below:

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions/Climate Change
- Hazards and Hazardous Materials
- Noise
- Tribal Cultural Resources

All impacts could not be reduced to a less than significant level with mitigation; therefore, there would be significant and unavoidable Project impacts associated with the following resource topics:

- Aesthetics
- Biological Resources
- Greenhouse Gas Emissions/Climate Change

Aesthetics

Ultimate Trail Configuration (Trail next to Rail Line)

The Ultimate Trail Configuration would require the removal of approximately 803 trees of various sizes, including mature and heritage trees (refer to *Biological Resources* below for more information). As described in Section 3.1, *Aesthetics*, the removal of trees would disrupt existing scenic vistas as experienced from local roadways and pedestrian facilities. Although trees removed to accommodate the Project would be replaced at an appropriate location and ratio determined by qualified biologists, in coordination with the regulatory permitting agencies and jurisdictional authorities (e.g., County, City, State Parks), the exact location of replacement trees is uncertain at this time, and timing of growth to maturity equivalent to the trees that would be removed cannot be predicted with certainty. Further, although the Project would be consistent with most applicable regulations that govern scenic quality, the tree removal and effect on scenic vistas would be inconsistent with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9, which aims to protect public vistas and scenic resources including trees.

Therefore, despite required tree replacement and other mitigation measures identified in Section 3.3, *Biological Resources*, the tree removal would affect public views of the Project corridor and disrupt existing scenic vistas of mature vegetation; and this would be inconsistent with policies protecting scenic quality. Therefore, impacts involving scenic vistas would be **significant and unavoidable**, even with the identified mitigation for tree removal (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c) because of the inability to mitigate the majority of tree removals within the Santa Cruz County Regional Transportation Commission (RTC)-owned rail corridor and the number of years required for replacement trees to mature.

Optional Interim Trail (Trail on the Rail Line)

The Optional Interim Trail would result in similar but slightly greater impacts to those described above when considering all three construction periods. Impacts from the Optional Interim Trail would require the removal of approximately 288 trees initially to remove the rail and construct the trail on the rail bed for Part 1 of the Optional Interim Trail. Then, later, if or when the rail line is reactivated and rebuilt in Part 2, the Ultimate Trail Configuration would be constructed in Part 3, requiring removal of another 669 trees, resulting in a total removal of approximately 957 trees. This would affect public views of the Project corridor and thus would be inconsistent with County General Plan Policies 5.10.3 and 5.18.8 and Capitola General Plan Policy OSC-6.9, which aims to protect public vistas and scenic resources including trees. Impacts would be **significant and unavoidable**, even with identified mitigation for tree removal (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removals within the RTC-owned rail corridor and the number of years required for replacement trees to mature.

Biological Resources

Ultimate Trail Configuration (Trail next to Rail Line)

The Ultimate Trail Configuration would adversely affect existing biological resources within the study area including monarch butterfly roost sites, nesting bird, roosting bat and San Francisco dusky-footed woodrat habitat, sensitive habitats, wetlands, wildlife movement, and protected trees. The Ultimate Trail Configuration could affect special-status fish species known to occur within

Rodeo Gulch and Soquel Creek, and could affect Santa Cruz black salamander, if present within the wetlands and along the streams.

The Ultimate Trail Configuration would result in removal of approximately 803 trees. Of these, 400 are regional native trees, 584 are identified as either City of Capitola Protected or County of Santa Cruz Significant trees, and 280 are *native* Protected or Significant trees. Many of these trees are located in known and potential monarch roost sites, sensitive coast live oak woodland, and riparian habitat types. Additionally, extensive tree and understory vegetation removal for the Project would affect wildlife movement within the rail corridor and disrupt wildlife dispersal and connectivity between open spaces along the rail corridor (e.g., Twin Lakes State Beach in Segment 9, Rodeo Gulch in Segment 10, Soquel Creek and New Brighton State Beach in Segment 11, and Aptos Creek and its tributaries in Segment 12).

The Project could result in potential adverse effects to protected fish species, including tidewater goby, steelhead, and Pacific lamprey, from encroachment into riparian corridors and increased trash and sedimentation; impacts to habitat for black salamander, if present; disturbance to nesting birds and roosting bats including tree removal, ground disturbance, and noise; and encroachment or displacement of San Francisco dusky-footed woodrat houses.

The Ultimate Trail Configuration would impact sensitive habitats including approximately 1.91 acres of coast live oak woodland and forest along the rail corridor and 0.42 acre of riparian habitat associated with Rodeo Gulch, Tannery Gulch, New Brighton Creek, Borregas Creek, and its tributary Stream 672. Additionally, the Project would displace 0.38 acre of scrub-shrub wetlands located within New Brighton State Beach. Approximately 0.01 acre of aquatic features would be impacted at Stream 472 during culvert replacement. Other impacts to aquatic features would be minor, as all work is anticipated to occur above the ordinary high water mark of the streams that intersect the Ultimate Trail Configuration.

Mitigation measures have been identified to reduce impacts during construction and operation, including construction best management practices, timing restrictions, biological monitoring, pre-construction surveys, and informational signage (Mitigation Measures BIO-1a, BIO-4, BIO-5, BIO-6, BIO-7a, BIO-7c, and BIO-8a). Mitigation also includes development and implementation of a comprehensive Biological Resources Mitigation and Management Plan and Aquatic Resources Mitigation and Management Plan, developed in coordination with local jurisdictions and regulatory agencies, to compensate for impacts and enhance remaining sensitive habitats (Mitigation Measures BIO-1b, BIO-7b, and BIO-8b). With implementation of these mitigation measures, impacts to special-status wildlife, nesting birds, roosting bats, sensitive habitats, and aquatic resources (wetlands) would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-5, BIO-6, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Impacts from tree removal in the corridor and the associated impacts on monarch butterfly roosting habitat and wildlife movement would not be reduced to a less than significant level because replacement trees would take many years to mature and provide adequate buffer quality, functions and values for the monarch roost sites and wildlife movement, and the availability of suitable mitigation sites within proximity to the Project corridor is limited. Therefore, these impacts would be **significant and unavoidable**, even with identified mitigation for monarch roost habitat and tree removal (Mitigation Measures BIO-1b, BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removal within RTC-owned rail corridor and the number of years required for replacement trees to mature.

Optional Interim Trail (Trail on the Rail Line)

The impacts of the Optional Interim Trail would be similar to but greater than those described above for the Ultimate Trail Configuration when considering all three construction periods of the Optional Interim Trail. The Optional Interim Trail is generally more impactful than the Ultimate Trail Configuration for the following reasons. There would be additional land disturbance needed to build the 16-foot-wide Optional Interim Trail that would be centered on the existing rail line, resulting in impacts on both sides of the tracks during Part 1. In particular, this would increase total tree removal from 803 trees in the Ultimate Trail Configuration to 957 trees for the Optional Interim Trail (288 trees from Part 1 + 669 trees from Part 3), as shown in **Table 2-3**. Additional tree removal would occur primarily within monarch roost habitat at Escalona Gulch, along the Porter-Sesnon open space element of New Brighton State Beach, and within the residential neighborhood of Seacliff.

Similar to the Ultimate Trail Configuration, impacts to most special-status wildlife, nesting birds, roosting bats, sensitive habitats, and aquatic resources (e.g., Tannery Gulch and palustrine scrub-shrub wetlands) would be **less than significant with mitigation** (Mitigation Measures BIO-1a, BIO-4, BIO-5, BIO-6, BIO-7a, BIO-7b, BIO-7c, BIO-8a, and BIO-8b).

Also similar to the Ultimate Trail Configuration, tree removal in the corridor and the resulting impacts to monarch roost habitat and wildlife movement would not be reduced to a less than significant level because replacement trees would take many years to mature and provide ecosystems services including adequate buffer quality, functions and values for the monarch roost sites, and wildlife movement. Further, mitigation sites for replacement planting and habitat creation that are in relatively proximity to the Project corridor (i.e., between Highway 1 and the Monterey Bay) are limited. Therefore, these impacts would be **significant and unavoidable**, even with identified mitigation for tree removal (Mitigation Measures BIO-1b and BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removal within the RTC-owned rail corridor and the number of years required for replacement trees to mature.

Cultural Resources

Ultimate Trail Configuration (Trail next to Rail Line)

The Project corridor for the Ultimate Trail Configuration alignment encompasses two historically significant built environment resources: the Santa Cruz Railroad and the Stockton Avenue Bridge. Regarding the Santa Cruz Railroad, trail construction would involve realigning a portion of the track in Segment 10 but would maintain the overall alignment of the rail corridor, preserving its primary character-defining feature. The introduction of new transportation-related elements within the corridor would be consistent with the railroad's historical associations with local transportation development. Other physical alterations, such as retaining walls and bridges, would be made within the corridor but would not diminish the integrity of significant historic features. Therefore, the Ultimate Trail Configuration would not result in significant impacts to the Santa Cruz Railroad. The Stockton Avenue Bridge is listed on the City of Capitola's Register of Historic Features and is eligible for the National Register of Historic Places. Implementation of the Ultimate Trail Configuration would include bicycle lane striping modifications and addition of two signs on the bridge (one new sign pole on each side of the bridge, attached to the outer railings) to guide trail users. The striping modification would be limited to the application of paint on the concrete bridge deck, which has been previously restriped and is not considered a character-defining feature aside from its two-lane width and adjacent sidewalks. The addition of the signage would not substantially impact the

bridge's physical characteristics, as they can be easily removed in the future without causing permanent damage. Therefore, the Ultimate Trail Configuration would not result in significant impacts to the Stockton Avenue Bridge. Impacts to historic resources (Santa Cruz Railroad and Stockton Avenue Bridge) would be **less than significant.**

Five previously recorded archaeological resources were identified within the Project corridor, and two previously recorded archaeological resources were identified adjacent to the Project corridor. Worker Awareness training, monitoring by an archaeologist and Native American representative, and adherence to protocols for unanticipated discoveries would reduce impacts to known and unknown archaeological resources. With implementation of these mitigation measures and compliance with County and City codes, impacts to archaeological resources would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, and CR-2d).

Human burials outside formal cemeteries are known to be present within the vicinity of the Project corridor. Human burials have specific provisions for treatment in Chapter 17.56 of the Capitola Municipal Code, Chapter 16.40 of the County Code, and California Public Resources Code (PRC), Section 5097. If human remains are found, California Health and Safety Code, Section 7050.5, states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, Section 16.40.040 of the County Code requires that all excavation cease within 200 feet of the find. The County Coroner would be notified immediately. If the human remains are determined to be Native American, the coroner would notify the Native American Heritage Commission, which would determine and notify a most likely descendant. The most likely descendant must complete the inspection of the site within 48 hours of being granted access to the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Compliance with the Capitola Municipal Code, the County Code, PRC Section 5097.98, and California Health and Safety Code, Section 7050.5 would reduce potential impacts to unknown human remains to **less than significant**.

Optional Interim Trail (Trail on the Rail Line)

The Project corridor for the Optional Interim Trail encompasses three built environment historical resources: the Santa Cruz Railroad, the Capitola Trestle Bridge, and the Stockton Avenue Bridge. The Optional Interim Trail would involve removal of 4.7 miles of track, which constitutes approximately 23% of the full length of the rail line. The alignment of the rail line is its primary character-defining feature (not the tracks and ties) due to its unique turns and surrounding development. This physical feature of the resource would remain, and it would visually appear and operate as a transportation corridor as it did historically. As a result, the removal of the ballast, rails, ties and earthen embankments would not constitute a substantial adverse change to the Santa Cruz Railroad. The impact would be **less than significant**.

Implementation of the Optional Interim Trail would require structural repairs and modifications to the Capitola Trestle Bridge, which in addition to being a contributing element of the Santa Cruz Railroad, is an individual resource listed in the City of Capitola's local register. The Secretary of the Interior's Standards encourage repairing historic materials whenever possible; but in cases where repair is not feasible, materials should be replaced in kind to maintain historical integrity. The structural repairs include replacing all the wood bracing and approximately 30–40% of the vertical wood posts on the timber bridges. The modifications include replacing the existing tracks and deck with a fiberglass-reinforced polymer (FRP) deck and guard rails. While the FRP deck and steel

supports would differ from the original rail line materials, they would be designed to match the bridge's aesthetics. To ensure compliance with the standards and avoid adverse changes, input from a historic preservation professional would be required during the design phase of the structural repairs and modifications for the Capitola Trestle Bridge (Mitigation Measure CR-1). Regarding potential impacts to the Stockton Avenue Bridge, Optional Interim Trail Parts 1 and 2 would not impact the Avenue Bridge. Part 3 is construction of the Ultimate Trail Configuration (discussed above), and the potential impacts to the bridge from added signage would be **less than significant**.

Implementing Optional Interim Trail Parts 1, 2, and 3 would involve three instances of ground disturbance, which would increase the potential to encounter archaeological resources. Potential impacts to known and unknown archaeological resources would be reduced to a less than significant level with Worker Awareness training, monitoring by an archaeologist and Native American representative, adherence to protocols for unanticipated discoveries, and compliance with Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code. Therefore, impacts would be **less than significant with mitigation** (CR-2a, CR-2b, CR-2c, and CR-2d).

Similar to the Ultimate Trail Configuration, construction of the Optional Interim Trail could encounter human remains during construction. Compliance with the Capitola Municipal Code, the County Code, PRC Section 5097.98, and California Health and Safety Code, Section 7050.5, ensure that impacts to unknown human remains would be **less than significant**.

Geology and Soils

Ultimate Trail Configuration (Trail next to Rail Line)

During construction of the Ultimate Trail Configuration, ground disturbance may directly or indirectly disrupt or destroy a unique paleontological resource, or site or unique geologic feature. As described in Section 3.5, *Geology and Soils*, implementation of Mitigation Measure GEO-5 would reduce impact to a less than significant level by requiring paleontological resources monitoring during construction. Therefore, the impact to paleontological resources would be **less than significant with mitigation** (Mitigation Measure GEO-5).

Optional Interim Trail (Trail on the Rail Line)

The construction-related impact of the Optional Interim Trail would be similar to but greater than those described above because there would be two additional phases of Project construction and ground-disturbing activities, thereby increasing the risk of disturbing paleontological resources. However, the impact would still be **less than significant with mitigation (**Mitigation Measure GEO-5).

Greenhouse Gas Emissions/Climate Change

Ultimate Trail Configuration (Trail next to Rail Line)

Implementation of the Ultimate Trail Configuration would result in the removal of approximately 803 trees, which would be inconsistent with the County Climate Action and Adaptation Plan (CAAP) Natural/Working Lands strategies including enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy (Strategies 17 and 18). Therefore, although the Ultimate Trail Configuration would be consistent with applicable greenhouse gas (GHG) reduction plans by decreasing GHG emissions through investment in bicycle and pedestrian infrastructure, it would be inconsistent with the County CAAP by resulting in tree removal. This tree

loss would be a **significant and unavoidable impact**, even with identified mitigation for tree removal (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removal within the RTC-owned rail corridor and the number of years required for replacement trees to mature.

Optional Interim Trail (Trail on the Rail Line)

Impacts associated with implementation of the Optional Interim Trail Part 1 would be greater than those described above for the Ultimate Trail Configuration because full implementation of the Optional Interim Trail would require the removal of 957 trees, compared to 803 trees. This removal of the trees would also be inconsistent with the County CAAP Natural/Working Lands strategies related to tree removal. Specifically, the County CAAP includes Natural/Working Lands Strategies 17 and 18 that include enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy. The loss of 957 trees would be staggered over 25 years so that replacement trees planted for the removal of 288 trees during Part 1 would have time to mature prior to the removal of an additional 669 trees during Part 3. However, total tree loss would still be inconsistent with the County CAAP. Therefore, the Optional Interim Trail would result in the removal of 154 more trees than the Ultimate Trail Configuration (957 trees instead of 803 trees). The impact of the Proposed Project with or without the Optional Interim Trail would be **significant and unavoidable**, even with the identified mitigation (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removal within the RTC-owned rail corridor and the number of years required for replacement trees to mature.

Hazards and Hazardous Materials

Ultimate Trail Configuration (Trail next to Rail Line)

During construction of the Ultimate Trail Configuration, ground disturbance could release existing soil contaminants, potentially exposing the public, environment, and students at nearby schools to hazardous materials. The Project corridor is located adjacent to soils with potential for contamination from historical railroad uses, such as arsenic, polycyclic aromatic hydrocarbons, creosote, pesticides, herbicides, and heavy metals. If found to be contaminated, the soil would be removed and transported from the site during Project construction. Mitigation Measure HAZ-1a would require soil sampling prior to Project construction, as well as implementation of a program to remediate or manage known contaminated materials during construction. Mitigation Measure HAZ-1b would ensure a Soils Management Plan is developed by a qualified engineer for the Project corridor, which would include measures to avoid exposure to contaminants. As described in Section 3.7, *Hazards and Hazardous Materials*, the impact would be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

Optional Interim Trail (Trail on the Rail Line)

The Optional Interim Trail would have greater potential impacts with respect to release of hazardous materials than the Proposed Project without the Optional Interim Trail. Ground-disturbing construction would occur three times for the Optional Interim Trail, instead of once, which would increase the potential for exposure to contaminants. This impact would still be **less than significant with mitigation** (Mitigation Measures HAZ-1a and HAZ-1b).

Additionally, removal of the existing rail line during construction of Part 1 of the Optional Interim Trail would have the potential to release contaminants associated with the rail line, as described in Section 3.7. Mitigation Measure HAZ-1c would require the ballast be tested for hazardous materials, and contaminated ballast reused for base rock would be capped with asphalt to avoid the exposure of future trail users to arsenic or any other contaminants, or would be transported to an appropriately designated disposal facility. The impact **would be less than significant with mitigation** (Mitigation Measure HAZ-1c).

Noise

Ultimate Trail Configuration (Trail next to Rail Line)

Construction of the Ultimate Trail Configuration could expose residences and a hotel along the Project corridor to a substantial temporary increase in noise levels and groundborne vibration when construction equipment is operating in proximity to an individual receptor. Mitigation Measures N-1 would require the construction contractor to implement noise-reducing measures where use of construction equipment occurs within 275 feet of residences or hotels. Mitigation Measure N-3 would require the construction contractor to provide written notification at least 1 week prior to the start of any construction activities involving the use of vibratory equipment to all residential units located within 50 feet or manufacturing uses within 235 feet of the construction area that will produce the vibration. The impact would be **less than significant with mitigation** (Mitigation Measures N-1 and N-3).

Optional Interim Trail (Trail on the Rail Line)

The Optional Interim Trail would result in similar but slightly greater noise and vibration impacts than those described above. The Optional Interim Trail includes the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11, which would result in exposure of additional residential and hotel receptors to construction noise in Segment 11. Additionally, construction of the Optional Interim Trail requires three construction periods. Part 1 would demolish the existing rail and construct the Optional Interim Trail; Part 2 would demolish the Optional Interim Trail and construct the rail; and Part 3 would construct the Ultimate Trail Configuration, thereby increasing the total construction activities and duration. However, the impact would be **less than significant with mitigation** (Mitigation Measures N-1 and N-3).

Tribal Cultural Resources

Ultimate Trail Configuration (Trail next to Rail Line)

During construction of the Ultimate Trail Configuration, ground disturbance has the potential to encounter unknown tribal cultural resources. Implementation of Mitigation Measure TCR-1a would require Native American monitoring during construction activities and Mitigation Measure TCR-1b would ensure that any unanticipated discoveries of tribal cultural resources are avoided or, where avoidance is infeasible, provide for appropriate treatment in consultation with the Native American tribes. Therefore, the impact would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

Optional Interim Trail (Trail on the Rail Line)

The Optional Interim Trail would result in similar but slightly greater impacts than those described above because the two additional construction phases would increase the risk of discovery. Project construction involves excavation and ground-disturbing activities up to 6 feet deep, which includes removal of the rail and construction of the Optional Interim Trail, which has the potential to encounter unknown tribal cultural resources. The impact would still be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b).

5.1.3 Alternatives Suggested during the Scoping Process

The NOP for the Project was issued on November 5, 2021, and a public scoping meeting was held on November 17, 2021. The NOP, written comments received, and a summary of the comments on the NOP (i.e., scoping comments) are included in **Appendix B**.

The scoping comments include the following suggested project alternatives, including design options and/or features (hereinafter considered alternatives). The description below also indicates if the alternative has been carried forward for evaluation or dismissed from further consideration.

Interim Trail (16 Feet)

Comments on the NOP include a request for full analysis of the 16-foot-wide Interim Trail in Chapter 3, *Environmental Impact Analysis*, of the EIR.

This alternative has been carried forward for evaluation in Chapter 3. The County, in coordination with the RTC, included an interim trail as an optional first phase of the Proposed Project (as opposed to a separate stand-alone alternative) and called it *Optional Interim Trail (Trail on the Rail Line)*. The Optional Interim Trail includes three parts: (1) implementation of the Interim Trail, which includes removal of the rail and construction of the trail on the rail line; (2) demolition of the Interim Trail and rebuilding the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail. Refer to Chapter 2, *Project Description*, for additional detail. Accordingly, it is evaluated as part of the Proposed Project analysis in Chapter 3.

As described in Section 2.4.2, *Optional Interim Trail (Trail on the Rail Line)*, this option could occur if the common carrier files for abandonment of freight operations along the Santa Cruz Branch Rail Line with the Surface Transportation Board, or if the RTC files for adverse abandonment. If this occurs, all or a portion of the Santa Cruz Branch Rail Line would likely be railbanked to preserve the corridor for future freight re-activation, and then could be used for a multi-use trail as an interim condition. Refer to Chapter 1, *Introduction*, Section 1.2.4, *Subsequent Actions and Considerations*, under *Railbanking* for additional information regarding railbanking.

Interim Trail (26 Feet)

Comments on the NOP include a request to analyze an interim trail that conforms with the 26-foot-wide Trail Only described in RTC's Unified Corridor Investment Study, Appendix B, Table B-13 (RTC 2019), in terms of width, length, and other characteristics (separating pedestrians and bicyclists). Thus, the 26-foot-wide Interim Trail differs from the 16-foot-wide Interim Trail in width and by separating bicyclists from pedestrians with striping, rather than bicyclists and pedestrians sharing the eastbound/westbound travel lanes. As an interim trail, this alternative is composed of three parts: (1) remove the rail and construct the 26-foot-wide Interim Trail, (2) remove the Optional

Interim Trail and reinstate the rail, and (3) construct the Ultimate Trail Configuration with the 12-foot trail next to the rail.

This alternative has been dismissed from further consideration and evaluation in this EIR because a substantially wider trail would result in substantially greater tree removal and associated impacts to aesthetics, biological resources, and GHG emissions. A wider trail would also result in additional construction-related impacts to air quality, geology and soils, and hydrology and water quality due to additional earth movement, emissions, and new impervious surface. Further, there are existing bridges and steep slopes which occur on one or both sides of the track, requiring retaining walls or narrowing of the trail at steep slopes and bridges or complete replacement of bridge structures at Rodeo Gulch and New Brighton Beach. Likely, the Interim Trail would narrow from 26 feet wide to 12 feet wide to use the existing bridge structures, which would result in a lack of trail design continuity.

Use Capitola Trestle Bridge

Comments on the NOP include inquiries about including the Capitola Trestle Bridge in the *Ultimate Trail Configuration (Trail next to Rail Line)*.

This alternative has been carried forward for evaluation in Chapter 3. The County, in coordination with the RTC, included an interim use of the Capitola Trestle Bridge as a design option in Segment 11 for the Ultimate Trail Configuration and called it Design Option A: Interim Trail on Capitola Trestle over Soquel Creek.

As described in Section 2.4.1, under this design option, instead of directing users to existing bicycle lanes and sidewalks through Capitola Village, the trail would transition at the Cliff Drive Plaza from Ultimate Trail alongside the rail line to an Optional Interim Trail on the rail line. This 0.5-mile (2,600 linear feet) Optional Interim Trail section would continue along the rail centerline (tracks and ties removed) across the Capitola Trestle Bridge and transition back to the Ultimate Trail on the eastern side of Monterey Avenue. The transition between Ultimate Trail and Optional Interim Trail is shown in **Appendix A.3** (sheets OPT A-1.01 through OPT A-1.06), and the 0.5-mile Optional Interim Trail is shown on sheets CP-1.17 to CP-1.21 in **Appendix A.2**). This design option requires railbanking and would temporarily convert the railroad bridge to trail use by implementing the necessary structural repairs and replacing the ballast, tracks, and ties with FRP deck for the trail. For additional detail, refer to Section 2.6.2 under *Bridges/Capitola Trestle*. If and when the rail line is later reactivated, the Optional Interim Trail would be removed, the rail would be reinstalled, and trail users would be directed through Capitola Village on bicycle lanes and pedestrian sidewalks per the Ultimate Trail Configuration.

A design option or alternative using a cantilevered path on the side of the Capitola Trestle Bridge (similar to the cantilevered path on the San Lorenzo River Trestle Bridge) was considered but dismissed from evaluation by the County because the wrought iron bridge and timber trestles cannot support a cantilevered bicycle and pedestrian bridge, and it would increase impacts to aesthetics and possibly historic resources.

Major Onstreet Improvements in Capitola Village

Comments on the Notice of Preparation (NOP) included a request to evaluate alternatives for on-street improvements through Capitola Village and to explain the restrictions of Measure L. Because the Ultimate Trail Configuration includes minor improvements, this alternative is defined as “major” improvements in Capitola Village. The Ultimate Trail Configuration includes minor on-street striping modifications to improve the visibility of the existing delineated bicycle lanes and safety for both

bicyclists and pedestrians. As described in Section 2.4.1 under *Cliff Drive Plaza/Capitola Village Connection*, these include revising the width of the existing bike and vehicular lanes for a roughly 350' long portion of Cliff Drive from the end of the Coastal Rail Trail to where the sidewalk begins on the coastal side of Cliff Drive to allow demarcation of a separate 4-foot-wide pedestrian path on the coastal side adjacent to the Class II bicycle lane,[1] repainting the existing white striping and adding green pavement painting to the existing Class II bicycle lanes, and installing white sharrow markings with green backgrounds along the Class III bike routes where bicycles and vehicles share the lane. Additionally, signage would be placed on existing sign poles along existing streets to direct users to the Cliff Drive and Monterey Avenue trail connections with no new sign poles or other improvements to streets and sidewalks. Both signage and striping would be installed with Project funds and would not require the expenditure of City funds. There would be no other major improvements through Capitola Village implemented as part of the Ultimate Trail Configuration.

An alternative with major improvements (i.e., beyond what is described above) has been dismissed from further consideration and evaluation in this EIR because this alternative would not reduce the severity of any of the significant effects of the Proposed Project (Aesthetics, Biological Resources, and Greenhouse Gas Emissions/Climate Change) and because of the restrictions in place as a result of Measure L.

Additionally, as a separate effort, the City of Capitola and RTC are evaluating improvements to bicycle and pedestrian circulation in the Capitola Village area.

The following description of Measure L includes excerpts from the City of Capitola's City Attorney's Impartial Analysis Measure L (Atchison, Barisone & Condotti n.d.). Measure L was placed on the ballot by an initiative petition signed by a legally sufficient number of registered voters in the City of Capitola and was approved. The stated purpose of Measure L is to keep the proposed rail trail entirely within the existing rail corridor, including across the trestle. The measure prohibits expenditure of any City "funds or resources related to the construction, reconstruction, operation, maintenance, financing, marketing, or signage for a detour of the Trail onto Capitola streets or sidewalks."

Maximize Connectivity to Coast (Coastal Side of Tracks)

Comments on the NOP include a request to maximize pedestrian and bicycle connectivity to the coast, including the beaches. Connectivity to the coast and beaches would be maximized by locating the trail on the coastal side of the tracks and providing connections to existing roadways with bicycle lanes and sidewalks that extend to the coast.

Locating substantial portions of the trail on the coastal side of the tracks is evaluated in this EIR as part of the Ultimate Trail Configuration in Chapter 3 and Alternative 2 (Rail with Trail on Opposite Side of the Tracks) in Chapter 5.

As described in Section 2.4.1 for the Ultimate Trail Configuration, more than half of the trail would be constructed on the coastal side, including most of Segment 11 (i.e., 2.4 miles of the 4.2-mile alignment), and there are several trail connections to adjacent roadways that extend to the coast (refer to *Trail Connections* for both Segments 10 and 11). The analysis is included in Chapter 3 of this EIR.

[1] As a result, the widths in the 35-foot-wide roadway would be Inland Class II Bicycle Lane (5 feet), Inland Travel Lane (10.5 feet), Coast Travel Lane (10.5 feet), Coast Class II Bicycle Lane (5 feet), and Pedestrian path (4 feet).

The Ultimate Trail Configuration locates Segment 10 on the inland side of the tracks to reduce tree removal and impacts to biological resources. However, in response to comments received on the NOP and to provide a broader range of reasonable alternatives to consider, the County decided to evaluate the coastal side of the tracks for Segment 10, as described below for Rail with Trail on Opposite Side of the Tracks. This analysis is included in Chapter 5, Section 5.2, of this EIR.

Thus, through analysis of the Ultimate Trail Configuration in Chapter 3 and Alternative 2 (Rail with Trail on Opposite Side of Tracks) in Chapter 5, the trail on the coastal side of the tracks is evaluated in this EIR.

Rail with Trail on Opposite Side of Tracks

Comments on the NOP include a request to analyze the trail on the opposite side of the tracks than the Ultimate Trail Configuration.

This alternative has been carried forward for evaluation in Chapter 5. The County, in coordination with the RTC, decided to evaluate this alternative because it provides a broader range of reasonable alternatives to consider, and it addresses the aforementioned request to maximize connectivity to the coast/beaches by locating all of Segment 10 (17th Avenue to 47th Avenue) on the coastal side of the tracks, instead of the inland side. Note that the opposite side of the tracks along most of Segment 11 would be the inland side. Refer to the description and evaluation of Alternative 2 (Rail with Trail on Opposite Side of Tracks) in Section 5.2 for additional information.

Narrower Trail along All or Part of Route

Comments on the NOP include a request to analyze a wider or narrower trail along all or part of the route. This section addresses an alternative with a narrower trail.

As stated in Section 2.4.1, the typical width of the Ultimate Trail Configuration is 12 feet. The trail narrows to between 10 and 12 feet at roadway crossings to slow trail users and improve safety at intersections.

An alternative for a narrower trail has been dismissed from further consideration and evaluation in this EIR for the following reasons. A narrower trail would be inconsistent with the purpose of this Project, as well as the adopted MBSST Network Master Plan, to provide an ADA-accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing rail corridor. A narrower trail would not meet California Department of Transportation (Caltrans) requirements for a Class I bikeway, which is defined as a multi-use paved path that is separated from any street or highway and permits a variety of users (including bicyclists, walkers, joggers, wheelchair users, and scooter users), per the Caltrans Highway Design Manual, Chapter 1000, *Bicycle Transportation Design* (Caltrans 2020: 1000-1-15), and therefore would not effectively accommodate both bicyclists and pedestrians.

Wider Trail along All or Part of Route

Comments on the NOP include a request to analyze a wider or narrower trail along all or part of the route. This section addresses an alternative with a wider trail.

As stated in Section 2.4.1, the width of the Ultimate Trail Configuration is primarily 12 feet, but it widens to 14 feet between 17th Avenue and Rodeo Gulch and could widen to 14 feet between 30th Avenue and 38th Avenue where there is additional space.

An alternative for a wider trail (16 feet wide) has been carried forward for evaluation in Chapter 3 and in Chapter 5 of this EIR. Refer to Interim Trail (16 Feet) above, which is evaluated in Chapter 3 as Optional Interim Trail Part 1, and refer to Trail Only below, which is evaluated in Section 5.2 as Alternative 1 (Trail Only).

An alternative for a substantially wider trail (over 16 feet wide) has been dismissed from further consideration and evaluation in this EIR because it would not fit within the rail corridor next to the existing rail line; and as described for Interim Trail (26 Feet) above, a substantially wider trail (over 16 feet wide) would result in substantially greater environmental impacts.

Detour around Trade Winds Mobile Home Park

Comments on the NOP include a proposed detour around the stretch of rail corridor that is along the Trade Winds Mobile Home Park, so the trail is not so close to those homes.

This alternative has been dismissed from further consideration and evaluation in this EIR because the County, in coordination with the RTC and City of Capitola, determined a detour would not be consistent with the MBSST Network Master Plan Objective 1.1 to provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor, and would disrupt connectivity to Jade Street Park which is considered a key recreation feature and destination within the City. Trade Winds Mobile Home Park is located between 41st Avenue and Jade Street Park in Capitola, and a detour around would require directing trail users onto the 41st Avenue bicycle lanes and sidewalks. 41st Avenue is a high volume, six- and four-lane arterial roadway that narrows to two lanes at the rail crossing. Detouring trail users onto a busy roadway would not maximize to the extent feasible project objectives to maximize safety and provide a continuous trail with continuity in design. Further, detouring trail users would reduce direct trail access to Jade Street Park.

5.1.4 Alternatives Considered during the Design Process

Trail Only (16 Feet)

The Trail Only option includes removal of the rail and construction of a 16-foot-wide trail in generally the same location. The trail narrows to 12 feet at roadway crossings to slow trail users and improve safety at intersections.

This Trail Only alternative differs from the Interim Trail (16 Feet), which is described above and included as an optional first phase of the Proposed Project, in that Trail Only (16 Feet) assumes that rail removal would be permanent, rather than a temporary interim trail with three parts, and there would be no reconstruction of the rail.

This alternative has been carried forward for evaluation in Chapter 5. The County, in coordination with the RTC, decided to evaluate this alternative because it was anticipated it could reduce at least one impact of the Ultimate Trail Configuration and of the Optional Interim Trail (e.g., less tree removal, earth movement and associated emissions). Additionally, it would provide for a broader range of reasonable alternatives to consider.

This Trail Only alternative differs from the Interim Trail (16 Feet), which is described above and included as an optional first phase of the Proposed Project, in that Trail Only (16 Feet) assumes that rail removal would be permanent, rather than a temporary or interim trail with three parts, and there would be no reconstruction of the rail. Refer to the description and evaluation of Alternative 1 (Trail Only) in Section 5.2 for additional information.

Interim Trail with Rail Preservation

The County considered an Optional Interim Trail that includes rail preservation because the Santa Cruz Branch Rail Line is eligible for listing as a historic resource by California Register of Historical Resources and National Register of Historic Places. Thus, rather than temporarily removing the rail tracks and ties to implement the Optional Interim Trail, this alternative would include FRP deck that would be installed over the existing rail tracks and ties supported by low retaining walls, with the intention of preserving the rail. Similar to the Optional Interim Trail described above, the Interim Trail with Rail Preservation includes three parts: (1) implementation of the Interim Trail, which includes installation of the FRP deck; (2) removal of the Interim Trail; and (3) construction of the Ultimate Trail Configuration alongside the rail.

This alternative has been dismissed from further consideration and evaluation in this EIR because of design challenges, and because it would not reduce a potentially significant impact. A recent historical evaluation of the rail line determined that the primary physical features which conveys the historical significance of the rail line is the corridor and its overall alignment. The rails, ballast, and ties are largely replacement materials and not historic fabric and therefore are considered secondary character-defining features (Brunzell and Barber 2023). As such, the retention of the rails, ballast and ties would not result in any lesser impact to historical resources. Additionally, this alternative may not be feasible from an engineering perspective for the following reasons:

- Ballast removal to construct the retaining walls on each side of the rail could adversely affect the rail structural system during construction by destabilizing the track support.
- Diverting the trail (FRP deck) to the side of the railroad at-grade crossings requires supporting piles to transition down and then back up to the FRP trail, which could adversely affect the rail structural system.
- The FRP deck would not likely support emergency and maintenance vehicles (other than a small all-terrain/maintenance vehicle), limiting the ability to respond to an emergency and maintenance on the trail.

Two Design Options: Rodeo Gulch Bridge

The following design options were considered for the new clear span trail bridge over Rodeo Gulch before it was determined the new bridge would be on the inland (north) side of the existing railroad bridge with approximately 7 feet between structures in the Ultimate Trail Configuration. For discussion purposes, these two design options are treated as two alternatives considered:

- **Inland Side of Existing Bridge** (4 feet between structures). The new trail bridge would be located approximately 4 feet north of the existing railroad bridge, requiring removal of 22 trees (instead of 25 trees). This alternative was dismissed because there would be limited space to maintain the existing rail bridge and new trail bridge, which could result in required maintenance activities to occur from below the bridges, increasing potential impacts to the Rodeo Creek biological resources, including riparian habitat, and water quality.
- **Coastal Side of Existing Bridge.** The new trail bridge would be located south of the existing railroad bridge. This alternative was dismissed because of the constrained right-of-way (ROW) on the east side of Rodeo Gulch. The new trail bridge would have minimal space for an abutment, and the trail would narrow and jog with an “S” curve around the existing railroad bridge to stay within the RTC ROW.

Four Design Options: Monterey Avenue to Grove Lane (Inland Side)

The following design options were considered along the inland side of the tracks between Monterey Avenue and Grove Lane before it was determined the trail would be on the coastal side in the Ultimate Trail Configuration (consistent with the MBSST Network Master Plan). For discussion purposes, these four design options are treated as four alternatives considered.

Of note for context, Park Avenue extends alongside the rail corridor, approximately 35 feet north of and 5–12 feet higher than the rail centerline. There are currently Class II bicycle lanes along Park Avenue, which are located along roadways and considered more appropriate for experienced bicyclists given the proximity to vehicular traffic. Consistent with the MBSST Network Master Plan and ADA requirements, the Ultimate Trail Configuration and the alternatives considered would provide a Class I bikeway.[2]

These alternatives for the section between Monterey Avenue and Grove Lane were dismissed by the County, in coordination with the RTC, from further consideration and evaluation in this EIR because they would result in greater environmental impacts from tree removal, as described below for each. Further, there are questions regarding the feasibility of the alignments extending along Park Avenue outside the RTC ROW, in light of the Measure L limitations (refer to the discussion for Major Onstreet Improvements in Capitola in Section 5.1.3):

- **Inland Side of Rail at Road Grade.** The trail would be located at the road grade and be immediately adjacent to Park Avenue with a 5-foot buffer to meet Class I trail standards. This alternative was dismissed because it would result in more tree removal (109 trees instead of 76 trees), diverts the Class II onto the Class I system, requires retaining walls on the south side of the trail, and would be located substantially closer to vehicular traffic along Park Avenue, which would increase potential conflicts and accidents with vehicular traffic and would not meet the project objective to maximize safety and serenity for trail users.
- **Inland Side of Rail above Rail Grade.** The trail would be located above the rail grade and below the road grade (in between the rail and road). This alternative was dismissed because it would result in more tree removal (149 trees instead of 76 trees).
- **Inland Side of Rail at Rail Grade.** The trail would be located at the rail grade. This alternative was dismissed because it would result in more tree removal (142 trees instead of 76 trees).
- **Splitting Bicycles and Pedestrians.** A Class I bikeway would be located at road grade along Park Avenue, and a pedestrian trail would be located alongside the rail on the inland or coastal side. This alternative was dismissed because it would substantially increase the amount of retaining wall required and the associated environmental impacts. This alternative would result in the increased impacts described above for Inland Side of Rail at Road Grade, plus the impacts of constructing a trail in the rail corridor that would require its own retaining walls to comply with the minimum rail offset. Further, there would be additional enforcement and safety concerns associated with keeping cyclists or non-pedestrians from accessing the pedestrian-only trail within the rail corridor.

[2] A Class I bikeway is defined as a multi-use paved path that is separated from any street or highway and permits a variety of users (including bicyclists, walkers, joggers, wheelchairs, and scooters), per the Caltrans Highway Design Manual, Chapter 1000, *Bicycle Transportation Design* (Caltrans 2020: 1000-1-15).

5.1.5 Summary of Alternatives Considered

Table 5-1 presents a summary of the alternatives considered for evaluation and either carried forward for evaluation in this chapter of the EIR or dismissed from further consideration. The table also includes the No Project alternative, as required by CEQA.

The alternatives considered were evaluated for their potential feasibility, their ability to achieve most of the project objectives, and their ability to reduce Project impacts. In **Table 5-1**, the alternatives considered are separated into those that are evaluated in the EIR (whether in Chapter 3 at an equal level of detail as the Proposed Project, or within this Chapter 5), and those that were considered but dismissed from further analysis for the reasons described above.

The following Project alternatives are analyzed in Section 5.2:

1. Trail Only (16 Feet)
2. Rail with Trail on Opposite Side of Tracks
3. No Project Alternative

Table 5-2 lists the project objectives and identifies whether these alternatives meet most of the project objectives in comparison to the Proposed Project. The No Project Alternative is not included in **Table 5-2**.

Table 5-1 Summary of Alternatives Considered

Alternative	Feasible?	Meet Most of Basic Project Objectives? (see Table 5-2)	Reduce Significant Project Impacts?	Rationale for Alternatives Dismissed
Alternatives Evaluated in EIR (Chapter 5)				
1. Trail Only (16 Feet)	Yes	Yes	Yes[a]	
2. Rail with Trail on Opposite Side of Tracks	Yes	Yes	No[b]	
3. No Project	Yes	No	Yes	
Other Alternatives Evaluated in EIR (Chapter 3 and/or Chapter 5)				
Interim Trail (16 Feet)[c]	Yes	Yes	No[d]	
Use Capitola Trestle Bridge[e]	Yes	Yes	No	
Maximize Connectivity to Coast (Coastal Side of Track)[f]	Yes	Yes	No	
Wider Trail along All or Part of Route[g]	Yes	Yes	Yes	
Alternatives Dismissed from Further Evaluation				
Interim Trail (26 Feet)	No	No[h]	No	Does not fit within RTC ROW next to the rail line; creates additional impacts
Major Onstreet Improvements in Capitola Village	No	No	No	Would not reduce significant impacts; may not be considered feasible due to Measure L restrictions[i]

Table 5-1 Summary of Alternatives Considered

Alternative	Feasible?	Meet Most of Basic Project Objectives? (see Table 5-2)	Reduce Significant Project Impacts?	Rationale for Alternatives Dismissed
Narrower Trail along All or Part of Route	No	Yes	Uncertain[j]	Does not meet Caltrans requirements nor adequately accommodate both cyclists and pedestrians
Detour around Trade Winds Mobile Home Park	Yes	No	No	Decreased safety for trail users and access to Jade Street Park
Interim Trail with Rail Preservation	Uncertain[k]	Yes	No	Design challenges and uncertain feasibility; would not reduce significant impacts
Two Design Options: Rodeo Gulch Bridge	No	Yes	No	Limited space and ROW constraints
Inland Side of Existing Bridge 4 Feet Between Structures				
Coastal Side of Existing Bridge				
Four Design Options: Monterey Ave to Grove Lane (Inland Side)	Uncertain[i]	Yes[l]	No	Greater impacts from tree removal; uncertain feasibility
Inland Side at Road Grade				
Inland Side above Rail Grade				
Inland Side at Rail Grade				
Splitting Bicycles and Pedestrians				

[a] Alternative 1 (Trail Only) would reduce tree removal and associated impacts to aesthetics, GHG emissions, land use, and some biological resources (but it would increase impacts on monarch habitat at Escalona Gulch and riverine habitat at Tannery Gulch). Alternative 1 would remove 288 trees, while the Ultimate Trail Configuration would remove 803 trees, and the Optional Interim Trail would remove 957 trees. The impacts would still be significant and unavoidable because of the inability to mitigate the majority of tree removal on site and the number of years required for trees to mature.

[b] Alternative 2 (Rail with Trail on Opposite Side of Tracks) would remove 1,000 trees, increasing associated impacts (listed above).

[c] Interim Trail (16 Feet) is evaluated in Chapter 3 as *Optional Interim Trail (Trail on the Rail Line)* and includes three parts: (1) removal of the rail and construction of the Interim Trail on the rail line; (2) demolition of the Interim Trail and rebuilding the rail line; and (3) construction of the Ultimate Trail Configuration, alongside the rail. When considering the whole of the Project, the impacts of Optional Interim Trail would include all those identified for the Ultimate Trail Configuration. Therefore, the Optional Interim Trail would not reduce significant Project impacts.

[d] As described in Chapter 3, Sections 3.1–3.14, and summarized in **Table ES-1**, most of the impacts of the Optional Interim Trail would be similar to the Ultimate Trail Configuration. However, for several environmental topics, the impacts would be greater because of the two additional construction periods. Additionally, it results in slightly more tree removal, as shown in **Table 2-4** and described in Section 3.3, *Biological Resources*, because construction of the Interim Trail (Part 1) requires tree removal on the south side of the rail that would not be required for the Proposed Project (Ultimate Trail Configuration). Part 1 of the Optional Interim Trail also results in greater impacts on monarch habitat at Escalona Gulch and riverine habitat at Tannery Gulch because of impacts on both sides of the tracks.

[e] Use Capitola Trestle Bridge is evaluated in Chapter 3 as *Design Option A: Interim Trail on Capitola Trestle over Soquel Creek*.

[f] Maximize Pedestrian/Bicycle Connectivity to Coast/Beaches is evaluated in Chapter 3 under Ultimate Trail Configuration with most of Segment 11 on coastal side and in Chapter 5 under Alternative 2 (Rail with Trail on Opposite Side of Tracks) with all of Segment 10 on the coastal side.

Table 5-1 Summary of Alternatives Considered

Alternative	Feasible?	Meet Most of Basic Project Objectives? (see Table 5-2)	Reduce Significant Project Impacts?	Rationale for Alternatives Dismissed

[g] Wider Trail along All or Part of Route is evaluated in Chapter 3 under Optional Interim Trail Part 1 and in Chapter 5 under Alternative 1 (Trail Only), as both of those trail alignments are primarily 16 feet wide, instead of the 12-foot-wide Ultimate Trail Configuration.

[h] Interim Trail (26 Feet) would not meet Project Objectives 1, 2, 5, 6, and 7 (refer to **Table 5-2** for list of project objectives).

[i] There are questions regarding the feasibility of the alignments extending along Park Avenue outside the RTC ROW, as well as major on-street improvements in Capitola Village, in light of the Measure L limitations (refer to the discussion for Major Onstreet Improvements in Capitola in Section 5.1.3).

[j] A much narrower trail would likely reduce tree removal, but not necessarily to below a significant and unavoidable impact because it is not known if a narrower trail would substantially reduce tree removal.

[k] The feasibility of Interim Trail with Rail Preservation would need to be confirmed to determine if the required ballast removal to construct the retaining walls on each side of the rail, as well as the pilings to support the descent and ascent at road crossings, would adversely affect the rail structural system.

[l] The Inland Side options would not meet Project Objective 6 to minimize trail impacts to sensitive habitat and special-status animal species because of greater tree removal (monarch butterfly habitat). Additionally, the Splitting Bicycles and Pedestrians option would not meet Project Objectives 1 and 4 (refer to **Table 5-2** for list of project objectives).

EIR = Environmental Impact Report; ROW = right-of-way; RTC = Santa Cruz County Regional Transportation Commission

Table 5-2 Project Objectives and Alternative Trail Alignments

Project Objective		Is the Trail Alignment Consistent with the Project Objective?			
		Proposed Project		Build Alternatives Evaluated	
		Ultimate Trail Configuration	Optional Interim Trail	1. Trail Only (16 Feet)	2. Rail with Trail on Opposite Side of Tracks
1	Provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County (Master Plan Objective 1.1)	Yes	Yes	Yes	Yes
2	Develop the trail so future rail transportation service along the corridor is not precluded (Master Plan Policy 1.2.4)	Yes	Yes	No	Yes
3	Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), coastal environment, local history, and affected communities (Master Plan Policies 1.1.2 and 1.1.4, Objective 2.1)	Yes	Yes	Yes	Yes
4	Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic (Master Plan Goal 1)	Yes	Yes	Yes	Yes
5	Minimize trail impacts to private lands, including agricultural, residential, and other land uses (Master Plan Objective 1.5)	Yes	Yes	Yes	Yes
6	Minimize trail impacts to sensitive habitat areas and special-status plant and animal species (Master Plan objective 1.4, Policy 1.4.1)	Yes[a]	Yes[b]	Yes[b]	No[c]
7	Comply with requirements of local, state, and federal agencies with jurisdiction	Yes	Yes	No[d]	Yes
Does it meet most of the basic project objectives)?		Yes	Yes	Yes	Yes

[a] The Ultimate Trail Configuration was designed to minimize tree removal and impacts to sensitive habitat to the extent feasible, while still conforming to Caltrans Class 1 requirements for minimum trail width and California Public Utilities Commission requirements for distance from rail, by locating the trail on the least impactful side of the tracks, and using a viaduct design in several locations which reduces ground disturbance and tree removal, compared to an at-grade trail with supporting retaining walls. This includes locating the Ultimate Trail Configuration on the south (coastal) side of the rail between Monterey Avenue and Coronado Street to reduce impacts to monarch butterfly habitat in the Escalona Gulch area.

[b] The Optional Interim Trail Part 1 (removal of tracks and construction of Optional Interim Trail) and Alternative 1 (Trail Only) would minimize some impacts to biological resources because there would be less tree removal by aligning a 16-foot-wide trail on the rail centerline, but it would increase impacts on monarch habitat at Escalona Gulch and riverine habitat at Tannery Gulch by extending the trail south of the current tracks. The Optional Interim Trail would also increase temporary impacts due to the two additional construction periods.

[c] Alternative 2 (Rail with Trail on Opposite Side of Tracks) would increase tree removal and impacts to sensitive habitat compared to the Ultimate Trail Configuration, which was designed to minimize tree removal and impacts to sensitive habitat, as described in table note a.

Table 5-2 Project Objectives and Alternative Trail Alignments

Project Objective	Is the Trail Alignment Consistent with the Project Objective?			
	Proposed Project		Build Alternatives Evaluated	
	Ultimate Trail Configuration	Optional Interim Trail	1. Trail Only (16 Feet)	2. Rail with Trail on Opposite Side of Tracks

[d] Alternative 1 (Trail Only) would conflict with current Master Plan Policy 1.1 to construct a trail to not preclude future trail service because there would be no reconstruction of the rail. RTC staff determined that the Optional Interim Trail would not conflict with this RTC policy because the option for future rail transit options is retained through railbanking, which could occur if the common carrier files for abandonment of freight operations along the Santa Cruz Branch Rail Line with the Surface Transportation Board, or if the RTC files for adverse abandonment.

5.2 Alternatives Evaluated in EIR

This section presents the alternatives and includes an evaluation for the environmental topics addressed in Sections 3.1 to 3.14, although at a more general level to compare the merits of the alternatives to the Proposed Project, as allowed by CEQA (*CEQA Guidelines*, Section 15126.6[d]). **Table 5-3**, located at the end of this chapter, presents a list of all the potential impacts of the Proposed Project and a summary comparison for each of the alternatives. The text below is a summary discussion, focusing on the potentially significant impacts that require mitigation to reduce the impact to a less than significant level. **Table 5-4**, also located at the end of this chapter, presents a list of the required mitigation measures for the Proposed Project and each alternative.

5.2.1 Alternative 1 (Trail Only)

Description

Under Alternative 1, the railroad tracks and ties would be permanently removed, and a paved multi-use trail with a typical width of 16 feet would be constructed in generally the same location throughout Segments 10 and 11.

Effectively, this Trail Only alternative is the same as implementing only Part 1 (but not Parts 2 and 3) of the Optional Interim Trail. Therefore, the trail alignment, width and materials, and features would be the same as that described in Section 2.4.2, *Optional Interim Trail (Trail on the Rail Line)*, under *Part 1) Implementation of the Optional Interim Trail*. A summary has been provided below.

Like the Ultimate Trail Configuration, the Alternative 1 trail alignment extends from 17th Avenue on the west to State Park Drive on the east. However, rather than directing trail users to sidewalks and bicycle lanes along surface streets through Capitola Village, the trail would continue along the rail centerline (tracks and ties removed) and across the Capitola Trestle Bridge. As described in Sections 2.4.2 and 2.6.2 for Optional Interim Trail Part 1, conversion of the existing Capitola Trestle Bridge from railroad use to trail use requires structural repairs to various parts of the bridge and installing FRP deck for the trail.

The typical trail width would be 16 feet with striping in the middle to separate eastbound and westbound trail users. The width would be reduced to 12 feet in constrained areas, including various street and bridge crossings, as described in Section 2.4.2 for Optional Interim Trail Part 1. This is consistent with the MBSST Network Master Plan, which identifies 16 feet where space permits and reducing to 12 feet to minimize impacts. For comparison, the Ultimate Trail is mostly 12 feet wide but

narrows to 10 feet wide in some areas due to constraints and widens to 14 feet wide where there is additional space (e.g., between 17th Avenue and Rodeo Gulch).

As described in Section 2.6.2 for Optional Interim Trail Part 1, the physical elements of track removal would entail: 1) Remove rail, ties, signage, and equipment. 2) Excavate and redistribute ballast on site where feasible. 3) Regrade, add base rock, compact, and then pave the trail with asphalt.

Alternative 1 (Trail Only) would require some retaining walls, tree removal (288 trees), and earth movement (7,363 cubic yards [CY] of excavation and 11,988 CY embankment construction/fill) for rail removal and trail construction, as described in Section 2.4.1 and **Table 2-3** for the Optional Interim Trail Part 1. It is assumed that Alternative 1 would result in the same amount of tree removal as the Optional Interim Trail Part 1 because it would be the same width (16 feet) and location.

Impact Analysis

The impact analysis presented below and in **Table 5-3** focuses on the environmental impacts of implementing Alternative 1 (Trail Only) in comparison to the Ultimate Trail Configuration (i.e., Proposed Project without the Optional Interim Trail), but also provides comparisons to the Optional Interim Trail (i.e., Proposed Project with the Optional Interim Trail).

Earth Movement. Alternative 1 would increase impacts associated with earth movement compared to the Ultimate Trail Configuration, and decrease impacts compared to the Optional Interim Trail. Construction-related impacts from ground disturbance and construction equipment are generally associated with the following environmental topics: air quality, cultural resources, geology/soils, hazardous materials, hydrology/water quality, and noise. Examples include dust and air emissions, inadvertent discovery of archaeological resources, loss of topsoil and erosion into waterways, and release of hazardous materials in the soil.

Alternative 1 requires more earth movement than the Ultimate Trail Configuration for the following reasons:

- The tracks and ties would be removed.
- The trail is at-grade, which requires more earthwork, whereas the Ultimate Trail Configuration includes several viaducts (approximately 2,030 linear feet of “floating bridges”) supported by piers requiring less earthwork.
- The 16-foot-wide trail would extend beyond the existing extents of the ballast, requiring additional fill. Additional fill is also required to provide the vegetated swale for stormwater treatment.
- There would be an additional 0.5 mile (2,500 linear feet) of trail constructed between Opal Street and Monterey Avenue, requiring additional cut and fill (rather than directing trail users through Capitola Village on surface streets).
- Additional cut and fill is needed to grade out the sides of the 16-foot-wide trail and avoid the need for retaining walls.

Alternative 1 requires less earth movement than the Optional Interim Trail because it has one construction period, whereas the Optional Interim Trail has three construction periods and more demolition (rail demolition in Part 1 and interim trail demolition in Part 2).

Earth movement quantities are available for Alternative 1 because it is generally the same as Optional Interim Trail Part 1, which is part of the optional first phase of the Proposed Project that was analyzed in detail in Chapter 3:

- Alternative 1 would require 7,363 CY of excavation and 11,988 CY embankment construction/fill (refer to Part 1 in **Table 2-3**).
- The Ultimate Trail Configuration would require 6,025 CY of excavation and 8,835 CY of embankment construction/fill (refer to **Table 2-2**).
- The Optional Interim Trail would require 62,046 CY of excavation and 28,186 CY of embankment construction/fill (refer to Parts 1–3 in **Table 2-3**).

Alternative 1 would also increase impacts to historical resources, compared to the Ultimate Trail Configuration, as well as the Optional Interim Trail, because Alternative 1 would permanently remove the rail line which is an identified historical resource. However, as noted in the discussion for Cultural Resources below and in Section 5.1.2, removal of the rail would not alter the alignment of the Santa Cruz Railroad, which is its primary character-defining feature.

Tree Removal. Alternative 1 would reduce tree removal and associated impacts to aesthetics, GHG emissions, and some biological resources compared to both the Ultimate Trail Configuration and the Optional Interim Trail. As shown in the table below, Alternative 1 would remove 515 fewer trees than the Ultimate Trail Configuration and 669 fewer trees than the Optional Interim Trail. However, Alternative 1 would increase impacts on monarch habitat at Escalona Gulch and riverine habitat at Tannery Gulch because the 16-foot-wide trail on the rail centerline and the associated disturbance would extend on the south side of the existing tracks into the existing monarch habitat.

	Alternative 1 (Trail Only)	Proposed Project	
		Ultimate Trail Configuration	Optional Interim Trail
Tree removal	288 trees[a]	803 trees[b]	957 trees[c]

[a] Refer to **Table 2-3** in Section 2.6.2. Alternative 1 would remove the same number of trees as Part 1 of the Optional Interim Trail.
[b] Refer to **Table 2-2** in Section 2.6.1.
[c] Refer to **Table 2-3** in Section 2.6.2. Total tree removal includes trees removed during Part 1 (288 trees) and Part 3 (669 trees).

In summary, Alternative 1 would reduce some of the impacts associated with tree removal, but would not reduce any of the significance determinations for the Proposed Project with or without the Optional Interim Trail, including any potentially significant impacts to a less than significant level (i.e., from Significant and Unavoidable to Less than Significant with Mitigation). There would still be significant and unavoidable impacts to aesthetics, biological resources, and GHG emissions/climate change from tree removal, which is the same as the Proposed Project with or without the Optional Interim Trail.

Aesthetics

The aesthetic impacts of Alternative 1 (Trail Only) would be similar to but less than the Proposed Project (with or without the Optional Interim Trail), which is addressed in Section 3.1, *Aesthetics*. Alternative 1 would require removal of 288 trees, which is substantially less than the Ultimate Trail Configuration (which would require removal of 803 trees) and the Optional Interim Trail (which would require removal of 957 trees). Although Alternative 1 would require removal of fewer trees than the Proposed Project, the overall impact determination would be significant and unavoidable due to tree removal because 288 trees is still a substantial number of trees, and it would have an adverse effect on scenic resources and be inconsistent with policies pertaining to tree removal.

Like the Proposed Project, the Alternative 1 trail alignment would not be visible from SR-1; therefore, impacts regarding scenic resources associated with a state scenic highway would be similar to the Proposed Project and remain less than significant.

Alternative 1 would not adversely affect daytime or nighttime views through creation of a new source of substantial light and glare. Construction would occur during the daytime, and trail lighting would be low-level and directed down toward the trail, in compliance with applicable Santa Cruz County and City of Capitola regulations. Similar to the Proposed Project, the potential light and glare impact would be less than significant.

The overall aesthetics impact of Alternative 1 would be similar but reduced compared to the Proposed Project with and without the Optional Interim Trail. Although the impact would be reduced by replacing the trees removed (through Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), there is uncertainty regarding the location and growth to maturity. Therefore, impacts would remain **significant and unavoidable** due to substantial tree removal, which is the same as the Proposed Project with and without the Optional Interim Trail.

Air Quality

The air quality impacts of Alternative 1 (Trail Only) would be similar to the Proposed Project, which are addressed in Section 3.2, *Air Quality*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project, Alternative 1 would generate construction-related emissions of particulate matter less than 10 microns in diameter (PM_{10}) and other criteria pollutants during construction. However, the impact would be slightly greater than the Ultimate Trail Configuration due to the demolition phase required to remove the existing rail line and the increased excavation, earthwork, and materials to construct a wider trail (16 feet wide compared to 12 feet wide). Compared to the Optional Interim Trail, Alternative 1 would have less construction-related emissions overall when considering the whole of the Interim Trail (Parts 1, 2, 3). Overall, Alternative 1 would result in similar ground disturbance and associated construction-related emissions, and the impact would be less than significant.

Once constructed, operational emissions would be the same as the Proposed Project with or without the Optional Interim Trail because function of the trail would be similar, including the net air quality beneficial effect by providing alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.

The overall air quality impacts of Alternative 1 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Biological Resources

The impacts to biological resources from Alternative 1 (Trail Only) would be similar to but less than the Ultimate Trail Configuration, and substantially less than the Optional Interim Trail, both of which are described in Section 3.3, *Biological Resources*. The overall impact determination for Alternative 1, would be **significant and unavoidable,** like the Proposed Project with or without the Optional Interim Trail.

Alternative 1 would require the removal of the tracks and construction of the 16-foot-wide multi-use trail generally centered on the existing tracks. The multi-use trail would be 4 feet wider than the 12-foot-wide Ultimate Trail Configuration and extend on both sides of the existing rail line, whereas the Ultimate Trail Configuration would be confined to one side of the corridor. Impacts to biological

resources from this alternative would be less overall because the footprint would be centered on the developed tracks and ballast, which do not support sensitive biological resources.

The main impacts include the removal of mature trees and adverse effects to sensitive habitats, as well as associated special-status plant and wildlife species. The impacts of Alternative 1 would be similar to but less than those identified for the Ultimate Trail Configuration and substantially less than Optional Interim Trail (Parts 1–3). Compared to the Ultimate Trail Configuration, the Alternative 1 (Trail Only) impacts to biological resources are as follows:

- **Monarch Roost Habitat.** Similar but greater impacts to known and potential monarch roost habitat. The number of trees to be removed for Alternative 1 is 288 trees compared to 803 for the Ultimate Trail, a substantially lower number. However, for Alternative 1, tree removal along Park Avenue (42 trees) would occur on the north side of trail, thereby removing the large eucalyptus trees that serve as wind buffers and autumnal roost trees for the known monarch roost site at Escalona Gulch. A number of these trees are avoided with the Ultimate Trail Configuration, although the overall number of tree removal at Escalona Gulch (97 trees) is greater. The trees that would be removed for the Ultimate Trail Configuration are situated along the steep southern embankment, are typically smaller-statured trees, and the embankment itself would continue to provide some wind protection for Escalona Gulch.
- **Birds and Mammals.** Similar impacts for breeding birds (including sensitive and common nesting avian species), roosting bats (including sensitive bat species), and San Francisco dusky-footed woodrat but less overall impact due to the reduction in tree removal and associated disturbance of understory vegetation and position of the trail centered on the developed footprint of the rail line.
- **Fish and Amphibians.** Similar but more potential impacts to federally listed fish species, because Alternative 1 requires improvements to the Capitola Trestle Bridge like the Optional Interim Trail, with temporary and indirect impacts associated with construction. Similar (primarily temporary and indirect) impacts to Santa Cruz black salamander, if present.
- **Sensitive Habitats.** Similar, but slightly less impacts (4.72 acres for Alternative 1, compared to 5.10 acres for Ultimate Trail), because of the position of the trail on the developed footprint, to sensitive habitats including coast live oak woodland, mixed riparian forest, coastal scrub, and monarch roost sites.
- **Aquatic Features.** Slightly less impacts overall. Greater impacts to the riverine habitat of Tannery Gulch (0.10 acre for Alternative 1, compared to zero acre for Ultimate Trail) and less impacts to the scrub-shrub wetlands (0.10 acre for Alternative 1, compared to 0.38 acre for Ultimate Trail) located within New Brighton State Beach.
- **Wildlife Movement.** Similar and slightly less impacts to wildlife movement because, although the Trail Only footprint is 4 feet wider than the Ultimate Trail, it would be centered on the tracks and therefore result in less tree removal (288 trees for Alternative 1, compared to 803 trees for Ultimate Trail) and similar disturbance of wildlife movement habitat including understory vegetation (7.07 acres for Alternative 1, compared to 8.35 acres for Ultimate Trail).
- **Tree Removal.** Substantially less impacts associated with tree removal (288 trees instead of 803 trees) and removal of native, significant and heritage trees (because of the position of footprint, centered on the tracks), but similar disturbance of understory vegetation.

The overall impacts to biological resources from impact of Alternative 1 would be significant and unavoidable, which is the same as the Proposed Project with or without the Optional Interim Trail. This is because the Alternative 1 (Trail Only) alignment results in impacts to the known monarch

roost site at Escalona Gulch and extensive removal of trees that cannot be feasibly mitigated to a less than significant level. Although the quantity of tree removal near Escalona Gulch for Alternative 1 would be less than the Ultimate Trail Configuration, the tree removal includes large eucalyptus trees north of the rail line that are autumnal roost sites for monarchs and serve as wind buffers for the overwintering roost trees south of the tracks. In addition, the large number of trees removed for Alternative 1, while substantially less than the Ultimate Trail, cannot be mitigated to a less than significant level. Of the 288 trees that would be removed for Alternative 1, 83 of these trees are native and Projected/Significant. Replacement trees would take many years to mature and provide ecosystems services including adequate buffer quality, functions and values for the monarch roost sites, and wildlife movement. Further, mitigation sites for replacement planting and habitat creation that are within relatively proximity to the Project corridor (i.e., between Highway 1 and the Monterey Bay) are limited.

Cultural Resources

The cultural resources impact of Alternative 1 (Trail Only) would be greater than the Ultimate Trail Configuration and slightly reduced compared to Optional Interim Trail, which are addressed in Section 3.4, *Cultural Resources.* The overall impact determination for Alternative 1 would be less than significant with mitigation, similar to the Proposed Project with or without the Optional Interim Trail.

Alternative 1 would involve removal of the railroad tracks and construction of the trail in generally the same location. As described above under *Cultural Resources* in Section 5.1.2 for the Optional Interim Trail, there are two built environment resources within the Project corridor which would be similarly affected under Alternative 1 compared to the Optional Interim Trail: the Santa Cruz Railroad and the Capitola Trestle Bridge. Removal of the rail would not alter the alignment of the Santa Cruz Railroad, which is its primary character-defining feature (rather than the tracks and ties). Regarding the Capitola Trestle Bridge, the structural repairs and conversion to trail use would be designed to match the bridge's aesthetics. However, implementation of mitigation requiring input from a historic preservation professional (Mitigation Measure CR-1) would ensure the design of the Capitola Trestle Bridge complies with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings. Mitigation Measure CR-1 is also required for the Optional Interim Trail, but not the Ultimate Trail Configuration, which would not alter the Capitola Trestle Bridge. There would be no impact to the Stockton Avenue Bridge or concrete arch culvert. Therefore, impacts to historic, built environment resources would be less than significant with mitigation (Mitigation Measure CR-1).

Construction of Alternative 1 would involve similar but slightly more amounts of ground disturbance compared to the Ultimate Trail Configuration because Alternative 1 requires rail removal and is a wider trail (16 feet instead of 12 feet), but it would involve less ground disturbance compared to the Optional Interim Trail because Alternative 1 has one construction period instead of three. Impacts to archaeological resources from Alternative 1 would be potentially significant, and compliance with Chapter 17.56 of the Capitola Municipal Code and Chapter 16.40 of the County Code and implementation of mitigation measures would be required to reduce impacts to known and unknown archaeological resources (similar to the Optional Interim Trail). Overall, impacts to archaeological resources would be similar to the Ultimate Trail Configuration and reduced compared to the Optional Interim Trail, which requires three construction phases (including demolition of the rail during Part 1 and demolition of the interim trail during Part 2). Impacts of

Alternative 1 would be less than significant with mitigation (Mitigation Measures CR-2a, CR-2b, CR-2c, CR-2d).

Similar to the Ultimate Trail Configuration and Optional Interim Trail, construction of Alternative 1 could encounter human remains during construction, and the associated risk is based on the amount of ground disturbance. This risk is greater with the Optional Interim Trail due to the two additional construction periods. Compliance with the Capitola Municipal Code, the County Code, PRC Section 5097.98, and California Health and Safety Code, Section 7050.5, ensure impacts to unknown human remains would be less than significant.

Overall, impacts to cultural resources from Alternative 1 (Trail Only) would be greater than the Ultimate Trail Configuration, but less than the Optional Interim Trail. Impacts would be **less than significant with mitigation,** which is the same as the Proposed Project with or without the Optional Interim Trail.

Geology and Soils

The geology and soils impact of Alternative 1 (Trail Only) would be similar to those identified for the Proposed Project, which are addressed in Section 3.5, *Geology and Soils*. The overall impact determination would be less than significant with mitigation, like the Proposed Project with or without the Optional Interim Trail.

The Alternative 1 alignment extends through the same geology and soils as the Proposed Project. Thus, like the Proposed Project, Alternative 1 could expose the trail and trail users to risk of injury from liquefaction or landslides and could result in substantial soil erosion or loss of topsoil, risk to life and property from expansive soils, and directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature during ground-disturbing activities. However, because Alternative 1 would be on the rail line (similar to the Optional Interim Trail Part 1), fewer improvements would be required for waterway crossings than the Ultimate Trail Configuration. Therefore, the potential damage from liquefaction, landslides, and/or lateral spreading would be slightly reduced because no pilings for viaduct construction would be required.

The impact associated with soil erosion and loss of topsoil from Alternative 1 would be slightly greater than the Ultimate Trail Configuration, due to the demolition phase required to remove the existing rail line and the increased excavation, earthwork, and materials to construct a wider trail (16 feet wide compared to 12 feet wide). Accordingly, these impacts from Alternative 1 would be less than the Optional Interim Trail, which has three construction periods including two phases of demolition (for rail removal during Part 1 and interim trail removal during Part 2). Project design and construction would include implementation of recommendations from the Geotechnical Investigation Reports prepared for the Project. Therefore, the impacts related to risk from unstable soils would be less than significant for Alternative 1, which is the same as the Proposed Project with or without the Optional Interim Trail, as described in Section 3.5, *Geology and Soils*.

The potential impacts to paleontological resources from ground-disturbing activities from Alternative 1 would be similar to the Ultimate Trail Configuration. Although Alternative 1 would be wider (12 to 16 feet wide, instead of 10 to 14 feet wide), resulting in more ground disturbance, the Ultimate Trail Configuration includes retaining walls requiring deeper excavation. Compared to the Optional Interim Trail, Alternative 1 would have less impact when considering the combined construction-related effects of Optional Interim Trail Parts 1, 2, and 3 because there would be more ground disturbance from three construction periods, including two phases of demolition (removal of the rail in Part 1, and removal of the interim trail in Part 2). With implementation of mitigation

requiring paleontological resource monitoring and reporting during Project construction, this impact would be less than significant with mitigation (Mitigation Measure GEO-5).

The overall geology and soils impacts of Alternative 1 would be **less than significant with mitigation** (Mitigation Measure GEO-5), which is the same as the Proposed Project with or without the Optional Interim Trail.

Greenhouse Gas Emissions/Climate Change

The GHG emissions/climate change impacts of Alternative 1 (Trail Only) would be similar to those identified for the Ultimate Trail Configuration and less than those identified for the Optional Interim Trail, which are addressed in Section 3.6, *Greenhouse Gas Emissions/Climate Change*. The overall impact determination would be significant and unavoidable, like the Proposed Project with or without the Optional Interim Trail, due to conflict with an applicable plan adopted for the purpose of reducing GHG emissions (County CAAP).

Alternative 1 would generate GHG emissions during construction from earth moving equipment and truck trips to haul soil. The impact would be similar to but slightly greater than the Ultimate Trail Configuration, due to the demolition phase required to remove the existing rail line and the increased excavation, earthwork, and materials to construct a wider trail (16 feet wide compared to 12 feet wide). Compared to the Optional Interim Trail, Alternative 1 would have less construction-related GHG emissions when considering the whole of the Interim Trail (Parts 1, 2, 3) because the Optional Interim Trail requires three construction period for full implementation of Part 1 (remove rail and construct interim trail), Part 2 (remove interim trail and rebuild rail), and Part 2 (construct Ultimate Trail Configuration). Once constructed, Alternative 1 would be an active transportation and would contribute to a regional net decrease in vehicle miles travel and thus GHG emissions, substantially similar to the Proposed Project with or without the Optional Interim Trail. Overall, Alternative 1 would not result in GHG emissions that would have a significant impact on the environment, and the impact would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

However, to construct the trail, Alternative 1 would result in the removal of 288 trees, which would be inconsistent with an applicable GHG reduction plan related to tree removal (County CAAP). Specifically, the County CAAP includes Natural/Working Lands Strategies 17 and 18 that include enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy. This impact would be less than the Ultimate Trail Configuration (which would remove 803 trees) and the Optional Interim Trail (which would remove 957 trees). Therefore, although tree removal would be reduced compared to the Proposed Project (Ultimate Trail Configuration and Optional Interim Trail), it would still conflict with applicable GHG reduction plans, and the impact would be significant and unavoidable, even with the identified mitigation for tree removal (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), because of the inability to mitigate the majority of tree removal on site and the number of years required for trees to mature.

Similar to the Proposed Project, Alternative 1 would place portions of the trail in a potential future tidal inundation, flood, and coastal bluff erosion hazard areas but would not introduce any new structures that would require protection from flooding or result in displacement of people during a flood event. Impacts related to sea level rise and storm flooding would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

The overall GHG emissions/climate change impacts of Alternative 1 would be **significant and unavoidable** due to tree removal, even with the identified mitigation (Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), which is the same as the Proposed Project with or without the Optional Interim Trail.

Hazards and Hazardous Materials

The hazards and hazardous materials impacts of Alternative 1 (Trail Only) would be similar to but slightly greater than those identified for the Ultimate Trail Configuration and less than the Optional Interim Trail (Parts 1, 2, and 3), which is addressed in Section 3.7, *Hazards and Hazardous Materials*. However, the overall impact determination for Alternative 1 would be less than significant with mitigation, like the Proposed Project with or without the Optional Interim Trail.

Similar to the Proposed Project, Alternative 1 could disturb contaminated near surface materials during construction. This impact would be similar to the Ultimate Trail Configuration and less than the Optional Interim Trail which has three construction periods (including demolition of the rail for Part 1 and interim trail for Part 2). Under all scenarios, this impact would be reduced to less than significant with mitigation requiring soil sampling prior to construction, a program to remediate or manage known contaminated soil during construction, and a Soils Management Plan developed by a qualified engineer to include measures to avoid exposure to contaminants (Mitigation Measure HAZ-1a and HAZ-1b).

Additionally, like the Optional Interim Trail, Alternative 1 would entail removal of the Santa Cruz Branch Rail Line as well as associated structures and equipment (i.e., crossing gates, switch boxes). Removal of the rail could result in potential exposure to contaminants still present on the track ballast and rail ties, resulting in health hazards to construction workers or the public. Therefore, impacts of Alternative 1 would be greater than the Ultimate Trail Configuration and similar to the Optional Interim Trail. Under all scenarios, this impact would be less than significant with compliance with existing hazardous material regulations and with mitigation requiring an evaluation of the subgrade materials within the corridor and capping contaminated near surface materials (soils and ballast) (Mitigation Measure HA-1c).

The overall hazards and hazardous materials impacts of Alternative 1 would be slightly greater than the Ultimate Trail Configuration due to rail removal and less than the Optional Interim Trail (Parts 1–3). Like the Proposed Project, impacts of Alternative 1 would be **less than significant with mitigation** for the Ultimate Trail Configuration (Mitigation Measures HAZ-1a and HAZ-1b) and the Optional Interim Trail (Mitigation Measure HAZ-1a, HAZ-1b, and HAZ-1c).

Hydrology and Water Quality

The hydrology and water quality impacts of Alternative 1 (Trail Only) would be similar to those identified for the Proposed Project, which are described in Section 3.8, *Hydrology and Water Quality*. The overall impact determination would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Like the Proposed Project, construction of Alternative 1 could violate water quality standards, interfere with groundwater recharge, and alter drainage patterns in the rail corridor through the introduction of new impervious surfaces. Compared to the Ultimate Trail Configuration, construction-related impacts of Alternative 1 would be greater because Alternate 1 would require more material movement from demolishing the existing rail and constructing a trail that is wider (16 feet compared to 12 feet) and would require the construction of additional trail segments on each side of the Capitola Trestle Bridge. Compared to the Optional Interim Trail, construction-related impacts of Alternative 1 would be less because the Optional Interim Trail would require more

material movement from three construction periods, which includes demolishing the rail (Part 1) and the Interim Trail (Part 2).

After construction, similar to the Proposed Project, Alternative 1 could generate pollutants from trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff that could degrade the surface water quality of downstream receiving waters, including the nine waterways identified in Section 3.8.1 (**Figure 3.8-1**). Like the Proposed Project (Ultimate Trail Configuration and Optional Interim Trail), Alternative 1 would incorporate stormwater drainage features and treatment devices and would be required to comply with the National Pollutant Discharge Elimination System (NPDES)-required Stormwater Pollution Prevention Plan (SWPPP), County Code, and Capitola Municipal Code to reduce the risk of water degradation on and off site from soil erosion and other pollutants.

Alternative 1 would result in a greater amount of new impervious surface compared to the Ultimate Trail Configuration because the trail would be 16 feet wide rather than 12 feet wide. However, compared to the Optional Interim Trail, Alternative 1 would result in the same amount of new impervious surface because the Interim Trail would also be 16 feet wide. Thus, with respect to potential interference with groundwater recharge, Alternative 1 would have slightly greater impact compared to the Ultimate Trail Configuration and similar impact compared to the Optional Interim Trail. However, impacts would be less than significant.

Similar to the Proposed Project (Ultimate Trail Configuration and Optional Interim Trail), Alternative 1 would not result in alterations of the course of a stream or river, and the relatively minor planned improvements would maintain localized storm drainage patterns. In addition, as determined appropriate by the City/County, stormwater treatment devices, including hydrodynamic separators, would be installed in the storm drain system to treat off-site flows to improve water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail.

Under all scenarios, potential impacts would be minimized with implementation of the pre- and post-construction best management practices, compliance with the NPDES-required SWPPP and the County of Santa Cruz Grading Ordinance, and incorporation of drainage features into project design.

The overall hydrology and water quality impact of Alternative 1 would be **less than significant**, which is the same as the Proposed Project with and without the Optional Interim Trail.

Land Use and Planning

The land use and planning impacts of Alternative 1 (Trail Only) would be similar to but slightly greater than those identified for the Proposed Project with or without the Optional Interim Trail, which is addressed in Section 3.9, *Land Use and Planning*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project with or without the Optional Interim Trail, Alternative 1 would be along the rail corridor, would not physically divide an established community, and would increase connectivity within the community. Further, Alternative 1 would also be consistent with most (39 of 45) of the applicable County and City land use policies (described in Section 3.9, *Land Use and Planning*), and inconsistent with County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8 and City of Capitola General Plan Policies OSC-6.2 and OSC-6.9, which pertain to tree preservation. While Alternative 1 would be inconsistent with the same number of policies as the Proposed Project, the degree of the inconsistent would be less because Alternative 1 would require less tree removal. The

evaluation in Section 3.9 considered policies of the County of Santa Cruz General Plan, the City of Capitola General Plan, the Santa Cruz County Active Transportation Plan, and MBSST Network Master Plan. City and County ordinances and policies associated with tree removal are addressed in the Biological Resources discussion.

Alternative 1 would not be consistent with Policy 1.2.4 of the MBSST Network Master Plan, which intends to develop trails in a way that does not preclude future rail service along the rail corridor, because Alternative 1 assumes permanent removal of the rail. Overall, because Alternative 1 would be consistent with most of the applicable City and County land use policies, this impact is considered less than significant.

The overall land use and planning impact of Alternative 1 would be similar to the Proposed Project with or without the Optional Interim Trail. Although Alternative 1 is inconsistent with MBSST Network Master Plan Policy 1.2.4 (and the Proposed Project is not), there would also be substantially less tree removal with Alternative 1. Impacts would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Noise

The noise impacts of Alternative 1 (Trail Only) would be similar to but greater than those identified for the Proposed Project, which are addressed in Section 3.10, *Noise*. The overall impact determination would be **less than significant with mitigation**, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project, construction of the Alternative 1 could result in a substantial temporary increase in noise levels and expose persons to groundborne vibration and noise. This impact would be similar to, but slightly greater than the Ultimate Configuration because there would be more ground disturbance associated with demolishing the rail and constructing a wider trail (16 feet wide instead of 12 feet wide). Constructing the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11 extends closer to sensitive receptors (residences and hotel) additional receptors; however, this segment is included in Design Option A for the Ultimate Configuration. This impact would be similar to, but less than the Optional Interim Trail, which requires three construction periods instead of one. Under all scenarios, construction impacts would be reduced to a less than significant level by requiring mitigation that implements noise-reducing measures near sensitive receptors and providing notification of construction vibration.

The overall noise impacts of Alternative 1 would be **less than significant with mitigation** (Mitigation Measures N-1 and N-3), which is the same as the Proposed Project with or without the Optional Interim Trail.

Public Safety and Services

The public safety and service impacts of Alternative 1 (Trail Only) would be similar to those identified for the Proposed Project, which are addressed in Section 3.11, *Public Safety and Services*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project with and without the Optional Interim Trail, Alternative 1 would have a similar number of trail users, estimated to be 500–1,500 per day for purposes of discussion and analysis (refer to Section 2.5 under *Trail Use*). However, since the Santa Cruz Branch Rail Line would

be removed under this alternative and the trail would be 16 feet wide, emergency access to the trail would be slightly easier (similar to the Optional Interim Trail) because the trail would be wider than the Ultimate Trail Configuration (12 feet wide), and emergency vehicles would not need to cross the rail tracks to access the trail. Slightly easier emergency access to the trail would also occur with the Optional Interim Trail while the 16-foot-wide interim trail is in place (Part 1), but not once it is removed (Part 2) and the 12-foot-wide Ultimate Trail Configuration is in use (Part 3). In addition, similar to the Optional Interim Trail, Alternative 1 would not include the additional striping modifications along Cliff Drive and through Capitola Village; therefore, the Interim Trail would also not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment.

The overall public safety and services impacts of Alternative 1 would be similar to those identified for the Proposed Project with or without the Optional Interim Trail. Impacts of Alternative 1 would be **less than significant**, like the Proposed Project with or without the Optional Interim Trail.

Transportation

The transportation impacts of Alternative 1 (Trail Only) would be similar to those identified for the Proposed Project, which are addressed in Section 3.12, *Transportation*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project, transportation impacts during construction of Alternative 1 would be primarily associated with the presence of large construction equipment and vehicles accessing the Project corridor. The impacts of Alternative 1 would be somewhat greater than the Ultimate Trail Configuration because Alternative 1 would require additional hauling trips for rail removal and more construction-related traffic associated with the demolition of the existing rail and construction of a wider trail. However, the impacts of Alternative 1 would be less than the Optional Interim Trail, which would also require additional hauling trips and more construction-related traffic associated with demolition of the existing rail (Part 1), the interim trail (Part 2), and three construction periods instead of one.

Similar to the Proposed Project, Alternative 1 would ultimately be consistent with the vehicle miles traveled (VMT) screening criteria set forth by the Office of Planning and Research (OPR), Caltrans, County of Santa Cruz, and City of Capitola. Specifically, Alternative 1 would be consistent with the OPR small Project screening criteria of fewer than 110 vehicular trips per day, would not induce travel, would be consistent with Association of Monterey Bay Area Governments' (AMBAG's) Sustainable Communities Strategy (SCS), and would satisfy the conditions of several OPR example projects that do not require induced demand analysis. As such, impacts related to VMT would be less than significant.

Similar to the Proposed Project, construction of Alternative 1 could introduce temporary hazards due to the potential for conflict between construction vehicles and existing traffic. This impact would be somewhat greater than the Ultimate Trail Configuration because there would be additional construction traffic associated with demolition of the rail line; and it would be less than the Optional Interim Trail, which would have two additional construction phases. Under all scenarios, construction signage and a flagger would be present as needed to maintain public safety while facilitating construction access to the Project corridor.

Similar to the Proposed Project, operation of Alternative 1 could affect vehicular, bicycle, and pedestrian safety at roadway crossings. However, like the Proposed Project, Alternative 1 would include safety design features safety design features (e.g., flashing signage, chicanes, crosswalks), which would reduce the potential for hazards during operation to a less than significant level. This includes new striping and sidewalk extensions to crosswalks across Park Avenue and Coronado Street along Segment 11, reducing existing user conflicts and providing an improved connection from the residential neighborhoods to New Brighton State Beach. Further, like the Proposed Project, Alternative 1 creates an active transportation facility that is separated from motor vehicle traffic, thereby improving overall safety in the Project corridor.

For Alternative 1, the trail would continue on the rail line over the Capitola Trestle Bridge, similar to Optional Interim Trail (Part 1) and the Ultimate Trail Configuration Design Option A (Interim Trail on Capitola Trestle over Soquel Creek). This alternative would not direct trail users through Capitola Village on surface streets with bicycle lanes and sidewalks. Therefore Alternative 1 would increase pedestrian and bicycle traffic along Cliff Drive and through Capitola Village or increase the existing user conflicts. However, the Interim Trail would also not include striping modifications along Cliff Drive and through Capitola Village; therefore, the Interim Trail would also not improve the visibility of existing delineated bicycle lanes or improve safety for existing bicyclists and pedestrians along this portion of the Project alignment.

Overall, the transportation impact of Alternative 1 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Tribal Cultural Resources

The tribal cultural resources impacts of Alternative 1 (Trail Only) would be similar to the Proposed Project, which are addressed in Section 3.13, *Tribal Cultural Resources.* The impact would be slightly greater than the Ultimate Trail Configuration, and less than Optional Interim Trail. The overall impact would be less than significant with mitigation, like the Proposed Project with or without the Optional Interim Trail.

Alternative 1 would require increased ground-disturbing work compared to the Ultimate Trail Configuration, due to rail removal and the increased trail width (16 feet wide, rather than 12 feet wide), and therefore would have a greater likelihood of encountering unknown tribal cultural resources. However, this impact would be less than the Optional Interim Trail (Parts 1, 2, 3), which has two additional construction periods and therefore greater risk of discovery. Under all scenarios, the impact would be reduced to a less than significant level with Native American monitoring during construction and preparation of a mitigation plan if tribal cultural resources are identified (Mitigation Measures TCR-1a and TCR-1b).

The overall tribal cultural resources impact of Alternative 1 would be **less than significant with mitigation** (Mitigation Measures CR-2a, CR-2b, CR-2c, CR-2d), which is the same as the Proposed Project with or without the Optional Interim Trail.

Utilities and Service Systems

The utilities and service systems impacts of Alternative 1 (Trail Only) would be similar to the Proposed Project, which are addressed in Section 3.14, *Utilities and Service Systems*. The overall impact would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Compared to the Ultimate Trail Configuration, Alternative 1 would have slightly greater impacts due to the larger construction footprint of the wider trail and the rail demolition. Compared to the Optional Interim Trail, Alternative 1 would have less impacts because, although the trail width would be similar, the Optional Interim Trail which would have two additional construction periods and more demolition activities, including rail demolition (Part 1) and Interim Trail demolition (Part 2).

Water. Compared to the Ultimate Trail Configuration, Alternative 1 would include a wider trail (16 feet wide compared to 12 feet wide), which would have a larger construction footprint and thus require slightly more water usage for dust suppression of disturbed areas. Compared to the Optional Interim Trail, Alternative 1 would require less water overall for dust suppression because there is only one construction phase instead of three construction phases. Like the Proposed Project with or without the Optional Interim Trail, Alternative 1 would not result in a permanent demand for water or result in the relocation or construction of new or expanded water infrastructure. The impact to water would be less than significant.

Wastewater. Like the Proposed Project with or without the Optional Interim Trail, Alternative 1 would not generate wastewater in excess of existing capacity or result in the relocation or construction of new or expanded wastewater infrastructure. The impact would be less than significant, similar to the Proposed Project with or without the Optional Interim Trail.

Stormwater. Like the Proposed Project with and without the Optional Interim Trail, Alternative 1 would be subject to the requirements of the Construction General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, which would ensure that construction of Alternative 1 would not result in pollutant runoff during construction. Similar to the Proposed Project with and without the Optional Interim Trail, Alternative 1 would be designed to include stormwater drainage design features that would be adequate for future drainage conditions, ensuring that operation of Alternative 1 would not require the additional relocation or construction of stormwater drainage facilities. Therefore, impacts related to stormwater drainage would be less than significant, similar to the Proposed Project with or without the Optional Interim Trail.

Electricity/Natural Gas, Telecommunications. For construction, Alternative 1 would require slightly more power or energy to operate tools associated with rail demolition, as well as the wider trail, compared to the Ultimate Trail Configuration, but less compared to the Optional Interim Trail which has two additional construction periods. For operation, Alternative 1 would result in similar electricity requirements for new lighting, traffic signal poles, and light-emitting diode (LED) flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons as the Proposed Project with or without the Optional Interim Trail. Like the Proposed Project, such additions would be installed and operated with extensions from the existing electric system. Neither construction nor operation of Alternative 1 would involve any components requiring telecommunications infrastructure or natural gas. The impacts would be less than significant, similar to the Proposed Project with or without the Optional Interim Trail.

Solid Waste. Construction of Alternative 1 would require rail demolition in Segments 10 and 11, which would generate more construction waste than the Ultimate Trail Configuration, but less than the Optional Interim Trail which would generate construction waste from three phases of construction, two of which involve demolition activities (Part 1 for rail removal, and Part 2 for Interim Trail removal), instead of one phase. Operation of Alternative 1 would generate a similar amount of solid waste as the Proposed Project with or without the Optional Interim Trail. Neither would result in an increase in permanent population that could increase waste generation. Any waste generated along the trail from

trail use would not be considered new waste added to the waste stream. Solid waste generated from construction and operation could be accommodated at the Buena Vista Landfill and the Monterey Peninsula Landfill, as described in Section 3.14. Impacts would be less than significant, similar to the Proposed Project with or without the Optional Interim Trail.

The overall utilities and service system impacts of Alternative 1 would be similar but slightly greater than the Ultimate Trail Configuration, and slightly less than the Optional Interim Trail**.** Impacts would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

5.2.2 Alternative 2 (Rail with Trail on Opposite Side of Tracks)

Description

Under Alternative 2, the trail would be located on the opposite side of the tracks than the Ultimate Trail Configuration in most sections.

Like the Ultimate Trail Configuration, the Alternative 2 trail alignment extends from 17th Avenue on the west to State Park Drive on the east, trail users would be directed to sidewalks and bicycle lanes along surface streets through Capitola Village, and the trail width would be primarily 12 feet. As described in Section 2.4.1, the trail width would widen to 14 feet where there is additional space (e.g., between 17th Avenue and Rodeo Gulch), and would be reduced to between 8 to 12 feet at several locations, including roadway crossings to slow trail users and improve safety at intersections, as described in Section 2.4.1.

The following describes where the trail would be located on the opposite side of the tracks compared to the Ultimate Trail Configuration, and where it would remain on the same side and why. Additionally, the following text provides tree removal and design notes of Alternative 2 compared to the Ultimate Trail Configuration, for an apples-to-apples comparison of the two trail-next-to-rail scenarios. Tree estimates are based on the arborist survey, unless otherwise noted.

Segment 10

17th Avenue to 47th Avenue (opposite side of tracks). The trail would extend along the coastal side of the tracks instead of the inland side, and the rail realignment would be to the north instead of the south. Additionally, the rail crossing would be located at Chanticleer Avenue instead of Corcoran Avenue. There would be no direct trail connections to Thompson Avenue, the County Corporation Yard (located on the west side of Rodeo Gulch), or Jade Street Park. With the trail on the coastal side, users would access Jade Street Park from the crossing at 47th Avenue. The new clear span bridge and viaducts over Rodeo Gulch would be similar, but there would be two more viaduct bents on the west side and two less viaduct bents on the east side. Additionally, due to the constrained ROW on the east side of Rodeo Gulch, the trail would narrow and jog with an “S” curve around the existing bridge structure to stay within the RTC ROW.

The earthwork and structures for Alternative 2 would be similar to the Ultimate Trail Configuration, as both alignments would use the full ROW. Alternative 2 would require slightly more tree removal (189 trees, instead of 183 trees for the Ultimate Trail Configuration). The additional tree removal required for Alternative 2 would be at the west end near 17th Avenue.

Segment 11

47th Avenue to Opal Street (same side of tracks). The trail would be on the coastal side from 47th Avenue to Opal Street and the east end of the Cliff Drive parking area, like the Ultimate Trail Configuration. This is because there are existing slopes on the inland side that would require substantially more earthwork and retaining walls. Additionally, the coastal side provides better coastal access. Locating the trail on the coastal side in this section requires the removal of approximately 16 trees for Alternative 2 and the Ultimate Trail Configuration (**Appendix A.5**, sheet DM-1.15).

Opal Street to Monterey Avenue (surface streets). From the Cliff Drive Plaza and parking lot, trail users would be directed onto the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village to the east side of Monterey Avenue, and the existing bicycle lanes would be restriped and signage added to improve visibility and safety, like the Ultimate Trail Configuration. No tree removal is required.

Monterey Avenue to Grove Lane (opposite side of tracks). The trail would be on the inland side of the tracks at grade with no viaduct, instead of the coastal side with a 240-linear-foot viaduct west of Grove Lane, locating trail users closer to Park Avenue traffic. Alternative 2 requires more tree removal (148 trees, instead of 90 trees for the Ultimate Trail Configuration). Alternative 2 requires approximately 1,485 linear feet of a one-tier retaining wall (instead of 2,450 linear feet of a two-tiered retaining wall for the Ultimate Trail Configuration), noting the two-tiered wall requires more excavation and fill because the trail would be elevated in the rail corridor due to the slope.

Grove Lane to Coronado Street (opposite side of tracks). The trail would be on the inland side of the tracks at grade, requiring approximately twice as much retaining wall structures and 330 linear feet less of the Park Avenue Viaduct, compared to the Ultimate Trail Configuration on the coastal side. This requires slightly more tree removal (66 trees, instead of 62 trees for the Ultimate Trail Configuration). Additionally, Alternative 2 includes an ADA ramp connecting to the sidewalk along Park Avenue just east of Grove Lane (which Ultimate Trail does not). However, like the Ultimate Trail Configuration, Alternative 2 includes a stairway connection to the New Brighton State Beach parking lot.

Coronado Street to Estates Drive (opposite side of tracks). The trail would be on the inland side of the tracks. Alternative 2 requires more tree removal (~450 trees[3], instead of 314 trees for Ultimate Trail Configuration), more retaining walls (4,600 linear feet, instead of 3,670 linear feet for Ultimate Trail Configuration), and less viaducts (720 linear feet, rather than 1,050 linear feet for Ultimate Trail Configuration). The retaining walls for Alternative 2 require substantially more “cut condition” retaining walls and associated excavation, compared to smaller “fill condition” retaining walls, due to the difference in slope conditions. The new clear span bridge over New Brighton State Beach roadway would be similar to Ultimate Trail Configuration. Portions of the trail on the east side of Estates Drive would need to be reduced to approximately 11’ 6” due to ROW constraints.

Estates Drive to Mar Vista Drive (opposite side of tracks). The trail would be on the inland side of the tracks. Alternative 2 would require the removal of fewer trees (~112 trees[4], instead of 119 trees for the Ultimate Trail Configuration). Due to ROW constraints west of Mar Vista Drive, 1,215 linear feet of the rail would need to be realigned southward, supported by a 700 linear foot retaining wall,

[3] Of the ~450 trees, 362 were identified based on the arborist’s field survey, and 88 were estimated based on aerial photographs.

[4] Of the ~112 trees, 105 were identified based on the arborist’s field survey, and 7 were estimated based on aerial photographs.

to accommodate the trail on the inland side. Thus, Alternative 2 would require substantially more retaining walls (2,400 linear feet, instead of 700 linear feet for Ultimate Trail Configuration) and less viaduct (150 linear feet, instead of 420 linear feet for Ultimate Trail Configuration).

Mar Vista Drive to State Park Drive (same side of tracks). The trail would be on the inland, like the Ultimate Trail Configuration. This is because trail sections on each side, including the Estates Drive to Mar Vista Drive section to the west and the planned Segment 12 to the east, are both on the inland side; and it would not make sense to have trail users switch sides for such a short 1,600-linear-foot stretch. Additionally, there are existing residences along both sides, located upslope on the inland (north) side and downslope on the coastal (south) side. Relocating the trail to the coastal downslope side would require more earth movement (deep cut and fill) to support a retaining wall, compared to cutting into the inland upslope side; additional drainage improvements to prevent water from entering residences below; and more tree removal (~48 trees if trail is on coastal side, instead of 19 trees if trail is located on inland side).

Segment 11 Summary (Monterey Avenue to State Park Drive). Alternative 2 would include more tree removal (~811 trees instead of ~620 trees), more retaining walls (~13,750 feet instead of ~10,860 linear feet), and fewer viaducts (~870 linear feet instead of ~2,040 linear feet) compared to the Ultimate Trail Configuration. This results in more excavation and fill because there are less viaducts on piers "floating" over the embankments, and more retaining walls that require filling in or a cut with deeper excavation. The square footage of State Parks easements needed from State Parks would be similar, but quantities per parcel would vary.

Impact Analysis

The impact analysis presented below and in **Table 5-3** focuses on the environmental impacts of implementing Alternative 2 (Rail with Trail on the Opposite Side of the Tracks) in comparison to the Ultimate Trail Configuration (i.e., Proposed Project without the Optional Interim Trail), but also provides comparisons to the Optional Interim Trail (i.e., Proposed Project with the Optional Interim Trail).

Earth Movement. Alternative 2 would increase impacts associated with earth movement compared to Ultimate Trail Configuration and decrease impacts compared to the Optional Interim Trail. Construction-related impacts from ground disturbance and construction equipment are generally associated with the following environmental topics: air quality, cultural resources, geology/soils, hazardous materials, hydrology/water quality, and noise. Examples include dust and air emissions, inadvertent discovery of archaeological resources, loss of topsoil and erosion into waterways, and release of hazardous materials in the soil.

As described above, Alternative 2 requires more earth movement than the Ultimate Trail Configuration in general because there would need to be more retaining walls, as well as fewer viaducts. For example, the section between Grove Lane and Coronado Street requires approximately twice as much retaining wall structure, and the section between Estates Drive and Mar Vista Drive requires over three times as much retaining wall structure. An exception is the section between Monterey Avenue and Grove Lane, where Alternative 2 would have a one-tier retaining wall, instead of a two-tier retaining wall that requires more excavation and fill.

Although the amount of excavation was not quantified[5], locating the trail on the opposite side of the tracks requires a cut with deeper excavation and thus more fill in several locations due to the existing slopes.

Alternative 2 requires less earth movement than the Optional Interim Trail because it has one construction period, whereas the Optional Interim Trail has three construction periods and more demolition (rail demolition in Part 1 and interim trail demolition in Part 2).

Alternative 2 would also reduce impacts to historical resources, compared to the Optional Interim Trail, because Alternative 2 would not remove the rail line. Although the Optional Interim Trail would ultimately rebuild the rail line, it would be removed from the rail corridor for several years (possibly decades), which would increase the impact to historical resources compared to retaining the rail line in the rail corridor.

Tree Removal. Alternative 2 would increase tree removal and associated impacts to aesthetics, biological resources, and GHG emissions compared to both the Ultimate Trail Configuration and the Optional Interim Trail. As shown in the table below, Alternative 2 would remove 197 more trees than the Ultimate Trail Configuration and 43 more trees than the Optional Interim Trail. In the section between Monterey Avenue and Grove Lane, there would be more removal of larger trees that provide better windbreak for the known monarch grove at Escalona Gulch and more canopy for better user experience.

	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	**Proposed Project**	
		Ultimate Trail Configuration	**Optional Interim Trail**
Tree removal	1,000 trees[a]	803 trees[b]	957 trees[c]

[a] Refer to text above. 189 trees (Segment 10) + 811 trees (Segment 11) = 1,000 trees.
[b] Refer to **Table 2-2** in Section 2.6.1.
[c] Refer to **Table 2-3** in Section 2.6.2. Total tree removal includes trees removed during Part 1 (288 trees) and Part 3 (669 trees), for a total of 957 trees.

In summary, Alternative 2 would not reduce any of the significance determinations for the Ultimate Trail Configuration or the Optional Interim Trail, including any potentially significant impacts to a less than significant level (i.e., from Significant and Unavoidable to Less than Significant with Mitigation). There would still be significant and unavoidable impacts to aesthetics, biological resources, and GHG emissions/climate change from tree removal, which is the same as the Proposed Project with or without the Optional Interim Trail.

Aesthetics

The aesthetic impacts of Alternative 2 would be similar to but greater than the Ultimate Trail Configuration and slightly greater than the Optional Interim Trail. The overall impact determination would be significant and unavoidable due to tree removal, which is the same as the Proposed Project with and without the Interim Trail.

[5] CEQA does not require that an EIR present the alternatives analysis in the same level of detail as the assessment of the Proposed Project (*CEQA Guidelines*, Section 15126.6[d]). Thus, a qualitative comparison (instead of a quantitative comparison) is presented for Alternative 2 (Rail with Trail on Opposite Side of Tracks). A quantitative comparison is presented for Alternative 1 (Trail Only) because it is the same as Part 1 of the Optional Interim Trail, which was analyzed in detail as part of the Proposed Project.

Under Alternative 2, the trail would be constructed in the same corridor and its characteristics would generally be similar to the Proposed Project. However, Alternative 2 would require removal of 1,000 trees, which would be 197 more trees than the Ultimate Trail Configuration and 43 more trees than the Optional Interim Trail. Accordingly, Alternative 2 would have a greater impact on scenic vistas and public views due to tree removal compared to the Ultimate Trail Configuration and a slightly greater impact compared to the Optional Interim Trail. Additionally, Alternative 2 would require approximately twice as much retaining wall and an additional approximately 11,000 square feet of pavement compared to the Ultimate Trail Configuration; however, these features would not block views of the Project corridor. The impact to scenic vistas and public views would be significant and unavoidable from tree removal, similar to the Proposed Project with and without the Optional Interim Trail.

Like the Proposed Project with and without the Optional Interim Trail, the Alternative 2 trail alignment would not be visible from SR-1; therefore, impacts regarding scenic resources associated with a state scenic highway would be less than significant.

Alternative 2 would not adversely affect daytime or nighttime views through creation of a new source of substantial light and glare. Construction would occur during the daytime, and trail lighting would be low-level and directed down toward the trail, in compliance with applicable Santa Cruz County and City of Capitola lighting regulations. Similar to the Proposed Project with and without the Optional Interim Trail, the potential light and glare impact would be less than significant.

The overall aesthetics impact of Alternative 2 would be similar but greater than the Ultimate Trail Configuration and slightly greater than Optional Interim Trail. Although the impact would be reduced by replacing the trees removed (through Mitigation Measures BIO-7a, BIO-7b, and BIO-7c), there is uncertainty regarding the location and growth to maturity. Therefore, impacts of Alternative 2 would be **significant and unavoidable** due to tree removal, which is the same as the Proposed Project with and without the Optional Interim Trail.

Air Quality

The air quality impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to the Proposed Project, which are addressed in Section 3.2, *Air Quality*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project, Alternative 2 would generate construction-related emissions of PM_{10} and other criteria pollutants during construction. The impact would be greater than the Ultimate Trail Configuration because Alternative 2 requires substantially more earthwork and retaining walls to construct on the opposite side of the tracks, as described above; however, the daily construction intensity would be similar and thus less than significant. The impact would be less than the Optional Interim Trail because Alternative 2 has one construction period instead of three and does not include rail demolition and removal during Part 1 or trail demolition and removal during Part 2. Under either scenario, the construction-related emissions would be less than significant.

Once constructed, operational emissions would be the same as the Proposed Project with or without the Optional Interim Trail because function of the trail would be similar, including the net air quality beneficial effect by providing alternative transportation corridor for bicyclists, pedestrians, and other users, which is expected to reduce vehicular travel and associated emissions.

The overall air quality impacts of Alternative 2 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Biological Resources

The impacts to biological resources from Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be substantially similar but greater than the Ultimate Trail Configuration and the Optional Interim Trail, which are described in Section 3.3, *Biological Resources*. The overall impact determination for Alternative 2, would be **significant and unavoidable,** like the Ultimate Trail Configuration and the Optional Interim Trail.

Alternative 2 would construct a primarily 12-foot-wide trail, with some segments widened to 14 feet where feasible and reduced to between 8 and 12 feet where constrained, positioned generally on the opposite side of tracks from the Ultimate Trail Configuration, although some sections would be on the same side as the Ultimate Trail Configuration, including 47th Avenue to Opal Street (coastal side) and Mar Vista Drive to State Park Drive (inland side). Alternative 2 would require greater tree removal (1,000 trees for Alternative 2, compared to 803 trees for Ultimate Trail), more retaining walls, and fewer viaducts. This would result in similar but greater impacts to biological resources, including tree removal, monarch butterfly roost sites, and wildlife movement. These impacts would still be significant and unavoidable, like the Ultimate Trail Configuration and the Optional Interim Trail.

- Monarch Roost Habitat, Birds and Mammals, Fish and Amphibians. Similar but greater impacts to known and potential monarch roost habitat; sensitive fish species; Santa Cruz black salamander (if present); breeding birds, including sensitive and common nesting avian species; roosting bats, including sensitive bats; and the San Francisco dusky-footed woodrat.
- Sensitive Habitats and Aquatic Features. Similar but greater impacts to sensitive habitats including coast live oak woodland, mixed riparian forest, coastal scrub, and monarch roost sites. Alternative 2 would result in direct impacts to aquatic resources at Tannery Gulch, but would avoid impacts to the palustrine scrub-shrub (willow) wetlands at this location.
- Wildlife Movement. Similar but greater impacts to wildlife movement because of increased tree removal.
- Tree Removal. Similar but greater impacts associated with tree removal and removal of native, Capitola Protected, and County Significant trees because a greater number of trees (1,000 trees for Alternative 2, compared to 803 trees for Ultimate Trail) would need to be removed.

The overall impacts to biological resources from impact of Alternative 2 would be **significant and unavoidable**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Cultural Resources

The cultural resources impact of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar but slightly greater than the Ultimate Trail Configuration, and reduced compared to the Optional Interim Trail. Overall, the cultural resources impact of Alternative 2 would be less than significant with mitigation, similar to the Proposed Project with or without the Optional Interim Trail.

The identified historic built resources within and near the Proposed Project include the Santa Cruz Railroad line, Capitola Trestle Bridge and Stockton Avenue Bridge in Capitola Village. Like the Ultimate Trail Configuration, Alternative 2 would include the addition of signage and bicycle lane striping modification on the Stockton Avenue Bridge, but it would not remove the Santa Cruz Railroad line or

impact the Capitola Trestle Bridge. Thus, similar to the Ultimate Trail Configuration, impacts to historic resources would be less than significant, and no mitigation would be required. The Optional Interim Trail would require removal of the Santa Cruz Railroad and repairs to the Capitola Trestle Bridge to implement Part 1 and construct the Optional Interim Trail. To reduce impacts to the Capitola Trestle Bridge, future design input from a qualified historic preservation professional would be required (Mitigation Measure CR-1). Compared to the Optional Interim Trail, Alternative 2 would reduce impacts to historic built resources because it would not require repairs or other alterations to the Capitola Trestle Bridge, and thus would not require Mitigation Measure CR-1.

Alternative 2 would require more ground-disturbing work than the Ultimate Trail Configuration, and would therefore result in slightly greater impacts to unknown subsurface archaeological resources. Compared to the Optional Interim Trail, Alternative 2 would require less ground-disturbing work, as full implementation of the Optional Interim Trail (Parts 1, 2, 3) has two additional construction periods. Under all scenarios, the impact would be reduced to a less than significant level with implementation of measures requiring Worker Awareness training, construction monitoring, and protocols for inadvertent discoveries (Mitigation Measures CR-2a, CR-2b, CR-2c, CR-2d). When compared to the Optional Interim Trail, the impact of Alternative 2 would be slightly less because there would be one construction phase (instead of three construction phases, albeit potentially decades apart), resulting in overall less risk of discovery.

Alternative 2 would require more ground-disturbing work than the Ultimate Trail Configuration, and would therefore result in slightly greater impacts related to the potential discovery of human remains. Alternative 2 would require less ground-disturbing work than the Optional Interim Trail, and would therefore result in slightly lesser impacts related to the potential discovery of human remains. Overall, impacts related to human remains would be less than significant with compliance with the City's Code, the County's Code, PRC Section 5097.98, and California Health and Safety Code Section 7050.5. Impacts would be less than significant, similar to the Proposed Project with or without the Optional Interim Trail.

The overall cultural resources impact of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar but slightly greater than those of the Ultimate Trail Configuration, and reduced compared to those of the Optional Interim Trail. The cultural resources impact of Alternative 2 would be **less than significant with mitigation**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Geology and Soils

The geology and soils impact of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Proposed Project, which are addressed in Section 3.5, *Geology and Soils*. The overall impact determination would be less than significant with mitigation, like the Proposed Project with or without Optional Interim Trail.

The Alternative 2 alignment extends through the same geology and soils as the Proposed Project (Ultimate Trail Configuration and Optional Interim Trail). Thus, like the Proposed Project, Alternative 2 could expose the trail and trail users to risk of injury from liquefaction or landslides, could result in risk to life and property from expansive soils, and result in substantial soil erosion or loss of topsoil. However, Alternative 2 would result in slightly more construction impacts related to erosion and soil loss than implementation of the Ultimate Trail Configuration because Alternative 2 would require more earth movement due to more retaining walls and fewer viaducts. Alternative 2 would result in less construction impacts associated with soil erosion and loss of topsoil than the Optional Interim

Trail because there would be one construction period instead of three and less excavation and earthwork, since the rail would not be removed and reconstructed and an interim trail would not be constructed and removed. However, similar to the Proposed Project, compliance with the NPDES-required SWPPP would reduce the risk of soil erosion and loss of topsoil during construction, and project design and construction would include implementation of recommendations from the Geotechnical Investigation Reports prepared for the Project. Therefore, with implementation of recommendations from the Geotechnical Investigation Reports, the impacts related to risk from unstable soils would be less than significant for Alternative 2, as well as the Proposed Project with and without the Optional Interim Trail, as described in Section 3.5, *Geology and Soils*.

Regarding paleontological resources, Alternative 2 would involve ground-disturbing activities that may directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature similar to the Proposed Project with and without the Optional Interim Trail. Compared to the Ultimate Trail Configuration, Alternative 2 would have a similar but slightly greater impact because more excavation and earth movement would be required for construction of the trail, as there would be more retaining walls and fewer viaducts. Compared to the Optional Interim Trail, Alternative 2 would have a reduced impact when considering the combined construction-related effects of Interim Trail Part 1 (rail removal and interim trail construction), Part 2 (interim trail removal and rail construction), and Part 3 (Ultimate Trail Configuration construction). With implementation of mitigation requiring paleontological resource monitoring and reporting during Project construction (Mitigation Measure GEO-5), this impact would be less than significant with mitigation for Alternative 2, similar to the Proposed Project with and without the Optional Interim Trail.

The overall geology and soils impacts of Alternative 2 would be **less than significant with mitigation** (Mitigation Measure GEO-5), which is the same as the Proposed Project with or without the Optional Interim Trail.

Greenhouse Gas Emissions/Climate Change

The GHG emissions/climate change impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar but slightly increased compared to those identified for the Proposed Project with or without the Optional Interim Trail, which are addressed in Section 3.6, *Greenhouse Gas Emissions/Climate Change*. The overall impact determination would be significant and unavoidable, like the Proposed Project with the Optional Interim Trail.

Like the Proposed Project, Alternative 2 would generate GHG emissions during construction from earth moving equipment and truck trips to haul soil. However, this impact would be greater than the Ultimate Trail Configuration because the Alternative 2 alignment requires substantially more earth movement and the construction of additional retaining walls (and thus greater ground disturbance and associated construction-related GHG emissions). This impact would be less than the Optional Interim Trail because there would be only one construction period instead of three and no rail or interim trail demolition (and thus less earth moving equipment and truck trips for soil and disposal of rail infrastructure). Once constructed, Alternative 2 would be an active transportation and would contribute to a regional net decrease in vehicle miles travel and thus reduced GHG emissions, like the Proposed Project. Overall, Alternative 2 would not result in GHG emissions that would have a significant impact on the environment, and the impact would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

However, to construct the trail, Alternative 2 would result in the removal of 1,000 trees, which would be inconsistent with an applicable GHG reduction plan related to tree removal (County CAAP). Specifically, the County CAAP includes Natural/Working Lands Strategies 17 and 18 that include enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy. This impact would be greater than the Ultimate Trail Configuration (which would remove 803 trees) and slightly more than the Optional Interim Trail (which would remove 957 trees). Therefore, Alternative 2 would also conflict with applicable GHG reduction plans, and the impact would be significant and unavoidable, even with the identified mitigation for tree removal (BIO-7a, BIO-7b, BIO-7c), because of the inability to mitigate the majority of tree removal on site and the number of years required for trees to mature.

Similar to the Proposed Project, Alternative 2 would place portions of the trail in a potential future tidal inundation, flood, and coastal bluff erosion hazard areas and would not introduce any new structures that would require protection from flooding or result in displacement of people during a flood event. With respect to coastal bluff erosion hazard areas (particularly between Grove Lane and Coronado Street in Capitola), this impact would be less compared to the Ultimate Trail Configuration because the Alternative 2 alignment would be on the inland side of the tracks instead of the coastal side of the tracks; and slightly less compared to the Optional Interim Trail which would replace the tracks (Part 1) until the Ultimate Trail Configuration is constructed (Part 3). The impacts related to sea level rise and storm flooding would be less than significant.

The overall GHG emissions/climate change impacts of Alternative 2 would be **significant and unavoidable** due to tree removal, even with the identified mitigation (BIO-7a, BIO-7b, BIO-7c), which is the same as the Proposed Project with or without the Optional Interim Trail.

Hazards and Hazardous Materials

The hazards and hazardous materials impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to the Ultimate Trail Configuration and less than the Optional Interim Trail, which is addressed in Section 3.7, *Hazards and Hazardous Materials*. Still, the overall impact determination for Alternative 2 would be less than significant with mitigation, like the Proposed Project with and without the Optional Interim Trail.

Similar to the Proposed Project with and without the Optional Interim Trail, Alternative 2 could disturb contaminated near surface materials during construction. This impact would be reduced to less than significant by complying with existing hazardous material regulations and implementing mitigation requiring soil sampling prior to construction, a program to remediate or manage known contaminated materials during construction (Mitigation Measure HAZ-1a), and a Soils Management Plan developed by a qualified engineer to include measures to avoid exposure to contaminants (Mitigation Measure HAZ-1b).

The impact of Alternative 2, as well as the Ultimate Trail Configuration, would be less than the impact of the Optional Interim Trail, which entails removal of the Santa Cruz Branch Rail Line and associated structures and equipment (i.e., crossing gates, switch boxes), and thus requires additional mitigation (HAZ-1c), evaluation of subgrade soil under the rail line and an asphalt cap to cover contaminated materials (soils and ballast).

The overall hazards and hazardous materials impacts of Alternative 2 would be similar to the Ultimate Trail Configuration and less than the Optional Interim Trail. Impacts would be **less than significant with mitigation** (Mitigation Measure HAZ-1a and HAZ-1b)**,** which is the same as the Ultimate Trail Configuration. However, Alternative 2 does not require additional mitigation

(Mitigation Measure HAZ-1c) associated with removal of the rail line, which would be required for the Optional Interim Trail.

Hydrology and Water Quality

The hydrology and water quality impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to but slightly greater than the Ultimate Trail Configuration and less than the Optional Interim Trail, which are described in Section 3.8, *Hydrology and Water Quality*. The overall impact determination would be less than significant, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project with or without the Optional Interim Trail, Alternative 2 would cross or extend adjacent to nine waterways; and trail construction and operation could violate water quality standards, interfere with groundwater recharge, and alter drainage patterns in the rail corridor through the introduction of new impervious surfaces.

The potential for construction-related impacts of Alternative 2 would be greater than the Ultimate Trail Configuration because Alternate 2 would require more earth movement due to more retaining walls and fewer viaducts than the Ultimate Trail Configuration, and would be less than the Optional Interim Trail which requires three construction periods and more demolition from rail removal during Part 1 and interim trail removal during Part 2. There would also be more potential for adverse effects to Tannery Gulch located on the inland side of the tracks, between New Brighton State Beach roadway and New Brighton Road. After construction when the trail is in operation, similar to the Proposed Project with or without the Optional Interim Trail, Alternative 2 could generate pollutants from trash and debris from inadvertent littering and illegal disposal, pathogens from pet wastes, and contaminants in stormwater runoff that could degrade the surface water quality of downstream receiving waters. Like the Proposed Project, these impacts would be less than significant because Alternative 2 would be required to comply with the NPDES-required SWPPP, County Code, and Capitola Municipal Code to reduce the risk of water degradation on and off site from soil erosion and other pollutants. Also like the Proposed Project, Alternative 2 would also incorporate stormwater drainage features and treatment devices along the alignment, as well as implement the same operation and maintenance practices with respect to trash and debris.

Alternative 2 would construct similar trail width compared to the Ultimate Trail Configuration (12 feet) and the Optional Interim Trail (16 feet while Interim Trail in use and 12 feet once Ultimate Trail Configuration is constructed). However, the Optional Interim Trail would have more new impervious surface while in use because the Interim Trail would include 0.5 mile of additional trail between Opal Street and Monterey Avenue. Under all scenarios, the impact with respect to interference with groundwater recharge would be less than significant.

Similar to the Proposed Project with or without the Optional Interim Trail, Alternative 2 would include stormwater drainage features to maintain localized storm drainage patterns, and would not substantially alter drainage patterns in the Project corridor and within the vicinity or result in alterations of the course of a stream or river. In addition, as determined appropriate by the City/County, stormwater treatment devices, including hydrodynamic separators, could be installed in the storm drain system to improve water quality by reducing the amount of polluted runoff that could occur as a result of the implementation of the trail.

Under all scenarios, potential impacts would be reduced to less than significant through implementation of the pre and post construction best management practices, compliance with the

NPDES-required SWPPP and the County of Santa Cruz Grading Ordinance, and incorporation of drainage features into project design. Thus, the overall hydrology and water quality impact of Alternative 2 would be **less than significant**, which is the same as the Proposed Project with and without the Optional Interim Trail.

Land Use and Planning

The land use and planning impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Ultimate Proposed Project with and without the Optional Interim Trail, which are addressed in Section 3.9, *Land Use and Planning.*

Like the Proposed Project, Alternative 2 would be located along the existing rail corridor and would not physically divide an established community. Rather, the trail would increase connectivity within the community. Also like the Proposed Project, Alternative 2 would be consistent with most (39 of 45) of the applicable County and City land use policies, as described in Section 3.9.

Like the Proposed Project, Alternative 2 would be inconsistent with County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8, and City of Capitola General Plan Policies OSC-6.2 and OSC-6.9, which pertain to tree preservation. The evaluation in Section 3.9 considered policies of the County of Santa Cruz General Plan, the City of Capitola General Plan, Santa Cruz County Bicycle Plan, and MBSST Network Master Plan. County and City ordinances and policies associated with tree removal are addressed in the *Biological Resources* discussion above.

The overall land use and planning impact of Alternative 2 would be **less than significant**, which is the same as the Proposed Project with and without the Optional Interim Trail.

Noise

The noise impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Proposed Project, which are addressed in Section 3.10, *Noise*. The overall impact determination would be less than significant with mitigation, like the Proposed Project with or without the Optional Interim Trail.

Like the Proposed Project, construction of the Alternative 2 alignment could result in a substantial temporary increase in noise levels and expose persons to groundborne vibration and noise. This impact would be greater than the Ultimate Trail Configuration because Alternate 2 would require more earth movement due to more retaining walls and fewer viaducts, but less than the Optional Interim Trail, which would have three construction periods and require more demolition (rail removal during Part 1 and interim trail removal during Part 2). Similar to the Proposed Project with or without the Optional Interim Trail, construction impacts would be reduced to a less than significant level by requiring mitigation that implements noise-reducing measures near sensitive receptors and providing notification of construction vibration (Mitigation Measures N-1 and N-3).

The overall noise impacts of Alternative 2 would be **less than significant with mitigation** (Mitigation Measures N-1 and N-3), which is the same as the Proposed Project with or without the Optional Interim Trail.

Public Safety and Services

The public safety and service impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Proposed Project, which are addressed in Section 3.11,

Public Safety and Services. The overall impact determination would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Like the Proposed Project with and without the Optional Interim Trail, Alternative 2 would likely have a similar number of trail users and would not likely result in the need for additional emergency response, fire or police protection, or other public services to maintain acceptable service ratios or response times.

The overall public safety and services impacts of Alternative 2 would be similar to those identified for the Proposed Project with and without the Optional Interim Trail. Impacts of Alternative 2 would be **less than significant**, like the Proposed Project with and without the Optional Interim Trail.

Transportation

The transportation impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Proposed Project, which are addressed in Section 3.12, *Transportation*. The overall impact determination would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Similar to the Proposed Project, transportation impacts during construction of Alternative 2 would be primarily associated with the presence of large construction equipment and vehicles accessing the Project corridor, which could introduce temporary hazards due to the potential for conflict between construction vehicles and existing traffic. During construction, the presence of construction signage and a flagger would maintain public safety while facilitating construction access to the Project corridor. As such, the impacts would be less than significant. The impact would be similar to those identified for the Ultimate Trail Configuration because both would have one construction period and similar but reduced compared to those identified for the Optional Interim Trail, which would have three construction periods instead of one.

Similar to the Proposed Project, Alternative 2 would ultimately be consistent with the VMT screening criteria set forth by OPR, Caltrans, City, and County. Specifically, Alternative 2 would be consistent with the OPR small project screening criteria of fewer than 110 vehicular trips per day, would not induce travel, would be consistent with AMBAG's SCS, and would satisfy the conditions of several OPR example projects that do not require induced demand analysis. As such, impacts related to VMT would be less than significant.

Similar to the Proposed Project, operation of Alternative 2 could affect vehicular, bicycle, and pedestrian safety at roadway crossings. However, like the Proposed Project, Alternative 2 would include safety design features (e.g., flashing signage, chicanes, crosswalks), which would reduce the potential for hazards during operation to a less than significant level. This includes new striping and sidewalk extensions to crosswalks across Park Avenue and Coronado Street along Segment 11, reducing existing user conflicts and providing an improved connection from the residential neighborhoods to New Brighton State Beach. This also includes restriping and adjusting the width of the vehicular and bicycle lanes along Cliff Drive to accommodate a pedestrian path on the coastal side, and adding green paint to the existing bicycle lanes through Capitola Village to improve visibility of the existing bicycle lanes and safety for both bicyclists and pedestrians.

In the section along Park Avenue, particularly between Monterey Avenue and Grove Lane, trail users would be located closer to vehicular traffic on Park Avenue, but there would be a low risk of conflict with vehicles because the trail would be separated from the roadway by approximately 10–12 feet.

Overall, the transportation impacts of Alternative 2 would be **less than significant**, which is the same as the Proposed Project with and without the Optional Interim Trail.

Tribal Cultural Resources

The tribal cultural resources impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to the Proposed Project, which are addressed in Section 3.13, *Tribal Cultural Resources.* The impact would be greater than the Ultimate Trail Configuration and less than the Optional Interim Trail. The overall impact would be less than significant with mitigation, like the Proposed Project with or without the Optional Interim Trail.

Compared to the Ultimate Trail Configuration, Alternative 2 would require more ground-disturbing work because it has more tree removal, retaining walls, and fewer viaducts. This results in more excavation and fill because there are less viaducts on piers "floating" over the embankments, and more retaining walls that require filling in or a cut with deeper excavation. Therefore, Alternative 2 would have a greater likelihood of encountering unknown tribal cultural resources.

Compared to the Optional Interim Trail, Alternative 2 would require less ground-disturbing work because full implementation of the Optional Interim Trail (Parts 1, 2, 3) includes rail removal and two additional construction periods, which results in more excavation with more demolition for rail removal (Part 1) and interim trail removal (Part 2). Therefore, the Optional Interim Trail would have a greater likelihood of encountering unknown tribal cultural resources.

Under both scenarios, the impact would be reduced to a less than significant level with mitigation during construction and preparation of a mitigation plan if tribal cultural resources are identified (Mitigation Measures TCR-1a and TCR-1b). The overall tribal cultural resources impact of Alternative 2 would be greater than the Ultimate Trail Configuration and less than the Optional Interim Trail; and impacts would be **less than significant with mitigation**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Under all scenarios, the impact would be reduced to a less than significant level with Native American monitoring during construction and preparation of a mitigation plan if tribal cultural resources are identified (Mitigation Measures TCR-1a and TCR-1b).

The overall tribal cultural resources impact of Alternative 2 would be **less than significant with mitigation** (Mitigation Measures TCR-1a and TCR-1b), which is the same as the Proposed Project with or without the Optional Interim Trail.

Utilities and Service Systems

The utilities and service systems impacts of Alternative 2 (Rail with Trail on Opposite Side of Tracks) would be similar to those identified for the Proposed Project, which are addressed in Section 3.14, *Utilities and Service Systems*. The overall impact determination would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Compared to the Ultimate Trail Configuration, Alternative 2 would have slightly greater impacts due to the additional retaining wall construction and associated ground disturbance. Compared to the Optional Interim Trail, Alternative 2 would have less impacts because there is only one construction period instead of three construction periods with rail demolition (Part 1) and Optional Interim Trail demolition (Part 2).

Water. Compared to the Ultimate Trail Configuration, Alternative 2 would result in a greater amount of earthwork and excavation, which would require slightly more water usage for dust suppression, but would not result in a permanent demand for water or result in the relocation or construction of new or expanded water infrastructure. Compared to the Optional Interim Trail, Alternative 2 would involve less earthwork and less water for dust suppression. Once constructed, water use is not required for operation (trail use). Overall, the impact to water would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Wastewater. Like the Proposed Project with and without the Optional Interim Trail, Alternative 2 would not generate wastewater in excess of existing capacity or result in the relocation or construction of new or expanded wastewater infrastructure, as a result of Project construction or operation. The impact to wastewater would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Stormwater. Like the Proposed Project with and without the Interim Trail, Alternative 2 would be subject to the requirements of the Construction General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, which would ensure that construction of Alternative 2 would not result in pollutant runoff during construction. Alternative 2 also would be designed to include stormwater drainage design features that would be adequate for future drainage conditions, ensuring that operation of Alternative 2 would not require the additional relocation or construction of stormwater drainage facilities. Therefore, impacts related to stormwater drainage would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Electricity/Natural Gas, Telecommunications. Compared to the Ultimate Trail Configuration, Alternative 2 would require a slightly greater amount of power or energy to operate tools during construction because it requires more earthwork (e.g., more retaining walls and less viaducts). Compared to the Optional Interim Trail, Alternative 2 would require less power or energy during construction because the rail would not be removed and there would be one construction phase instead of three. For operation, Alternative 2 would result in similar electricity requirements for new lighting, traffic signal poles, and LED flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons as the Proposed Project with and without the Optional Interim Trail. These additions would also be installed and operated with extensions from the existing electric system. Neither construction nor operation of Alternative 2 would involve any components requiring telecommunications infrastructure or natural gas service. Therefore, Alternative 2 would not involve the relocation of existing electricity, natural gas, or telecommunications facilities.

The impacts of Alternative 2 would be slightly greater than the Ultimate Trail Configuration and slightly less than the Optional Interim Trail. The impact would be less than significant, like the Proposed Project with and without the Optional Interim Trail.

Solid Waste. Compared to the Ultimate Trail Configuration, construction of Alternative 2 would generate more construction waste (e.g., excavated soil and tree removal debris associated with more tree removal and more retaining walls) that would be disposed off site. Compared to the Optional Interim Trail, Alternative 2 would generate less construction waste because it would have one construction period with no removal of the rail, instead of three construction periods with rail demolition (Part 1) and interim trail demolition (Part 2). Operation of Alternative 2 would generate a similar amount of solid waste from trail users as the Proposed Project with or without the Optional Interim Trail. Alternative 2 would include the same amount of trash receptacles along the trail and

would not result in an increase in permanent population that could generate waste. Any waste generated along the trail from trail use would not be considered new waste added to the waste stream. Solid waste generated from construction and operation could be accommodated at the County's Buena Vista Landfill and the Monterey Peninsula Landfill. Impacts would be greater compared to the Proposed Project without the Optional Interim Trail and less than the Proposed Project with the Optional Interim Trail.

The overall impacts to utilities and service system from Alternative 2 would be similar to those identified for the Ultimate Trail Configuration and similar to but less than those identified for the Optional Interim Trail. Impacts would be **less than significant**, which is the same as the Proposed Project with and without the Optional Interim Trail.

5.2.3 Alternative 3 (No Project)

Description

CEQA requires analysis of a No Project alternative to allow decision makers to compare the impacts of approving a project with the impacts of not approving a project (*CEQA Guidelines*, Section 15126.6[e]). The No Project analysis must discuss the existing conditions at the time the NOP 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. If future uses of the land are predictable, such uses should be discussed as possible No Project conditions.

As such, under the No Project alternative, the Coastal Rail Trail Segments 10 and 11 Project would not be constructed, and there would be no new multi-use trail in the Project corridor, which is the portion of the rail corridor between 17th Avenue and State Park Drive (**Figure 2-1**). The Project corridor would remain "as is" with no planned development of a trail for alternative transportation, recreation, or other uses.

The RTC would maintain and operate the rail corridor in accordance with current policy and legal obligations, which could include rail operation (e.g., freight or passenger service). As described in Section 1.2.2, *Rail Operation and Maintenance*, RTC's rail line maintenance includes, but is not limited to, vegetation control (including potential tree trimming and removal), ditch grading, culvert clearing, and slope repair. Trees are removed only if they are unhealthy and/or present a safety hazard. RTC is currently moving forward to implement a capital maintenance program for the rail ROW that includes bridge rehabilitation as funding is available.

The No Project scenario does not preclude improvements to the tracks for use or removal of the tracks. However, there are limited funds identified for repairs required for rail operation of any type (e.g., freight, recreational passenger, commuter rail). Although potential future use of the rail is uncertain, it cannot be precluded; and the RTC will be evaluating passenger rail along the rail corridor in 2023–2024.

Rail service is not a distinguishing factor between the Proposed Project and No Project scenarios. In other words, future rail use is equally likely to occur in the foreseeable future under both the Proposed Project and No Project scenarios. Therefore, rail use is not the focus of the No Project analysis. The focus is the difference in environmental impacts as they relate to not constructing the trail.

Impact Analysis

This impact analysis below focuses on the environmental impacts of retaining the rail corridor "as is" and not constructing the trail, particularly in comparison to potentially significant impacts of the Proposed Project.

As summarized in **Table 5-3**, in comparison with the Proposed Project, there would generally be less than significant or no environmental impacts under Alternative 3. In particular, construction-related impacts associated with earth movement and tree removal would be substantially reduced. However, air quality (criteria pollutant) and GHG emissions associated with vehicular traffic would increase because the trail as an alternative transportation Project is expected to result in less vehicular transportation and thus reduced emissions. Additionally, with No Project, there would not be benefits to public safety and access, such as improved emergency access to the rail corridor.

Aesthetics

Under Alternative 3 (No Project), it is reasonable and foreseeable that the current visual character and quality of the Project corridor and surrounding lands would generally remain similar to current conditions. There would be no development of a trail within the Project corridor requiring substantial tree removal. However, the RTC would continue rail line maintenance which includes vegetation control (including potential tree trimming and removal), ditch grading, culvert clearing, and slope repair. Compared to the Proposed Project with and without the Optional Interim Trail, the potential tree removal for maintenance would not be substantial enough to significantly alter scenic vistas. Rail line maintenance would occur regardless and is not a distinguishing factor between the Proposed Project and No Project scenarios.

Alternative 3 would result in no impacts to scenic vistas due to substantial tree removal for trail construction, development of a trail within the rail corridor, or no alterations to existing roadways that would alter scenic views. When compared to the Proposed Project, Alternative 3 would result in substantially less impact to scenic vistas because substantial tree removal to accommodate trail construction would not be required; and less overall impacts involving scenic vistas, scenic resources visible from a state scenic highway, conflict with applicable regulations that govern scenic quality, and light and glare.

There would be **no impact** to aesthetics from Alternative 3, which would be substantially less than the significant and unavoidable impacts from the Proposed Project with or without the Optional Interim Trail.

Air Quality

Under Alternative 3 (No Project), there would be no construction-related emissions from trail construction that would expose sensitive receptors to pollutant concentrations, compared to existing conditions; thus, impacts associated with construction emissions would be less than the Proposed Project with or without the Optional Interim Trail. However, there would be no new trail to provide a bicycle and pedestrian connection that would support a net reduction in regional vehicle trips and associated air pollutant emissions, which would not support the emissions reduction goals of the Monterey Bay Air Resources District Air Quality Management Plan. As described in Section 3.2, *Air Quality,* the Proposed Project would have no operation-related emissions from trail use, except occasional minor emissions from maintenance activities (e.g., landscaping equipment, repainting), and would likely result in a decrease in criteria pollutants from

the anticipated reduction in vehicular travel. Thus, when compared to the Proposed Project, Alternative 2 would result in less construction impacts, but greater operation impacts.

The overall air quality impacts of Alternative 3 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Biological Resources

The impacts on biological resources associated with Alternative 3 (No Project) would be substantially less than the Proposed Project with or without the Optional Interim Trail. Tree removal, understory removal, ground disturbance, and the associated impacts to sensitive habitats would be limited to the existing maintenance regime of the rail corridor. There would be no widening of the developed footprint within the rail corridor. All significant and unavoidable impacts from tree removal and the associated effects on monarch roost habitat and wildlife movement would not occur. The rail corridor would retain its function as a largely undeveloped linear feature that supports mature trees, thereby connecting and buffering the remaining open spaces within the surrounding development.

There would be **no impact** on biological resources from Alternative 3, which would be substantially less than impacts from the Proposed Project with or without the Optional Interim Trail (significant and unavoidable).

Cultural Resources

The cultural resources impact of Alternative 3 (No Project) would be less than the Proposed Project because there would be no ground disturbance from the construction phase that could adversely affect undiscovered buried archaeological resources or human remains. Further, there would be no alteration to the rail corridor from rail realignment or introduction of new visual feature and use that would alter the setting of the Santa Cruz Branch Rail Line (a historic resource).

As described in Section 3.4, *Cultural Resources*, the Santa Cruz Branch Rail Line is considered a historic resource. Although it would be a less than significant impact, the Proposed Project would alter the railroad through realignment in Segment 10 for the Ultimate Trail Configuration and temporarily remove the railroad for Optional Interim Trail (Part 1), whereas Alternative 3 would not physically alter the railroad. Accordingly, there would be no impact, and impacts to historic resources would be reduced under Alternative 3. Alternative 3 would not require alterations to the Capitola Trestle Bridge or addition of signage or striping modifications to the Stockton Avenue Bridge.

Alternative 3 would not involve ground-disturbing work. Therefore, there would be no impact to archaeological resources (compared to less than significant with mitigation under the Proposed Project with or without the Optional Interim Trail). Additionally, there would be no impact to human remains under Alternative 3 (compared to less than significant without mitigation under the Proposed Project with or without the Optional Interim Trail).

There would be **no impact** to cultural resources from Alternative 3, which would be reduced compared to impacts from the Proposed Project with or without the Optional Interim Trail (which would be less than significant with mitigation).

Geology and Soils

Under Alternative 3 (No Project), the impact would be less than the Proposed Project with or without the Optional Interim Trail because there would be no construction-related ground

disturbance. As described in Section 3.5, *Geology and Soils*, the Proposed Project would result in potential impacts from demolition, grading, and excavation resulting in soil erosion or loss of topsoil and potential disturbance of paleontological resources, requiring mitigation for paleontological resource monitoring and reporting during Project construction. Implementing Alternative 3 would substantially reduce these impacts because there would be no construction activities resulting in ground disturbance, nor a new trail structure with new trail users that could be exposed to increased risk of injury from liquefaction or landslides or expansive soils.

There would be **no impact** related to geology and soils from Alternative 3, which would be less than the Proposed Project with or without the Optional Interim Trail, which would have a less than significant with mitigation.

Greenhouse Gas Emissions/Climate Change

Under Alternative 3 (No Project), the GHG emissions impact would be less than the Proposed Project with or without the Optional Interim Trail because there would be no construction-related GHG emissions, and there would be no operational GHG emissions from lighting or solid waste collection and other maintenance activities. As described in Section 3.6, *Greenhouse Gas Emissions/Climate Change*, the Project impacts related to GHG emissions would be less than significant.

Under Alternative 3, the impact from tree removal that would potentially interfere with implementation of the County CAAP Natural/Working Lands strategies would be avoided. However, under the No Project scenario, there would continue to be an unspecified amount of vegetation maintenance that could involve removing trees in the rail corridor, and an essential part of the MBSST Network would not be implemented. Not continuing to implement the MBSST Network would be inconsistent with the City's Climate Action Plan, the County's CAAP, AMBAG's Metropolitan Transportation Plan and SCS, and California Air Resources Board's (CARB's) Scoping Plan, which include new biking and walking facilities as key to reducing VMT. The MBSST is specifically key to regional alternative transportation options. Although the No Project alternative does not support implementation of the MBSST Network Master Plan, inconsistency with these strategies does not result in a direct physical effect on the environment that results in increased GHG emissions. However, if the Project is not implemented, the efforts to increase bicycle and pedestrian use would have to be focused elsewhere on other projects or strategies, which may have a greater GHG emissions/climate change impact. It would be speculative to conclude that such tradeoffs would result in significantly worse impacts. Thus, this impact is determined less than significant.

Alternative 3 would result in reduced impacts related to hazards from climate change because no new development would occur. As described in Section 3.6, *Greenhouse Gas Emissions/Climate Change*, this Project impacts related to flood hazards from climate change would be less than significant.

Therefore, there would be no impact related to GHG emissions or climate change hazards, but an overall **less than significant** related to consistency with applicable GHG reduction plans, unlike the Proposed Project with or without the Optional Interim Trail, which would result in a significant and unavoidable impact.

Hazards and Hazardous Materials

Under Alternative 3 (No Project), there would be no construction-related activities that could disturb contaminated near surface materials (soil and/or ballast), exposing the public or environment to hazardous materials. As described in Section 3.7, *Hazards and Hazardous Materials*,

these impacts of the Proposed Project with or without the Optional Interim Trail would be less than significant with mitigation. The mitigation requires soil sampling prior to construction, a program to remediate or manage known contaminated materials during construction, and a Soils Management Plan developed by a qualified engineer to include measures to avoid exposure to contaminants.

The impact of Alternative 3 would be less than Proposed Project (Ultimate Trail Configuration) and substantially less than the Proposed Project with the Interim Trail, which has three construction periods and substantial demolition (Part 1 for rail removal and Interim Trail construction, Part 2 for interim trail removal, and Part 3 for Ultimate Trail construction). Alternative 3 would not involve construction of the trail, demolition of the rail line, or demolition of the Optional Interim Trail, and would not result in health hazards associated with subgrade soil within the corridor. Accordingly, there would be **no impact** related to hazards and hazardous materials from Alternative 3, which would be less than the Proposed Project with or without the Optional Interim Trail (significant with mitigation).

Hydrology and Water Quality

Under Alternative 3 (No Project), there would be no construction activities that could violate water quality standards or waste discharge requirements, generate additional sources of polluted runoff, or alter existing drainage patterns. Therefore, the impact would be less than the Ultimate Trail Configuration, which has one construction period, and substantially less than the Optional Interim Trail, which has three construction periods. As described in *Section 3.8, Hydrology and Water Quality,* the Proposed Project's construction impacts would be less than significant through implementation of the pre and post construction best management practices, comply compliance with the NPDES-required SWPPP, County Municipal Code, and Capitola Municipal Code, and incorporation of drainage features into project design. In addition, there would be no trail improvements that could alterations to drainage patterns in the rail corridor through the introduction of new impervious surfaces.

There would be **no impact** related to hydrology and water quality from Alternative 3, which would be less than the Proposed Project with or without the Optional Interim Trail, which would be less than significant.

Land Use and Planning

Under Alternative 3 (No Project), the impact would be similar to the Proposed Project with or without the Optional Interim Trail. Although it similarly would not divide an established community, it would not result in the beneficial effect of increasing connectivity within the community.

As described in Section 3.9, *Land Use and Planning*, of the 45 applicable County and City policies evaluated, the Proposed Project would be consistent with all except County General Plan Policies 5.1.6, 5.10.3, 5.10.8, and 5.18.8, and City of Capitola General Plan Policies OSC-6.2 and OSC-6.9, which pertain to tree preservation, because it would result in tree removal that would be a significant disruption in sensitive habitat and impact scenic resources (Impacts associated with City and County tree protection ordinances is addressed under *Biological Resources*). The Project would also be consistent with the goals of the RTC's adopted MBSST Network Master Plan.

Although the Alternative 3 (No Project) would not result in an inconsistency with the above listed County and City policies, it would not be consistent with the goals of the RTC's adopted MBSST Network Master Plan, as well as other County and City policies promoting the construction of multi-use trails and active transportation alternatives. Although Alternative 3 does not support

implementation of the MBSST Network Master Plan, not constructing the trail in accordance with the Master Plan would not result in direct physical effects on the environment.

Therefore, the land use and planning impact from Alternative 3 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Noise

Under Alternative 3 (No Project), there would be no new trail construction and therefore no exposure of persons (in residences and hotels along the alignment) to a substantial temporary increase in noise levels and groundborne vibration, nor to any minor permanent increases in noise from trail use. This impact would be less than the Ultimate Trail Configuration, which would have one construction period, and substantially less than the Optional Interim Trail, which would have three construction periods including two with substantial demolition activities (Part 1 for rail removal, and Part 2 for interim trail removal). As described in Section 3.10, *Noise*, these construction impacts would be reduced to less than significant by requiring mitigation that implements noise-reducing measures near sensitive receptors and provides notification of construction vibration (Mitigation Measures N-1 and N-3).

There would be **no impact** related to noise from Alternative 3, which would be less than the Proposed Project without the Optional Interim Trail and substantially less than the Project with the Interim Trail, which under either scenario would be less than significant with mitigation.

Public Safety and Services

Under Alternative 3 (No Project), there would be no new trail and thus no increased need for additional emergency response, fire or police protection services, or other public services associated with new trail users. However, as described in Section 3.11, *Public Safety and Services*, the new trail would result in the beneficial effect of making the Santa Cruz Branch Rail Line less isolated and thus less susceptible to criminal activity or unsafe behavior. Additionally, the Proposed Project would provide increased emergency access to the rail corridor. Thus, although Alternative 3 would not result in any adverse impacts, it also would not provide these benefits.

Therefore, the public safety and services impact of Alternative 3 would be **less than significant**, which is the same as the Proposed Project with or without the Optional Interim Trail.

Transportation

Under Alternative 3 (No Project), there would be no new trail construction activities resulting in the presence of large construction equipment or hauling trips to and from the Project corridor, and there would be no temporary hazards related to the potential for conflict between construction vehicles and existing traffic. This impact would be less than the Proposed Project (Ultimate Trail) without the Optional Interim Trail, which has one construction period, and substantially less than the Proposed Project with the Optional Interim Trail, which has three construction periods including demolition of the rail and construction of Interim Trail (Part 1), demolition of the Interim Trail and rail construction (Part 2), and construction of the Ultimate Trail (Part 3) which results in more hauling trips. As described in Section 3.12, *Transportation*, the Proposed Project with or without the Interim Trail would be less than significant.

However, because there would be no new trail to provide an alternative means of travel, Alternative 3 would not reduce VMT in the vicinity of the Project corridor. Additionally, there would be no striping modifications to the bicycle lanes and pedestrian paths through Capitola Village.

Overall, the Alternative 3 transportation impacts would be increased compared to the Proposed Project with or without the Optional Interim Trail, but would remain **less than significant,** which is the same as the Proposed Project with or without the Optional Interim Trail.

Tribal Cultural Resources

Under Alternative 3 (No Project), there would be no construction-related ground disturbance that could adversely affect undiscovered buried tribal cultural resources. Therefore, this potential Project impact would be less than the Proposed Project (Ultimate Trail) without the Optional Interim Trail, which has one construction period, and substantially less than the Proposed Project with the Interim Trail, which has three construction periods. As described in Section 3.13, *Tribal Cultural Resources*, this Project impact would be reduced to a less than significant level with mitigation involving Native American monitoring during construction and/or preparation of a mitigation plan if tribal cultural resources are identified.

There would be **no impact** related to tribal cultural resources from Alternative 3, compared to less than significant with mitigation for the Proposed Project with or without the Optional Interim Trail.

Utilities and Service Systems

Under Alternative 3 (No Project), there would be no construction or operational activities that would result in water usage, wastewater generation, or solid waste generation; and there would be no effects to storm drainage, electricity, natural gas, or telecommunication infrastructure. As addressed in Section 3.14, *Utilities and Service Systems*, the Proposed Project with and without the Optional Interim Trail would require minor increases in water use during construction for dust suppression and revegetation of disturbed areas; and increased solid waste from construction activities, especially with the Optional Interim Trail which would have three construction periods instead of one, and which requires substantial demolition (rail removal for Part 1 and interim trail removal for Part 2). The increased impervious surface of the new trail would have minor alterations to storm drainage, as storm drain facilities would be incorporated into the trail project. Thus, Project impacts would be less than significant.

There would be **no impact** related to utilities and service systems from Alternative 3, compared to less than significant for the Proposed Project with or without the Optional Interim Trail.

5.3 Environmentally Superior Alternative

Table 5-3, supported by the discussion in Section 5.2, provides a comparison of the environmental impacts of the *Ultimate Trail Configuration (Trail next to Rail Line)*, *Optional Interim Trail (Trail on the Rail Line)*, Alternative 1 (Trail Only), Alternative 2 (Rail with Trail on Opposite Side of Tracks), and Alternative 3 (No Project). As stated at the beginning of this chapter, CEQA does not require that an EIR present the alternatives analysis in the same level of detail. Therefore, the comparisons are qualitative and descriptive (e.g., more or less impact).

Based on this comparison, Alternative 3 (No Project) would result in less environmental impacts overall, compared to the Proposed Project with and without the Optional Interim Trail as well compared to Alternatives 1 and 2.

If the environmentally superior alternative is the No Project alternative, CEQA requires the EIR shall also identify an environmentally superior alternative among the other alternatives (*CEQA Guidelines* Section 15126.6). Therefore, the rest of this section focuses on comparing the Proposed Project, including both the Ultimate Trail Configuration and the Optional Interim Trail; Alternative 1 (Trail Only); and Alternative 2 (Rail with Trail on Opposite Side of Tracks).

Table 5-5 presents a summary comparison of the overall impact for each of the resource topics as identified in **Table 5-3**, and **Table 5-5** identifies the environmentally superior alternative for each resource topic based on that comparison. **Table 5-5** is located at the end of this chapter, following **Table 5-3** and **Table 5-4**.

The *CEQA Guidelines* (Section 15126.6) does not stipulate how or provide guidance on how to identify an environmentally superior alternative when the potential impacts of the Proposed Project and project alternatives are similar, leaving this to the lead agency's discretion. For the purposes of this analysis, the County considered two measures for identifying an environmentally superior alternative: (1) minimizing significant and unavoidable impacts and (2) environmentally superior for most resource topics.

1) Minimizing Significant and Unavoidable Project Impacts

As described in **Table 5-3** and **Table 5-5**, the Ultimate Trail Configuration, Optional Interim Trail, Alternative 1 (Trail Only), and Alternative 2 (Trail on Opposite Side of Tracks) would all result in the following significant and unavoidable (SU) impacts.

Aesthetics

- Adverse effect on scenic resources and vistas through the removal of mature trees (Impact AES-1)
- Inconsistency with policies that pertain to tree and vegetation removal (Impact AES-2)
- Cumulative aesthetics impacts from increased development in open spaces and disrupting scenic vistas from tree removal (Impact AES-C)

Biological Resources

- Adverse effect on monarch butterfly and autumnal and/or wintering roost sites from tree removal (Impact BIO-1)
- Interference with wildlife movement from tree removal and habitat fragmentation (Impact BIO-9)
- Conflict with policies and ordinances protecting trees (Impact BIO-10)
- Cumulative biological resources impacts from tree removal and fragmentation of habitat and wildlife corridors (Impact BIO-C)

Greenhouse Gas Emissions/Climate Change

- Inconsistency with applicable GHG reduction plans (Impact GHG-2)

The significant and unavoidable impacts are due to the tree removal necessary to maintain the minimum width requirements for a Class I multipurpose trail design that safely accommodates bicycles and pedestrians, meets ADA requirements, and CPUC safety requirements. Alternative 1 (Trail Only) would result in less tree removal, as shown in the first row of **Table 5-5** and listed below:

- Ultimate Trail Configuration – 803 trees
- Optional Interim Trail – 957 trees
- Alternative 1 (Trail Only) – 288 trees
- Alternative 2 (Rail with Trail on Opposite Side of Tracks) – 1,000 trees

The Ultimate Trail Configuration includes Design Option A (Interim Trail on Capitola Trestle over Soquel Creek), which would not result in the removal of additional trees, and Design Option B (Inland Side of Track between Grove Lane and Coronado Street in Capitola), which would result in the removal of four additional trees (refer to **Table 2-2**).

Using the measure of minimizing significant and unavoidable impacts, Alternative 1 (Trail Only) was determined environmentally superior because it results in substantially less tree removal. However, it should be noted that it results in increased impacts to monarch habitat at Escalona Gulch because it requires the removal of large wind buffer and autumnal roost trees on the north (inland) side of the tracks that would not be affected by Ultimate Trail Configuration.

2) Environmentally Superior for Most Resource Topics

Of the 14 resource topics summarized in **Table 5-3** and **Table 5-5**, the Ultimate Trail Configuration was identified as environmentally superior for eight topics. This is because the Ultimate Trail Configuration generally results in less ground disturbance and demolition, as described below in the bulleted list. Increased ground disturbance increases construction-related emissions, erosion and loss of topsoil, noise, and risk of discovery (cultural, paleontological, and tribal cultural resources). More demolition increases construction-related emissions, noise, solid waste, and potential release of soil contaminates and exposure to construction personnel:

- Optional Interim Trail includes two additional construction periods, the wider construction footprint disturbs both sides of the tracks, and rail demolition increases risk of hazardous materials exposure.
- Alternative 1 (Trail Only) has a wider construction footprint that disturbs both sides of the tracks (16 feet wide trail instead of 12 feet wide trail) and extends an additional 0.5 mile (by continuing the trail in the rail corridor, rather than directing users to the on-street system through Capitola Village), rail demolition increases risk of hazardous materials exposure, and permanent removal of the Santa Cruz Branch Rail Line increases impacts to identified historic resources.
- Alternative 2 (Rail with Trail on Opposite Side of Tracks) requires more earthwork and ground disturbance for additional retaining wall construction (and fewer viaducts), also resulting in more impacts on sensitive habitats and aquatic features.

The Ultimate Trail Configuration includes Design Option A (Interim Trail on Capitola Trestle over Soquel Creek), which would increase the disturbance area by 1.2 acres and excavation quantities by 1,602 cubic yards, and Design Option B (Inland Side of Track between Grove Lane and Coronado Street in Capitola), which would increase the disturbance area by 0.09 acre and the excavation quantities by 246 cubic yards (refer to **Table 2-2**).

Using the measure of environmentally superior for most resource topics, the Ultimate Trail Configuration is considered environmentally superior because it requires less ground disturbance overall.

Summary

In summary, identifying an environmentally superior alternative depends on the measure used.

Using the measure of Minimizing Significant and Unavoidable Impacts, Alternative 1 (Trail Only) was determined environmentally superior because it results in substantially less tree removal. However, it should be noted that it results in increased impacts to monarch habitat at Escalona Gulch because it requires the removal of large wind buffer and autumnal roost trees on the north (inland) side of the tracks that would not be affected by Ultimate Trail Configuration.

Using the measure of Environmentally Superior for Most Resource Topics, the Ultimate Trail Configuration is considered environmentally superior because it requires less ground disturbance overall.

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Aesthetics					
AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees.	SU MM BIO-7a, BIO7-b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Similar, less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	NI Less
AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.	SU MM BIO-7a, BIO-7b, BIO-c	SU Similar, more MM BIO-7a, BIO-7b, BIO-c	SU Similar, less MM BIO-7a, BIO-7b, BIO-c	SU Similar, more MM BIO-7a, BIO-b, BIO-7c	NI Less
AES-3. The Project would not adversely affect daytime or nighttime views.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**NI**
Air Quality					
AIR-1. The Project would not conflict with or obstruct implementation of the adopted MBARD AQMP.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Slightly more[d]
AIR-2. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is designated non-attainment.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	LTS Less from construction; Slightly more from operation[d]
AIR-3. The Project would not expose sensitive receptors to substantial pollutant concentrations.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, more	NI Less
AIR-4. The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	LTS Similar	LTS Similar	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Biological Resources					
BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.	SU MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-1a, BIO-1b MM BIO-7a, BIO-7b, BIO-7c	NI Less
BIO-2. The Project could adversely affect sensitive fish species.[i]	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	LTSM MM BIO-1a MM BIO-4 MM BIO-7ª,b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-4 MM BIO-7a, BIO-7b, BIO-7c	NI Less

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
BIO-5. Project construction could adversely affect sensitive and common roosting bat species that may use coast live oak, riparian, and other trees along the alignment.	LTSM MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-5 MM BIO-7a, BIO-7b, BIO-7c	NI Less
BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.	LTSM MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, less MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	LTSM Similar, more MM BIO-1a MM BIO-6 MM BIO-7a, BIO-7b, BIO-7c	NILess
BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.	LTSM MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, slightly less MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats.	LTSM MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, slightly less MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	LTSM Similar, more MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less
BIO-9. The Project would interfere with wildlife movement.	SU MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, more MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, slightly less MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	SU Similar, more MM BIO-1a MM BIO-7a, BIO-7b, BIO-7c MM BIO-8a, BIO-8b	NI Less

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
BIO-10. The Project would conflict with policies and ordinances protecting trees, including the City of Capitola Community Tree Management Ordinance and County of Santa Cruz Significant Tree Ordinance.	SU MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**NI**
Cultural Resources					
CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).	LTS[e]	LTSM Similar, more MM CR-1	LTSM Similar, more MM CR-1	LTS Similar	NI Less
CR-2. Ground-disturbing activities during project construction may unearth or adversely impact subsurface archaeological resources.	LTSM MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, more MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, slightly more MM CR-2a, CR-2b, CR-2c, CR-2d	LTSM Similar, slightly more MM CR-2a, CR-2b, CR-2c, CR-2d	NI Less
CR-3. Ground-disturbing activities during project construction may disturb human remains.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Geology and Soils					
GEO-1. The Project would not exacerbate the existing exposure of people or structures to risks from strong seismic ground shaking.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-2. The Project may exacerbate exposure of the public to liquefaction or landslide hazards and may be located on a geological unit or soil that would become unstable as a result of lateral spreading, landslides, and liquefaction.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-3. The Project may result in substantial soil erosion or loss of topsoil.	LTS	LTS Simila	LTS Similar	LTS Similar	NI Less
GEO-4. The Project would not exacerbate the existing risk to life or property resulting from expansive soils.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LTSM MM GEO-5	LTSM Similar, slightly more MM GEO-5	LTSM Similar, slightly more MM GEO-5	LTSM Similar, slightly more MM GEO-5	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Greenhouse Gas Emissions/Climate Change					
GHG-1. The Project would not result in GHG emissions that would have a significant impact on the environment.	LTS	LTS Similar, more	LTSM Similar, slightly more	LTS Similar, slightly more	NI Less
GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.	SU MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	SU Similar, less MM BIO-7a, BIO-7b, BIO-7c	SU Similar, more MM BIO-7a, BIO-7b, BIO-7c	LTS Less

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
GHG-3. The Project would not expose people or structures to substantial risk of loss, injury, or death as a result of flooding from projected sea level rise and storms.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**SU**	**SU**	**SU**	**SU**	**LTS**
Hazards and Hazardous Materials					
HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.	LTSM[g] MM HAZ-1a, HAZ-1b	LTSM Similar, more MM HAZ-1a, HAZ-1b	LTSM[h] Similar, slightly more MM HAZ-1a, HAZ-1b, HAZ-1c	LTSM Similar MM HAZ-1a, HAZ-1b	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Hydrology and Water Quality					
HYD-1. The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality or conflict with a Water Quality Control Plan.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
HYD-2. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge.	LTS	LTS Similar, slightly more	LTS Similar, slightly more	LTS Similar	NI Less
HYD-3. The Project would not substantially alter drainage patterns within the Project corridor or vicinity.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
HYD-4. The Project would not risk release of pollutants due to Project inundation in flood hazard, tsunami, or seiche zones.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Land Use and Planning					
LUP-1. The Project would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Similar, less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
Noise					
N-1. Construction may result in a substantial temporary increase in noise levels.	LTSM MM N-1	LTSM Similar, more MM N-1	LTSM Similar, slightly more MM N-1	LTSM Similar, slightly more MM N-1	NI Less
N-2. Operation of the Project would not expose persons to or generate excessive noise levels.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	LTSM MM N-3	LTSM Similar, more MM N-3	LTSM Similar, slightly more MM N-3	LTSM Similar, slightly more MM N-3	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Public Safety and Services					
PUB-1. The Project would not result in the need for additional fire protection facilities or emergency medical services response to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar, slightly less	LTS Similar	LTS Less
PUB-2. The Project would not result in the need for additional police protection or law enforcement facilities to maintain acceptable service ratios or response times.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
PUB-3. The Project would not result in the need for the construction of new or additional park facilities or in the degradation of existing facilities.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
PUB-4. The Project would not result in the need for the construction of new or additional health service facilities.	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**
Transportation					
T-1. The Project would meet the screening criteria set by the OPR, Caltrans, Santa Cruz County, and City of Capitola and thus would not conflict or be inconsistent with *CEQA Guidelines*, Section 15064.3(b).	LTS	LTS Similar	LTS Similar	LTS Similar	LTS Less for construction, more for operation
T-2. Neither construction nor operation of the Project would substantially increase hazards due to a geometric design feature or incompatible use.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Tribal Cultural Resources					
TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	LTSM MM TCR-1a, TCR-1b	LTSM Similar, more MM TCR-1a, TCR-1b	LTSM Similar, slightly more MM TCR-1a, TCR-1b	LTSM Similar, slightly more MM TCR-1a, TCR-1b	NI Less
Overall Impact Determination[b]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**
Utilities and Service Systems					
UTIL-1. The Project would require the relocation or replacement of water, wastewater, electricity, gas, and telecommunications conveyance infrastructure.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-2. Sufficient water supplies are available to serve construction and operation of the project.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-3. The Project would not generate wastewater in excess of existing treatment capacity.	LTS	LTS Similar	LTS Similar	LTS Similar	NI Less
UTIL-4. The Project would not generate solid waste in excess of local landfill capacity and would comply with applicable regulations related to solid waste.	LTS	LTS Similar, more	LTS Similar, slightly more	LTS Similar, slightly more	NI Less
Overall Impact Determination[b]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**

[a] The resource topics and impacts of the Proposed Project are presented in the first column. The impact determination and any required mitigation for the *Proposed Project, including the Ultimate Trail Configuration* and the *Optional Interim Trail*, and Project Alternatives are presented in the other columns. The anticipated impacts of the Project Alternatives, as well as the Optional Interim Trail, are described in comparison to the *Ultimate Trail Configuration* (e.g., similar, more, less), with the reasoning presented primarily in the text discussion and also in Table 5-5. A summary of the required mitigation is presented in **Table 5-4**.

[b] The "Overall Impact Determination" for the resource topic is based on the highest or "worst" level of potential impact for the resource topic.

[c] The impact determinations are for the whole of the optional Interim Trail, including implementation of all three parts: (1) removal of the rail and construction of the Interim Trail on the rail line; (2) demolition of the Interim Trail and rebuilding the rail line; and (3) construction of the Ultimate Trail Configuration alongside the rail. This results in three separate construction periods

[d] The No Project alternative was determined to have more operational impact than the Ultimate Trail Configuration, Optional Interim Trail and Alternatives 1 and Alternative 2, because these build scenarios would provide alternative transportation for bicycles and pedestrians, which is anticipated to reduce vehicular use and associated emissions, which is the goal in several planning

Table 5-3 Comparison of Impacts[a] for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Resource Topics and Impacts[a]	Ultimate Trail Configuration (Trail Next to Rail Line)[e]	Compared to Ultimate Trail Configuration			
		Optional Interim Trail (Trail on the Rail Line)[c]	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)

documents including: California Air Resources Board Scoping Plan, Monterey Bay Air Resources District Air Quality Management Plan, Association of Monterey Bay Area Government Metropolitan Transportation Plan and Sustainable Communities Strategy, City Climate Action Plan, County Climate Action and Adaptation Plan.

[e] The Ultimate Trail Configuration includes the following design options. The mitigation measures would apply to both design options, unless otherwise indicated.

Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[f] Design Option A would be LTSM and require Mitigation Measure CR-1.

[g] Design Option A would also require Mitigation Measure HAZ-1c

[h] Mitigation Measure HAZ-1c is for Optional Interim Trail Part 1 only, but not Part 2 or 3.

[i] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

NI = No Impact; LTS = Less than Significant without Mitigation; LTSM = Less than Significant with Mitigation; SU = Significant and Unavoidable

AQMP = Air Quality Management Plan; Caltrans = California Department of Transportation; ESHA = Environmentally Sensitive Habitat Area; GHG = greenhouse gas; MBARD = Monterey Bay Air Resources District; OPR = Governor's Office of Planning and Research; SCBRL = Santa Cruz Branch Rail Line

Table 5-4 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Mitigation Measure	Proposed Project		Project Alternatives		
	Ultimate Trail Configuration (Trail Next to Rail Line) [a]	Optional Interim Trail (Trail on the Rail Line)	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Note: Most of the mitigation measures are required for the Ultimate Trail Configuration, Optional Interim Trail, and Alternatives 1 and 2. The shaded rows indicate for which impacts the mitigation requirements are different.					
BIO-1a. Conduct Biological Monitoring for Sensitive Wildlife Species	Yes	Yes	Yes	Yes	No
BIO-1b. Enhance Monarch Roost Habitat along Rail Corridor (Escalona Gulch, New Brighton State Beach, Borregas Creek)	Yes	Yes	Yes	Yes	No
BIO-4. Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction Occurs between February 1 and August 31	Yes	Yes	Yes	Yes	No
BIO-5. Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction	Yes	Yes	Yes	Yes	No
BIO-6. Implement San Francisco Dusky-Footed Woodrat Protection Measures during Construction	Yes	Yes	Yes	Yes	No
BIO-7a. Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing	Yes	Yes	Yes	Yes	No
BIO-7b. Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation	Yes	Yes	Yes	Yes	No
BIO-7c. Implement Best Management Practices to Protect Biological Resources during Construction	Yes	Yes	Yes	Yes	No
BIO-8a. Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats	Yes	Yes	Yes	Yes	No
BIO-8b. Develop and Implement Aquatic Resources Mitigation and Monitoring Plan	Yes	Yes	Yes	Yes	No
BIO-9c. Implement Best Management Practices to Protect Biological Resources during Construction	Yes	Yes	Yes	Yes	No
BIO-C. Include cumulative conservation goals and objectives in the Project-Specific Biological Resources Mitigation and Management Plan (Mitigation Measure BIO-9b)	Yes	Yes	Yes	Yes	No

Table 5-4 Summary of Mitigation Measures Identified for Ultimate Trail Confirmation, Optional Interim Trail, and Project Alternatives

Mitigation Measure	Proposed Project		Project Alternatives		
	Ultimate Trail Configuration (Trail Next to Rail Line) [a]	Optional Interim Trail (Trail on the Rail Line)	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
CR-1. Standards Rehabilitation Review	No[b]	Yes	Yes	No	No
CR-2a. Worker's Environmental Awareness Program	Yes	Yes	Yes	Yes	No
CR-2b. Archaeological Monitoring	Yes	Yes	Yes	Yes	No
CR-2c. Native American Monitoring	Yes	Yes	Yes	Yes	No
CR-2d. Implementation of Protocol for Unanticipated Discovery of Cultural Resources	Yes	Yes	Yes	Yes	No
GEO-5. Implement Paleontological Resources Protection	Yes	Yes	Yes	Yes	No
HAZ-1a. Conduct Soil Sampling and Implement Necessary Remediations	Yes	Yes	Yes	Yes	No
HAZ-1b. Prepare and Implement Soils Management Plan	Yes	Yes	Yes	Yes	No
HAZ-1c. Evaluate and Cap Contaminated Subgrade Soil and Ballast	No[b]	Yes[c]	Yes	No	No
N-1. Implement Noise-reducing Measures for Construction Equipment Used within 275 Feet of Residences/Hotels	Yes	Yes	Yes	Yes	No
N-3. Provide Notification of Construction Vibration to Residential Units and Manufacturing Operations within 235 Feet	Yes	Yes	Yes	Yes	No
TCR-1a. Conduct Native American Monitoring During Construction in Previously Undisturbed Native Soils	Yes	Yes	Yes	Yes	No
TCR-1b. Implement Protocol for Unanticipated Discovery of Tribal Cultural Resources if Monitor Not Present	Yes	Yes	Yes	Yes	No

[a] The Ultimate Trail Configuration includes the following design options. The mitigation measures would apply to both design options, unless otherwise indicated.
Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek
Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[b] This mitigation measure would be required for Design Option A but not for Design Option B.

[c] This mitigation measure is required for Optional Interim Trail Part 1 only, not Part 2 (interim trail removal and rail reconstruction) or Part 3 (Ultimate Trail Configuration construction).

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
Tree Removal[j]	803	957[b]	288[c]	1,000[d]	100[e]	
Aesthetics	Significant and unavoidable	Similar, but more because more tree removal	Similar, but less because less tree removal	Similar, but more because more tree removal	Less	Alternative 1 (Trail Only)
Impact Determination[a]	**SU**	**SU**	**SU**	**SU**	**NI**	
Air Quality	Less than Significant	Similar, but more emissions from construction activities because two additional construction periods	Similar, but slightly more emissions from construction activities because of the wider trail and rail demolition and hauling	Similar, but more emissions from construction activities because of additional earthwork and retaining walls	Less from construction, Slightly more for operation[e]	Ultimate Trail Configuration
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**	
Biological Resources	Significant and unavoidable	Similar, but more because of impacts on both sides of the tracks, more tree removal, and multiple construction periods.	Similar, but slightly less because less tree removal overall, but includes additional removal of specific wind buffer and autumnal roost trees at Escalona Gulch that are important to monarchs.	Similar, but more because more tree removal and more impacts on sensitive habitats and aquatic features.	Less	Alternative 1 (Trail Only)[g]
Impact Determination[a]	**SU**	**SU**	**SU**	**SU**	**NI**	

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
Cultural Resources	Less than Significant with Mitigation	More, due to the temporary removal of the Santa Cruz Branch Rail Line, wider construction footprint, and two additional construction periods	More, due to the permanent removal of the Santa Cruz Branch Rail Line and wider construction footprint	Similar, but slightly more because more ground disturbance from more retaining walls and fewer viaducts	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**	
Geology and Soils	Less than Significant with Mitigation	Similar, but slightly more soil erosion and loss of topsoil, as well as increased risk of discovering paleontological resources, from two additional construction periods	Similar, but slightly more soil erosion and loss of topsoil, as well as increased risk of discovering paleontological resources, from wider construction footprint	Similar, but slightly more soil erosion and loss of topsoil during construction, and increased risk of discovering paleontological resources from more earth movement and more retaining walls and less viaducts.	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**	
Greenhouse Gas Emissions/Climate Change	Significant and unavoidable	Similar, but more emissions from wider construction footprint, two additional construction periods and more tree removal and policy inconsistency	Similar, but less because less tree removal and associated policy inconsistency, but slightly more emissions from wider construction footprint	Similar, but slightly more emissions from additional retaining walls and earth movement and more tree removal and policy inconsistency	Less from construction emissions, but no trail and thus no reduced vehicular use and associated emissions[f]	Alternative 1 (Trail Only)

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
Impact Determination[a]	**SU**	**SU**	**SU**	**SU**	**LTS**	
Hazards and Hazardous Materials	Less than Significant with Mitigation	Similar, but more because more potential for release of soil contaminates and exposure to construction personnel from removing rail and two additional construction periods	Similar, but slightly more potential for release of soil contaminates and exposure to construction personnel from removing rail	Similar	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**	
Hydrology and Water Quality	Less than Significant with Mitigation	Similar, but more because more risk of adversely effecting water quality, groundwater, and drainage patterns from two additional construction periods. More impervious surface from wider trail.	Similar, slightly more because more materials movement from demolishing existing rail. More impervious surface from wider trail.	Similar, but slightly more because more materials movement from constructing more retaining walls and fewer viaducts.	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**	
Land Use and Planning	Less than Significant	Similar[h] but more tree removal	Similar[h], but less tree removal and less policy inconsistency associated with the tree removals.	Similar[h], but more tree removal	Similar, because although no inconsistency with tree protection	Alternative 1 (Trail Only)

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
			Inconsistent with Policy 1.2.4 of the MBSST Network Master Plan from permanent removal of the rail		policies[h], there would be inconsistency with Policy 1.2.4 of MBSST Network Master Plan and no trail increasing connectivity in the community	
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**	
Noise	Less than Significant with Mitigation	Similar, but more for construction because of two additional construction periods	Similar, but slightly more for construction because of additional earthwork and demolition, and additional noise impacts of extra 0.5 miles of trail construction	Similar, but slightly more for construction because of additional earthwork and retaining walls	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**	
Public Safety and Services	Less than Significant	Similar	Similar, slightly less because	Similar	Less	Alternative 1 (Trail Only)

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
			Alternative 1 would have a wider path with no rail, which could provide better emergency vehicle access			
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**	
Transportation	Less than Significant	Similar, slightly more because two additional construction periods[i]	Similar, slightly less because reduced potential for user conflicts through Capitola Village	Similar	Less for construction traffic, More because no reduced VMT, no multi-use trail separating bikes and peds from traffic, and no improvements to bicycle lanes and pedestrian paths through Capitola Village	Alternative 1 (Trail Only)
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**LTS**	
Tribal Cultural Resources	Less than Significant with Mitigation	Similar, but more because two additional construction periods and associated risk of discovery	Similar, but slightly more because the wider trail requires more ground disturbance and	Similar, slightly more because increased earth movement for additional retaining walls increases risk of discovery	Less	Ultimate Trail Configuration

Table 5-5 Summary Comparison of Impacts[a] and Environmentally Superior Alternative by Resource Topic

Resource Topic	Ultimate Trail Configuration (Trail Next to Rail Line)	Compared to Ultimate Trail Configuration				Environmentally Superior (excluding Alt 3 No Project)
		Optional Interim Trail (Trail on the Rail Line) Parts 1–3	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)	
			associated risk of discovery			
Impact Determination[a]	**LTSM**	**LTSM**	**LTSM**	**LTSM**	**NI**	
Utilities and Service Systems	Less than Significant	Similar, but more because additional solid waste generated by the two additional construction periods and demolition of the rail (Part 1) and Interim Trail (Part 2)	Similar, but slightly more, because additional solid waste generated by demolition of the rail	Similar, but slightly more because additional solid waste (e.g., more excavated soil from additional retaining walls and tree removal debris)	Less	Ultimate Trail Configuration
Impact Determination[a]	**LTS**	**LTS**	**LTS**	**LTS**	**NI**	

[a] The impact determination represents the overall or combined Project impact (highest or "worst" level of impact) for the resource topic, as summarized in **Table 5-3**. The numbers in parentheses are defined below and provide a numeric measure to the degree of impact, for purposes of providing a means for comparing the impact within each environmental topic and the sum across all environmental topics.

[b] The Optional Interim Trail as a whole would result in the removal of approximately 957 trees (288 trees from Part 1 construction of Interim Trail + 669 trees from Part 3 construction of Ultimate Trail Configuration). Refer to **Table 2-3**.

[c] Alternative 1 (Trail Only) would result in the same amount of tree removal as Part 1 of the Optional Interim Trail (288 trees) because it would be the same width (16 feet) and location.

[d] Alternative 2 (Trail on Opposite Side of Rail) would result in the removal of approximately 1,000 trees. 189 trees (Segment 10) + 811 trees (Segment 11) = 1,000.

[e] Under No Project conditions, trees could be removed as part of RTC's ongoing maintenance activities if trees are unhealthy and/or present a hazard. Based on past and ongoing maintenance practices, it is estimated this is less than 5 trees in an average year and more during heavy storm years in the 4.7-mile portion of the rail corridor between 17th Avenue and State Park Avenue. This does not include trees that fall naturally. For purposes of comparison, it is estimated that 2 trees would be removed each year over 50 years, for total of 100 trees removed.

[f] The No Project alternative was determined to have more operational impact than the Proposed Project with or without the Optional Interim Trail and build alternatives, which all would provide alternative transportation for bicycles and pedestrians and thus anticipated to reduce vehicular use and associated emissions, which is the goal in several planning documents including: California Air Resources Board Scoping Plan, Monterey Bay Air Resources District Air Quality Management Plan, Association of Monterey Bay Area Government Metropolitan Transportation Plan and SCS, City Climate Action Plan, County CAAP.

[g] Alternative 1 (Trail Only) was determined environmentally superior because it results in substantially less tree removal. However, it should be noted that it results in increased impacts to monarch habitat at Escalona Gulch because it requires the removal of large wind buffer and autumnal roost trees on the north (inland) side of the tracks that would not be affected by Ultimate Trail Configuration.

[h] Similar because also inconsistent with County General Plan Policies 5.1.6, 5.10.3, and 5.18.8, and City of Capitola General Plan Policies OSC-6.2 and OSC-6.9 due to tree removal.

6 List of Preparers and References

6.1 List of Preparers

This EIR was prepared by the County of Santa Cruz (County), as the lead agency under the California Environmental Quality Act (CEQA).

The County prepared the EIR in coordination with City of Capitola (City) and the Santa Cruz County Regional Transportation Commission (RTC), which are responsible agencies. For the purposes of CEQA, the term "responsible agency" includes other public agencies that have discretionary approval authority over the **Coastal Rail Trail Segments 10 and 11 Project** (Project).

The County's lead consultant is RRM Design Group, supported by several subconsultants for project design, including MME Engineering, Pacific Crest Engineering, Weber Hayes, W-Trans, Zephyr Rail, and Thoma Electric.

The technical analyses therein and compilation of the EIR were prepared by RRM's consultant team, Harris & Associates (Harris), with support from Rincon Consultants (Rincon) and EcoSystems West (ESW). Key individuals associated with the preparation of this EIR are listed below.

Lead Agency

County of Santa Cruz

Rob Tidmore, Project Manager

Juliette Robinson, Senior Resource Planner and Biologist

Matt Johnston, Principal Planner and Environmental Coordinator

Lead Design Consultant

RRM Design

Mike Sherrod, Principal-in-Charge

Kayla Szubielski, PLA, Project Manager

Morgane Staake, Designer

Darren Choy, PE, Lead Civil Engineer

EIR Consultant Team

Project Management

Kate Elliott, Project Manager (Harris)

Esther Daigneault, Assistant Project Manager (Harris)

Nicole West, Assistant Project Manager (Rincon)

Megan Jones, Principal (Rincon)

Alec Barton, Project Coordinator (Harris)

Shelby Cramton, Project Coordinator (Rincon)

Technical Analysis and Production

Aesthetics

Nicholas Carter, Rincon

Air Quality and Greenhouse Gas Emissions/Climate Change

Sharon Toland, Harris

Biological Resources

Justin Davilla, ESW

Erin McGinty, ESW

William Davilla, ESW

Cultural Resources

Steven Treffers, Rincon (Historic)

Hannah Haas, Rincon (Archaeology)

Kayleigh Limbach, Rincon

Geology and Soils

Esther Daigneault, Harris

Andrew McGrath, Rincon (Paleontology)

Hazards and Hazardous Materials

Jesse Voremberg, Rincon

Hydrology and Water Quality

Esther Daigneault, Harris

Darren Choy, RRM

Land Use and Planning

Kayleigh Limbach, Rincon

Noise

Sharon Toland, Harris

Public Safety and Services

Shelby Cramton, Rincon

Transportation

Taylor Freeman, Rincon

Tribal Cultural Resources

Kayleigh Limbach, Rincon

Utilities and Service Systems

Shelby Cramton, Rincon

Effects Found to be Less than Significant and Other CEQA-Required Discussions

Esther Daigneault, Harris

Nicholas Carter, Rincon

Project Alternatives

Kate Elliott, Harris

Graphics Support

Randy Deodat, Harris

Abby Robles, Rincon

Annette Tran, Rincon

Allysen Valencia, Rincon

Brooke Emmett, Rincon

Editing and Production

Lindsey Messner, Harris

Eija Blocker, Harris

6.2 References

Executive Summary

Pacific Crest Engineering, Inc. (Pacific Crest Engineering). 2021. *Draft Geotechnical Investigation – Design Phase, Monterey Bay Sanctuary Scenic Trail (MBSST) – Segments 10 and 11, Santa Cruz, California*. Project No. 2120-SZ69-F11, October 22, 2021.

Chapter 1 Introduction

Santa Cruz County Friends of the Rail & Trail (Rail and Trail) (FORT). 2023. "Friends of the Rail & Trail." Friends of the Rail Trail. www.railandtrail.org. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013.

_____. 2014. *Monterey Bay Sanctuary Scenic Trail Network Master Plan.* Santa Cruz, CA. February 6, 2014.

Chapter 2 Project Description

AMEC Geomatrix. 2009. *Phase II Investigations and Human Health Risk Assessment for Arsenic: Santa Cruz Branch Line*. December 2009.

City of Capitola. 2023. "Post Construction Requirements." https://www.cityofcapitola.org/publicworks/page/post-construction-requirements. Accessed October 2023.

County of Santa Cruz 2022. Design Criteria. December. https://www.dpw.co.santa-cruz.ca.us/Portals/19/pdfs/Design%20Crit/2022%20 DESIGNCRITERIA.pdf?ver=QjgD7YKftGKlpkn95v3_uw%3D%3D&timestamp=1671064422616. Accessed October 2023.

Cooper Lighting Solutions. 2020. Gleon Galleon LED 1-10 Light Squares Solid State LED. TD500020EN. September 15, 2020. https://www.cooperlighting.com/api/assets/v1/file/Signify/content/dc3c04e7318247a28a91ad41008de7d2/mcgraw-gleon-galleon-amber-wavelinx-legacy-spec. Accessed October 2023.

Pacific Crest Engineering, Inc. (Pacific Crest Engineering). 2021. Draft Geotechnical Investigation – Design Phase, Monterey Bay Sanctuary Scenic Trail (MBSST) – Segments 10 and 11, Santa Cruz, California. Project No. 2120-SZ69-F11, October 22, 2021.

Santa Cruz County Regional Transportation Commission (RTC). 2019. *Final Unified Corridor Investment Study*. January 2019. https://www.sccrtc.org/wp-content/uploads/2019/01/UCS-Final-January2019.pdf. Accessed October 2023.

Chapter 3 Environmental Impact Analysis

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013.

Section 3.1 Aesthetics

California Department of Transportation (Caltrans). 2023. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed October 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Rincon Consultants, Inc. (Rincon). 2023. Visual Impact Memorandum for the Coastal Rail Trail Segments 10 and 11. April 27, 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

Section 3.2 Air Quality

Bay Area Air Quality Management District (BAAQMD). 2017. "Air Quality Standards and Attainment Status." Last updated January 5, 2017. https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status. Accessed October 2023.

California Air Pollution Officers Association (CAPCOA). 2022. California Emissions Estimator Model (CalEEMod). Version 2022.1.1.12. Accessed October 2023. https://www.caleemod.com/.

California Air Resources Board (CARB). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* Stationary Source Division, Mobile Source Control Division. Sacramento, CA. October 2000.

_____. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* Sacramento, CA. April 2005.

_____. 2022. "Maps of State and Federal Area Designations." https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations. Last Updated November 2022. Accessed October 2023.

_____. 2023. "Top 4 Summary." [dataset]. Sacramento, CA.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Monterey Bay Air Resources District (MBARD). 2008. *CEQA Air Quality Guidelines*. Monterey, CA. February 2008.

_____. 2017. *2012–2015 Air Quality Management Plan.* Monterey, CA. March 15, 2017.

National Oceanic and Atmospheric Administration (NOAA). 2018. "Did You Know? Subtropical Highs." *National Centers for Environmental Information*. https://www.ncdc.noaa.gov/monitoring-references/dyk/subtropical-highs. Accessed October 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

_____. 2022. S*ustainability Policy and Regulatory Update Draft Environmental Impact Report* (SCH #2020079005). April.

U.S. Environmental Protection Agency (USEPA). 2018. *Report on the Environment – Ozone Concentrations*. https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=8. Accessed October 2023.

Western Regional Climate Center (WRCC). 2023. "Period of Record Monthly Climate Summary, Santa Cruz, California." https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7916. Accessed October 2023.

Section 3.3 Biological Resources

Allaback, Mark. 2016. Wildlife Biologist, Biosearch Associates. Personal communication via email regarding San Francisco dusky-footed woodrat relocation methods, with Erin McGinty, Wildlife Biologist, EcoSystems West Consulting Group. December 15, 2016.

Alley, D. 2023. Fisheries Biologist, DW Alley and Associates. Personal communication via email with Erin McGinty, EcoSystems West Consulting Group senior wildlife biologist, regarding the presence of Pacific lamprey in the Soquel Creek watershed. May 15, 2023.

Altman, B. and R. Sallabanks. 2020. Olive-Sided Flycatcher (*Contopus cooperi*), Version 1.0. In Birds of the World (A.F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.olsfly.01. Accessed October 2023.

Baldwin B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*. Second Edition. University of California Press, Berkeley.

Barbour, M., T. Keeler-Wolf, and A. A. Schoenherr, editors. 2007. *Terrestrial Vegetation of California*. Third Edition. University of California Press, Berkeley, Los Angeles and London.

Beedy, E.C., W.J. Hamilton, III, R.J. Meese, D.A. Airola, and P. Pyle. 2017. Tricolored Blackbird (*Agelaius tricolor*), Version 3.0. The Birds of North America (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bna.tribla.03. Accessed October 2023.

Beier and Loe. 1992. "A Checklist for Evaluating Impacts to Wildlife Corridors." *Wildlife Society Bulletin*, Volume 20: 434–440.

Bolster, B.C., editor. 1998. *Terrestrial Mammal Species of Special Concern in California*. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey, and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No. FG3146WM.

Bond, M. 2003. *Principles of Wildlife Corridor Design*. Prepared for the Center for Biological Diversity. October 2003.

Bowman, R. H., and D. C. Estrada. 1980. Soil Survey of Santa Cruz County, California. U.S. Department of Agriculture, Soil Conservation Service. 148 pp. and maps.

Buehler, D.A. 2020. Bald Eagle (*Haliaeetus leucocephalus*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.baleag.01. Accessed October 2023.

Breckenridge, W.J. 1935. "An ecological study of some Minnesota Marsh Hawks." The Condor, Volume 37, pp. 268–276.

CalFish. 2011. "Anadromous Fish Distribution." Steelhead Distribution Geospatial Data. https://www.calfish.org/ProgramsData/Species/AnadromousFishDistribution.aspx. Accessed October 2023.

California Department of Fish and Wildlife (CDFW). 2014. Black Salamander Life History Account. Originally from Zeiner, D.C., et al, eds. 1988–1990. California's Wildlife. Vol. I–III. California Department of Fish and Game, Sacramento, California. Updated by CWHR 2000 and 2014. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1454&inline=1. Accessed October 2023.

_____. 2016. Black Salamander Range Map. Originally from Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988–1990. California's Wildlife. Vol. I–III. California Depart. of Fish and Game, Sacramento, California. Updated by CWHR 1998, 2012, and 2016. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=1455&inline=1. Accessed October 2023.

_____. 2023a. "State and Federally Listed Endangered, Threatened, and Rare Plants of California." https://wildlife.ca.gov/Conservation/CESA. Accessed October 2023.

_____. 2023b. "State and Federally Listed Endangered and Threatened Animals of California." https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline. Accessed October 2023.

_____. 2023c. "Natural Communities." https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List#natural%20communities. Accessed October 2023.

_____. 2023d. "Species of Special Concern." https://www.wildlife.ca.gov/Conservation/SSC. Accessed October 2023.

_____. 2023e. "Fully Protected Animals." https://wildlife.ca.gov/Conservation/Fully-Protected. Accessed October 2023.

_____. 2023f. California Natural Diversity Database (CNDDB) – Commercial Version dated June 1, 2018, RareFind Version 5.2.14. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx. Accessed October 2023.

_____. 2023g. Biogeographic Information and Observation System (BIOS) Version 6. https://apps.wildlife.ca.gov/bios6/. Accessed October 2023.

California Department of Fish and Wildlife Natural Diversity Database (CDFW CNDDB). 2023. Special Animals List. Periodic publication. 66 pp. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline. Accessed October 2023.

California Interagency Watershed Mapping Committee (CIWMC): California Department of Water Resources (DWR), California Department of Forestry and Fire Protection (CDF), California Department of Fish and Game (DFG), California State Water Resources Control Board (SWRCB), USDA Forest Service (USFS) Pacific Southwest Region (R5), USDA Natural

Resources Conservation Service (NRCS), U.S. Geologic Survey (USGS), USDI Bureau of Reclamation (USBR), USDI Bureau of Land Management (BLM), U.S. Environmental Protection Agency (USEPA) Region IX, Stephen P. Teale Data Center (Teale GIS Solutions Group). 2004. California Interagency Watershed Map of 1999 (Calwater 2.2.1) (Updated 2004). https://www.arcgis.com/home/item.html?id=a6ddb044e7fb4a0396c899862f2a5201. Accessed October 2023.

California Invasive Plant Council (Cal-IPC). 2023. The Cal-IPC Inventory. Berkeley, CA. https://www.cal-ipc.org/plants/inventory/. Accessed October 2023.

California Native Plant Society (CNPS). 2023. Rare Plant Program. Rare Plant Inventory (online edition, v9-01 1.5). https://www.rareplants.cnps.org. Accessed October 2023.

California Natural Diversity Database (CNDDB). 2023a. Commercial Version dated June 1, 2018, RareFind Version 5.2.14. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx. Accessed October 2023.

. 2023b. Biogeographic Information and Observation System (BIOS) Version 5.66.18. https://map.dfg.ca.gov/bios/. Accessed October 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Cicero, C., P. Pyle, and M.A. Patten. 2020. Oak Titmouse (*Baeolophus inornatus*), Version 1.0. In Birds of the World (P.G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.oaktit.01. Accessed October 2023.

Clark, C.J. and D.E. Mitchell. 2020. Allen's Hummingbird (*Selasphorus sasin*), Version 1.0. In Birds of the World (A.F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.allhum.01. Accessed October 2023.

Dayton, J. 2023. Personal communication via phone regarding occurrence of western monarch butterfly in Woods Cove and monarch habitat characteristics with Justin Davilla, Ecologist, EcoSystems West Consulting Group.

Dunk, J.R. 2020. White-Tailed Kite (*Elanus leucurus*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.whtkit.01. Accessed October 2023.

DW Alley and Associates. 2016. 2015 Draft Summary Report – Juvenile Steelhead Densities in the San Lorenzo, Soquel, Aptos and Corralitos Watersheds, Santa Cruz County, CA. Prepared for the Santa Cruz County Environmental Health Department.

eBird. 2023. eBird: An Online Database of Bird Distribution and Abundance. Audubon and Cornell Lab of Ornithology. Ithaca, New York. https://ebird.org/map/. Accessed October 2023.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Fellers, G.M. and P.M. Kleeman. 2007. California Red-Legged Frog (*Rana draytonii*) Movement and Habitat Use: Implications for Conservation. Journal of Herpetology, 41 (2):276–286.

Garrison, B.A. and A. Turner 2020. Bank Swallow (*Riparia riparia*), Version 1.0. In Birds of the World (S. M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.banswa.01. Accessed October 2023.

Geupel, G.R. and G. Ballard. 2020. Wrentit (*Chamaea fasciata*), Version 1.0. In Birds of the World (P.G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.wrenti.01. Accessed October 2023.

Griffiths, J., and F. Villablanca. 2015. "Managing Monarch Butterfly Overwintering Groves: Making Room among the Eucalyptus." *California Fish and Game* 101:40–50.

Gunn, C., P.E. Lowther, C.T. Collins, J.P. Beason, K. Potter, and M. Webb. 2023. Black Swift (*Cypseloides niger*), Version 3.0. In Birds of the World (S.M. Billerman and B.K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.blkswi.03. Accessed October 2023.

Harvey, M.J., J.S. Altenbach, and T.L. Best. 1999. Bats of the United States. Arkansas Game and Fish Commission in cooperation with the U.S. Fish and Wildlife Service.

Heady, Paul. 2018. Bat Biologist, Central Coast Bat Research Group. Personal communication via phone, regarding bats expected to occur in coast live oak forest on the north coast, with Erin McGinty, Biologist, EcoSystems West Consulting Group. April 12, 2018.

Hickman, J. C., editor. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, CA.

Hilty, J.A., W.Z. Lidicker Jr., A.M. Merenlender. 2006. *Corridor Ecology, The Science and Practice of Linking Landscapes for Biodiversity Conservation*. Island Press, Washington DC.

Holland, D.C. and R.B. Bury, 1998. *Clemmys marmorata* (Baird and Girard 1852) Western Pond Turtle. In P.C.H. Pritchard and A G.J. Rhodin (eds.), The Conservation Biology of Freshwater Turtles. Chelonian Research Monographs 2(2).

Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. State of California, the Resource Agency, Department of Fish and Game. October 1986.

Hyland, Tim. 2023. California State Parks Environmental Scientist. Personal communication via phone with Justin Davilla, EcoSystems West Consulting Group Senior Ecologist, regarding the potential presence of Santa Cruz tarplant in the Porter Sesnon Open Space, New Brighton State Beach. April 15, 2023.

International Union for Conservation of Nature (IUCN). 2022. "Migratory Monarch Butterfly Now Endangered-IUCN Red List." July 21, 2022. https://www.iucn.org/press-release/202207/migratory-monarch-butterfly-now-endangered-iucn-red-list. Accessed October 2023.

Katzner, T.E., M.N. Kochert, K. Steenhof, C.L. McIntyre, E.H. Craig, and T.A. Miller. 2020. Golden Eagle (*Aquila chrysaetos*), Version 2.0. In Birds of the World (P.G. Rodewald and B.K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.goleag.02. Accessed October 2023.

Lidicker, W.Z. 1999. Responses of Mammals to Habitat Edges: An Overview. *Landscape Ecology* 14: 333. https://doi.org/10.1023/A:1008056817939. Accessed October 2023.

Lowther, P.E., P. Pyle, and M.A. Patten. 2020. Nuttall's Woodpecker (*Dryobates nuttallii*), Version 1.0. In Birds of the World (P.G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.nutwoo.01. Accessed October 2023.

Lowther, P.E., C. Celada, N.K. Klein, C.C. Rimmer, and D.A. Spector. 2020. Yellow Warbler (*Setophaga petechia*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.yelwar.01. Accessed October 2023.

Marks, J.S., D.L. Evans, and D.W. Holt. 2020. Long-Eared Owl (*Asio otus*), Version 1.0. In Birds of the World (S.M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.loeowl.01. Accessed October 2023.

Meese, R.J. 2017. Results of the 2017 Tricolored Blackbird Statewide Survey. California Department of Fish and Wildlife, Wildlife Branch, Nongame Wildlife Program Report 2017-04, Sacramento, CA. 27 pp. + appendices.

Meese, R.J. and E.C. Beedy. 2015. Managing Nesting and Foraging Habitats to Benefit Breeding Tricolored Blackbirds. Central Valley Bird Club Bulletin No. 17:79-96. Moyle, P.B., R.M. Quiñones, J. V. Katz and J. Weaver. 2015. *Fish Species of Special Concern in California*. Sacramento: California Department of Fish and Wildlife. https://www.wildlife.ca.gov/Conservation/SSC/Fishes. Accessed October 2023.

Munz, P.A., and D.D. Keck. 1973. *A California Flora and Supplement*. University of California Press, Berkeley, CA.

Nafis, G. 2023. "California Herps – A Guide to the Amphibians and Reptiles of California." http://www.californiaherps.com/. Accessed October 2023.

National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) (= NOAA Fisheries). 2005. Endangered and Threatened Species: Designation of Critical Habitat for Seven Evolutionary Significance Units of Pacific Salmon and Steelhead in California. Federal Register. 50 CFR Part 226. September 2, 2005.

_____. 2006. Endangered and Threatened Species: Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead; Final Rule. Federal Register. 50 CFR Parts 223 and 224. January 5, 2006.

_____. 2012. Final Recovery Plan for central California Coast Coho Salmon Evolutionary Significance Unit (ESU). National Marine Fisheries Service, Southwest Region, Santa Rosa, California.

Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. U.S. Department of Agriculture Last modified September 9, 2021. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed October 2023.

Nelson, S.K. 2020. Marbled Murrelet (*Brachyramphus marmoratus*), Version 1.0. In Birds of the World (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.marmur.01. Accessed October 2023.

Neubauer, D. 2013. Annotated Checklist of the Vascular Plants of Santa Cruz County, California. Second Edition. California Native Plant Society (CNPS), Santa Cruz County Chapter. 172 pp.

Pacific Gas & Electric Company (PG&E), ICF International, and H. T. Harvey & Associates. 2015. *Nesting Bird Management Plan: Biologists Guidelines for PG&E Utility Operations, Maintenance, and Projects*. August 2015.

Page, G.W., L.E. Stenzel, J.S. Warriner, J.C. Warriner, and P.W. Paton. 2020. Snowy Plover (*Charadrius nivosus*), Version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.snoplo5.01. Accessed October 2023.

Pelton, E., S. Jepsen, C. Schultz, C. Fallon, and S. H. Black. 2016. *State of the Monarch Butterfly Overwintering Sites in California*. 40+vi pp. Portland, OR: The Xerces Society for Invertebrate Conservation. www.xerces.org. Accessed October 2023.

Penrod, K., R. Hunter, and M. Merrifield. 2001. *Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings*. Cosponsored by California Wilderness Coalition, The Nature Conservancy, U.S. Geological Survey, Center for Reproduction of Endangered Species, and California State Parks.

Pierotti, R.J. and C.A. Annett. 2020. Western Gull (*Larus occidentalis*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.wesgul.01. Accessed 2023.

Pierson, E.D., and Heady, P.A. 1997. Unpublished Telemetry Study of the Western Red Bat on Vandenberg Air Force Base, California.

Poulin, R.G., L.D. Todd, E.A. Haug, B.A. Millsap, and M.S. Martell. 2020. Burrowing Owl (*Athene cunicularia*), Version 1.0. In Birds of the World (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.burowl.01. Accessed October 2023.

Quinn, J. 2015. American Badgers (*Taxidea taxus*) in California. CDFW Conservation Lecture Series. Habitat Conservation Planning Branch, Sacramento, CA. August 6, 2015. Accessed October 2023.

Rinkert, A. 2022. Bird Records, Santa Cruz Bird Club. Personal communication via email regarding nesting of black swift, with Erin McGinty, Biologist, EcoSystems West Consulting Group. August 18, 2022.

Sakai, H.F. and B.R. Noon, 1993. Dusky-Footed Woodrat Abundance in Different-Aged Forests in Northwest California. Journal of Wildlife Management. Volume 57, pp. 373–381.

Santa Cruz, County of. 1992. *Santa Cruz County Urban Forestry Master Plan*. Prepared for the Santa Cruz County Redevelopment Agency. Prepared by Royson, Hanamoto, Alley, and Abey in association with Wolf Mason Associates. Adopted December 1992.

_____. 1994. *1994 General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

Santa Cruz County Regional Transportation Commission (RTC). 2013a. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Draft Environmental Impact Report*. Santa Cruz, CA.

_____. 2013b. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013.

_____. 2014. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report Addendum*.

Sawyer, J., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation*. Second Edition. California Native Plant Society, Sacramento, California.

Schwitters, L., D. Schwitters, E.L. Bull, and C.T. Collins. 2021. Vaux's Swift (*Chaetura vauxi*), Version 1.1. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.vauswi.01.1. Accessed October 2023.

Science and Collaboration for Connected Wildlands (SCCW). 2014. "Landscape Blocks for the California Bay Area Linkage Network. Critical Linkages: Bay Area and Beyond. Fair Oaks, CA." https://map.dfg.ca.gov/metadata/ds0853.html?5.83.12. Accessed October 2023.

Sedgwick, J.A. 2020. Willow Flycatcher (*Empidonax traillii*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.wilfly.01. Accessed October 2023.

Shuford, W. D., and Gardali, T., editors. 2008. C*alifornia Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Simmons, R. 1988. "Honest Advertising, Sexual Selection, Courtship Displays, and Body Condition of Polygynous Male Harriers." The Auk, Volume 105, pp. 303–307.

Smith, K.G., S.R. Wittenberg, R.B. Macwhirter, and K.L. Bildstein. 2020. Northern Harrier (*Circus hudsonius*), Version 1.0. In Birds of the World (P.G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.norhar2.01. Accessed October 2023.

Southern California Coastal Water Research Project (SCCWRP). 2019. Analysis of the Juvenile Steelhead and Stream Habitat Database, Santa Cruz County, California. Technical Report 1082. Prepared for the County of Santa Cruz by Marcus Beck, Kristen Kittleson, and Kevin O'Connor. July 2019.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Stebbins, Robert C., and Samuel M. McGinnis. 2012. Field Guide to Amphibians and Reptiles of California: Revised Edition (California Natural History Guides). University of California Press.

Steiner, Chad. 2018. Wildlife Biologist. Personal communication, in person, regarding occurrence of anadromous fish, with Erin McGinty, biologist, EcoSystems West Consulting Group. July 12, 2018.

Steiner, Chad. 2023. Wildlife Biologist. Personal communication via text, regarding occurrence of western pond turtle and Santa Cruz black salamander, with Erin McGinty, biologist, EcoSystems West Consulting Group.

Thomas, J.H. 1961. *Flora of the Santa Cruz Mountains of California*. Stanford University Press, Stanford, California. 434 pp.

Thompson, C.F. and K.P. Eckerle. 2022. Yellow-Breasted Chat (*Icteria virens*), Version 2.0. In Birds of the World (P.G. Rodewald and B.K. Keeney, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.yebcha.02. Accessed October 2023.

Thomson, C.P., A.N. Wright, and H.B. Shaffer. 2016. *California Amphibian and Reptile Species of Special Concern*. University of California Press. Oakland, CA.

Tibor, D.P., editor. 2001. *Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society Special Publication No. 1*. 6th edition. California Native Plant Society, Sacramento, CA.

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). Final. ERDC/EL TR-08-28. Prepared by Environmental Laboratory, U.S. Army Engineer Research and Development Center. Wetlands Regulatory Assistance Program. September. https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/7627. Accessed October 2023.

U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Tidewater Goby. Federal Register 50 CFR Part 17, Volume 59, No. 24, pp. 5494–5499, February 4, 1994. https://ecos.fws.gov/ecp/species/57. Accessed October 2023.

_____. 1999. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Pacific Coast Population of Western Snowy Plover, Final Rule. Federal Register 50 CFR Part 17, Volume 64, No. 234, pp. 68508–68544, December 7, 1999. https://www.gpo.gov/fdsys/pkg/FR-1999-12-07/pdf/99-31357.pdf#page=1. Accessed October 2023.

_____. 2000. Endangered and Threatened Wildlife and Plants; Threatened Status for the Holocarpha macradenia (Santa Cruz tarplant), Final Rule. Federal Register 50 CFR Part 17, Volume 65, No. 54, pp. 14898-14909, March 20, 2000. https://www.federalregister.gov/documents/2000/03/20/00-6834/endangered-and-threatened-wildlife-and-plants-threatened-status-for-holocarpha-macradenia-santa-cruz. Accessed October 2023.

_____. 2002. Recovery Plan for the California Red-Legged Frog (*Rana aurora draytonii*). U. S. Fish and Wildlife Service, Portland, Oregon. vii+173pp.

_____. 2005. *Recovery Plan for the Tidewater Goby, (*Eucyclogobius newberryi*)*. U.S. Fish and Wildlife Service, Pacific Region, Portland, Oregon. vi + 199 pp. http://ecos.fws.gov/docs/recovery_plan/051207.pdf. Accessed October 2023.

_____. 2009. *A System for Mapping Riparian Areas in the Western United States*. Division of Habitat and Resource Conservation Branch of Resource and Mapping Support, Arlington, VA.

_____. 2010. Revised Designation of Critical Habitat for California Red-Legged Frog; Final Rule. Federal Register Vol. 75, No. 51 March 17, 2010. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2010_register&docid=fr17mr10-23. Accessed October 2023. _____. 2020. Endangered and Threatened Wildlife and Plants; 12-Month Finding for the Monarch Butterfly. Federal Register 50 CFR Part 17, Volume 85, No. 243, pp. 81813–81822. December 17, 2020. https://www.govinfo.gov/content/pkg/FR-2020-12-17/pdf/2020-27523.pdf#page=1. Accessed October 2023.

_____. 2021. Birds of Conservation Concern 2021. United States Department of Interior, Fish and Wildlife Service. Division of Migratory Bird Management. Arlington, Virginia. 47pp. https://www.fws.gov/sites/default/files/documents/birds-of-conservation-concern-2021.pdf. Accessed October 2023.

_____. 2023a. “Listed Species Believed to or Known to Occur in California.” https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=CA&stateName=California&statusCategory=Listed. Accessed October 2023.

_____. 2023b. “Species Proposed for Listing Believed to or Known to Occur in California.” https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=CA&stateName=California&statusCategory=Proposed%20for%20Listing. Accessed October 2023.

_____. 2023c. “Candidate Species Believed to or Known to Occur in California.” https://ecos.fws.gov/ecp/report/species-listings-by-state-totals?statusCategory=Candidate%20for%20Listing. Accessed October 2023.

_____. 2023d. National Wetlands Inventory. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/. Accessed October 2023.

_____. 2023e. Endangered and Threatened Wildlife and Plants; Review of Species that are Candidates for Listing as Endangered or Threatened; Annual Notification of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions. Federal Register 50 CFR Part 17, Volume 88, No. 122, pp. 41560–41585. June 27, 2023. https://www.govinfo.gov/content/pkg/FR-2020-12-17/pdf/2020-27523.pdf#page=1. Accessed October 2023.

Vickery, P.D. 2020. Grasshopper Sparrow (*Ammodramus savannarum*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.graspa.01. Accessed October 2023.

Warner, R.M., and Czaplewski, N.J. 1984. *Myotis volans*. Mammalian Species, Volume 224, pp.1–4.

Watt, D.J., P. Pyle, M.A. Patten, and J.N. Davis. 2020. Lawrence's Goldfinch (*Spinus lawrencei*), Version 1.0. In Birds of the World (P.G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.lawgol.01. Accessed October 2023.

Western Bat Working Group (WBWG). 2017. Western Bat Species: Regional Priority Matrix http://wbwg.org/matrices/species-matrix/ and Western Bat Species: Species Accounts http://wbwg.org/western-bat-species/. Accessed October 2023.

White, C.M., N.J. Clum, T.J. Cade, and W.G. Hunt. 2020. Peregrine Falcon (*Falco peregrinus*), Version 1.0. In Birds of the World (S.M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.perfal.01. Accessed October 2023.

Yosef, R. 2020. Loggerhead Shrike (*Lanius ludovicianus*), Version 1.0. In Birds of the World (A.F. Poole and F.B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.logshr.01. Accessed October 2023.

Xerces Society of Invertebrate Conservation (Xerces Society). 2023a. Xerces Society Western Monarch Overwintering Sites Database. https://xerces.org/monarchs/. Accessed October 2023.

_____. 2023b. Western Monarch Count. Western Monarch Thanksgiving Count and New Year’s Count Data, 1997–2021. www.westernmonarchcount.org. Accessed October 2023.

Section 3.4 Cultural Resources

Brunzell, Kara, and Ynez Barber. 2023. *Historical Resources Evaluation Report for the State Route Highway 1 Auxiliary Lanes and Bus-on-Shoulder Improvements—Freedom Boulevard to State Park Drive—and Coastal Rail Trail Segment 12 Project*.

California Department of Transportation (Caltrans). 2021. *Structure Maintenance & Investigations. Historical Significance – Local and State Agency Bridges*.

Capitola, City of. 1999. *Applications #99-52 Through #99-60: Public Hearing Regarding Designation of the Following as Historic Features under Chapter 17.87 of the Capitola Municipal Code [1030-20]*. Capitola City Council/Planning Commission. July 15.

_____. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar. AltaMira Press; Lanham, MD.

Haas, Hannah, and Steven Treffers. 2018. Davenport Branch Line, California Department of Parks and Recreation Form 523. Record on file at the Northwest Information Center, Rohnert Park, CA.

Jones, Terry L., Nathan E. Stevens, Deborah A. Jones, Richard T. Fitzgerald, and Mark G. Hylkema. 2007. "The Central Coast: A Midlatitude Milieu." In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 125–146. AltaMira Press; Lanham, MD.

National Park Service (NPS). 1997. National Register Bulletin: How to Apply the National Register Criteria for Evaluation. Washington, D.C.

RailPros. 2021. *Capitola Railroad Bridge: Repurposing Conceptual Study*. Prepared for the Santa Cruz County Regional Transportation Commission. August 19, 2021.

Rowe and Associates. 1986. *City of Capitola Architectural Survey*. Prepared for the City of Capitola.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

Webb, Toni, and Garret Root. 2014a. Southern Pacific Railroad Harkins Slough Trestle, California Department of Parks and Recreation Form 523. Record on file at the Northwest Information Center, Rohnert Park, CA.

_____. 2014b. Southern Pacific Railroad La Selva Trestle, California Department of Parks and Recreation Form 523. Record on file at the Northwest Information Center, Rohnert Park, CA.

Section 3.5 Geology and Soils

Boessnecker, R.W., F.A. Perry, and J.G. Schmitt. 2014. "Comparative Taphonomy, Taphofacies, and Bonebeds of the Mio-Pliocene Purisima Formation, Central California: Strong Physical Control on Marine Vertebrate Preservation in Shallow Marine Settings." PLOS One. Volume 9, pp. e91419.

Brabb, E.E. 1997. "Geologic Map of Santa Cruz County, California: a Digital Database." [map.] United States Geological Survey, Open-File Report OF-97-489, scale 1:62,500.

Bradley, W.C., and W.O. Addicott. 1968. "Age of First Marine Terrace near Santa Cruz, California." Geological Society of America Bulletin, Volume 79, pp. 1,203–1,210.

California Department of Water Resources (DWR). 2014. *Public Update for Drought Response: Groundwater Basins with Potential Water Shortages, Gaps in Groundwater Monitoring, Monitoring of Land Subsidence, and Agricultural Land Fallowing*. Natural Resource Agency. Sacramento, CA. November 2014.

California Geological Survey (CGS). 2002. *California Geomorphic Provinces – Note 36*. Sacramento, CA.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

California Division of Mines and Geology (CDMG). 1997. *Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps*. Special publication, California Department of Conservation. Revised by Earl W. Hart and Bryant. Sacramento, CA.

Clark, Joseph C. 1981. "Stratigraphy, Paleontology, and Geology of the Central Santa Cruz Mountains, California Coast Ranges." Geological Survey Professional Paper 1168. U.S. Department of the Interior. Washington, DC. 47–51.

Global Rangelands. 2018."The Twelve Soil Orders." https://globalrangelands.org/topics/rangeland-ecology/twelve-soil-orders#Mollisols. Accessed October 2023.

Jefferson, G.T. 2010. A catalogue of late Quaternary vertebrates from California. *Natural History Museum of Los Angeles County Technical Report*. Volume 7, pp. 5–172.

Natural Resources Conservation Service (NRCS). 2018. "Web Soil Survey." U.S. Department of Agriculture.

Pacific Crest Engineering, Inc. (Pacific Crest Engineering). 2021. *Draft Geotechnical Investigation – Design Phase, Monterey Bay Sanctuary Scenic Trail (MBSST) – Segments 10 and 11, Santa Cruz, California*. Project No. 2120-SZ69-F11, October 22, 2021.

Paleobiology Database (PBDB). 2023. The Paleobiology Database. http://paleobiodb.org/. Accessed October 2023.

Roberts, Sebastian, Andrew D. Baron, Earl E. Brabb, and Richard J. Pike. 1998. Digital compilation of "Preliminary Map of Landslide Deposits in Santa Cruz County, California, By Cooper-Clark and Associates, 1975": A Digital Map Database: U.S. Geological Survey Open-File Report 98792. http://pubs.usgs.gov/of/1998/of98-792/. Accessed October 2023.

Santa Cruz, City of. 2011. *City of Santa Cruz General Plan 2030 Draft Environmental Impact Report.* SCH# 2009032007. Santa Cruz, California. September 2011.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

_____. 2021. *Local Hazard Mitigation Plan 2021–2026*. July 2021. https://www.sccoplanning.com/Portals/2/County/Planning/policy/LHMP/County%20of%20Santa%20Cruz%20LHMP%202021-2026.pdf. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013.

Santa Cruz Sentinel. 2023. "Ancient Mastodon Tooth Fossil Found on Beach in Aptos." Published May 31, 2023. https://www.santacruzsentinel.com/2023/05/31/ancient-mastodon-tooth-fossil-found-on-beach-in-aptos/. Accessed October 2023.

Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

University of California Museum of Paleontology (UCMP). 2023. UCMP Online Database Specimen Search Portal. https://ucmpdb.berkeley.edu/. Accessed October 2023.

U.S. Geological Survey (USGS). 2017. "Earthquake Glossary: Liquefaction." USFS Earthquake Hazards Program. https://earthquake.usgs.gov/learn/glossary/?term= liquefaction. Accessed October 2023.

Wagner, D.L., H.G. Greene, G.J. Saucedo, and C.L. Pridmore. 2002. "Geologic Map of the Monterey 30' x 60' Quadrangle and Adjacent Areas, California" [map]. California Geological Survey, Regional Geologic Map RGM-1, scale 1:100,000.

Woodring, W.P., M.N. Bramlette, and W.S.W. Kew. 1946. *Geology and Paleontology of Palos Verdes Hills, California. United States Geological Survey Professional Papers, Professional Paper 207*, pp. 1–139.

Section 3.6 Greenhouse Gas Emissions/Climate Change

Association of Environmental Professionals, California Chapter, Climate Change Committee (AEP). 2017. *Production, Consumption and Lifecycle Greenhouse Gas Inventories: Implications for CEQA and Climate Action Plans*. August 2017.

Association of Monterey Bay Area Governments (AMBAG). 2022a. *Moving Forward Monterey Bay 2045, 2045 Metropolitan Transportation Plan/Sustainable Communities*. Seaside, CA. June 2022.

_____. 2022b. 2045 *Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties Final Environmental Impact Report* (SCH #2020010204). Seaside, CA. June 2022.

Bay Area Air Quality Management District (BAAQMD). 2022. *2022 CEQA Guidelines*. April

California Air Pollution Control Officers Association (CAPCOA). 2008. *CEQA and Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*. Sacramento, CA. January 2008.

_____. 2022. *California Emissions Estimator Model Users Guide*, Version 2022.1. April.

California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan, A Framework for Change*. Sacramento, CA. December 2008.

_____. 2017. *California's 2017 Climate Change Scoping Plan*. Sacramento, CA. November 2017.

_____. 2022a. *California Greenhouse Gas Emissions for 2000 to 2020, Trends of Emissions and Other Indicators*. October 26.

_____. 2022b. *2022 Scoping Plan Update*. Sacramento, CA. December 2022.

California Department of Water Resources (DWR). 2016. *The National Flood Insurance Program in California, Quick Guide Coastal Appendix: Planning for Sea Level Rise*. Sacramento, CA. October 2016.

California Natural Resources Agency (CNRA). 2009. *California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008.* Sacramento, CA.

_____. 2021. *Climate Adaptation Strategy*. Sacramento, CA. 2021.

Capitola, City of. 2015. *Climate Action Plan for the City of Capitola*. October 22.

_____. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Central Coast Wetlands Group. 2017a. *Santa Cruz County Coastal Climate Change Vulnerability Report*. June.

_____. 2017b. *City of Capitola Coastal Climate Change Vulnerability Report*. June.

Governor's Office of Planning and Research (OPR). 2017. *State of California General Plan Guidelines*. Sacramento, CA.

Intergovernmental Panel on Climate Change (IPCC). 2013. "Summary for Policymakers." *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* Geneva, Switzerland.

_____. 2014. "Summary for Policymakers." *Climate Change 2014: Mitigation of Climate Change.* Geneva, Switzerland.

National Oceanic and Atmospheric Administration (NOAA). 2023. "Annual Greenhouse Gas Index." http://www.esrl.noaa.gov/gmd/aggi/. Accessed October 2023.

Natural Resources Defense Council (NRDC). 2017. *Fact Sheet 17-04-A - EPA's Endangerment Finding: The Legal and Scientific Foundation for Climate Action*. May.

Nature Conservancy. 2023. Coastal Resiliency Program Mapping Portal. https://maps.coastalresilience.org/. Accessed October 2023.

Office of the Attorney General (OAG). 2022. "Climate Change Impacts in California." Department of Justice. Sacramento, CA. July 13, 2022. https://oag.ca.gov/environment/impact. Accessed October 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

_____. 2022. *County of Santa Cruz Climate Action and Adaptation Plan*. Santa Cruz, CA. December 2022.

U.S. Environmental Protection Agency (USEPA). 2023a. "Overview of Greenhouse Gas Emissions – Carbon Dioxide Emissions." Last updated August 25, 2023. https://www.epa.gov/ghgemissions/overview-greenhouse-gases#main-content. Accessed October 2023.

_____. 2023b. "Global Greenhouse Gas Emissions Data." Last updated February 15, 2023. https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data. Accessed October 2023.

_____. 2023c. "Inventory of U.S. Greenhouse Gas Emissions and Sinks." Last updated August 25, 2023. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed October 2023.

Section 3.7 Hazards and Hazardous Materials

AMEC Geomatrix, Inc. (AMEC Geomatrix). 2009. *Phase II Investigations and Human Health Risk Assessment for Arsenic, Santa Cruz Branch Line, Santa Cruz and Monterey Counties, California.* Oakland, CA. December 2009.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). 2023. "Division of Oil, Gas & Geothermal Resources – Well Finder." https://maps.conservation.ca.gov/doggr/wellfinder/. Accessed October 2023.

California Department of Forestry and Fire Protection (CAL FIRE). 2007. "Santa Cruz County Draft Fire Hazard Severity Zones in LRA." Last updated June 2007. https://osfm.fire.ca.gov/media/6770/fhszl06_1_map44.pdf. Accessed October 2023.

_____. 2023a. "About CAL FIRE." https://www.fire.ca.gov/about. Accessed October 2023.

_____. 2023b. "CAL FIRE AT A GLANCE." https://web.archive.org/web/20220811194503/https:/www.fire.ca.gov/media/rb3b0q3v/glance.pdf. Accessed October 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

_____. 2020. *Local Hazard Mitigation Plan: 2020 Five Year Update.* https://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/1463/capitola_local_hazard_mitigation_plan_-_2020_update.pdf. Accessed October 2023.

Geomatrix Consultants, Inc. 1997. *Preliminary Site Assessment Davenport and Santa Cruz Branch Lines, Santa Cruz and Monterey Counties, California*. Prepared for Santa Cruz County Regional Transportation Commission (RTP). Santa Cruz, CA. March 1997.

Governor's Office of Emergency Services (CalOES). 2006. *California Implementation Guidelines for the National Incident Management System*. Prepared for the California Emergency Management Community. Sacramento, CA. September 2006.

_____. 2014. *California Fire Service and Rescue Emergency Mutual Aid System Mutual Aid Plan*. Sacramento, CA. December 2014.

_____. 2017. *State of California Emergency Plan.* Sacramento, CA. October 1, 2017.

Monterey Bay Air Resources District (MBARD). 2008. *CEQA Air Quality Guidelines*. Monterey, CA. February 2008.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

_____. 2015. *Local Hazard Mitigation Plan 2015–2020*. Santa Cruz, CA. September 2015.

_____. 2022. "Hazardous Materials and Waste." Environmental Health. https://scceh.com/NewHome/Programs/HazardousMaterialsWaste.aspx. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2012. *Santa Cruz Branch Rail Line Alignment and Bridge Evaluation & Repair/Rehabilitation or Replacement Recommendation Report*. August 31, 2012.

_____. 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013. Accessed October 2023. https://sccrtc.org/projects/multi-modal/monterey-bay-sanctuary-scenic-trail/final-environmental-impact-report-on-the-monterey-bay-santucary-scenic-trail-mbsst/.

U.S. Environmental Protection Agency (USEPA). 2022. "Summary of the Federal Insecticide, Fungicide, and Rodenticide Act." Last modified September 12, 2022. https://www.epa.gov/laws-regulations/summary-federal-insecticide-fungicide-and-rodenticide-act. Accessed October 2023.

_____. 2023. "Learn About Asbestos." Last modified March 27, 2023. https://www.epa.gov/asbestos/learn-about-asbestos#asbestos. Accessed October 2023.

Weber, Hayes & Associates (WHA). 2023. *Initial Site Assessment Coastal Rail Trail Project Segments 10 & 11*. April 13, 2023.

Section 3.8 Hydrology and Water Quality

Balance Hydrologics. 2023. *Location Hydraulic Study for Rail Trail Segments 10 and 11*. May.

Central Coast Regional Water Quality Control Board (CCRWQCB). 2019. *Water Quality Control Plan for the Central Coast Basin, June 2019 Edition*. California Environmental Protection Agency. Sacramento, CA. June.

California Department of Water Resources (DWR). 2009. *California Water Plan Update 2009 Volume 3 – Regional Reports, Central Coast Integrated Water Management*. Bulletin 160-09. Sacramento, CA.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Santa Cruz Mid-County Groundwater Agency (MCGA). 2019. *Santa Cruz Mid-County Groundwater Sustainability Plan*. November.

Santa Cruz, City of. 2018. *Local Hazard Mitigation Plan Five Year Update 2018–2023*. Santa Cruz, CA. Adopted by City Council on October 9, 2018.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

State Water Resources Control Board (SWRCB). 2022. 2020–2022 California Integrated Report. https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html. Accessed October 2023.

Western Regional Climate Center (WRCC). 2023. Period of Record Monthly Climate Summary, Santa Cruz, California. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7916. Accessed October 2023.

Section 3.9 Land Use and Planning

California Department of Finance. 2023. E-5 Population and Housing Estimates for Cities, Counties, and the State. https://dof.ca.gov/forecasting/demographics/estimates/. Accessed October 2023.

California State Parks and Recreation Department (State Parks). 1990. New Brighton State Beach General Plan. https://www.parks.ca.gov/pages/21299/files/ar_407_654.pdf. Accessed October 2023.

_____. 2010. *California State Parks General Planning Handbook*. https://www.parks.ca.gov/pages/21299/files/planning_handbook_april_2010.pdf. Accessed October 2023.

Capitola, City of. 2011. City of Capitola Bicycle Transportation Plan. Adopted February 10, 2011. https://bicycleinfrastructuremanuals.com/manuals6/City-of-Capitola-City-of-Capitola-Bicycle-Transportation-Plan-2011.pdf. Accessed October 2023.

_____. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

_____. 2022. Santa Cruz County Sustainability Update. Board of Supervisors Public Hearing Draft November 2022. https://sccoplanning.com/Portals/2/County/Planning/SustainabilityUpdate/General_Plan/GeneralPlanChapter7_PPF_public_draft.pdf?ver=nrvsnqKZMnVGwut_E1SrvQ%3d%3d. Accessed October 2023.

Santa Cruz County, Regional Transportation Commission (RTC). 2014. *Monterey Bay Sanctuary Scenic Trail Network Master Plan*. Santa Cruz, CA. February 6, 2014.

U.S. Census Bureau. 2020a. Total Population in Live Oak CDP, California. https://data.census.gov/all?q=Live+Oak+CDP,+California. Accessed October 2023.

_____. 2020b. Total Population in Aptos CDP, California. https://data.census.gov/all?q=aptos+ca+. Accessed October 2023.

Section 3.10 Noise

California Department of Transportation (Caltrans). 2013. *Transportation and Construction Vibration Guidance Manual*. Sacramento, CA. September 2013.

California Governor's Office of Planning and Research (OPR). 2017. *State of California 2017 General Plan Guidelines*.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. Office of Planning and Environment. Washington, DC. September 2018.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide*. Prepared by U.S. Department of Transportation Research and Innovative Technology Administration. Prepared for U.S. Department of Transportation Federal Highway Administration, Office of Natural and Human Environment. Washington, DC. January 2006.

Santa Cruz, County of. 2020. *1994 General Plan/Local Coastal Program, Chapter 9: Noise*. Updated February 2020.

_____. 2021. Santa Cruz County Code. Current through Ordinance 5383, passed October 19, 2021.

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013.

Trek. 2023a. "Good Sounds. Bad Sounds. The science behind Fuel EXe's game-changing acoustics." Accessed October 2023. https://blog.trekbikes.com/en/2022/07/12/fuel_exe_bicycle_acoustics/.

_____. 2023b. GadgetReview. "How Loud is An Electric Bike." Update March 7, 2023. Accessed October 2023. https://www.gadgetreview.com/how-loud-is-an-electric-bike.

Section 3.11 Public Safety and Services

California Department of Transportation (Caltrans). 2020. Highway Design Manual. Chapter 1000, Bicycle Transportation Design. https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf. Accessed October 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

_____. 2023a. “Public Works Parks.” https://www.cityofcapitola.org/publicworks/page/parks. Accessed October 2023.

_____. 2023b. “Public Works Facilities.” https://www.cityofcapitola.org/publicworks/page/facilities. Accessed October 2023.

Capitola Police Department (CPD). 2022. *Capitola PD CA Policy Manual*. https://www.cityofcapitola.org/sites/default/files/fileattachments/police/page/14101/release_20220831_t132606_capitola_pd_ca_policy_manual_1.pdf. Accessed October 2023.

Central Fire District (CFD). 2022. *Central Fire District of Santa Cruz County Annual Report 2022*. https://www.centralfiresc.org/DocumentCenter/View/3351/Central-FD-Annual-Report-2022-PDF. Accessed October 2023.

Fish, Stefan. 2018. Sargent, Santa Cruz County Sheriff’s Department, North Coast Sheriff’s Service Center. Telephone conversation regarding sheriff services with Wendy Young Environmental Specialist, Harris & Associates on May 8, 2018.

Hop, Randall, and Nick Baldridge. 2022. Sergeant & Lieutenant of the Santa Cruz County Sheriff’s Office Community Policy Division. Conversation regarding police response services with representatives from Harris & Associates and Rincon Consultants, Inc. on May 18, 2022.

Live Oak School District. 2023. “Our Schools.” https://www.losd.ca/schools/our-schools. Accessed October 2023.

Mack, Marco. 2022. Deputy Fire Marshal, CMF CBO, Central Fire District. Conversation regarding fire response services with representatives from Harris & Associates and Rincon Consultants, Inc. on May 12, 2022.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

_____. 2018. *Santa Cruz County Parks Strategic Plan*. https://www.scparks.com/Portals/12/pdfs/strategic%20plan/SantaCruzCountyParksStrategicPlan_PublicReviewDraft.pdf. Accessed October 2023.

_____. 2022. 2045 Regional Transportation Plan. https://sccrtc.org/funding-planning/long-range-plans/2045-regional-transportation-plan/. Accessed October 2023.

_____. 2023a. “Emergency Medical Services.” https://www.santacruzhealth.org/HSAHome/HSADivisions/PublicHealth/EmergencyMedicalServices.aspx. Accessed October 2023.

_____. 2023b. County Parks Park Finder. https://www.scparks.com/Home/ExploreOurParksBeaches/CountyParksParkFinder.aspx. Accessed October 2023.

Santa Cruz, County of, Office of Education. 2023. Santa Cruz County School Districts. https://santacruzcoe.org/schools/santa-cruz-county-school-districts/. Accessed October 2023.

Santa Cruz County Public Libraries (SCPL). 2013. Santa Cruz Public Libraries Facilities Master Plan 2014–2023. March 2013. https://www.santacruzpl.org/files/library_administration/documents/SCPLFacilitiesMasterPlan2013.pdf. Accessed October 2023.

_____. 2023. “Library Branches.” https://www.santacruzpl.org/branches/map/. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. https://sccrtc.org/projects/multi-modal/monterey-bay-sanctuary-scenic-trail/final-environmental-impact-report-on-the-monterey-bay-santucary-scenic-trail-mbsst/. Accessed October 2023.

Santa Cruz Regional 9-1-1 (SCR911). 2022. Santa Cruz Regional 9-1-1 Annual Report. https://www.scr911.org/sites/default/files/fileattachments/scr9-1-1/page/3701/2022_annual_report.pdf. Accessed October 2023.

Santa Cruz Sentinel. 2023. “Kaiser backs out of purchase of property for Live Oak facility.” May 21, 2023. https://www.santacruzsentinel.com/2023/05/21/kaiser-backs-out-of-purchase-of-property-for-live-oak-facility/). Accessed October 2023.

Soquel Union Elementary School District. 2023. “Our Schools.” https://www.suesd.org/our-schools. Accessed October 2023.

Section 3.12 Transportation

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 Metropolitan Transportation Plan & the Sustainable Communities Strategy. 2022. https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy. Accessed October 2023.

California Department of Transportation (Caltrans). 2020a. Transportation Analysis Framework. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-taf-fnl-a11y.pdf. Accessed October 2023.

_____. 2020b. Transportation Impact Study Guide. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Accessed October 2023.

_____. 2020c. Highway Design Manual. Chapter 1000, Bicycle Transportation Design. https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf. July 1, 2020. Accessed October 2023.

Capitola, City of. 2005. City of Capitola Land Use Plan. Local Coastal Program. Revised January 2005. https://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/15081/capitola_local_coastal_program.pdf. Accessed October 2023.

_____. 2011. City of Capitola Bicycle Transportation Plan. https://bicycleinfrastructuremanuals.com/manuals6/City-of-Capitola-City-of-Capitola-Bicycle-Transportation-Plan-2011.pdf. February 10, 2011. Accessed October 2023.

_____. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Mack, Marco. 2022. Deputy Fire Marshal, CMF CBO, Central Fire District. Conversation regarding fire response services with representatives from Harris & Associates and Rincon Consultants, Inc. on May 12, 2022.

Mozumder, Kailash. 2023. Public Works Project Manager, City of Capitola. Conversation regarding City of Capitola VMT guidelines with representatives from Harris & Associates and Rincon Consultants, Inc. on May 11, 2023.

Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed October 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

_____. 2020. Analyzing Vehicle Miles Traveled for CEQA Compliance. https://www.sccoplanning.com/Portals/2/County/Planning/policy/Transportation/SantaCruzCounty_VMTGuidelines_051121.pdf. Accessed October 2023.

_____. 2022. Active Transportation Plan. https://ecoact.org/wp-content/uploads/2022/05/SCC_ATP_Final_web.pdf. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2014. *Monterey Bay Sanctuary Scenic Trail Network Master Plan.* Santa Cruz, CA. February 6, 2014.

_____. 2022. 2045 Regional Transportation Plan. https://sccrtc.org/funding-planning/long-range-plans/2045-regional-transportation-plan/. Accessed October 2023.

_____. 2023. Signed Bicycle Routes & Other Bikeways of Santa Cruz County. https://sccrtc.maps.arcgis.com/apps/StoryMapBasic/index.html?appid=dc90c3b75f3b4bd191277f7099cca3ff&extent=-122.2023,36.8662,-121.7773,37.0681. Accessed October 2023.

Santa Cruz Metropolitan Transit District. (METRO) 2023. System Map. http://www.scmtd.com/en/routes/schedule/map/202240/71. Accessed October 2023.

University of California at Berkley (UC Berkley). 2023a. Transportation Injury Mapping System. SWITRS GIS Map. https://tims.berkeley.edu. Accessed October 2023.

_____. 2023b. Transportation Injury Mapping System. ATP Maps & Summary Data. https://tims.berkeley.edu/tools/atp/. Accessed October 2023.).

Section 3.13 Tribal Cultural Resources

Field, Les W., and Alan Leventhal. 2003. "'What Must It Have Been Like!': Critical Considerations of Precontact Ohlone Cosmology as Interpreted through Central California Ethnohistory." Wicazo SA Review 18(2): 95–126.

Jones, Barbara L. 2010. "Mythic Implications of Faunal Assemblages from Three Ohlone Sites." Master's Thesis, Department of Anthropology, San Francisco State University, San Francisco, California.

Jones, Doug. 2015. "Ritual and Religion in the Ohlone Cultural Area of Central California." Master's Thesis, Department of Anthropology, San José State University, San José, California.

Kroeber, Alfred J. 1925. Handbook of the Indians of California. Bulletin 78, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington, D.C. Reprinted 1976 by Dover Publications, Inc., New York.

Leventhal, Alan, and Diane DiGiuseppe. 2009. "Analysis of the Stone, Bone and Shell Artifacts from CA-SCL-869." In Final Report on the Burial and Archaeological Data Recovery Program Conducted on a Portion of a Middle Period Ohlone Indian Cemetery, Katwáš Ketneyma Waréeptak (The Four Matriarchs Site) CA-SCL-869, Located at 5912 Cahalan Avenue, Fire Station # 12 San José, Santa Clara County, California. Ohlone Families Consulting Services. Submitted to City of San José Department of Public Works.

Milliken, Randall, Laurence Shoup, and Beverly Ortiz. 2009. "Ohlone/Costanoan Indians of the San Francisco Peninsula and their Neighbors, Yesterday and Today." Government Documents and Publications 6.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

Schick, Grant W. 1994. "The Ohlone and the Oak Woodlands: Cultural Adaptation in the Santa Clara Valley, Research Manuscript No. 4." Santa Clara University. Santa Clara, California.

Skowronek, Russell K. 1998. "Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California." Ethnohistory 45: 675–708.

Section 3.14 Utilities and Service Systems

California Department of Resources Recycling and Recovery (CalRecycle). 2023a. Solid Waste Information System Facility/Site Activity Details: Buena Vista Drive Sanitary Landfill (44-AA-0004). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1397?siteID=3420. Accessed June 2023.

_____. 2023b. SWIS Facility/Site Activity Details. Ben Lomond Transfer Station (44-AA-0005). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1398?siteID=3421. Accessed June 2023.

_____. 2023c. SWIS Facility/Site Activity Details. Monterey Peninsula Landfill (27-AA-0010). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2642?siteID=1976. Accessed June 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Central Coast Community Energy. 2023. "About 3CE." https://3cenergy.org/about-us/. Accessed October 2023.

Santa Cruz, City of. 2012. *General Plan 2030*. Adopted June 2012, Revised October 2019. https://www.cityofsantacruz.com/home/showpublisheddocument/71130/637453677885300000. Accessed June 2023.

_____. 2017. "Know Your Water Service. Your Guide to the Santa Cruz Water Department." https://www.cityofsantacruz.com/home/showpublisheddocument/63146/636906552572530000. Accessed June 2023.

_____. 2021. “City of Santa Cruz Urban Water Management Plan.” https://www.cityofsantacruz.com/home/showpublisheddocument/87122/637739611535800000. Accessed June 2023.

_____. 2023a. “Where Does Our Water Come From?” https://www.cityofsantacruz.com/government/city-departments/water/where-does-our-water-come-from. Accessed June 2023.

_____. 2023b. “Wastewater System.” https://www.cityofsantacruz.com/government/city-departments/public-works/wastewater-treatment-facility. Accessed June 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

_____.2023. “Recycling and Trash.” https://dpw.co.santa-cruz.ca.us/Home/RecyclingTrash.aspx. Accessed June 2023.

Santa Cruz County Sanitation District (SCCSD). 2019. *Basic Financial Statements and Independent Auditor’s Reports*. https://www.co.santa-cruz.ca.us/Portals/0/County/auditor/sanitation_district_audit_2019/sanitation_district_audit_2019.pdf. Accessed June 2023.

_____. 2021. *Sewer System Management Plan Audit*. https://dpw.co.santa-cruz.ca.us/Portals/19/pdfs/Sanitation/pdf/SSMP_AUDIT_2021_FINAL%20SIGNED.pdf?ver=yjBLQDpYY5_Uejt-SY6oKw%3D%3D. Accessed June 2023.

Schaaf and Wheeler Consulting Civil Engineers (Schaaf and Wheeler). 2013. *Storm Drain Facilities Master Plan*. Santa Cruz County. https://dpw.co.santa-cruz.ca.us/Portals/19/pdfs/stormwater/Master%20Plans/2013%20Master%20Plan%20Report.pdf?ver=Bio8BKbkYlv11mxwWuKh_A%3D%3D&timestamp=1639521593169. Accessed June 2023.

Soquel Creek Water District (SqCWD). 2021. “2020 Urban Water Management Plan.” https://www.soquelcreekwater.org/DocumentCenter/View/1665/2020-Urban-Water-Management-Report-PDF?bidId=. Accessed June 2023.

_____. 2023. “Facts, Figures & Maps” https://www.soquelcreekwater.org/242/Facts-Figures-Maps. Accessed October 2023.

State Water Resources Control Board (SWRCB). 2023. Land Disposal Program. Disposal Facilities Authorized to Accept Treated Wood Waste. https://www.waterboards.ca.gov/water_issues/programs/land_disposal/treated_wood_waste.html. Accessed June 2023.

Steel. 2022. Project Manager, Capital Projects, County of Santa Cruz Community Development and Infrastructure Department. Telephone conversation. August 4, 2022.

Section 3.15 Effects Found to be Less than Significant

California Department of Forestry and Fire Protection (CAL FIRE). 2007a. “Santa Cruz County Draft Fire Hazard Severity Zones in LRA.” Last updated June 2007. Accessed October 2023. https://osfm.fire.ca.gov/media/6770/fhszl06_1_map44.pdf.

_____. 2007b. “Santa Cruz County Fire Hazard Severity Zones in SRA.” Last updated November 2007. https://osfm.fire.ca.gov/media/6768/fhszs_map44.pdf. Accessed June 2023.

_____. 2022. Fire Hazard Severity Zone Maps. Last updated November 2022. https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/. Accessed June 2023.

California Department of Toxic Substances Control (DTSC). 2023. "EnviroStor." https://www.envirostor.dtsc.ca.gov/public/. Accessed October 2023.

California Department of Transportation (Caltrans). 2023. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed June 2023.

Capitola, City of. 2019. Capitola General Plan. Adopted June 26, 2014. Updated March 13, 2019. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element. Accessed October 2023.

Mack, Marco. 2022. Deputy Fire Marshal, CMF CBO, Central Fire District. Conversation regarding fire response services with representatives from Harris & Associates and Rincon Consultants, Inc. on May 12, 2022.

Pacific Crest Engineering, Inc. (Pacific Crest Engineering). 2021. Draft Geotechnical Investigation – Design Phase, Monterey Bay Sanctuary Scenic Trail (MBSST) – Segments 10 & 11, Santa Cruz, California. Project No. 2120-SZ69-F11, October 22, 2021.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 19, 1994.

_____. 2015. *Operational Area Emergency Management Plan*. Last updated October 2015. http://www.co.santa-cruz.ca.us/Portals/0/County/OES/pdfs/DRAFTOPERATIONAL%20AREA%20EMERGENCY%20MANAGEMENT%20PLAN%20%28EMP%29%202015pdf.pdf. Accessed October 2023.

State Water Resources Control Board (SWRCB). 2023. "GeoTracker." https://geotracker.waterboards.ca.gov/. Accessed October 2023.

Watsonville Municipal Airport. 2003. "Watsonville Municipal Airport Master Plan." Accessed October 2023. https://www.cityofwatsonville.org/DocumentCenter/View/987/CM-Resolution-179-03-Airport-Master-Plan-PDF.

Weber, Hayes & Associates (WHA). 2023. Initial Site Assessment Coastal Rail Trail Project Segments 10 & 11. April 13, 2023.

Chapter 4 Other CEQA-Required Discussions

California Geological Survey. 2012. Aggregate Sustainability in California.

California Department of Fire (CAL FIRE). 2008. The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program Fire Hazard Severity Zone Maps. https://egis.fire.ca.gov/FHSZ/. Accessed October 2023.

Santa Cruz, City of. 2012. *General Plan 2030*. Adopted June 2012, Revised October 2019. https://www.cityofsantacruz.com/home/showpublisheddocument/71130/637453677885300000. Accessed October 2023.

_____. 2021. *City of Santa Cruz Urban Water Management Plan*. https://www.cityofsantacruz.com/home/showpublisheddocument/87122/637739611535800000. Accessed October 2023.

City of Santa Cruz. 2022. *Final Environmental Impact Report for the Coastal Rail Trail Segments 8 and 9*. January 2023.

Santa Cruz, County of. 1994. *General Plan and Local Coastal Program for the County of Santa Cruz, California*. December 1994.

Santa Cruz County Regional Transportation Commission (RTC). 2023. *Draft Environmental Impact Report/Environmental Assessment for the State Route 1 Auxiliary Lanes and Bus-on-Shoulder Improvements—Freedom Blvd. to State Park Dr.—and Coastal Rail Trail Segment 12 Project*. April 2023. https://sccrtc.org/projects/streets-highways/hwy1corridor/highway-1-state-park-dr-to-freedom-blvd-aux-lanes/. Accessed October 2023.

Santa Cruz County Sanitation District (SCCSD). 2019. *Basic Financial Statements and Independent Auditor's Reports*. https://www.co.santa-cruz.ca.us/Portals/0/County/auditor/sanitation_district_audit_2019/sanitation_district_audit_2019.pdf. Accessed October 2023.

Soquel Creek Water District (SqCWD). 2021. "2020 Urban Water Management Plan." https://www.soquelcreekwater.org/DocumentCenter/View/1665/2020-Urban-Water-Management-Report-PDF?bidId=. Accessed October 2023.

Chapter 5 Project Alternatives

Atchison, Barisone & Condotti. n.d. City of Capitola City Attorney Impartial Analysis Measure L.

Brunzell, Kara, and Ynez Barber. 2023. *Historical Resources Evaluation Report for the State Route Highway 1 Auxiliary Lanes and Bus-on-Shoulder Improvements—Freedom Boulevard to State Park Drive—and Coastal Rail Trail Segment 12 Project*.

Caltrans (California Department of Transportation). 2020. Highway Design Manual. December 30, 2015. Updated July 1. https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm. Accessed October 2023.

Santa Cruz County Regional Transportation Commission (RTC). 2019. *Final Unified Corridor Investment Study*. January 2019. https://www.sccrtc.org/wp-content/uploads/2019/01/UCS-Final-January2019.pdf. Accessed October 2023.

Appendix A. Project Design Plans

- A.1, Ultimate Trail Configuration
- A.2, Optional Interim Trail
- A.3, Design Option A: Interim Trail on Capitola Trestle
- A.4, Design Option B: Inland Side Grove to Coronado
- A.5, Tree Removal for Ultimate Trail Configuration
- A.6, Tree Removal for Optional Interim Trail
- A.7, Tree Quantity and Evaluation Summaries
- A.8, Tree Inventory for Ultimate Trail and Optional Interim Trail

This page intentionally left blank.

DEPARTMENT OF PUBLIC WORKS
RAIL TRAIL SEGMENTS 10 - 11 TRAIL NEXT TO THE RAIL LINE
(ULTIMATE TRAIL CONFIGURATION)
17th Avenue to State Park Drive

PROJECT DESCRIPTION

SEGMENT 10 INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED ALONG THE SANTA CRUZ BRANCH RAIL LINE FROM THE EAST SIDE OF 17TH AVENUE TO THE EAST SIDE OF 47TH AVENUE. THIS SEGMENT ALSO INCLUDES RAIL OPERATIONS EQUIPMENT RELOCATION AND APPROXIMATELY ONE MILE OF TRACK REMOVAL AND RECONSTRUCTION.

SEGMENT 11 INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED ALONG THE SANTA CRUZ BRANCH RAIL LINE FROM THE EAST SIDE OF 47TH AVENUE TO OPAL STREET WHERE THE TRAIL DIVERTS ONTO EXISITNG BIKE AND PEDESTRIAN FACILITIES THROUGH CAPITOLA VILLAGE TO MONTEREY AVENUE. IMPROVEMENTS TO THE EXISITNG BIKE AND PEDESTRIAN FACILITIES THROUGH THE VILLAGE INCLUDE NEW DIRECTIONAL SIGNAGE AND PAVEMENT MARKINGS. CONSTRUCTION OF THE MULTI-USE TRAIL PICKS UP ON THE WEST SIDE OF MONTEREY AVENUE ALONG THE SANTA CRUZ BRANCH RAIL LINE AND CONTINUES TO THE WEST SIDE OF STATE PARK DRIVE.

PROJECT DIRECTORY

OWNER
SANTA CRUZ COUNTY REGIONAL
TRANSPORTATION COMMISSION
CONTACT: GRACE BLAKESLEE PHONE: (831) 460-3200
RAIL CONTACT: TOMMY TRAVERS FAX: (831) 460-6178

LANDSCAPE ARCHITECT
RRM DESIGN GROUP
3765 SOUTH HIGUERA, SUITE 102 PHONE: (949) 361-7950
SAN LUIS OBISPO, CA 93401 FAX: (949) 361-7955
CONTACT: MIKE SHERROD

CIVIL ENGINEER
RRM DESIGN GROUP
325 DAVIS STREET PHONE: (510) 751-4910
SAN LEANDRO, CA 94577 FAX: (510) 686-4910
CONTACT: DARREN CHOY

ELECTRICAL ENGINEER
THOMA ELECTRIC
3562 EMPLEO ST. PHONE: (805) 543-3850
SAN LUIS OBISPO, CA
CONTACT: CHRIS PATCHIN

GEOTECHNICAL ENGINEER
PACIFIC CREST ENGINEERING
444 AIRPORT BLVD PHONE: (831) 722-9446
WATSONVILLE, CA 95076
CONTACT: ELIZABETH MITCHELL

STRUCTURAL ENGINEER
MESITI-MILLER ENGINEERING
224 WALNUT ST, SUITE B PHONE: (831) 426-3186
SANTA CRUZ, CA 95060
CONTACT: DALE HENDSBEE

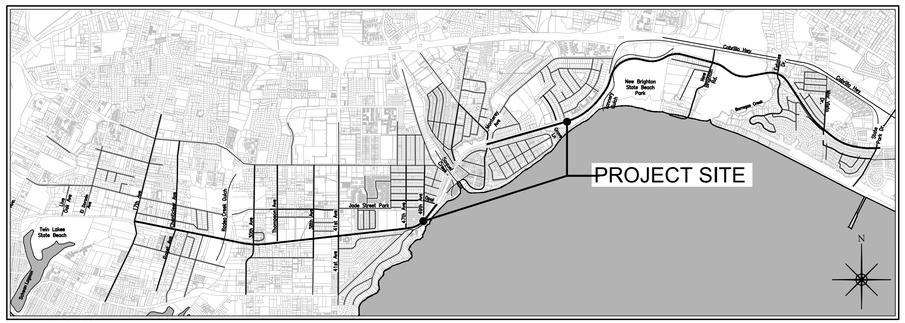
TRAFFIC ENGINEER
WHITLOCK & WEINBERGER (W-TRANS)
1276 LINCOLN AVE, SUITE 204 PHONE: (510) 444-2600
SAN JOSE, CA 9525
CONTACT: STEVE FITZSIMMONS

RAIL ENGINEER
ZEPHYR UAS/RAIL (ZUI)
725 W TOWN & COUNTRY RD, SUITE 550 PHONE: (714) 835-6355
ORANGE, CA 92868
CONTACT: ALFRED YALDA

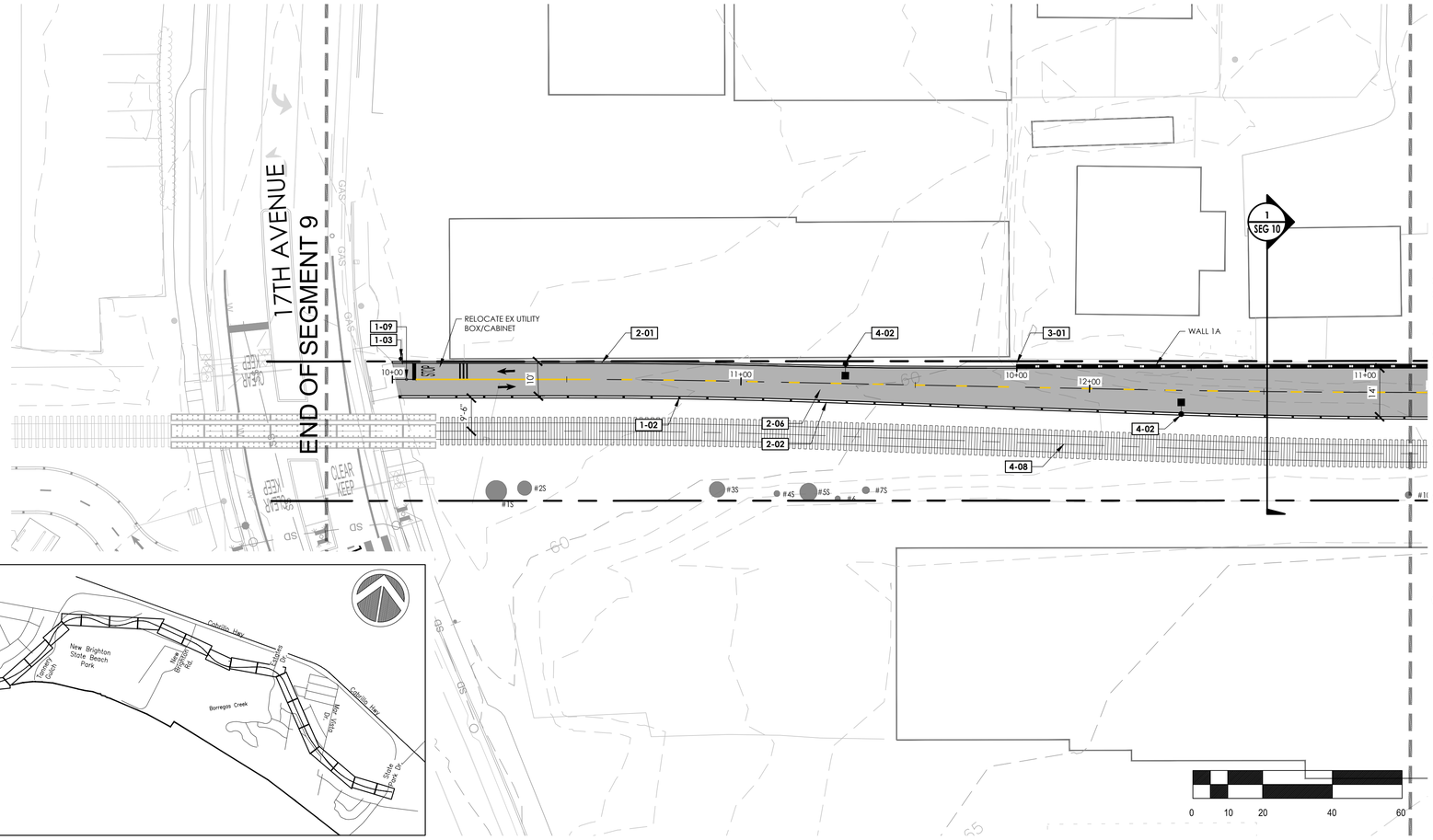
CLIENT
COUNTY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT
CONTACT: ROB TIDMORE
PHONE: (831) 454-2160
FAX: (831) 454-2385

SECONDARY CLIENT
CITY OF CAPITOLA
PUBLIC WORKS DEPARTMENT
CONTACT: KAILASH MOZUMDER
PHONE: (831) 475-7300

VICINITY MAP


PROJECT SITE
Capitola Way
New Brighton State Beach Park
Bonita Dr
Bonita Dr
Bonita Dr

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

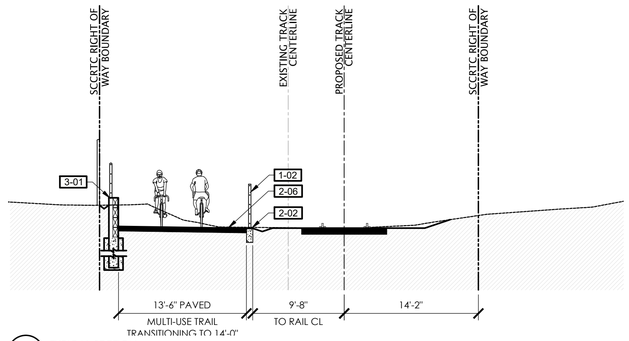


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



1 TYPICAL SECTION
SCALE 1/8"=1'-0"

REVISIONS

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

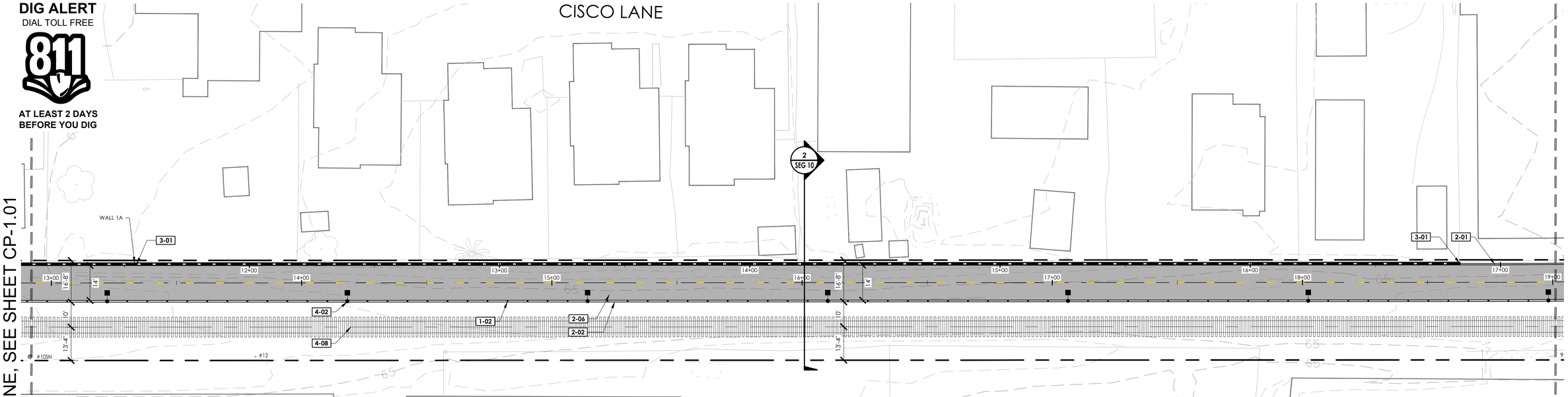
SCALE AS SHOWN
CP-1.01
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.01 Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWT-S10.dwg XTB-0193-06-RWT-S10.dwg XC-0193-06-RWT.dwg XC-0193-06-RWT-S10.dwg XSHEET-0193-06-RWT-S10.dwg XM-0193-06-RWT-S10.dwg XSB-0193-06-RWT-S10.dwg XSC-0193-06-RCO2-Segment 10.dwg XSC-0193-06-RWT-S10.dwg Plotted By: dnsomeera, Plotted: Feb 15, 2023 - 5:36pm
\\Corp\rmv\sn-ask\0001\0193-06-RCO2-Santa Cruz Rail Trail-Seg-10-11\Rail with Trail\Landscape-Architecture\Tasks-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RWT-S10.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

CISCO LANE

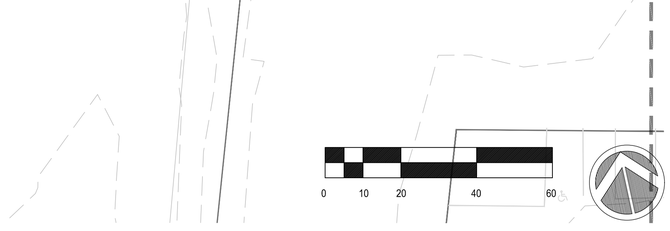


MATCHLINE, SEE SHEET CP-1.01

MATCHLINE, SEE SHEET CP-1.03

KEYMAP



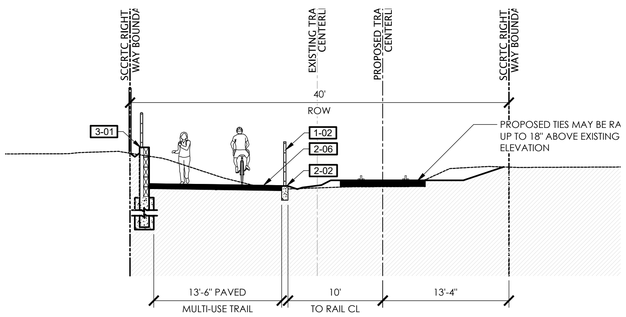


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



2 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.02
VAULT NO.

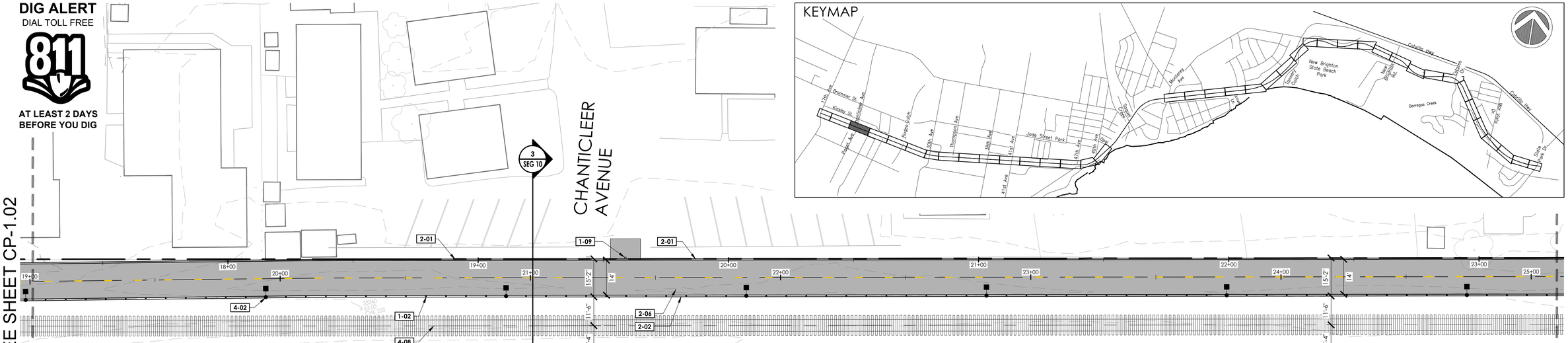
Layout Tab Name: CP-1.02 Images: county-logo-black-transparent.png Xrefs: X1-0193-06-RWT-S10.dwg X2b-0193-06-RWT-S10.dwg X3-0193-06-RWT-S10.dwg XCTMP-0193-06-RCD1.dwg XCTMP-0193-06-RCD2.dwg SEC-0193-06-RWT-S10.dwg XH-0193-06-RWT-S10.dwg X5B-0193-06-RWT-S10.dwg X6-0193-06-RWT-S10.dwg X7-0193-06-RWT-S10.dwg XC-0193-06-RWT.dwg XTB-0193-06-RWT.dwg X-0193-06-RWT-S10.dwg XTCP-0193-06-RWT-S10.dwg
I:\Corp\mm\on-site\2021\0193-06-RCD2-Santa-Cruz-Rail-Trail-Segs-10-11\Bid with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted By: dnisenbaum, Plotted: Feb 15, 2023 - 5:38pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.02

CHANTICLEER AVENUE

PAGET AVENUE



KEYMAP

MATCHLINE, SEE SHEET CP-1.04

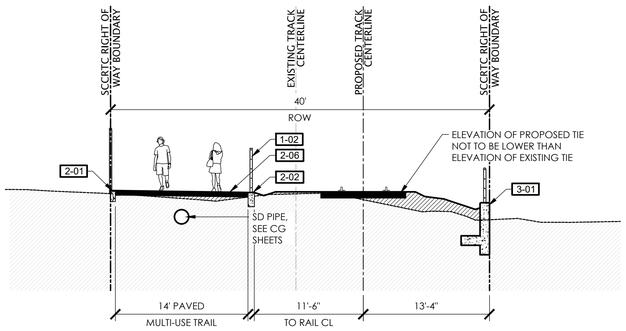
RELEGRINI STREET

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT-IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



3 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.03
VAULT NO.	

Layout Tab Name: CP-1.03, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XR-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCSD.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg
\\Corp\vm\wn-ssk\0001\0193-06-RCSD-Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Landscape-Architecture\Tom-B-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RWT-S10.dwg, Plotted By: dnsomekma, Plotted: Feb 15, 2023 – 5:40pm

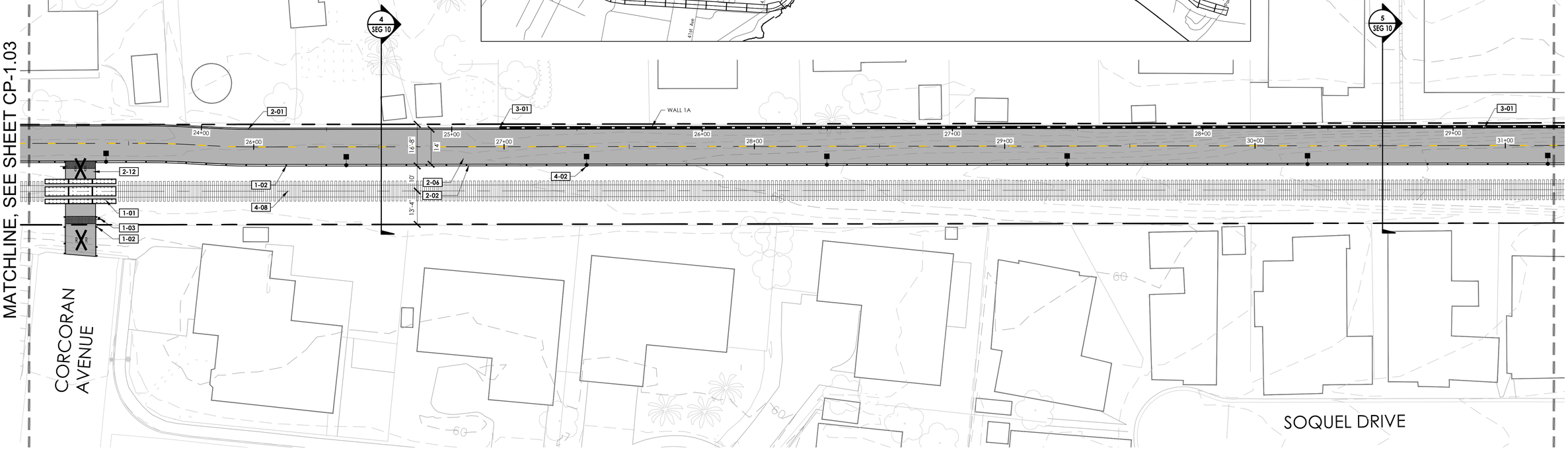
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.03

MATCHLINE, SEE SHEET CP-1.05

KEYMAP



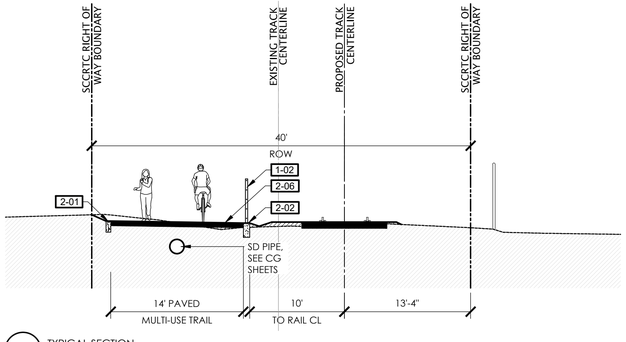


REFERENCE NOTES SCHEDULE

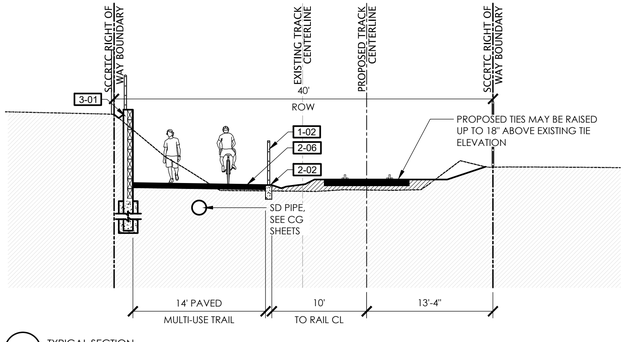
SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



4 TYPICAL SECTION
SCALE 1/8"=1'-0"



5 TYPICAL SECTION
SCALE 1/8"=1'-0"

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.04, Images: county-logo-black-transparent.png, XREFs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSC-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XSD-0193-06-RWT-S10.dwg
\\Corp\rm\rm-Jobs\0001\0193-06-RDS20-Santa Cruz Rail Trail-Segs 10-11\Rail with Trail\Landscape Architecture\Tom-Bi-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted By: dnsonstrom, Plotted: Feb 15, 2023 - 3:40pm

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

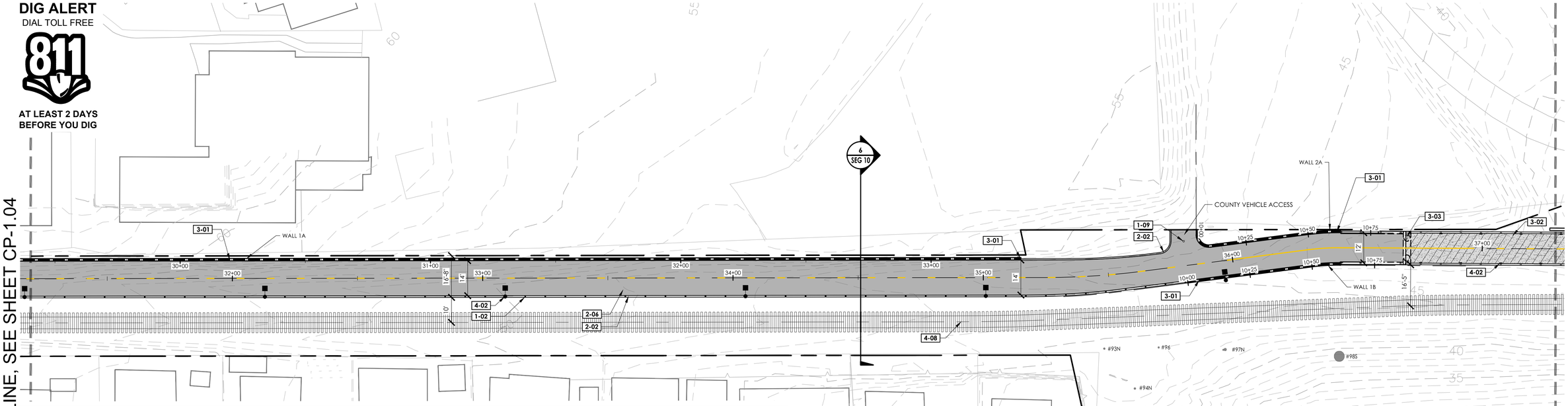
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.04
VAULT NO.	

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

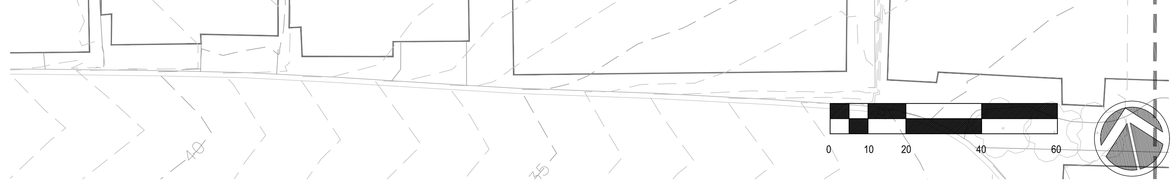
MATCHLINE, SEE SHEET CP-1.04



MATCHLINE, SEE SHEET CP-1.06

KEYMAP



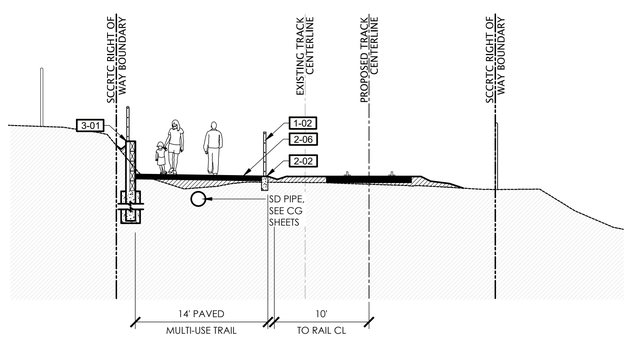


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



6 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S10

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	KS		CP-1.05
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.05, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XT-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XSB

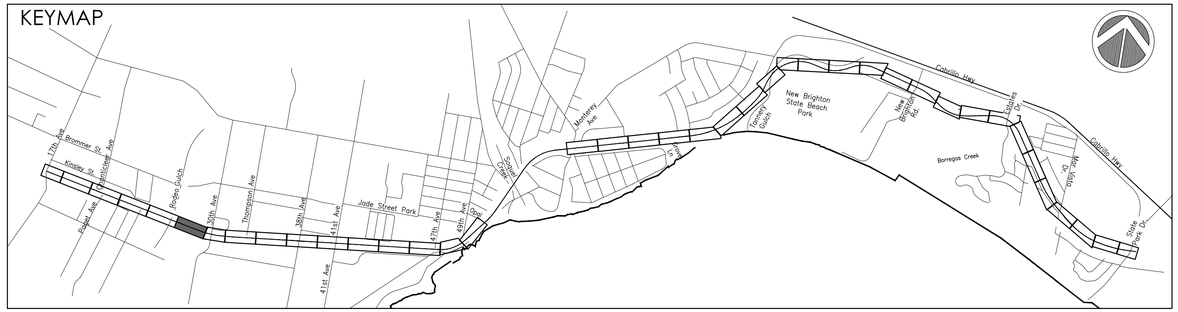
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.05

MATCHLINE, SEE SHEET CP-1.07

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

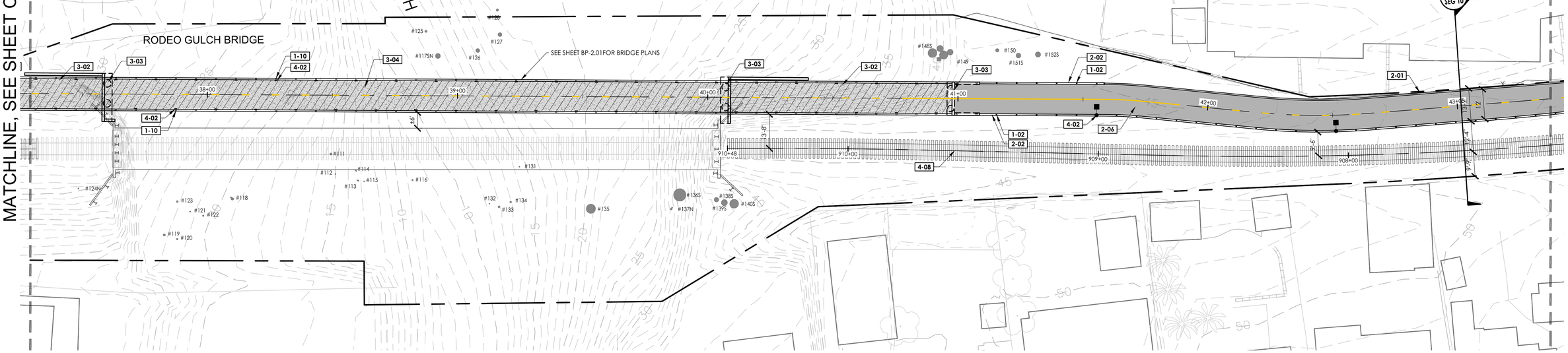
KEYMAP



RODEO GULCH

RODEO GULCH BRIDGE

SEE SHEET BP-2.01FOR BRIDGE PLANS



7
SEG 10

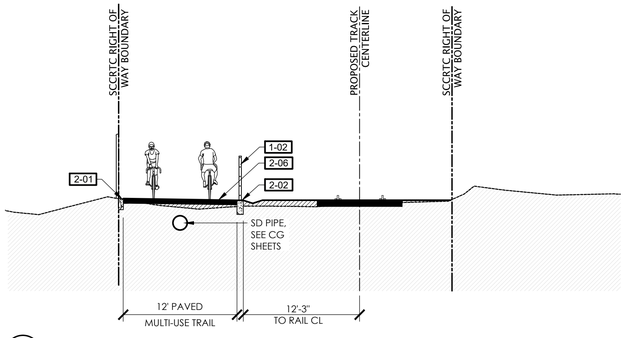
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK

0 10 20 40 60



7 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

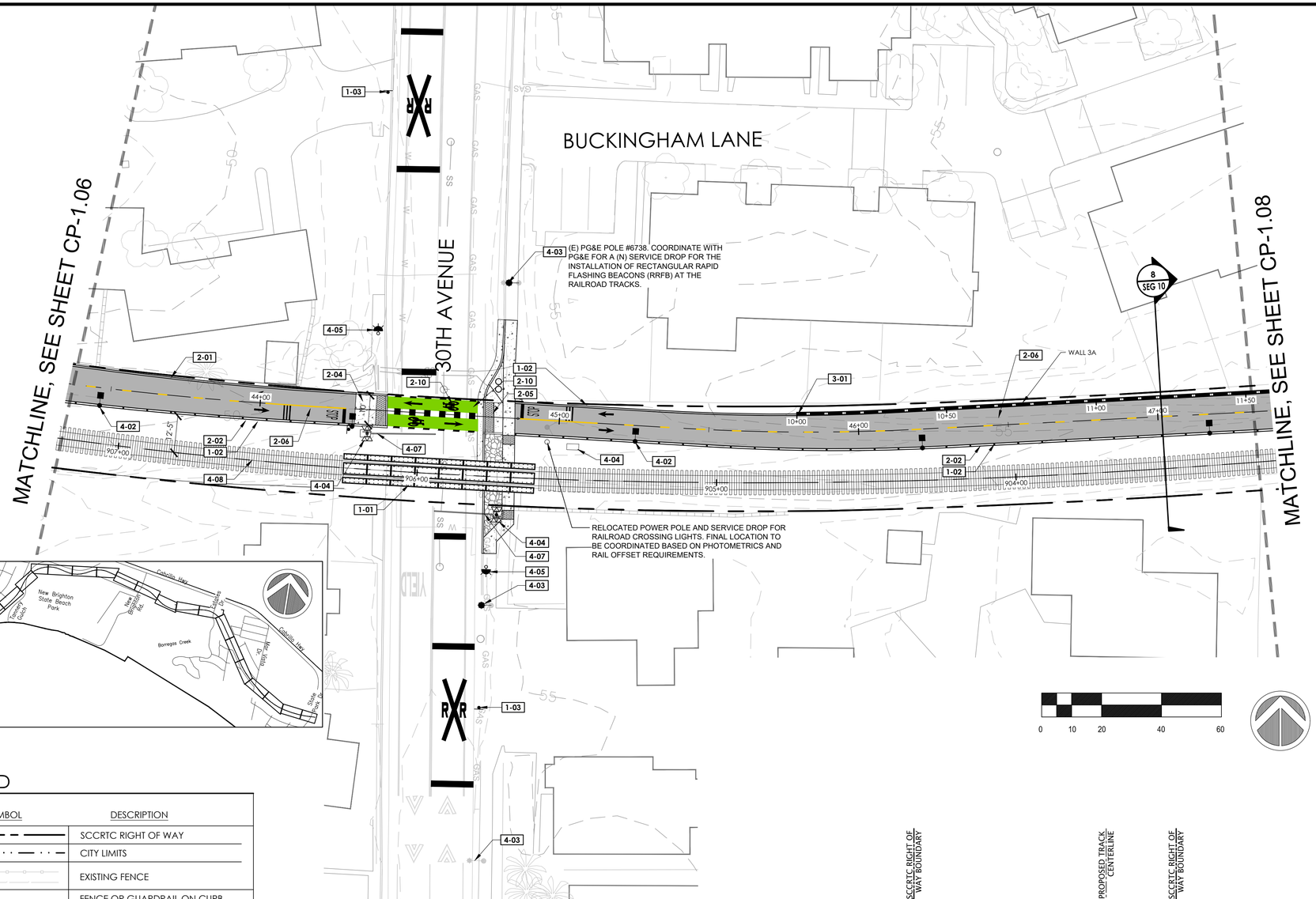
DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

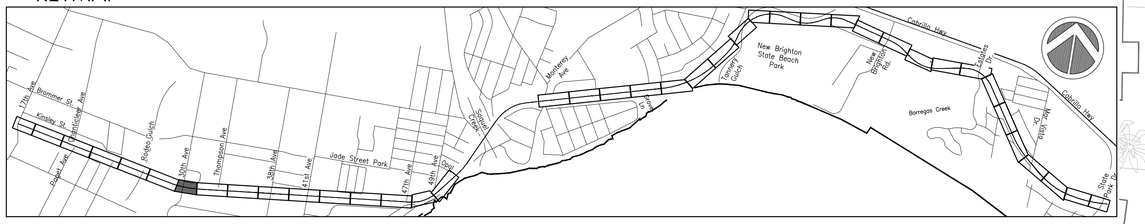
SCALE AS SHOWN
CP-1.06
VAULT NO.

Layout Tab Name: CP-1.06, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, XDWG#-0193-06-RCD2.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XDP-0193-06-RWT-S10.dwg, XSP-0193-06-RWT-S10.dwg, XPP-0193-06-RWT-S10.dwg, XW-0193-06-RWT-S10.dwg, XLP-0193-06-RWT-S10.dwg, XLM

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP


Capitola Way
Capitola Rd
New Brighton State Beach Park
New Brighton Rd
Borregas Creek
Soquel Ave
Monterey Ave
Tannery Gulch
Jade Street Park
Rodeo Gulch
Thompson Ave
Bonita Dr
Bonnie Doon Rd
Bonnie Doon Ct
Kinsley St
Bonnie Doon Ln
Bonnie Doon Way
Bonnie Doon Dr
Bonnie Doon Ct
Bonnie Doon Rd

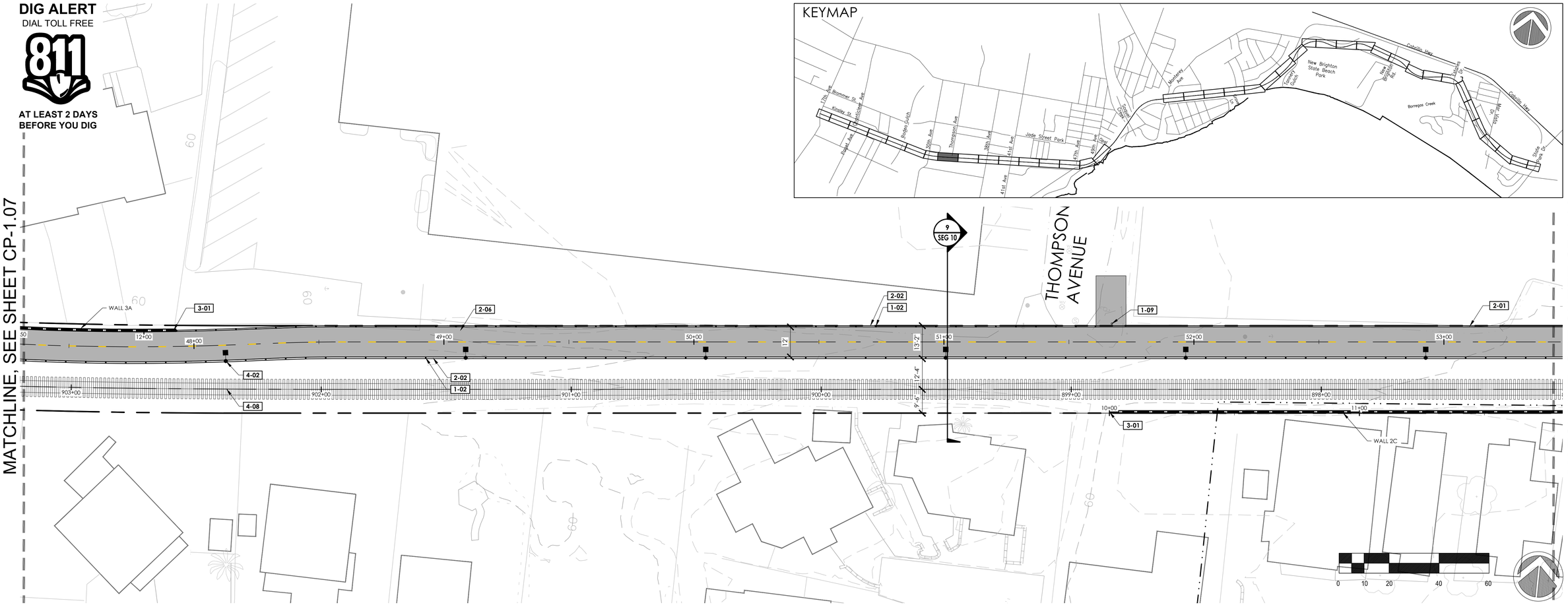
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.07

MATCHLINE, SEE SHEET CP-1.09

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

KEYMAP

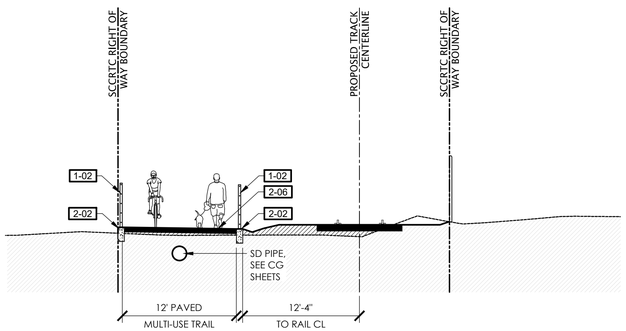


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



9 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.08
VAULT NO.	

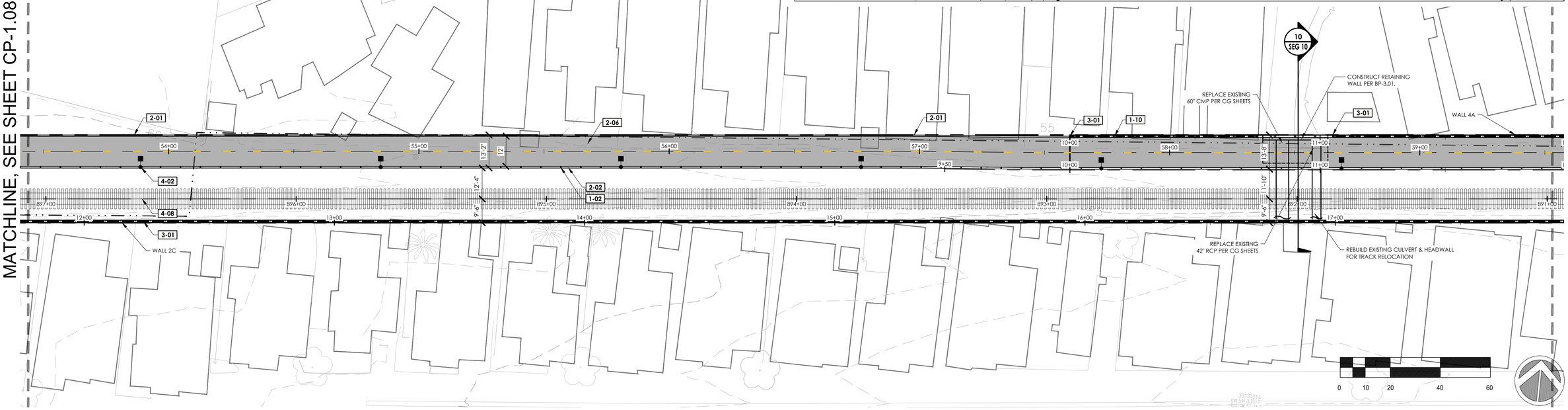
Layout Tab Name: CP-1.08, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XC-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCSD.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg
\\Corp.lym\wm-ab\W0011\0193-06-RCSD-Santa Cruz Rail Trail-Seg 10-11\Bid with Trail\Landscape-Architecture\Tom-B-Schematic Design\Sheet Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted By: dnissenbaum, Plotted: Feb 15, 2023 - 3:41pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.08

MATCHLINE, SEE SHEET CP-1.10



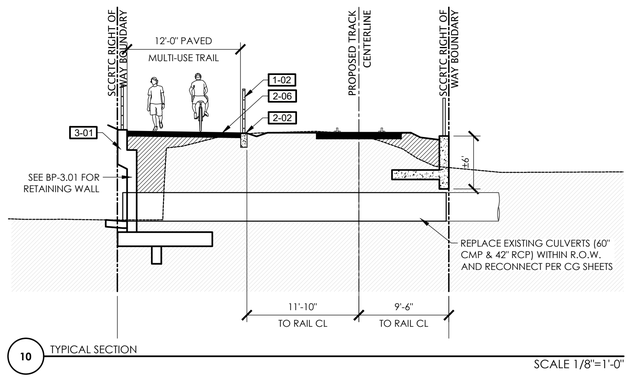


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT-IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



10 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.09
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.09, Images: county-logo-black-transparent.png , Xrefs: P:\0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, XEXMAP-0193-06-RCD0.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, \\corp\rrm-data\2021\2193-06-RCD0-Santa Cruz Rail Trail-Seg-10-11\Rail with Trail\Landscape-Architecture\Trail-Rail-Schematic Design\Sheet Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted By: dsouvanna, Plotted: Feb 15, 2023 - 5:41pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.09

MATCHLINE, SEE SHEET CP-1.11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

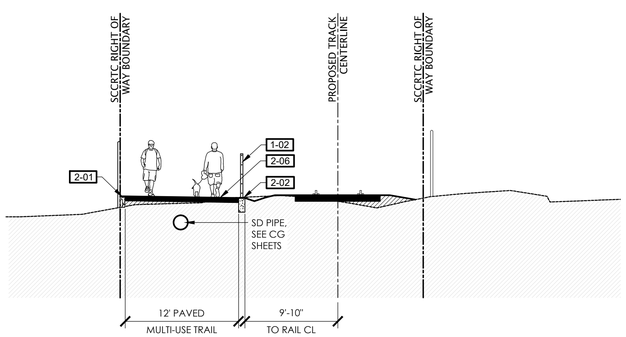


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



11 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.10
VAULT NO.	

Layout Tab Name: CP-1.10, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, SSC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSR-0193-06-RWT-S10.dwg, \\Corp\vm\wm-ala\V001\0193-06-RC20-Santa Cruz Rail-Trail-Seg 10-11\Bid with Trail\Landscape-Architecture\Tom-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted: By: dnsanhams, Plotted: Feb 15, 2023 - 5:42pm

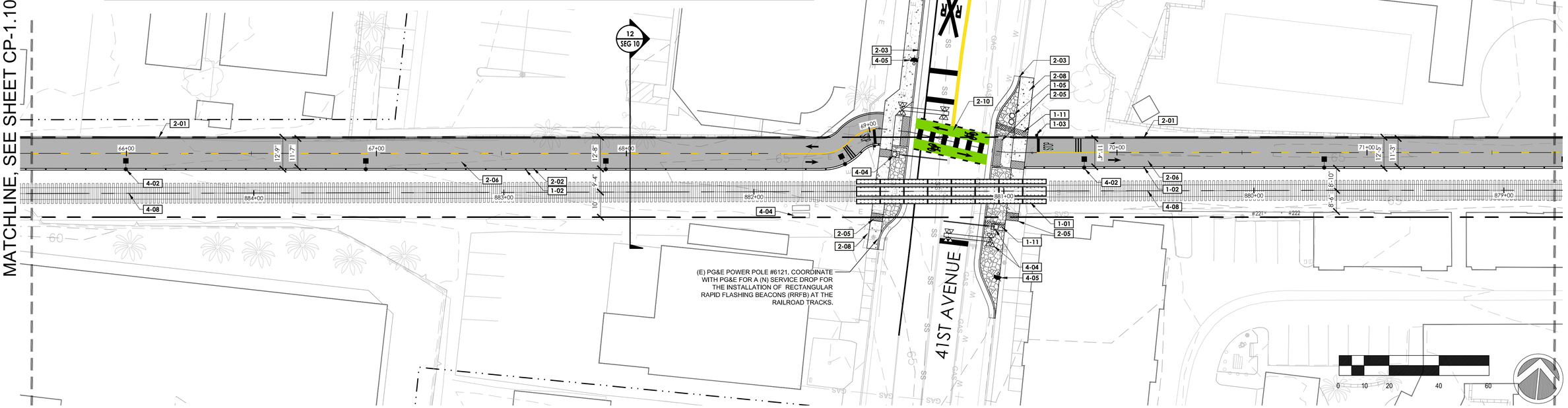
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET CP-1.10

MATCHLINE, SEE SHEET CP-1.12

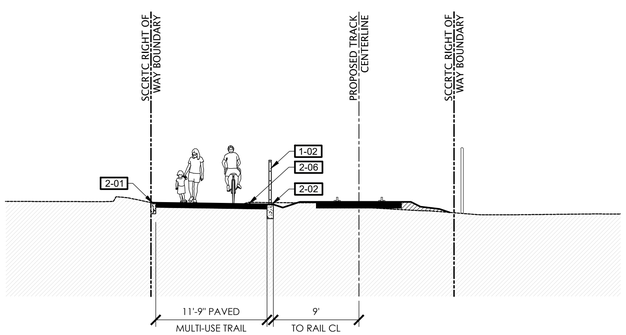


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



12 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.11
VAULT NO.	

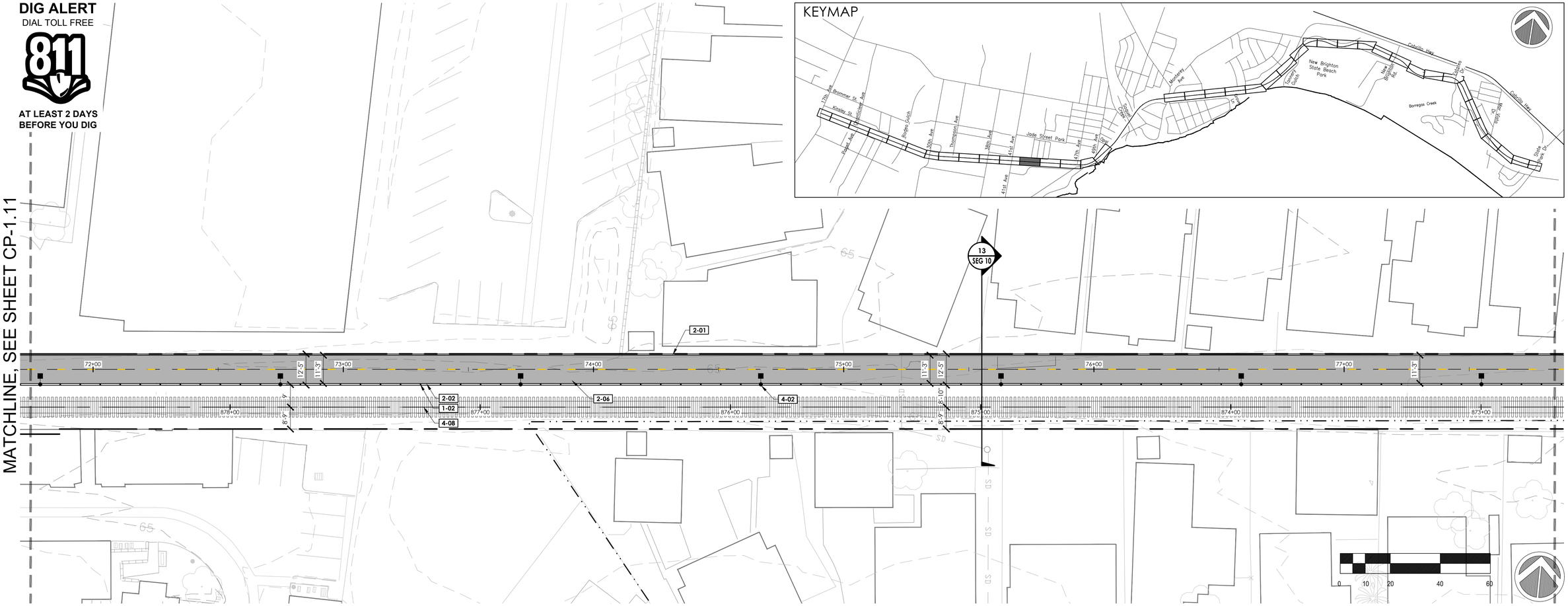
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.11, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XP-0193-06-RWT-S10.dwg, \\corp\vm\sm-sdv\0001\0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, Plotted By: dnsonstens, Plotted: Feb 15, 2023 - 5:43pm
\\corp\vm\sm-sdv\0001\0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XP-0193-06-RWT-S10.dwg, Plotted By: dnsonstens, Plotted: Feb 15, 2023 - 5:43pm
Layout Tab Name: CP-1.11, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XP-0193-06-RWT-S10.dwg, \\corp\vm\sm-sdv\0001\0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XP-0193-06-RWT-S10.dwg, Plotted By: dnsonstens, Plotted: Feb 15, 2023 - 5:43pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.11

MATCHLINE, SEE SHEET CP-1.13

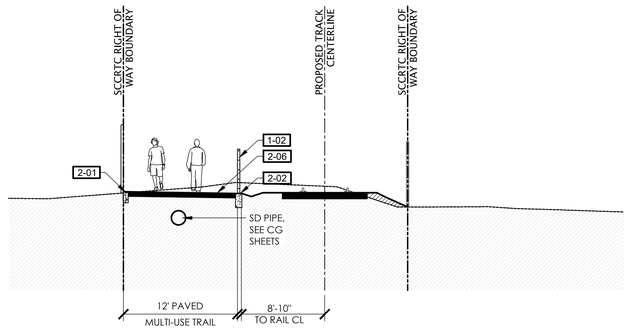


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



13 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.12
VAULT NO.	

Layout Tab Name: CP-1.12 Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWT-S10.dwg XTB-0193-06-RWT-S10.dwg XC-0193-06-RWT.dwg XC-0193-06-RWT-S10.dwg XDWG-0193-06-RWT-S10.dwg XH-0193-06-RWT-S10.dwg SEC-0193-06-RCSD.dwg SEC-0193-06-RWT-S10.dwg XH-0193-06-RWT-S10.dwg \\Corp\rrm\san-ish\0001\0193-06-RCSD-Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RWT-S10.dwg Plotted By: dnsamuels, Plotted: Feb 15, 2023 – 5:43pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

CIRCLE DRIVE

JADE STREET PARK

KEYMAP

MATCHLINE, SEE SHEET CP-1.12

MATCHLINE, SEE SHEET CP-1.14

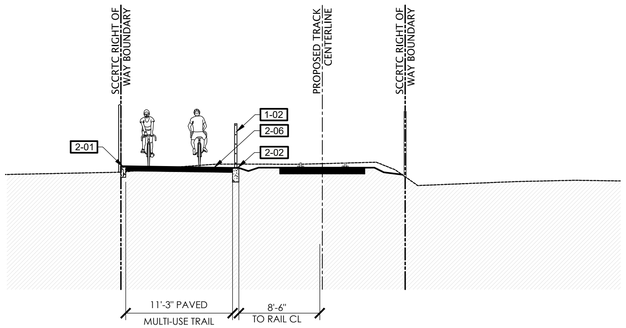


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT-IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



14 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S10

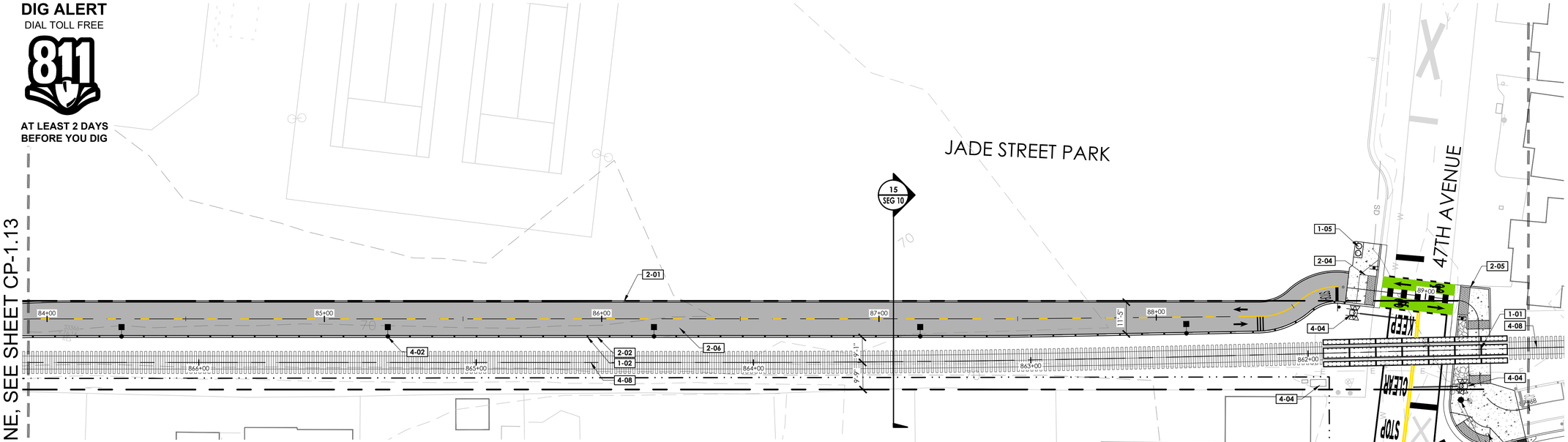
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.13
VAULT NO.

Layout Tab Name: CP-1.13, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, XKEYMAP-0193-06-RCDS.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XSB

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.13



MATCHLINE, SEE SHEET CP-1.15 (SEGMENT 11)

KEYMAP

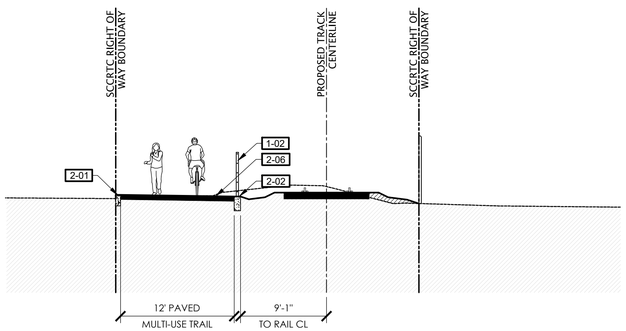


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-05	TRASH RECEPTACLES
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
1-11	PROPOSED SIDEWALK UNDER DRAIN
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-12	PROPOSED AT-GRADE CROSSING
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-04	RELOCATED RAIL EQUIPMENT
4-05	SOLAR LED W11-15 CROSSING SIGN
4-07	FUTURE PHASE RAIL DROP ARM
4-08	PROPOSED RAIL REALIGNMENT

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL
LIGHT ON EX. FIXTURE / ROADWAY LIGHT / TRAIL LIGHT / RECESSED LIGHT-IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK



15 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

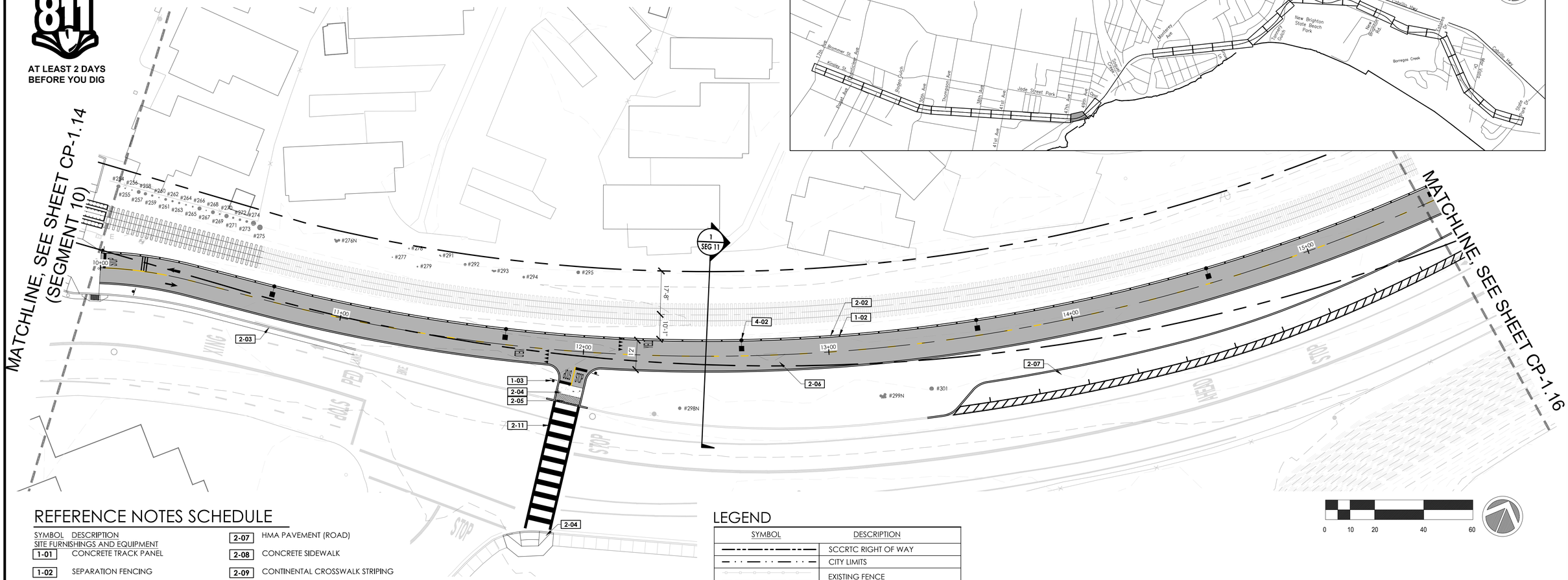
DRAWING #:
CP-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

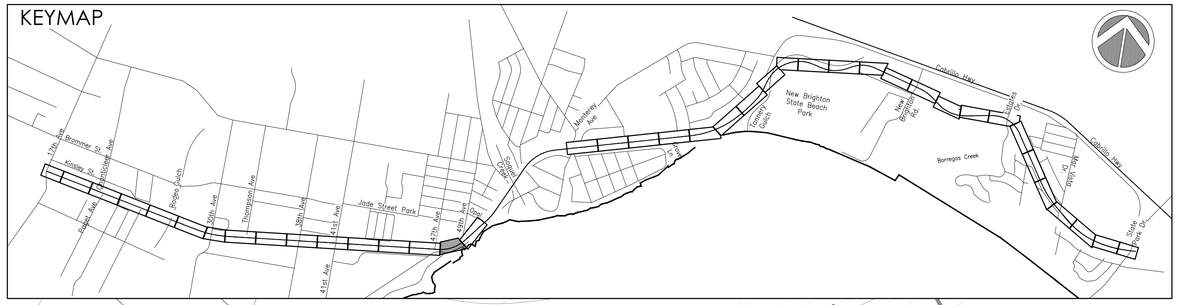
SCALE AS SHOWN
CP-1.14
VAULT NO.

Layout Tab Name: CP-1.14, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCSD.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, \\Copy\mm\un-real\2001\0193-06-RCSD-Soquel-Cruz-Rail-Trail-Seg-10-11\Rail and Trail\Landscape-Architecture\Visio-IB-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RWT-S10.dwg, Plotted By: alexanderia, Plotted: Feb 15, 2023 - 5:43pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG



KEYMAP



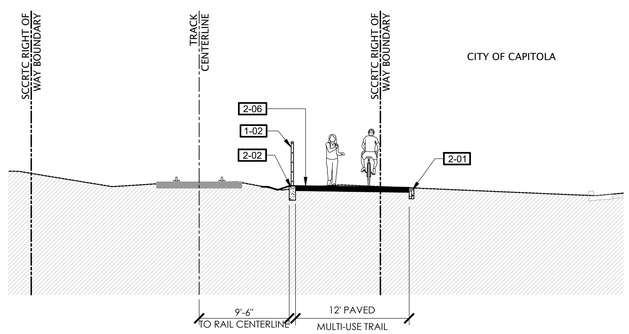
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



1 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

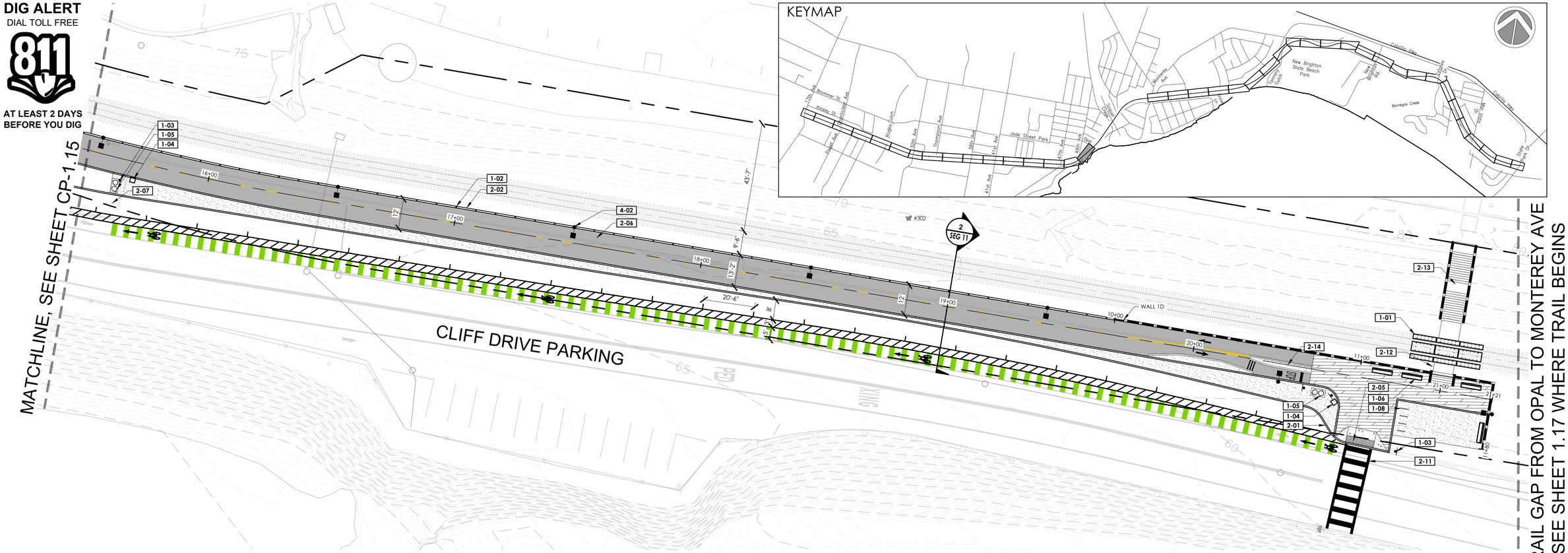
DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.15
VAULT NO.

Layout Tab Name: CP-1.15, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XT-0193-06-RWT.dwg, KEYMAP-0193-06-RCD20.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, Plotted By: mmistovich, Plotted: Jun 15, 2023 - 7:05am
C:\Users\mmistovich\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



TRAIL GAP FROM OPAL TO MONTEREY AVE
SEE SHEET 1.17 WHERE TRAIL BEGINS

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

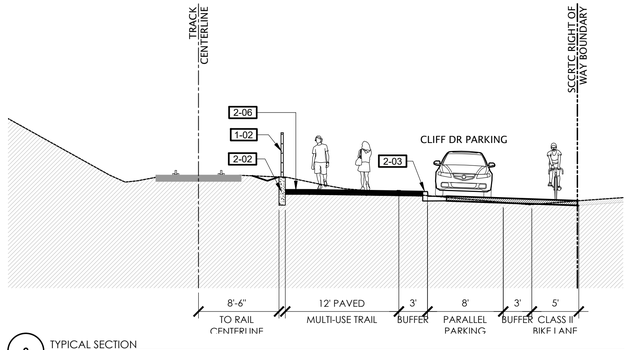
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



2 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

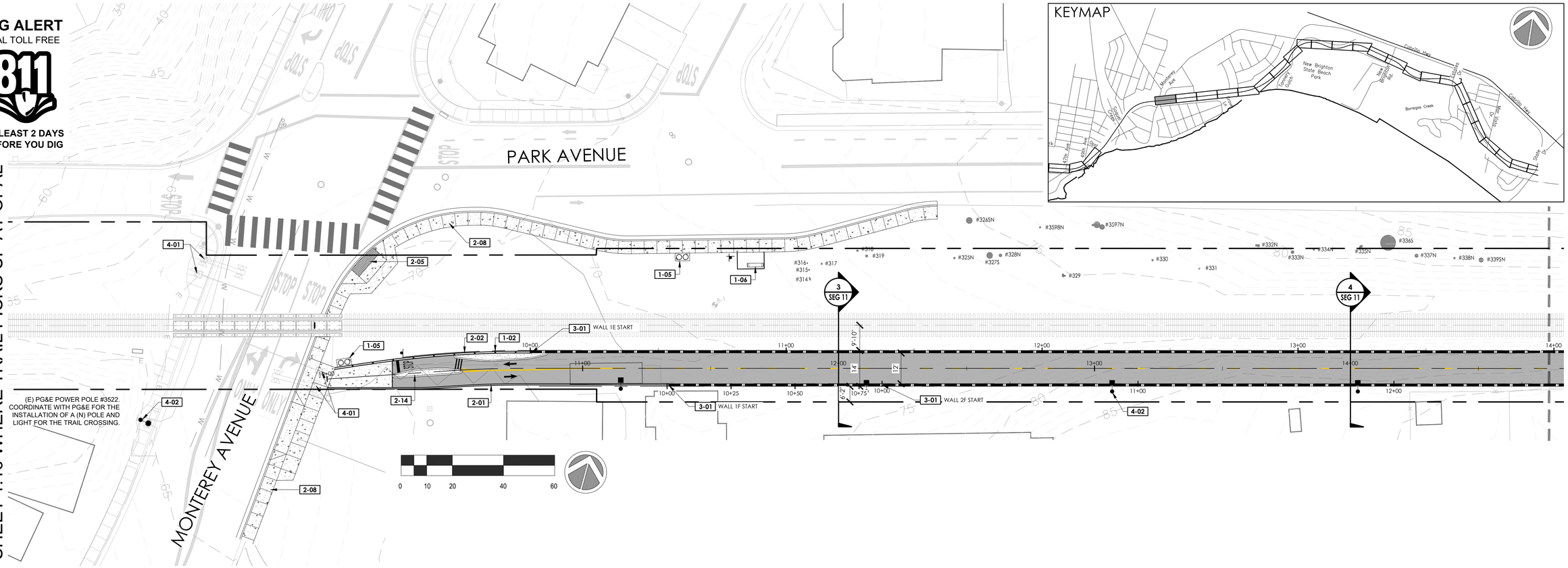
DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.16
VAULT NO.	

Layout Tab Name: CP-1.16, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCD.dwg, SSC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmolaske\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmolaske, Plotted: Jun 15, 2023 - 7:05am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL GAP FROM OPAL TO MONTEREY AVE SEE SHEET 1.16 WHERE TRAIL PICKS UP AT OPAL



MATCHLINE, SEE SHEET CP-1.18

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

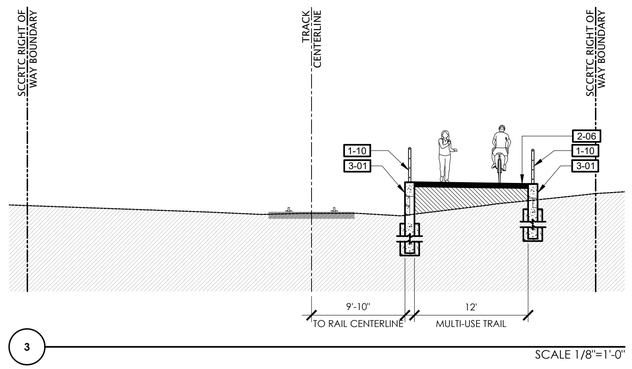
- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

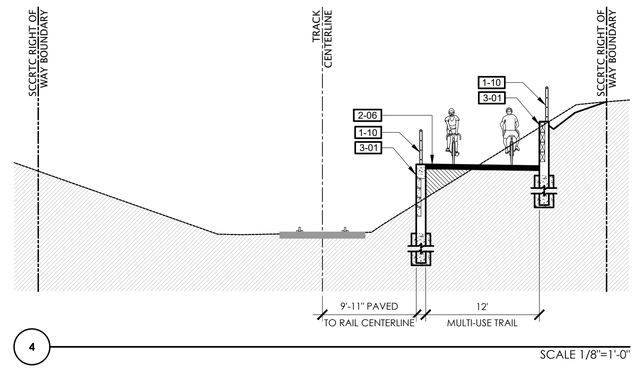
UTILITIES

- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS





TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.17
VAULT NO.

Layout Tab Name: CP-1.17, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC02.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\kmistaker\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistaker, Plotted: Jun 15, 2023 - 7:06am

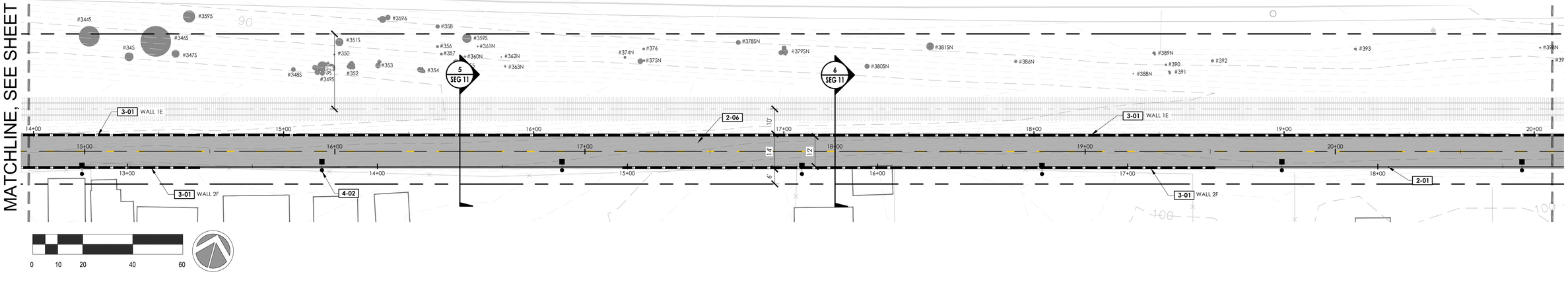
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.17

PARK AVENUE

KEYMAP



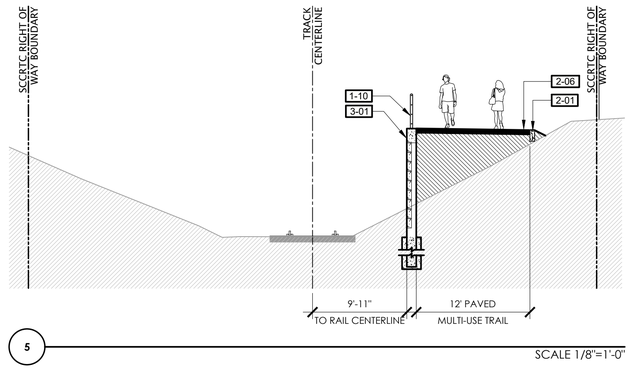


REFERENCE NOTES SCHEDULE

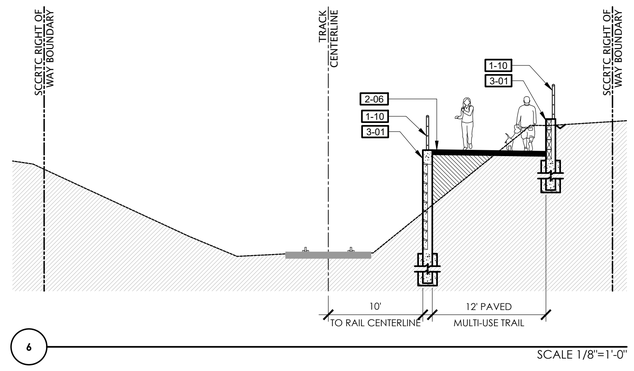
SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



5 SCALE 1/8"=1'-0"



6 SCALE 1/8"=1'-0"

MATCHLINE, SEE SHEET CP-1.19

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

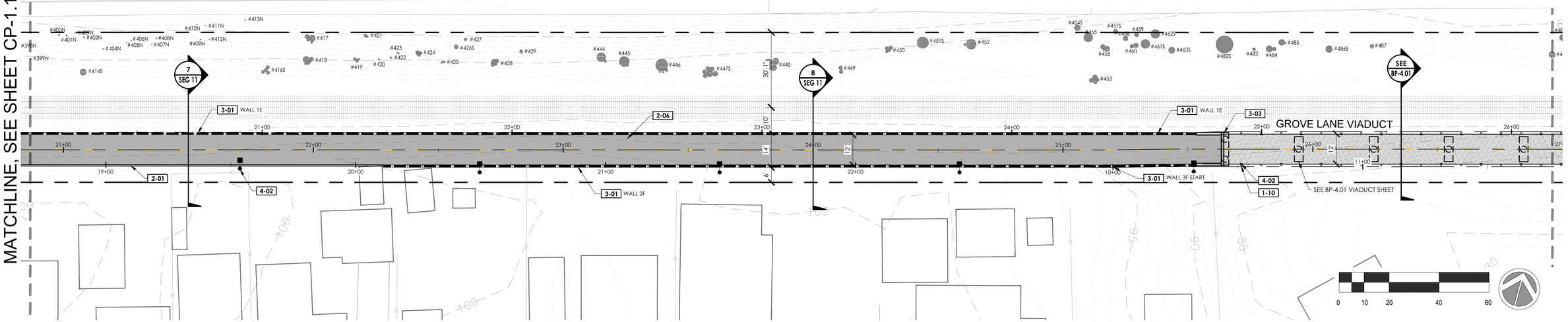
CONSTRUCTION KEYNOTE PLANS

REFERENCES FIELD BOOK:	DATE 02/10/2023	SCALE AS SHOWN	
	DRAWN KS	CP-1.18	
DRAWING #: CP-0193-06-RWT-S11	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

Layout Tab Name: CP-1.18, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, C:\Users\mmistovich\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmistovich, Plotted: Jun 15, 2023 - 7:06am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



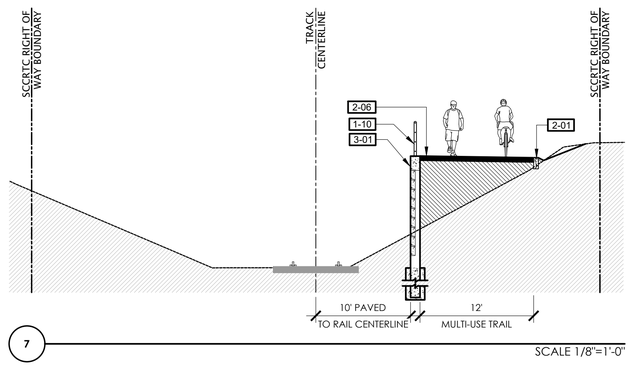


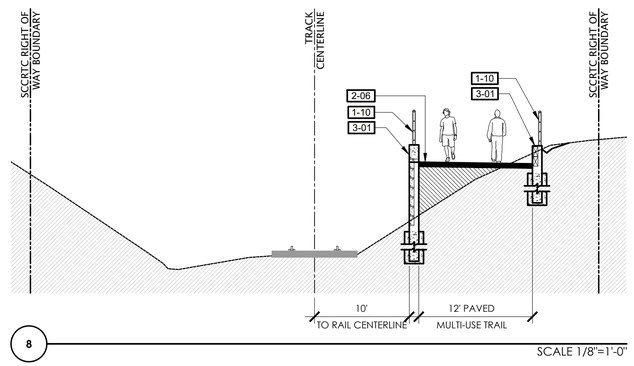
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS





PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

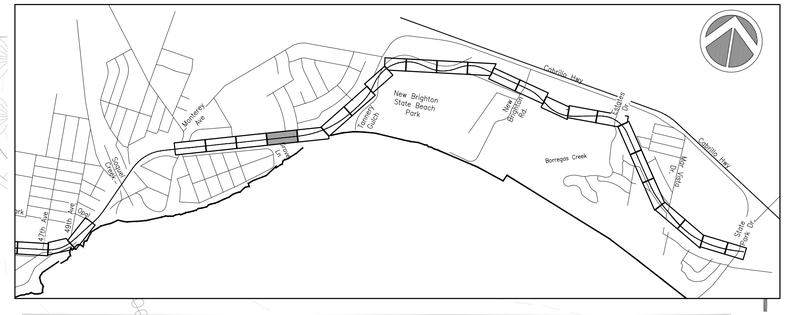
SCALE AS SHOWN
CP-1.19
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.19, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XSTAMP-0193-06-RCD.dwg, SSC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\mmolaske\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmolaske, Plotted: Jun 15, 2023 - 7:07am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



(E) STREET LIGHT AT CORNER OF PARK AVE. AND WESLEY ST. COORDINATE WITH PG&E CITY FOR EXTENSION OF POWER CIRCUIT TO (N) LIGHT AND POLE AT PARK AVE. AND GROVE LANE TRAIL CROSSING.

WESLEY STREET

PARK AVENUE

GROVE LANE VIADUCT

GROVE LANE

ESCALONA GULCH

MATCHLINE, SEE SHEET CP-1.19

MATCHLINE, SEE SHEET CP-1.21

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

SEE BP-4.01 VIADUCT SHEET

0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

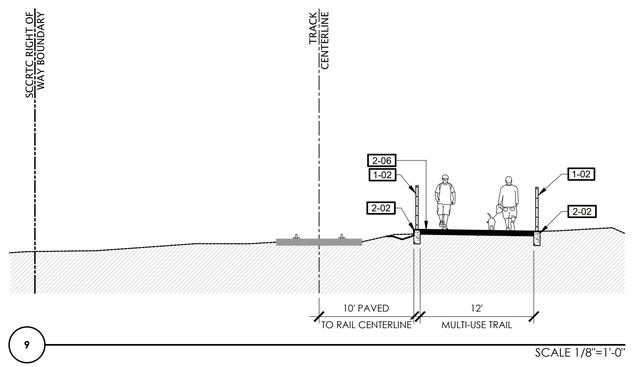
- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

UTILITIES

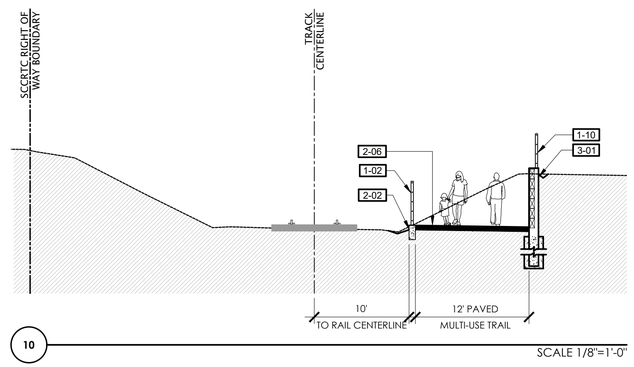
- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



9 SCALE 1/8"=1'-0"



10 SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

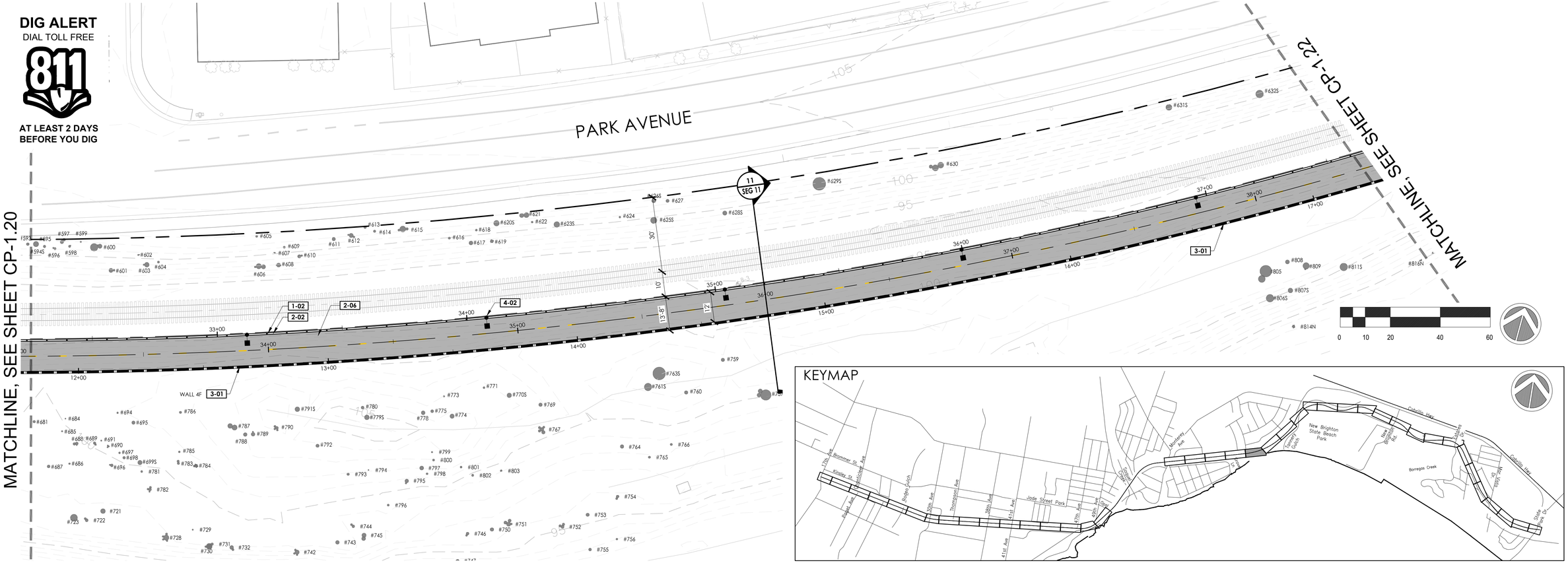
REFERENCES
FIELD BOOK:

DRAWING #: CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.20
VAULT NO.	

Layout Tab Name: CP-1.20, Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XT-0193-06-RWT-S11.dwg, BDYMAP-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, SH-0193-06-RWT-S11.dwg
C:\Users\mmasse\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg Plotted By: mmasse, Plotted: Jun 15, 2023 - 7:08am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

REFERENCE NOTES SCHEDULE

SITE FURNISHINGS AND EQUIPMENT

SYMBOL	DESCRIPTION
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE

STRUCTURAL

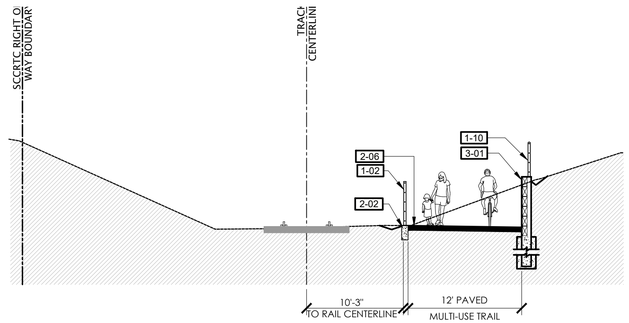
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE

UTILITIES

4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



11 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

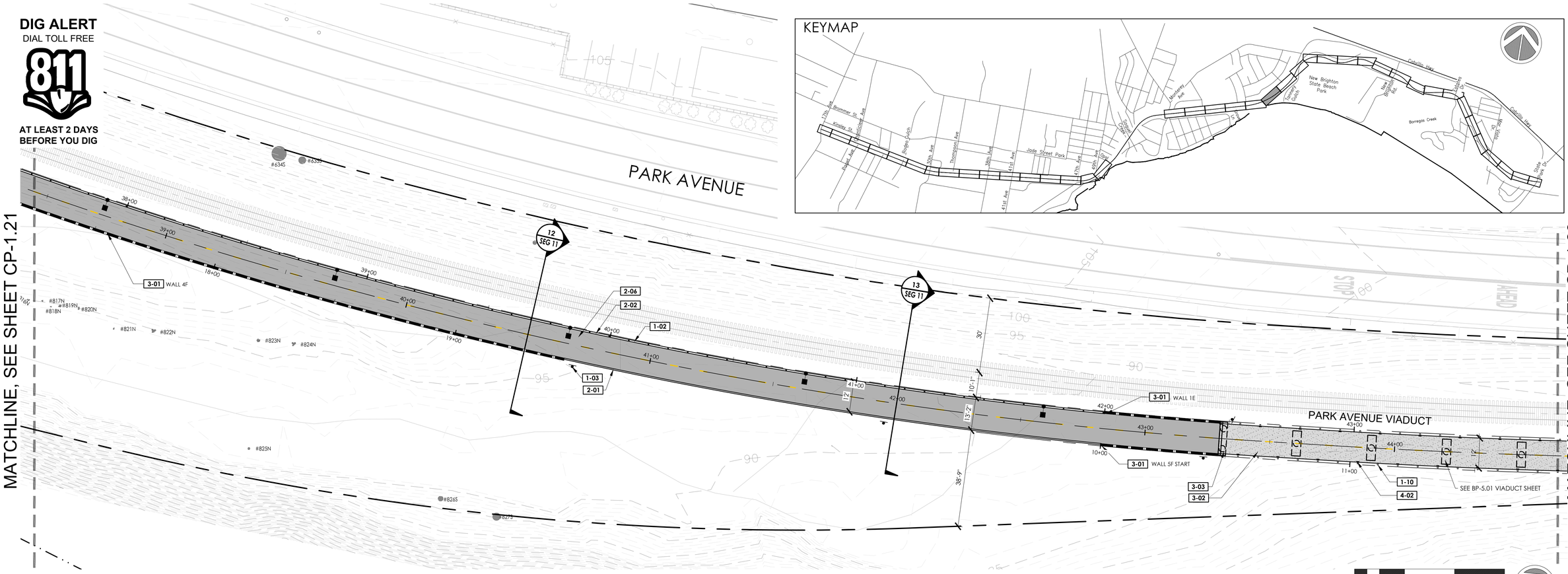
REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.21
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.21, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT.dwg, XT-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\kmistaske\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistaske, Plotted: Jun 15, 2023 - 7:08am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



MATCHLINE, SEE SHEET CP-1.21

MATCHLINE, SEE SHEET CP-1.23

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

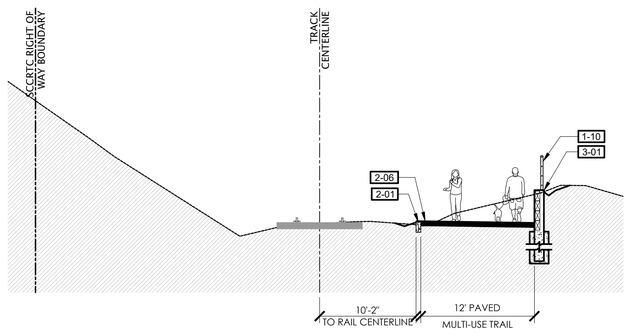
- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

UTILITIES

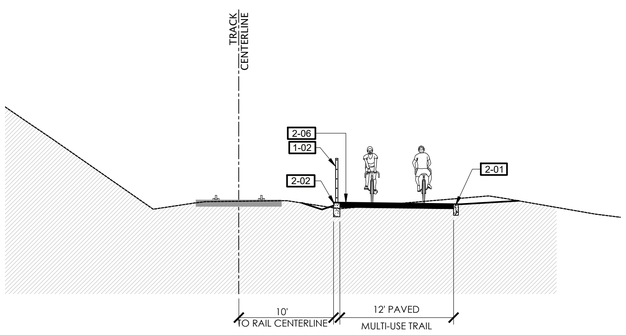
- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



12 TYPICAL SECTION
SCALE 1/8"=1'-0"



13 TYPICAL SECTION
SCALE 1/8"=1'-0"

0 10 20 40 60

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

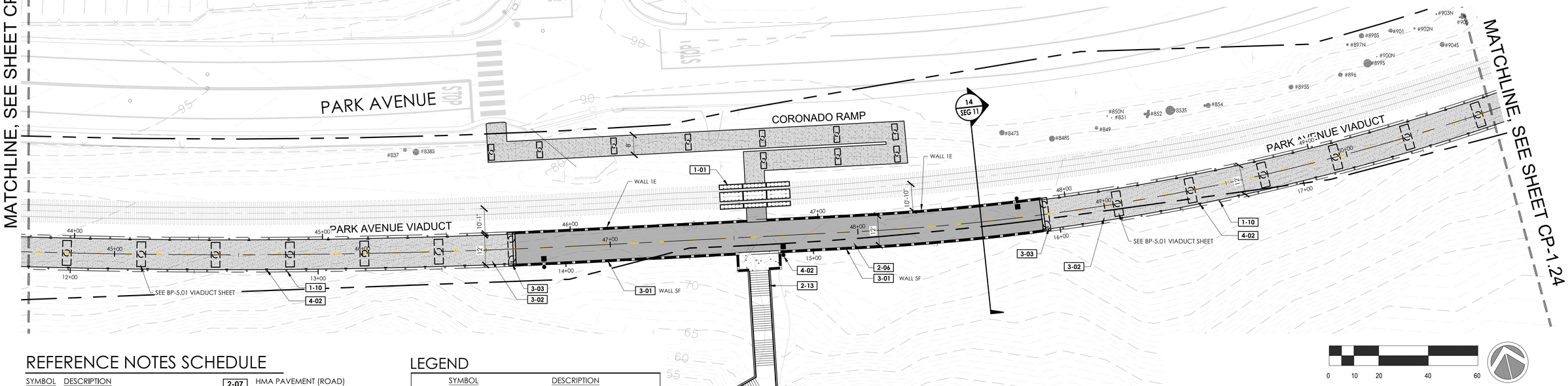
REFERENCES	DATE 02/10/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN KS	CP-1.22	
DRAWING #: CP-0193-06-RWT-S11	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.22, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RDR.dwg, SEC-0193-06-RWT-S11.dwg, BH-0193-06-RWT-S11.dwg
C:\Users\mmassaro\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmassaro, Plotted: Jun 15, 2023 - 7:09am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





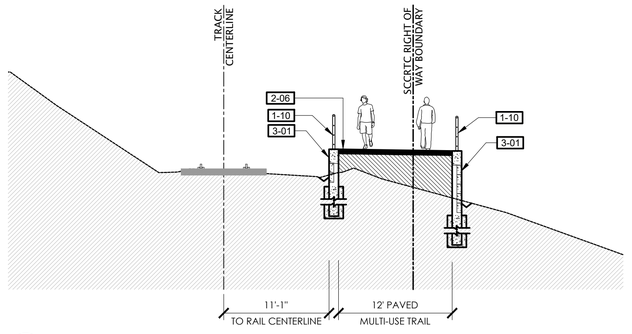
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



14 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

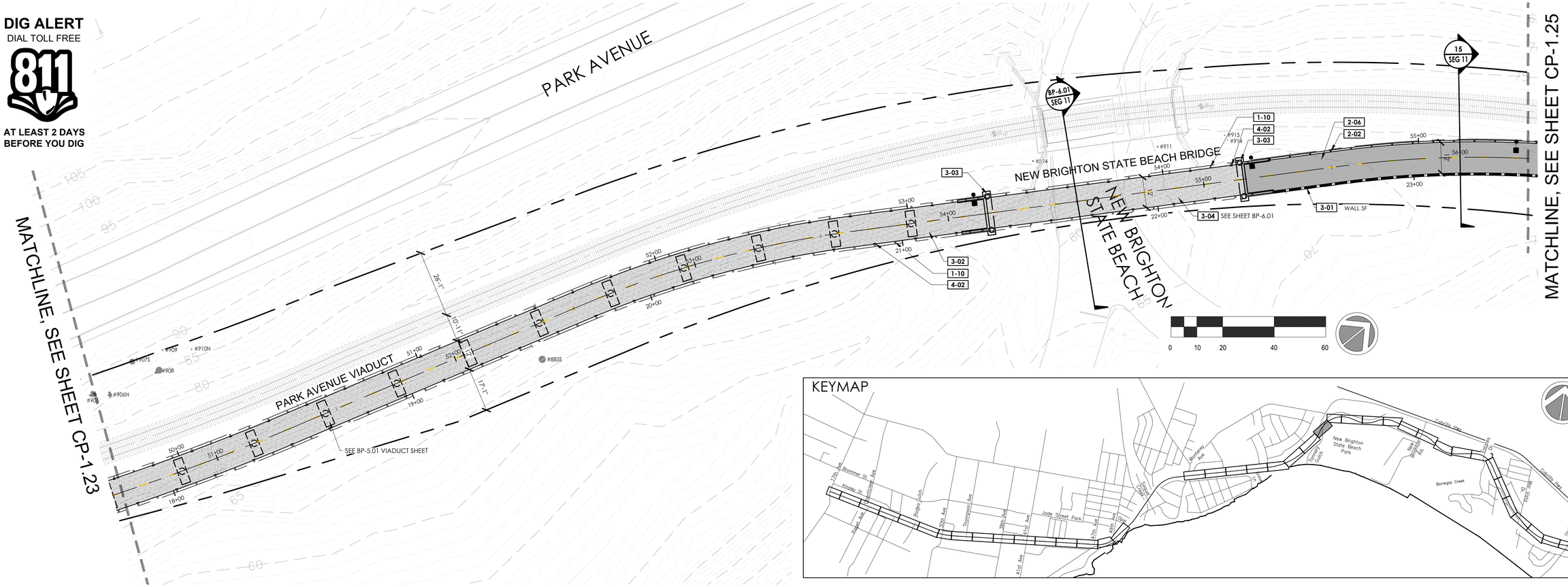
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.23
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.23, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, C:\Users\kmistaske\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistaske, Plotted: Jun 15, 2023 - 7:09am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



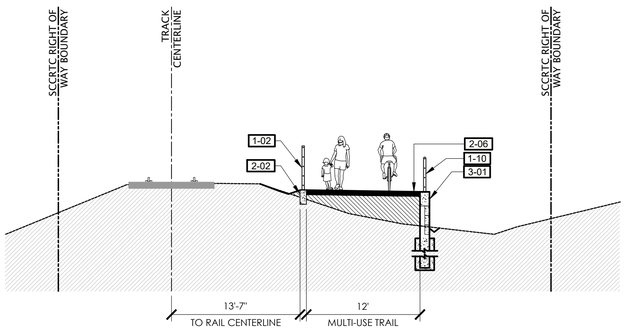
KEYMAP

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



15 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S11

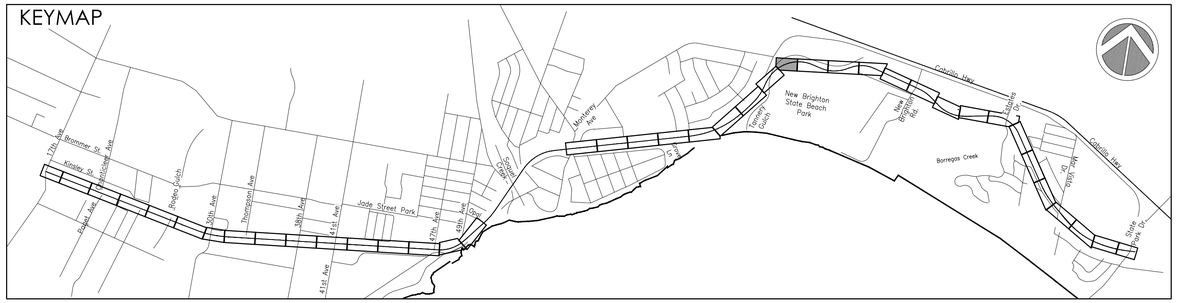
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.24
VAULT NO.	

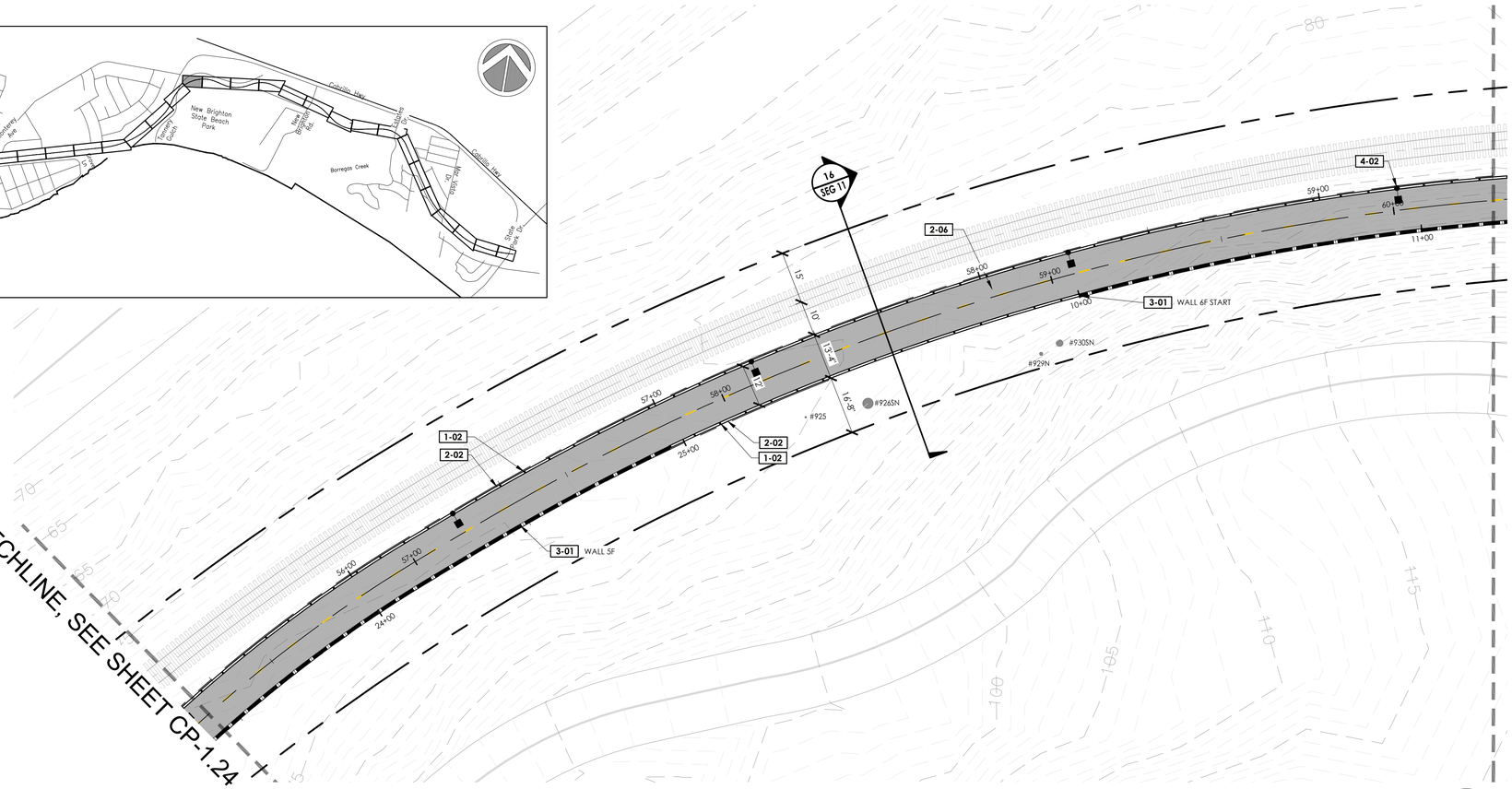
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.24, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg
C:\Users\kmistakes\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistakes, Plotted: Jun 15, 2023 - 7:10am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

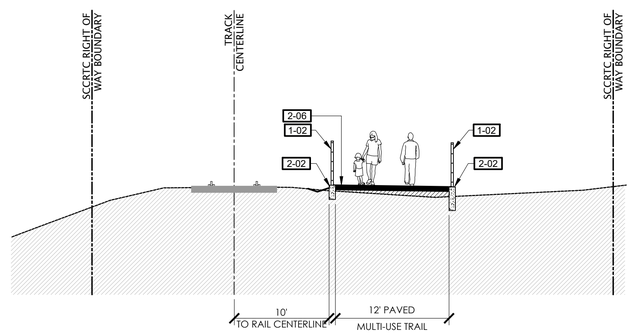
UTILITIES

- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



16 TYPICAL SECTION

SCALE 1/8"=1'-0"

MATCHLINE, SEE SHEET CP-1.26

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

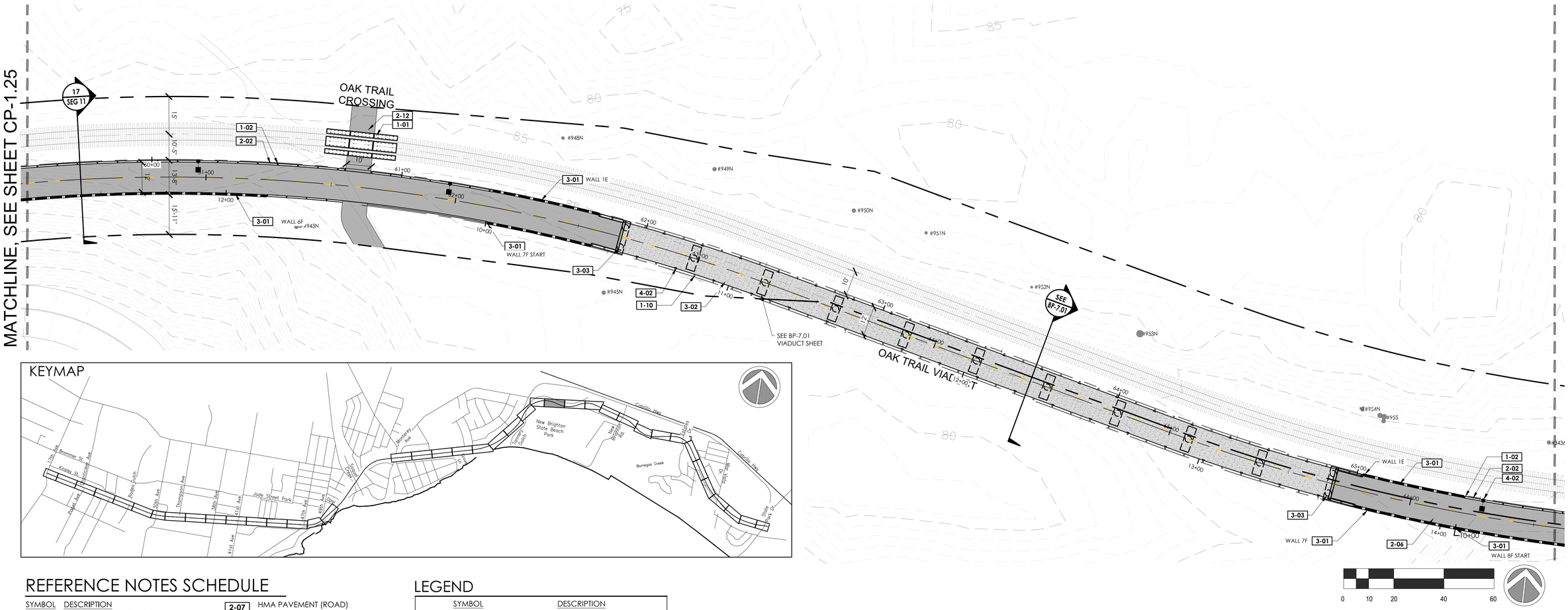
DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.25
VAULT NO.

Layout Tab Name: CP-1.25, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RO20.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmassaro\AppData\Local\Temp\AcPublish_26192\CP-0193-06-RWT-S11.dwg, Plotted By: mmassaro, Plotted: Jun 15, 2023 - 7:10am

MATCHLINE, SEE SHEET CP-1.25



MATCHLINE, SEE SHEET CP-1.27

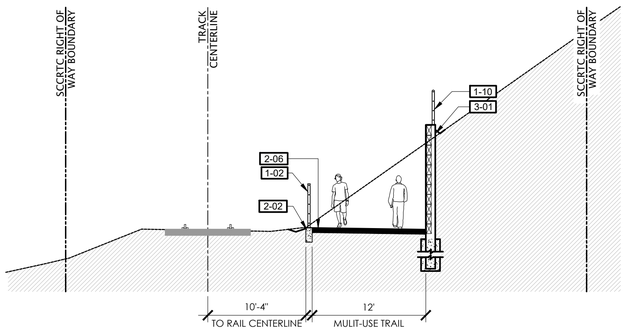
KEYMAP

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



17 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

CP-1.26

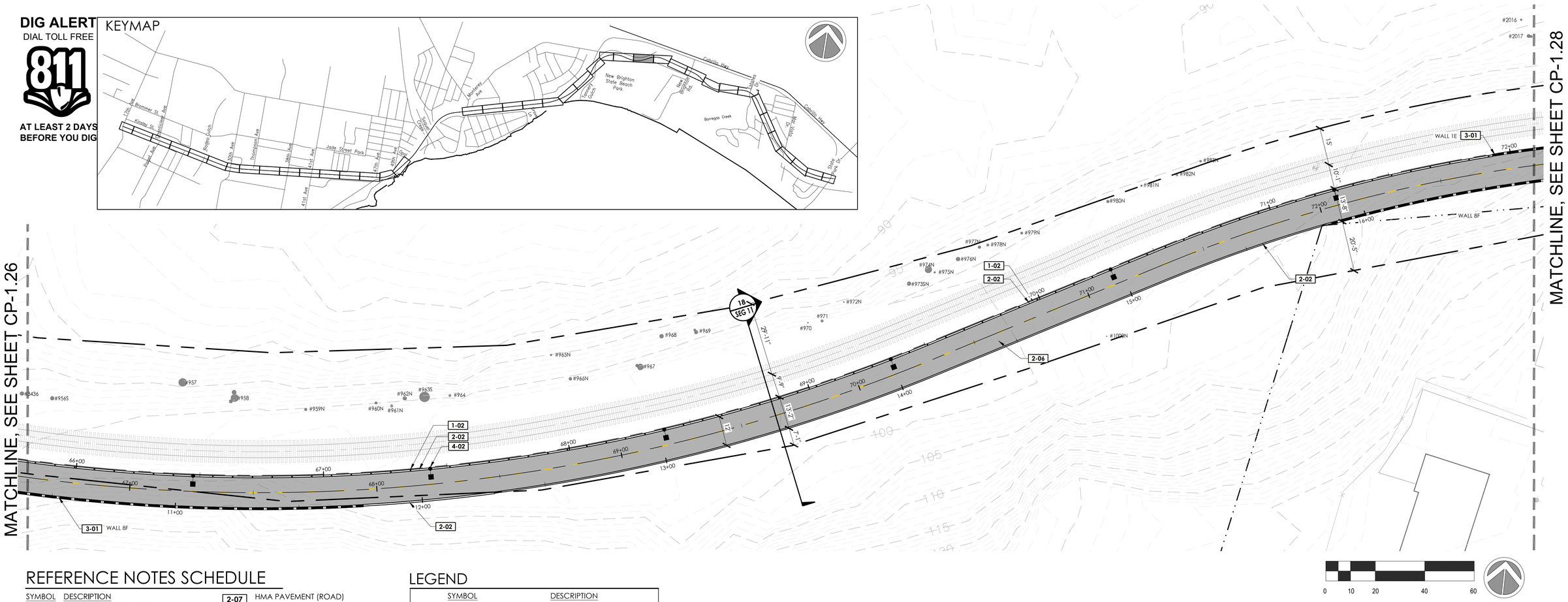
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

Layout Tab Name: CP-1.26, Images: county-logo-black-transparent.png, Xrefs: FT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC02c.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\kmistake\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistake, Plotted: Jun 15, 2023 - 7:10am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

KEYMAP

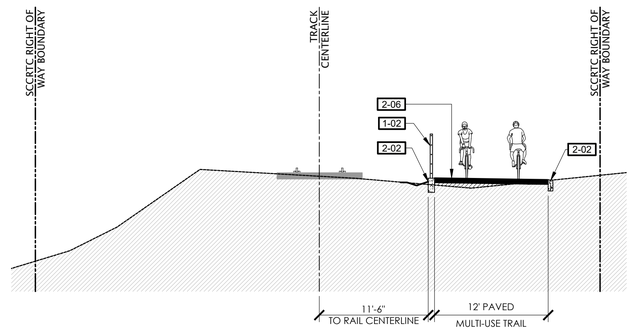


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



18 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

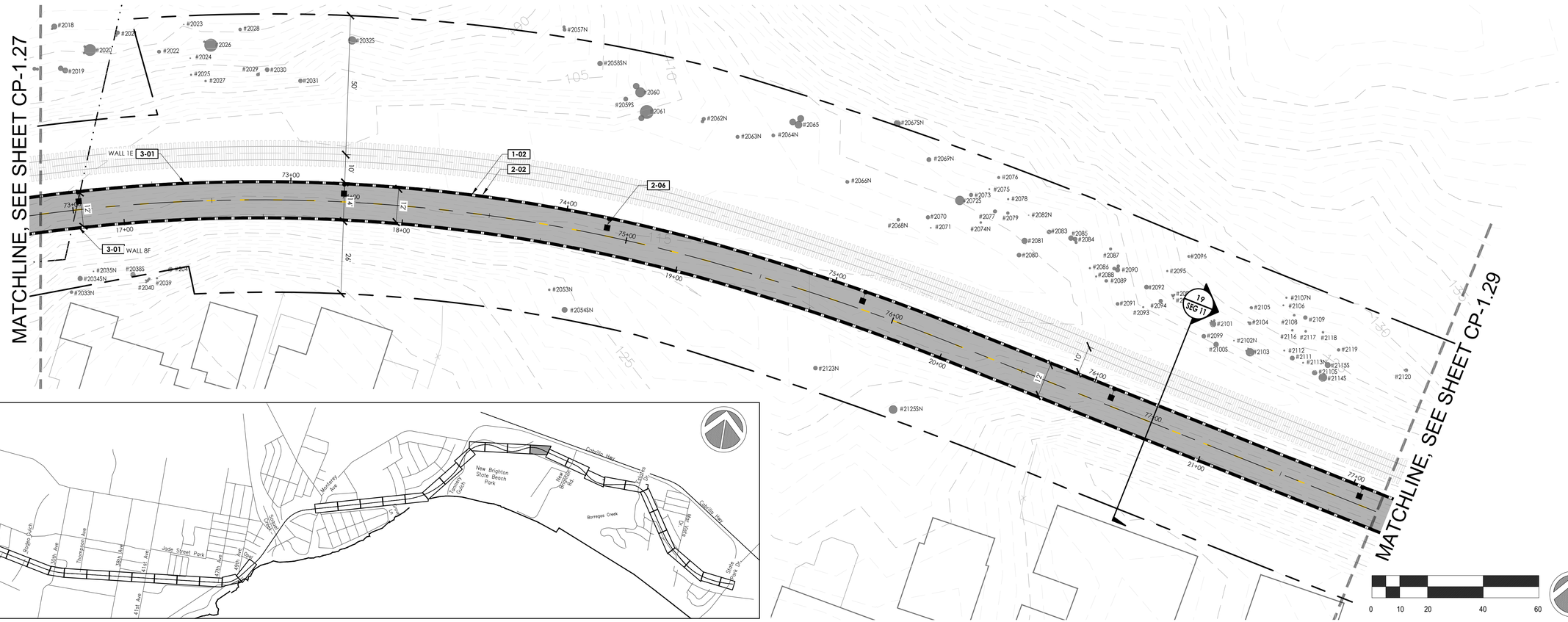
REFERENCES
FIELD BOOK:
DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.27
VAULT NO.

Layout Tab Name: CP-1.27, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC02c.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\kmistakes\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistakes, Plotted: Jun 15, 2023 - 7:11am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

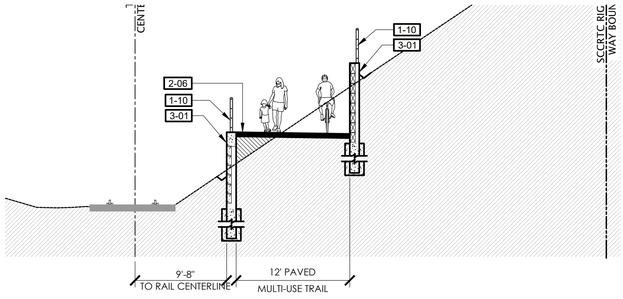
- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

UTILITIES

- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



19 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

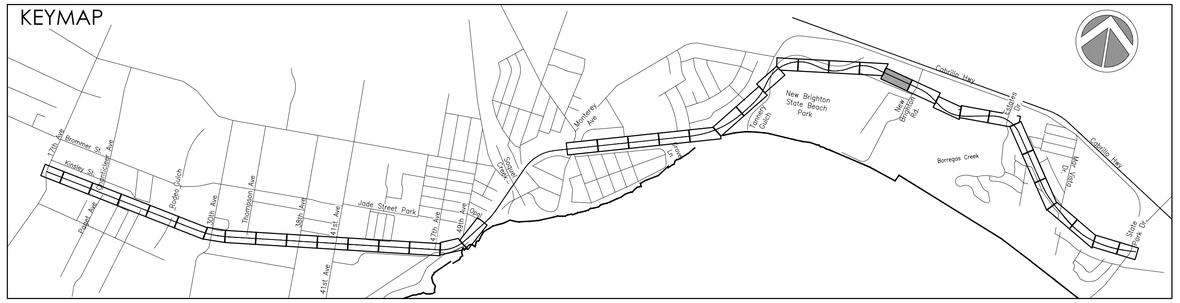
DRAWING #:
CP-0193-06-RWT-S11

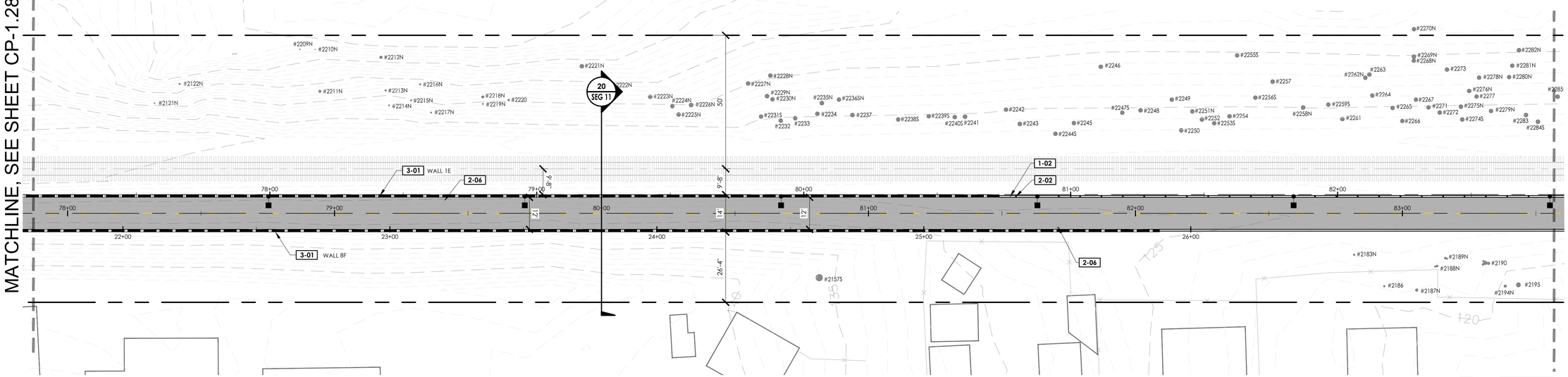
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.28
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.28 Images: county-logo-black-transparent.png; XRefs: XT-0193-06-RWT-S11.dwg; XTB-0193-06-RWT.dwg; XT-0193-06-RWT-S11.dwg; KEYMAP-0193-06-RWT-S11.dwg; SEC-0193-06-RWT-S11.dwg; XH-0193-06-RWT-S11.dwg
C:\Users\ymatosek\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: rmatosek, Plotted: Jun 15, 2023 - 7:11am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





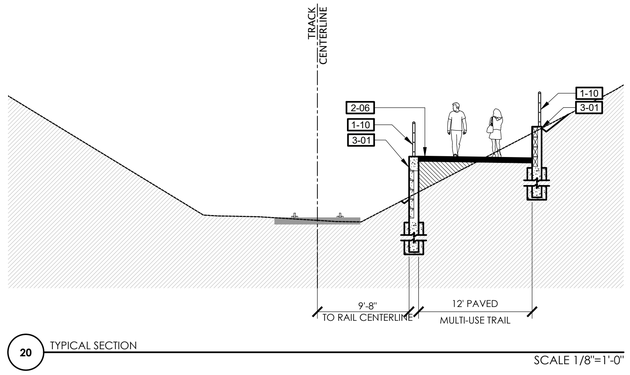
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



20 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

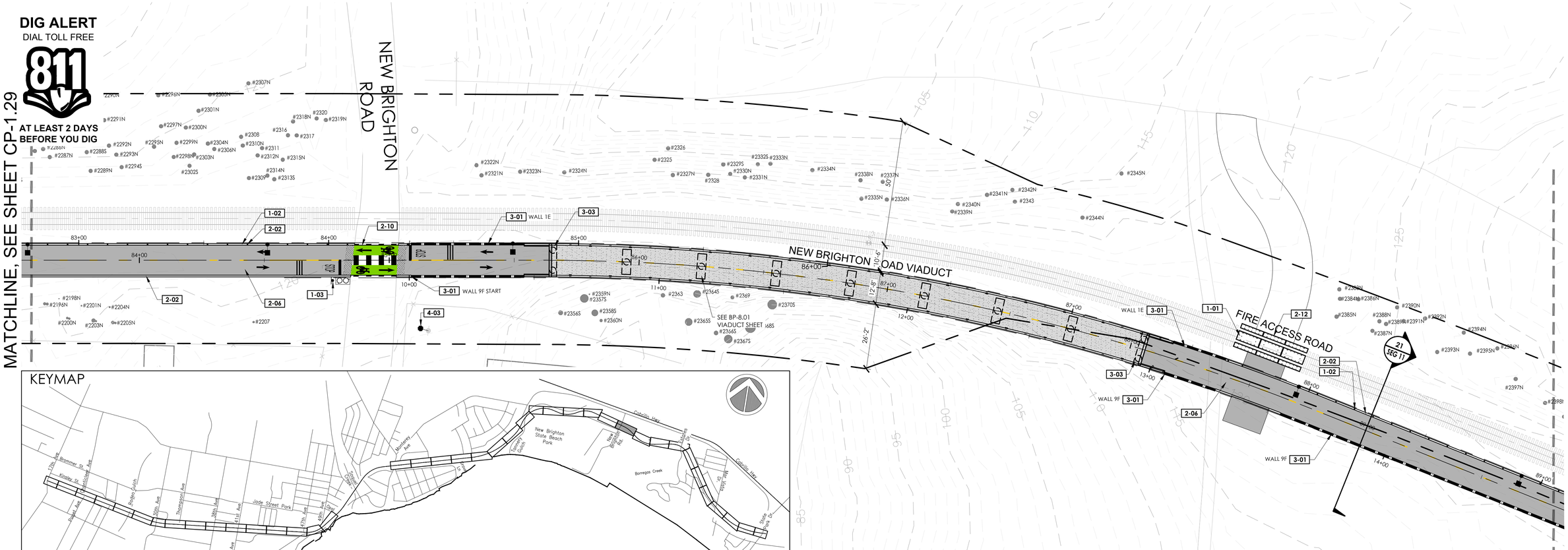
SCALE AS SHOWN
CP-1.29
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.29, Images: county-logo-black-transparent.png, Xrefs: X1-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XDTM-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmatsuka\Vault\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmatsuka, Plotted: Jun 15, 2023 - 7:12pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.29



MATCHLINE, SEE SHEET CP-1.21

KEYMAP

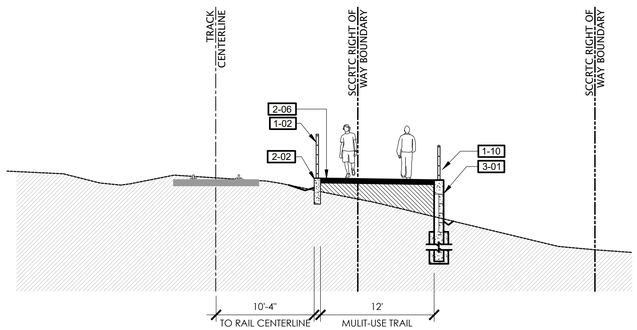
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



21 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

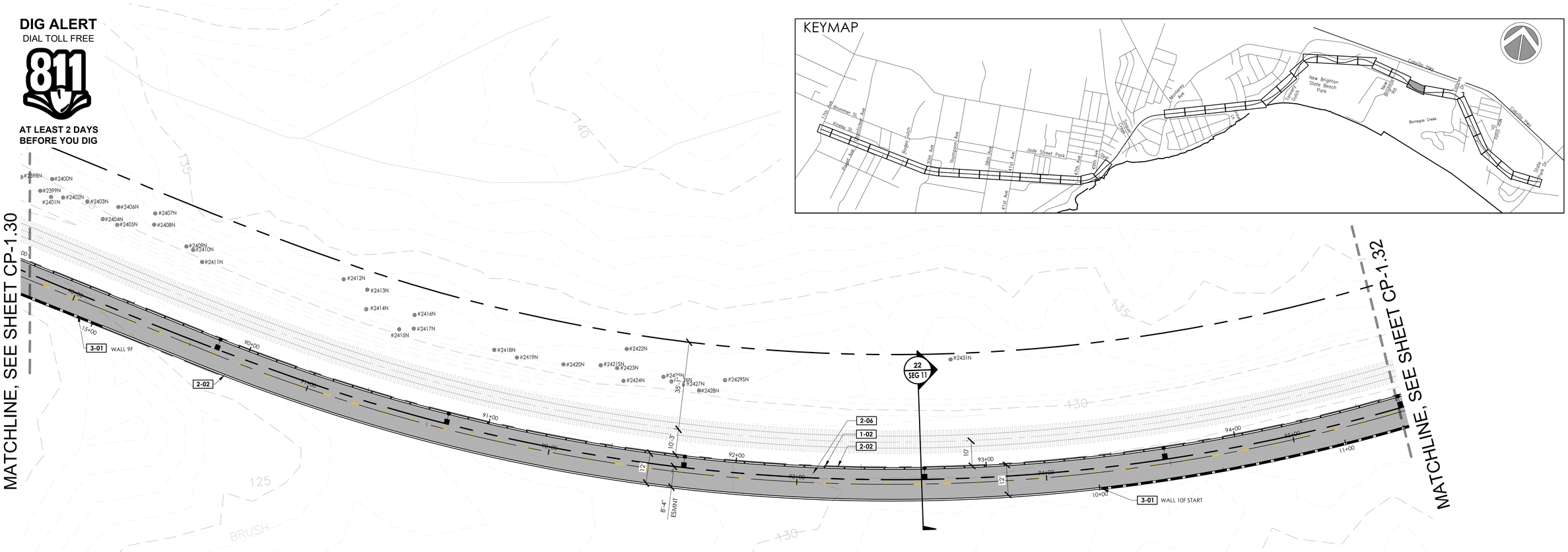
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.30
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.30, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWP.dwg, SEC-0193-06-RWT-S11.dwg, SH-0193-06-RWT-S11.dwg
C:\Users\mmassaro\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmassaro, Plotted: Jun 15, 2023 - 7:12am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

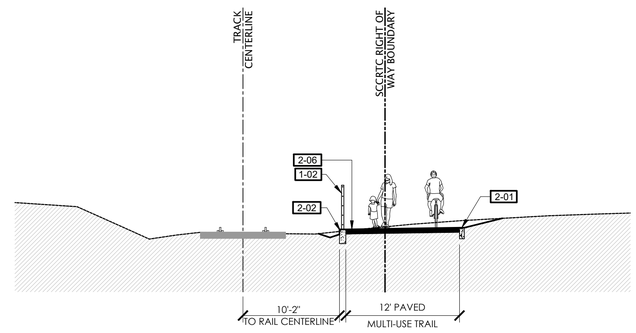
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



22 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

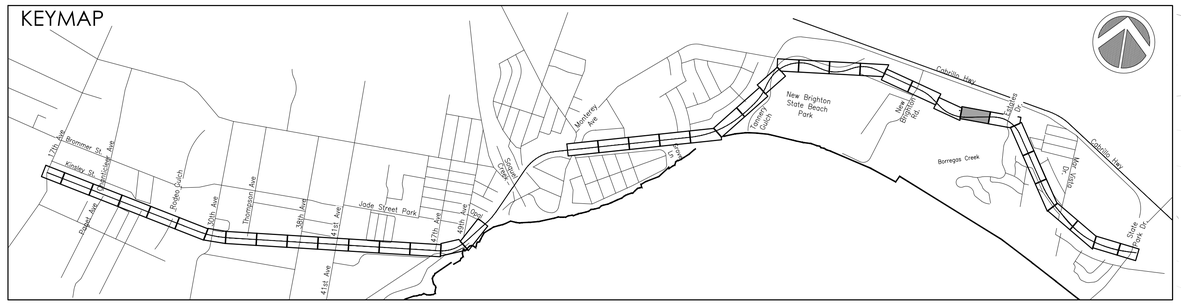
SCALE AS SHOWN
CP-1.31
VAULT NO.

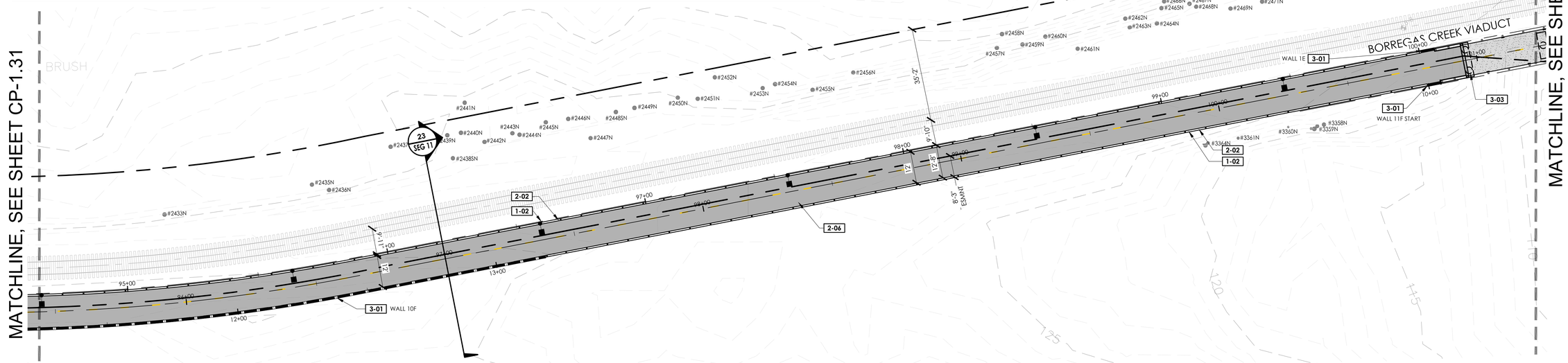
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.31, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XSCHMAP-0193-06-RWT-S11.dwg, XECMAP-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmasiaek\Vault\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmasiaek, Plotted: Jun 15, 2023 - 7:13am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





MATCHLINE, SEE SHEET CP-1.33

REFERENCE NOTES SCHEDULE

SITE FURNISHINGS AND EQUIPMENT

SYMBOL	DESCRIPTION
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

SYMBOL	DESCRIPTION
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE

STRUCTURAL

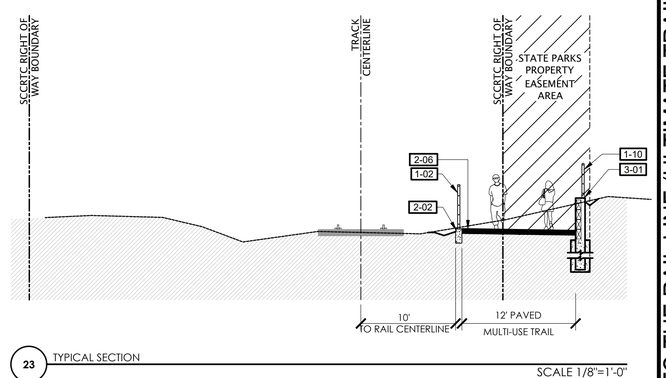
SYMBOL	DESCRIPTION
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE

UTILITIES

SYMBOL	DESCRIPTION
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



23 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

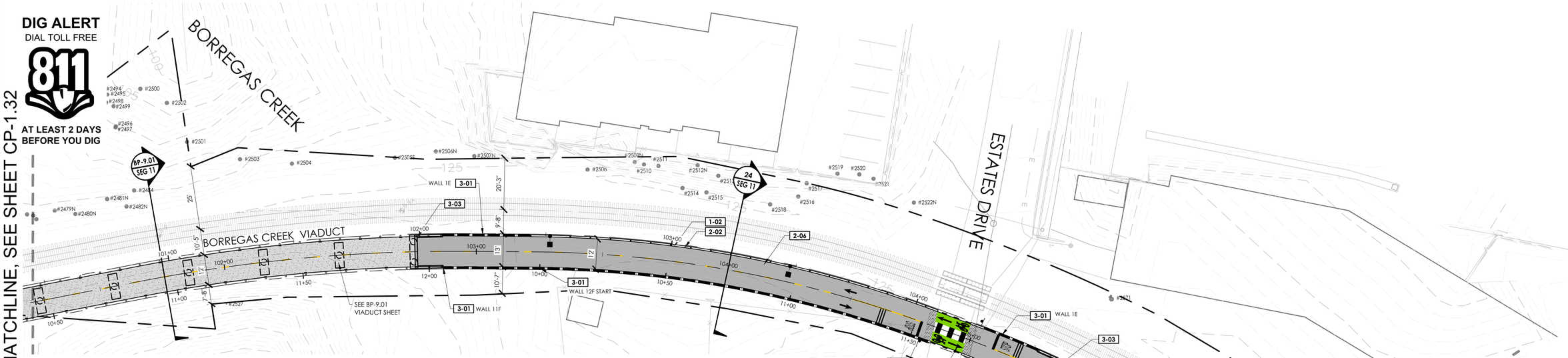
SCALE AS SHOWN
CP-1.32
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.32, Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, BDYMAP-0193-06-RW20.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmasters\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmasters, Plotted: Jun 15, 2023 - 7:13am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.32



KEYMAP



0 10 20 40 60

REFERENCE NOTES SCHEDULE

SITE FURNISHINGS AND EQUIPMENT

SYMBOL	DESCRIPTION
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE

STRUCTURAL

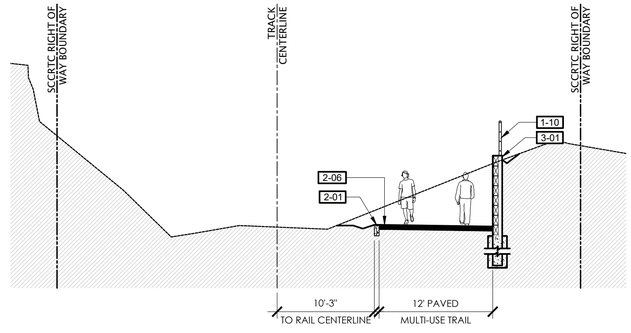
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE

UTILITIES

4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



24 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

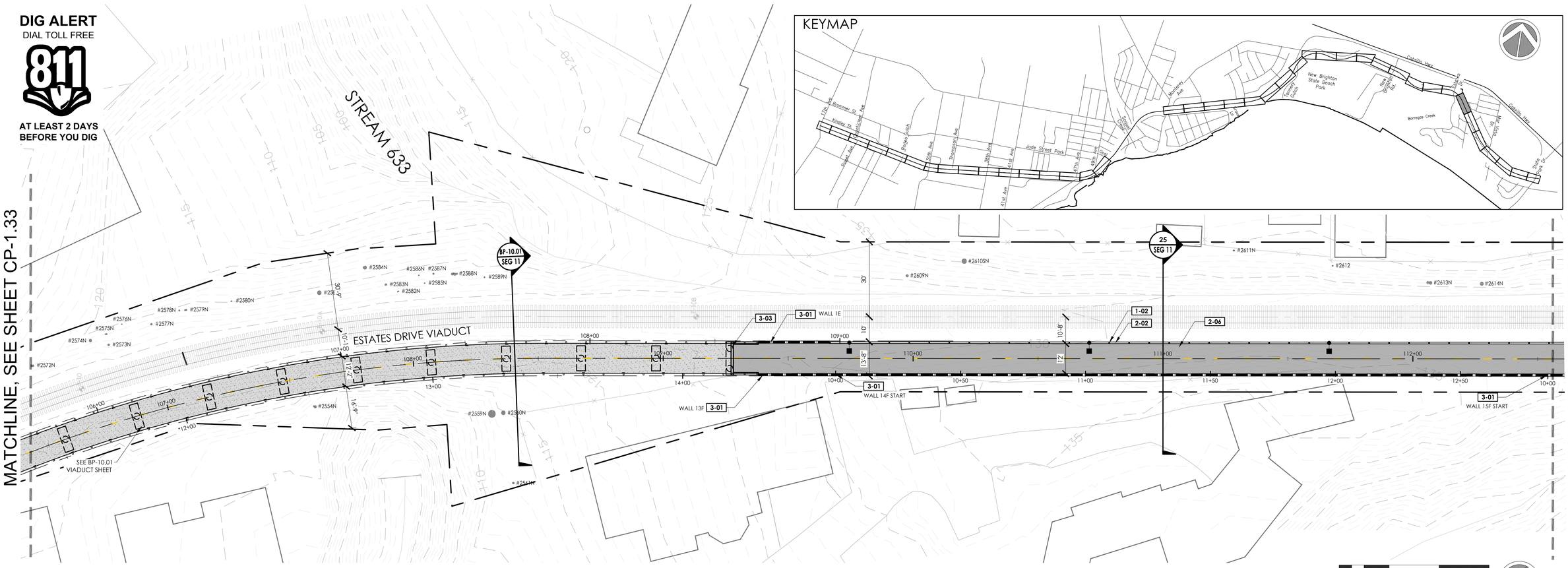
DRAWING #:
CP-0193-06-RWT-S11

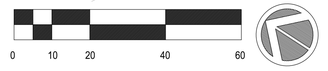
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.33
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout_Tab_Name: CP-1.33 Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWT-S11.dwg XTB-0193-06-RWT.dwg XT-0193-06-RWT-S11.dwg KEYMAP-0193-06-RWT-S11.dwg XH-0193-06-RWT-S11.dwg SEC-0193-06-RWT-S11.dwg SEC-0193-06-4020.dwg C:\Users\ymatosek\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmatosek, Plotted: Jun 15, 2023 - 7:14am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



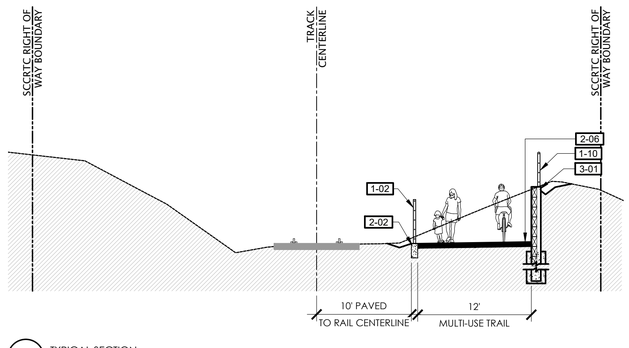


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



25 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

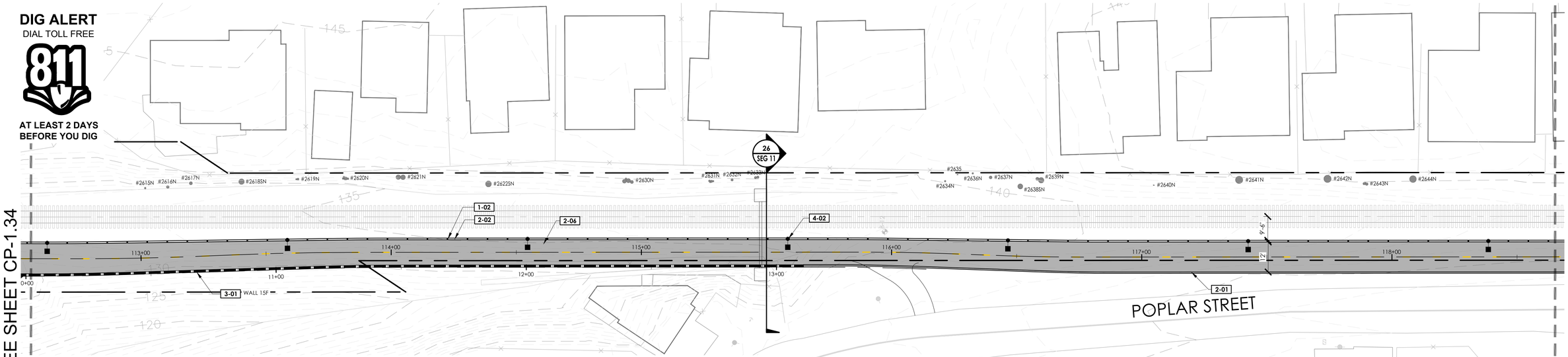
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.34
VAULT NO.

Layout Tab Name: CP-1.34, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\kmistake\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: kmistake, Plotted: Jun 15, 2023 - 7:14am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.34



MATCHLINE, SEE SHEET CP-1.36

KEYMAP



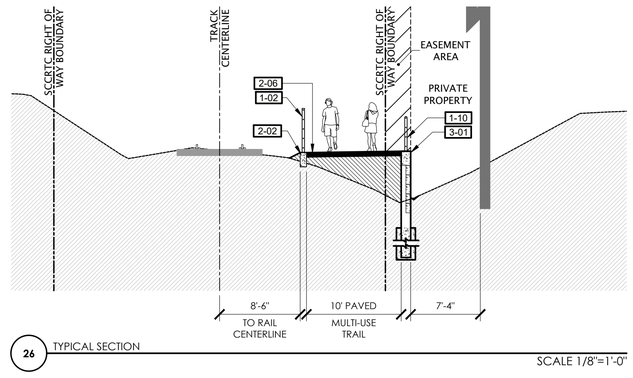
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



26 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

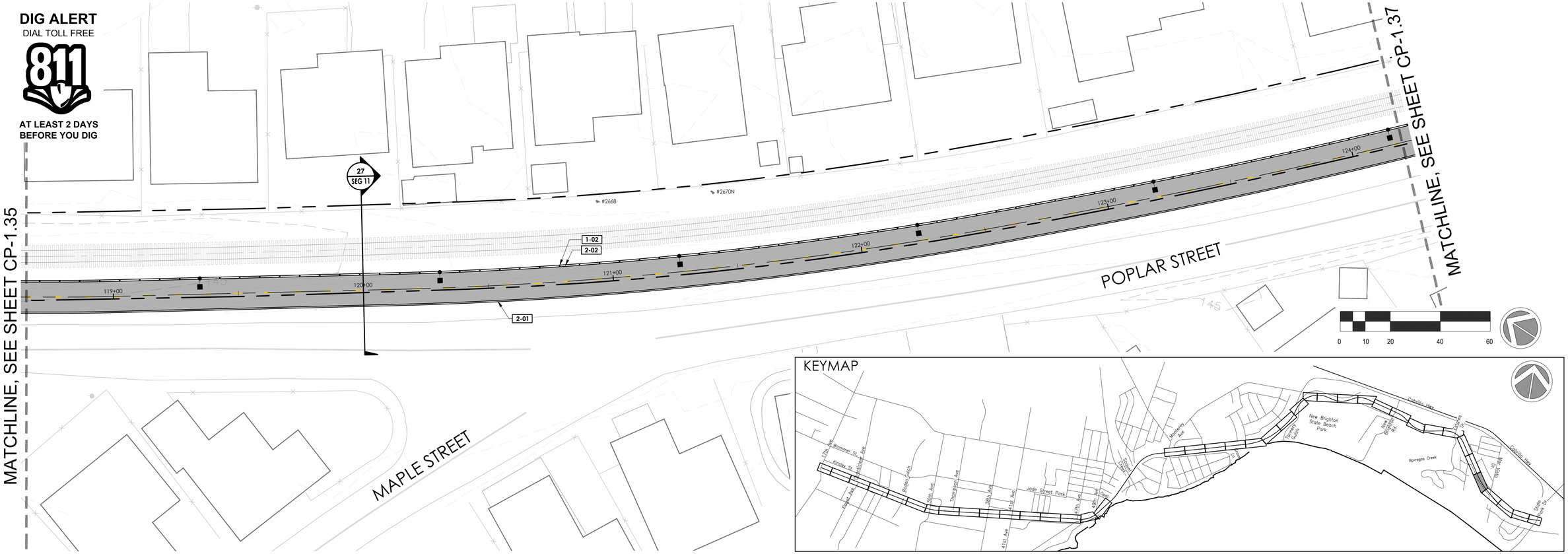
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.35
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.35, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, C:\Users\mmistakw\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmistakw, Plotted: Jun 15, 2023 - 7:15am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

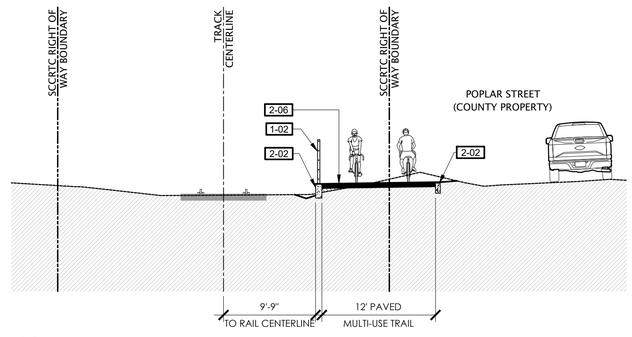


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



27 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

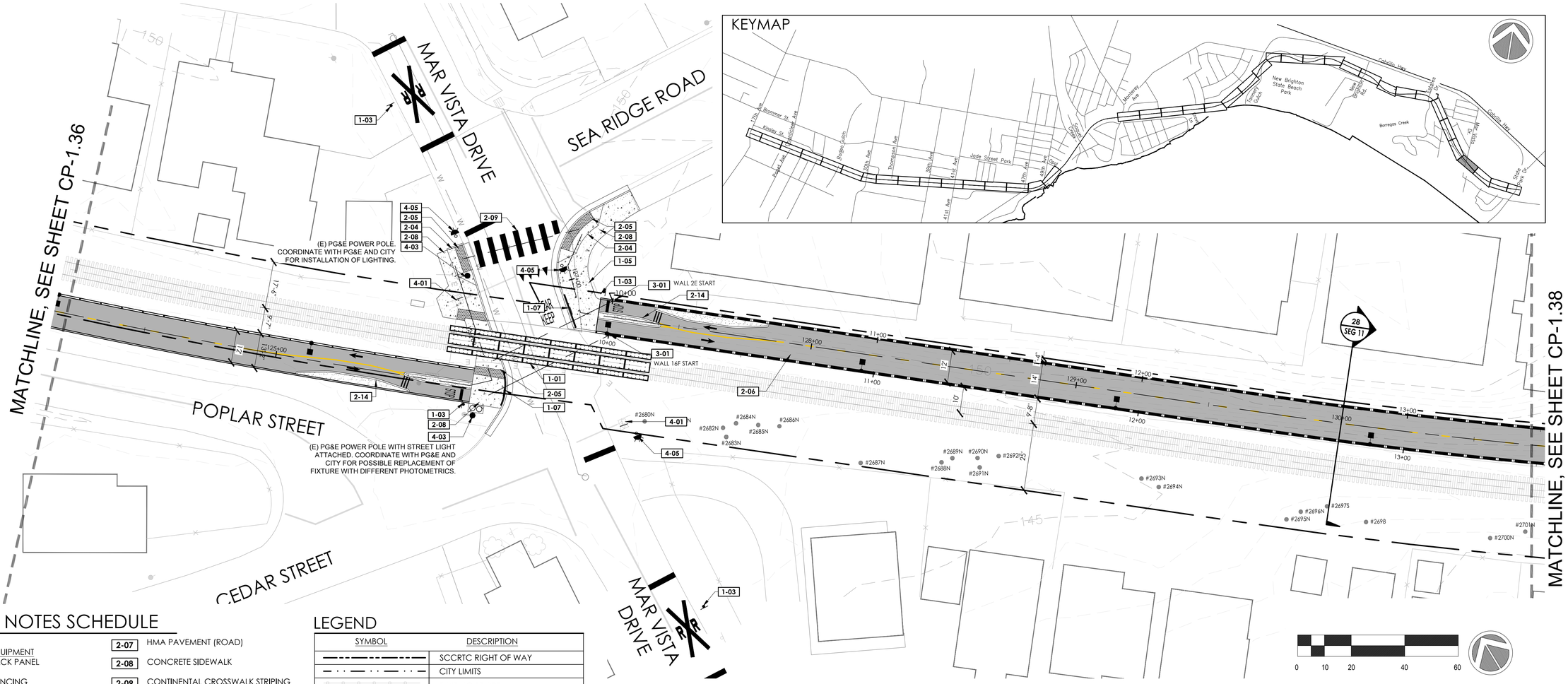
DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.36
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.36, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCCD.dwg, SSC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\mmolaske\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmolaske, Plotted: Jun 15, 2023 - 7:15am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

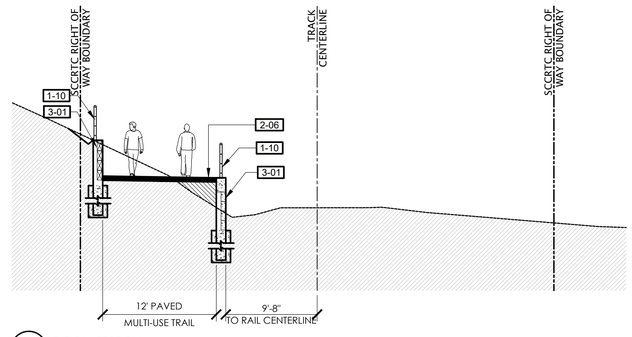


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



28 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

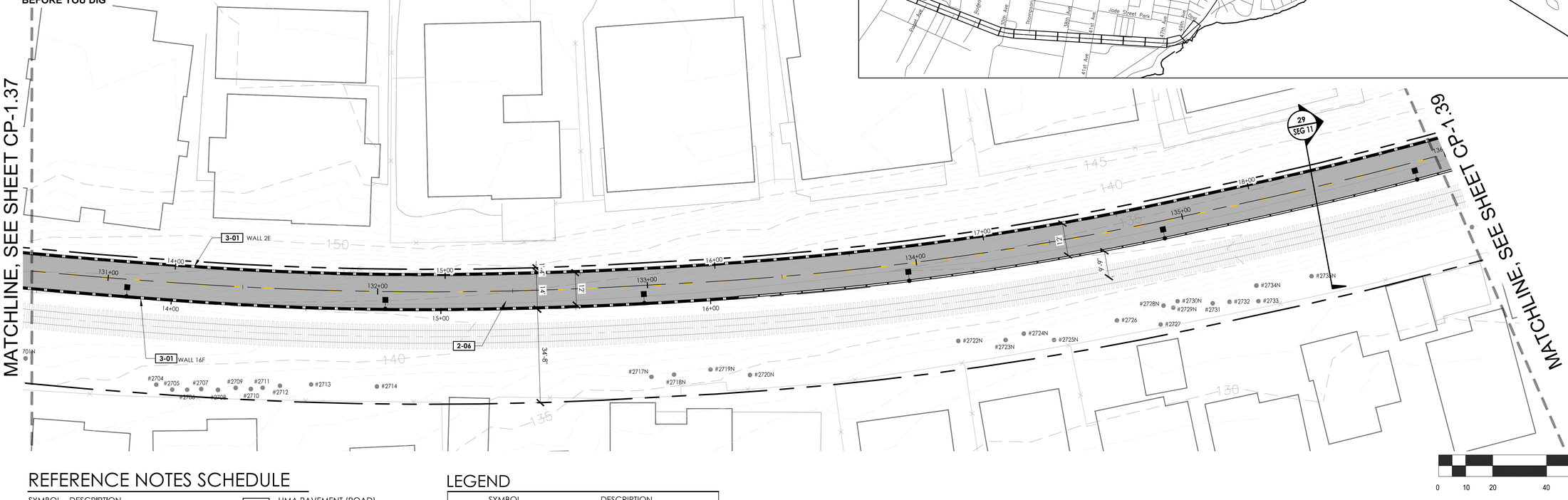
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.37
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.37, Image: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XTAB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCZ0.dwg, SSC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg
C:\Users\mmistake\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmistake, Plotted: Jun 15, 2023 - 7:16am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



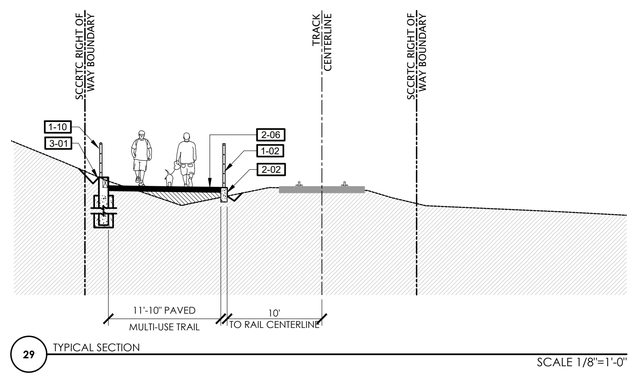


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS



29 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

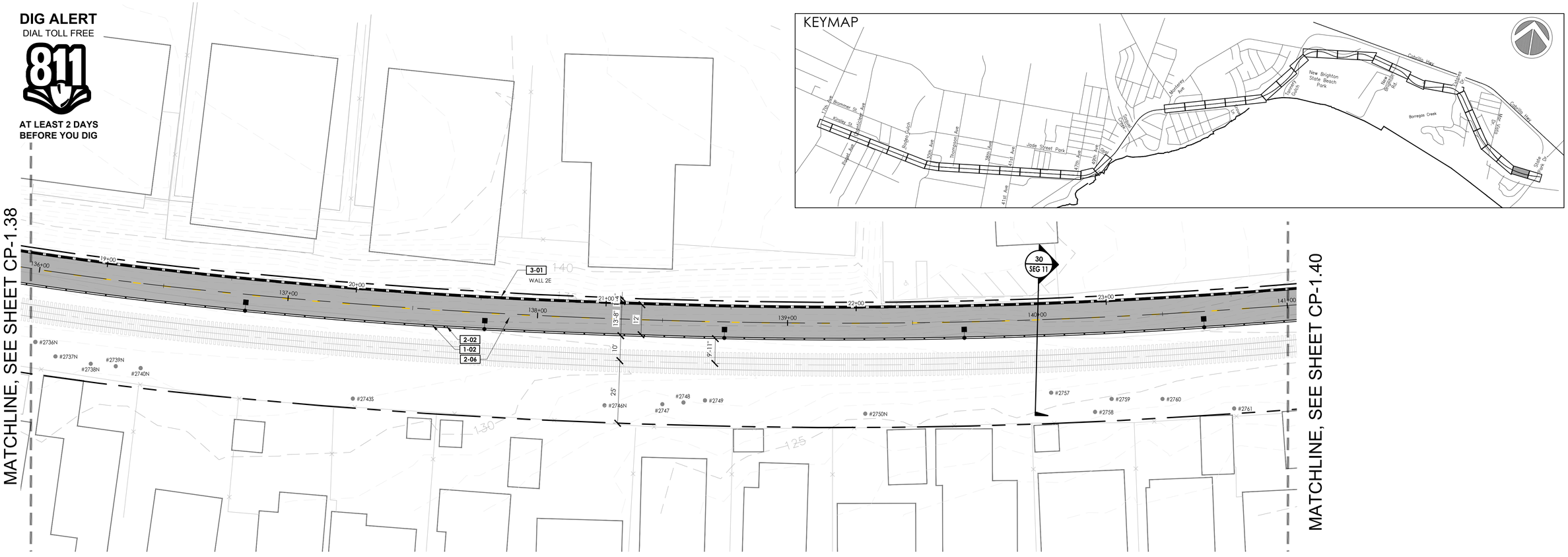
REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.38
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.38, Images: county-logo-black-transparent.png; Xrefs: XY-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCFD.dwg, SEC-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, C:\Users\rmmistake\AppData\Local\Temp\AcPublish_20196\CP-0193-06-RWT-S11.dwg, Plotted By: rmmistake, Plotted: Jun 15, 2023 - 7:16am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



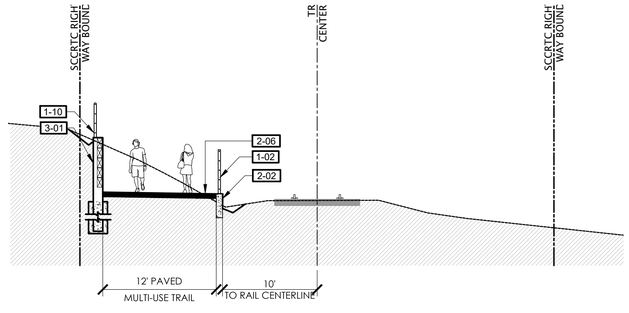
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL, SEE WP SHEETS
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

0 10 20 40 60



30 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

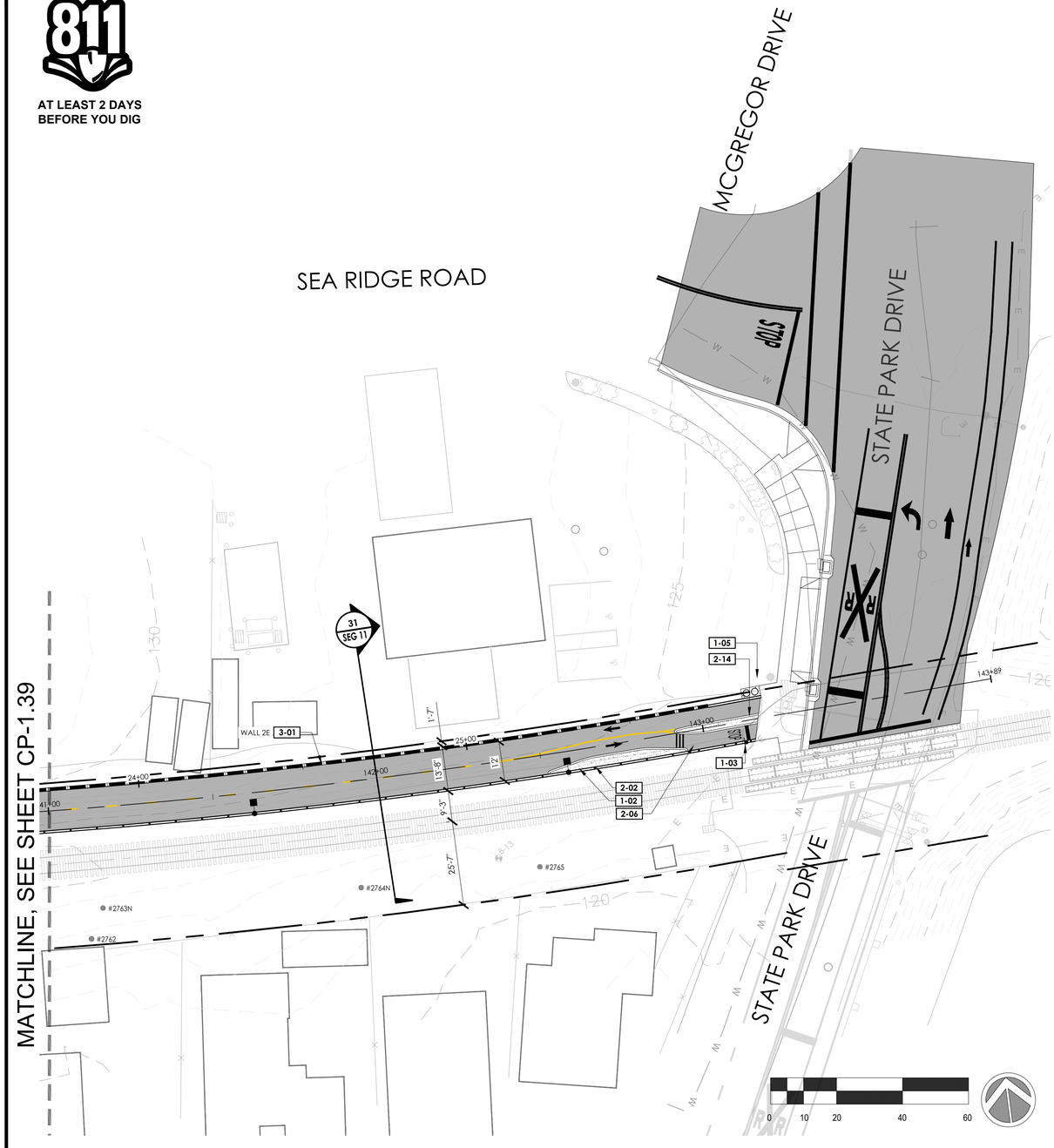
REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RWT-S11

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	KS		CP-1.39
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

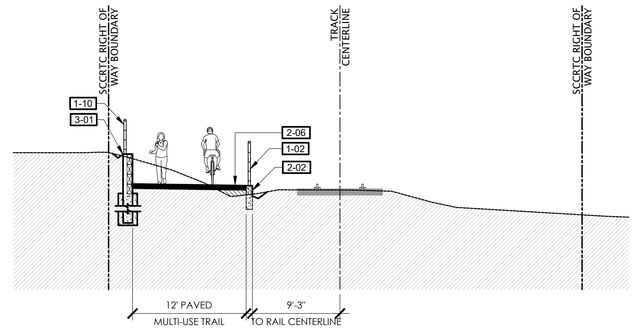
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.39, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg; XTR-0193-06-RWT.dwg; SC-0193-06-RWT-S11.dwg; KEYMAP-0193-06-RCED.dwg; SEC-0193-06-RWT-S11.dwg; XH-0193-06-RWT-S11.dwg; C:\Users\mmistovich\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwg, Plotted By: mmistovich, Plotted: Jun 15, 2023 – 7:16am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG







31 TYPICAL SECTION
SCALE 1/8"=1'-0"

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT
- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL
- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL
- 3-01 RETAINING WALL, SEE WP SHEETS
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

UTILITIES
- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGE

	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
	DECORATIVE PAVERS

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
CONSTRUCTION KEYNOTE PLANS

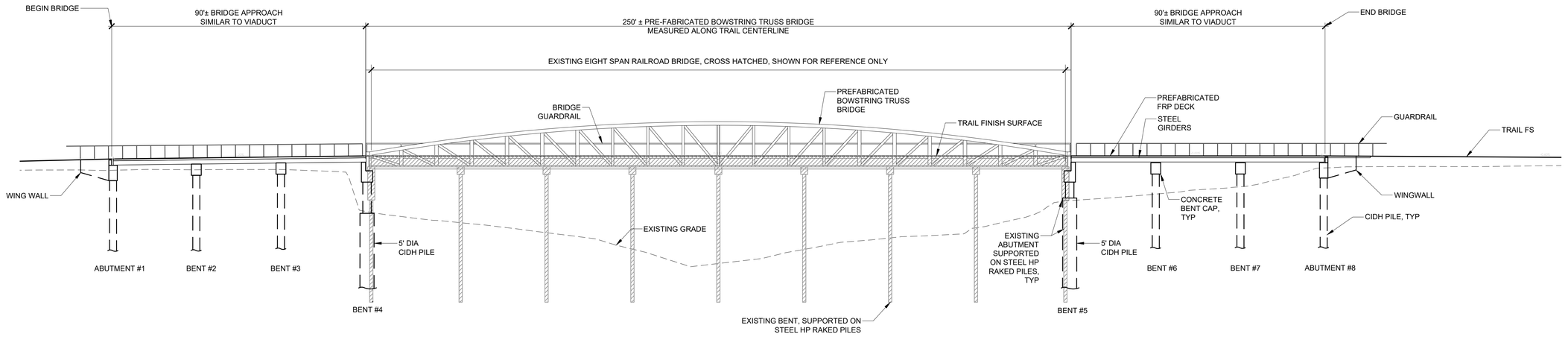
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.40
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.40, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, XH-0193-06-RWT-S11.dwg, SEC-0193-06-RWT-S11.dwg, XP-0193-06-RWT-S11.dwg
C:\Users\mmistovich\AppData\Local\Temp\AcPublish_20192\CP-0193-06-RWT-S11.dwt, Plotted By: mmistovich, Plotted: Jun 15, 2023 - 7:17am

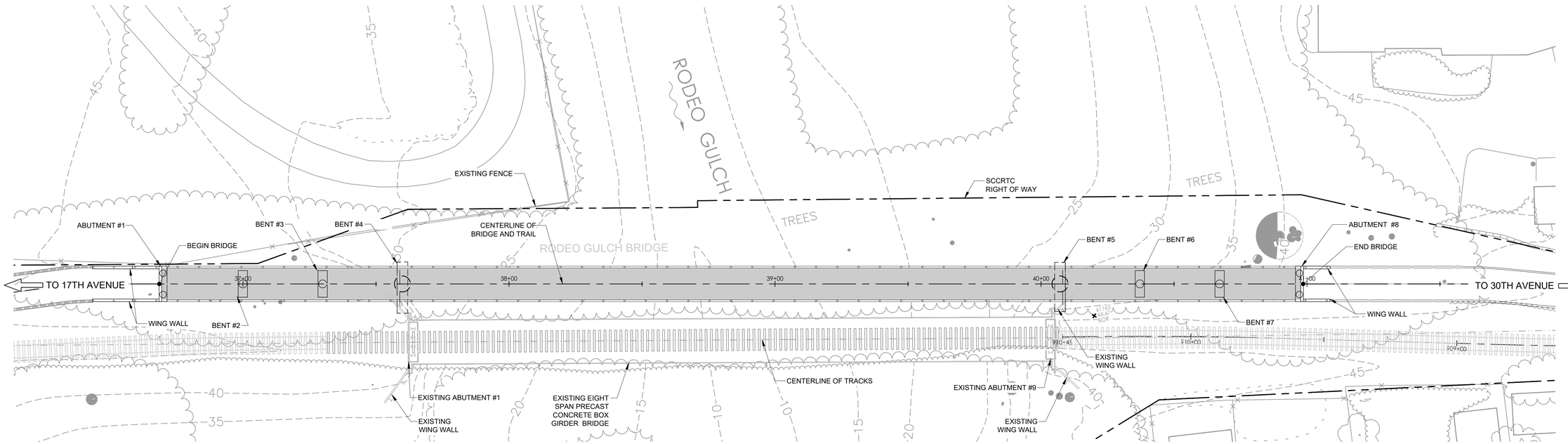


BRIDGE ELEVATION

SCALE: 1" = 20'

20' 0 10' 20' 40'

1" = 20'



BRIDGE PLAN

SCALE: 1" = 20'

20' 0 10' 20' 40'

1" = 20'

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

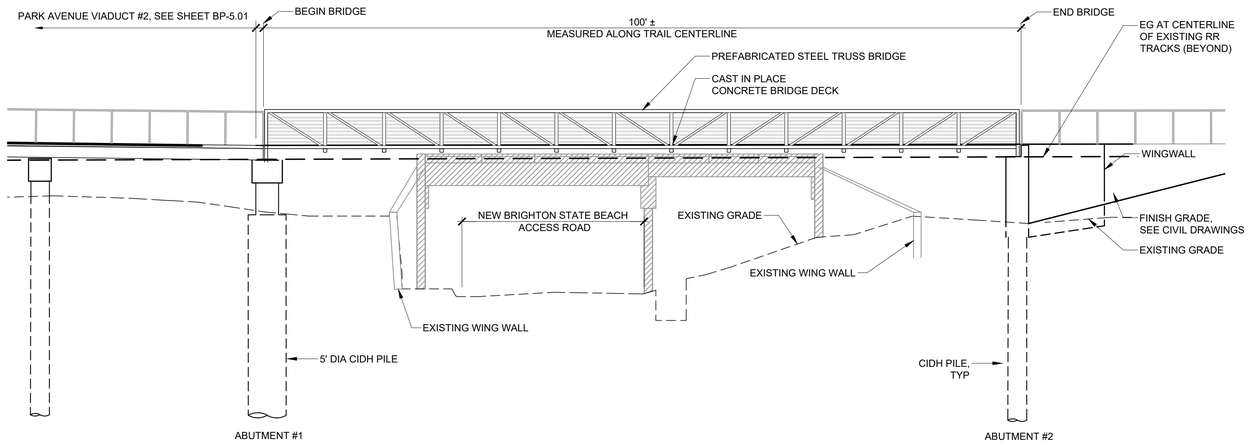
COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
MULTI-USE TRAIL
RODEO GULCH BRIDGE GENERAL PLAN SHEET

REFERENCES
FIELD BOOK:
DRAWING #:

DATE	02/10/2023
DRAWN	EDD
DESIGN	DH/PD
CHECKED	PD

SCALE AS SHOWN
BP-2.01
VAULT NO.

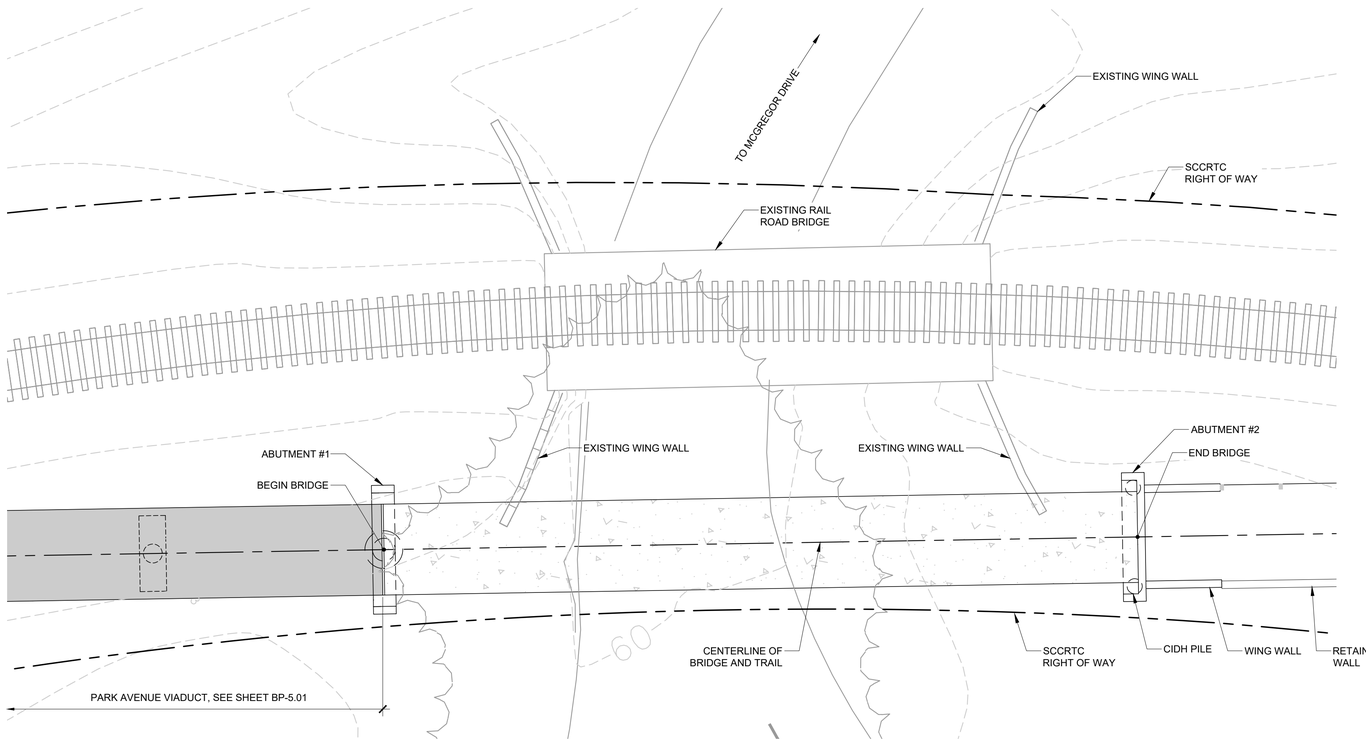


BRIDGE ELEVATION

SCALE: 1" = 10'

10' 0 5' 10' 20'

1" = 10'

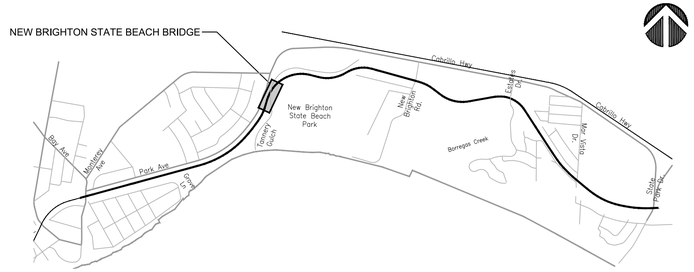


BRIDGE PLAN

SCALE: 1" = 10'

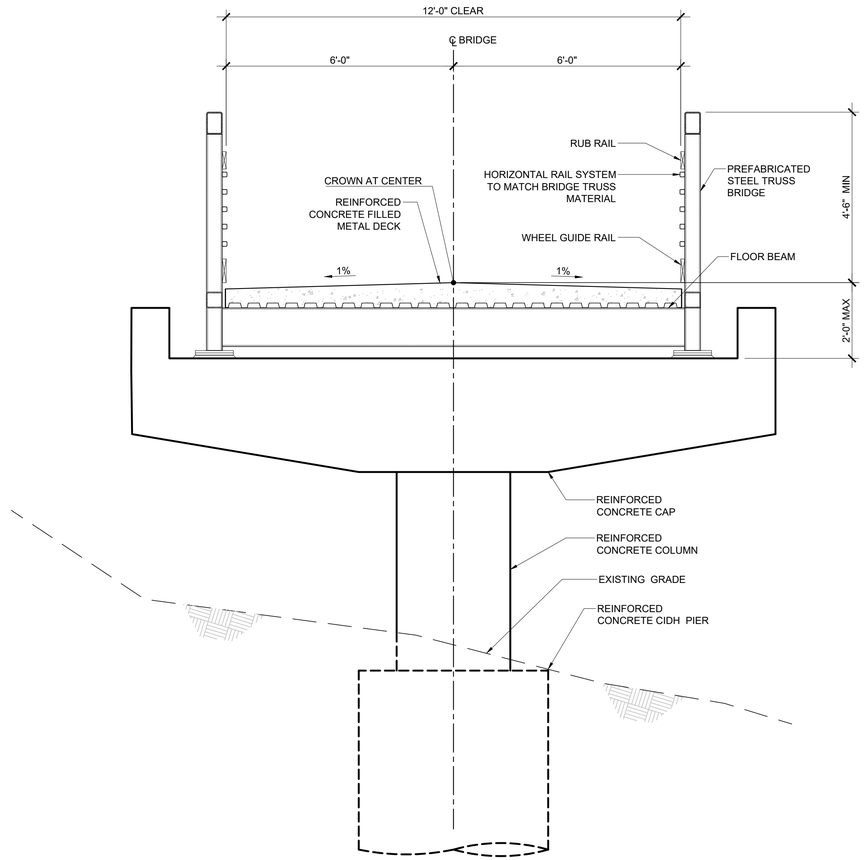
10' 0 5' 10' 20'

1" = 10'



STRUCTURAL KEY MAP - SEGMENT 11

SCALE: NTS



SECTION AT ABUTMENT #1

SCALE: 1/2" = 1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
MULTI-USE TRAIL
NEW BRIGHTON STATE BEACH BRIDGE GENERAL PLAN SHEET

REFERENCES
FIELD BOOK:
DRAWING #:

DATE	02/10/2023
DRAWN	GR
DESIGN	DH/PD
CHECKED	PD

SCALE AS SHOWN
BP-6.01
VAULT NO.

DIAGRAMMATIC WAYFINDING AND DIRECTIONAL SIGNAGE SHOWING APPROXIMATE LOCATIONS FOR REFERENCE



LEGEND

SYMBOL	DESCRIPTION
⊕	WAYFINDING/DIRECTION SIGNAGE LOCATION
	PROPOSED TRAIL
	EXISTING RAIL

NOT TO SCALE

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS	

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

WAYFINDING SIGNAGE SCHEMATIC

REFERENCES
FIELD BOOK:
DRAWING #:

DATE	02/10/2023	SCALE	NTS
DRAWN	MMS		WF-1.00
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

Layout Tab Name: WF-1.00, Images: Capitola Map.jpg, county-logo-black-transparent.png , Refs: XTB-0193-06-RWT.dwg
N:\2001\0193-06-RGDS-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 11\WF-0193-06-RWT-S11.dwg, Plotted By: kmazabalekis, Plotted: Mar 16, 2023 - 11:50am

DEPARTMENT OF PUBLIC WORKS

RAIL TRAIL SEGMENTS 10 - 11 TRAIL ON THE RAIL LINE (INTERIM TRAIL)

17th Avenue to State Park Drive

PROJECT DESCRIPTION

PICKING UP WHERE SEGMENT 9 TERMINATES, THE SEGMENTS 10 AND 11 PROJECT INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED GENERALLY ALONG THE SANTA CRUZ BRANCH RAILROAD CENTERLINE WITH THE REMOVAL OF EXISTING TRACKS AND TIES THROUGH THE PROCESS OF RAILBANKING FROM THE EAST SIDE OF THE 17TH AVENUE TO THE WEST SIDE OF STATE PARK DRIVE.

PROJECT DIRECTORY

OWNER
SANTA CRUZ COUNTY REGIONAL
TRANSPORTATION COMMISSION
CONTACT: GRACE BLAKESLEE PHONE: (831) 460-3200
RAIL CONTACT: TOMMY TRAVERS FAX: (831) 460-6178

LANDSCAPE ARCHITECT
RRM DESIGN GROUP
3765 SOUTH HIGUERA, SUITE 102 PHONE: (949) 361-7950
SAN LUIS OBISPO, CA 93401 FAX: (949) 361-7955
CONTACT: MIKE SHERROD

CIVIL ENGINEER
RRM DESIGN GROUP
325 DAVIS STREET PHONE: (510) 751-4910
SAN LEANDRO, CA 94577 FAX: (510) 686-4910
CONTACT: DARREN CHOY

ELECTRICAL ENGINEER
THOMA ELECTRIC
3562 EMPLEO ST. PHONE: (805) 543-3850
SAN LUIS OBISPO, CA
CONTACT: CHRIS PATCHIN

GEOTECHNICAL ENGINEER
PACIFIC CREST ENGINEERING
444 AIRPORT BLVD PHONE: (831) 722-9446
WATSONVILLE, CA 95076
CONTACT: CHRIS JOHNSON

STRUCTURAL ENGINEER
MESITI-MILLER ENGINEERING
224 WALNUT ST, SUITE B PHONE: (831) 426-3186
SANTA CRUZ, CA 95060
CONTACT: DALE HENDSBEE

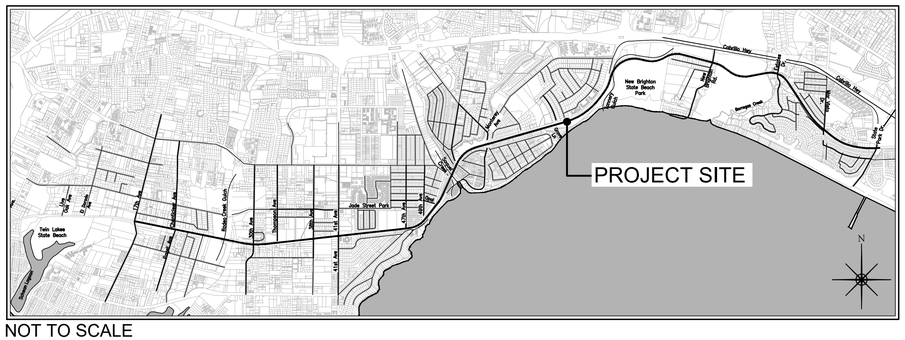
TRAFFIC ENGINEER
WHITLOCK & WEINBERGER (W-TRANS)
1276 LINCOLN AVE, SUITE 204 PHONE: (510) 444-2600
SAN JOSE, CA 9525
CONTACT: STEVE FITZSIMMONS

RAIL ENGINEER
ZEPHYR UAS/RAIL (ZUI)
725 W TOWN & COUNTRY RD, SUITE 550 PHONE: (714) 835-6355
ORANGE, CA 92868
CONTACT: ALFRED YALDA

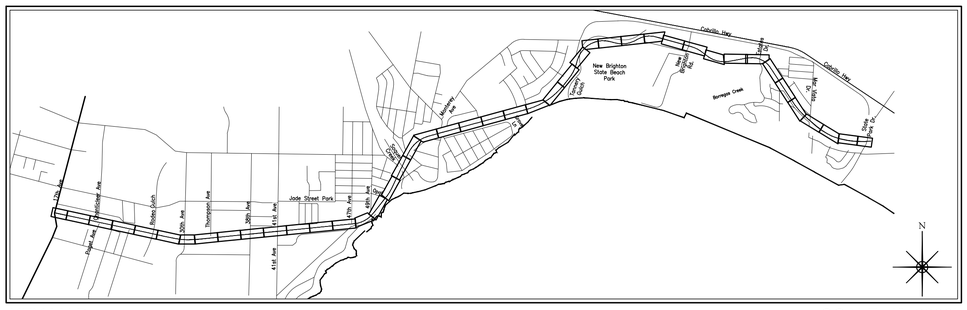
CLIENT
COUNTY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT
CONTACT: ROB TIDMORE
PHONE: (831) 454-2160
FAX: (831) 454-2385

SECONDARY CLIENT
CITY OF CAPITOLA
PUBLIC WORKS DEPARTMENT
CONTACT: KAILASH MOZUMDER
PHONE: (831) 475-7300

VICINITY MAP



NOT TO SCALE



KEY MAP SCALE: 1"=2000'

SHEET INDEX

TS-1.01	TITLE SHEET
DM-1.01-1.14	SEGMENT 10 DEMOLITION PLANS
DM-1.15-1.44	SEGMENT 11 DEMOLITION PLANS
CP-1.01-1.14	SEGMENT 10 CONSTRUCTION KEYNOTE PLANS
CP-1.15-1.44	SEGMENT 11 CONSTRUCTION KEYNOTE PLANS
BP-1.01	RODEO GULCH BRIDGE PLAN
BD-1.01	RODEO GULCH BRIDGE DETAILS
BP-2.01	CAPITOLA TRESTLE BRIDGE PLAN
BD-2.01	CAPITOLA TRESTLE BRIDGE DETAILS
BP-3.01	NEW BRIGHTON STATE BEACH BRIDGE PLAN
BD-3.01	NEW BRIGHTON STATE BEACH DETAILS
WD-1.01-1.02	RETAINING WALL DETAIL SHEETS

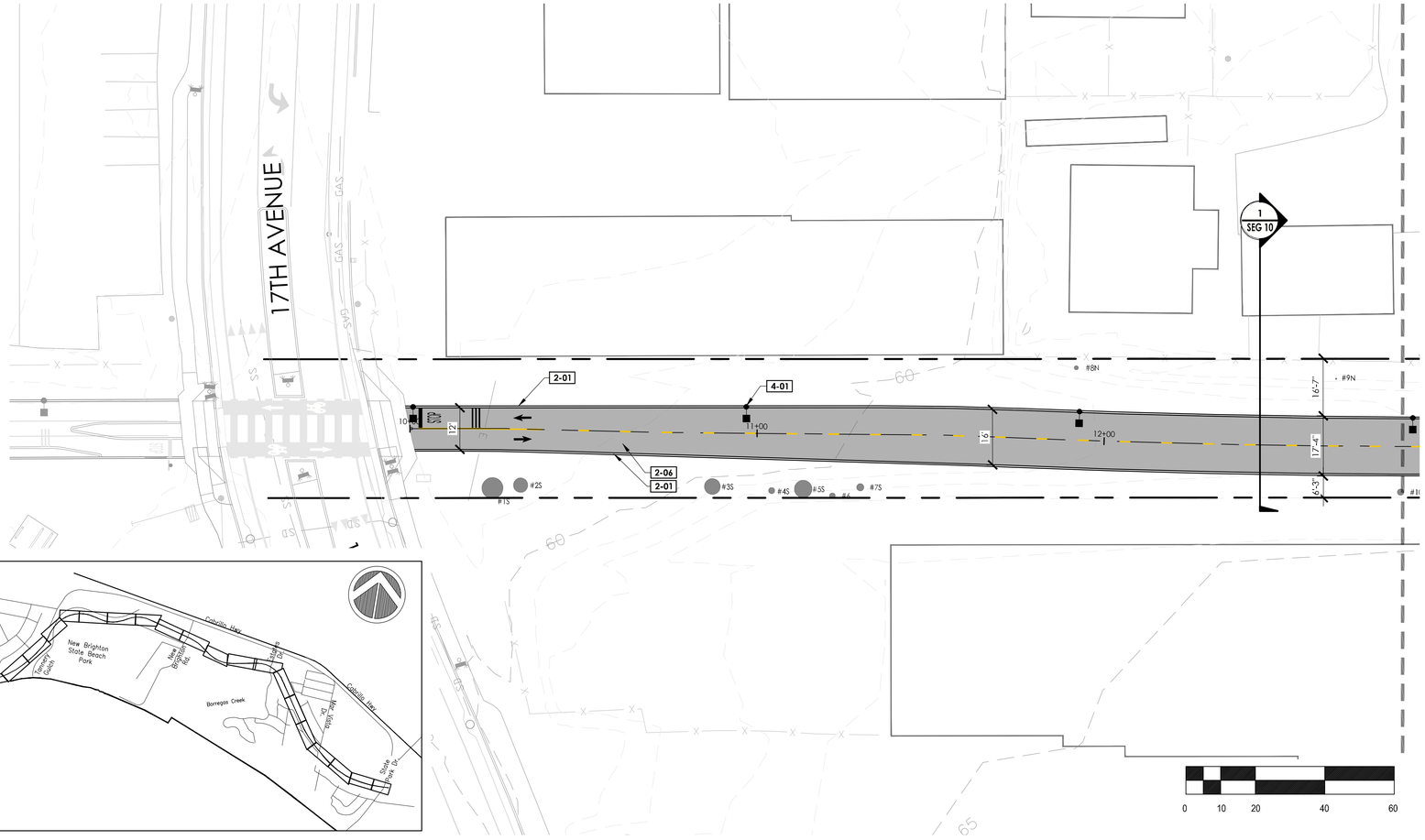
REFINED SCHEMATIC DESIGN SUBMITTAL

FEDERAL PROJECT NO.: ATPL-5936 (154)
STATE PROJECT NO.: 05-2300-0030
COUNTY PROJECT NO.:

REFERENCES	DATE	06/15/23	SCALE AS SHOWN
FIELD BOOK:	DRAWN	KS/EK/MMS	TS-1.01
DRAWING #:	DESIGN	KS/EK/MMS	VAULT NO.
	CHECKED	MS/KS	

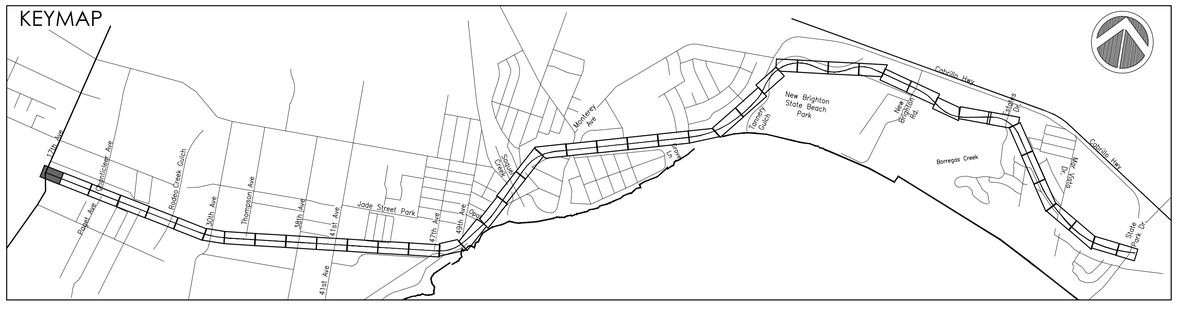
Users/kyle.sanchez/Desktop/Segment 10-11 Trail/Segment 10-11 Trail_Title Sheet.dwg, Plotted By: mmeeks, Plotted: Jun 15, 2023 - 7:00am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



MATCHLINE, SEE SHEET CP-1.02

KEYMAP

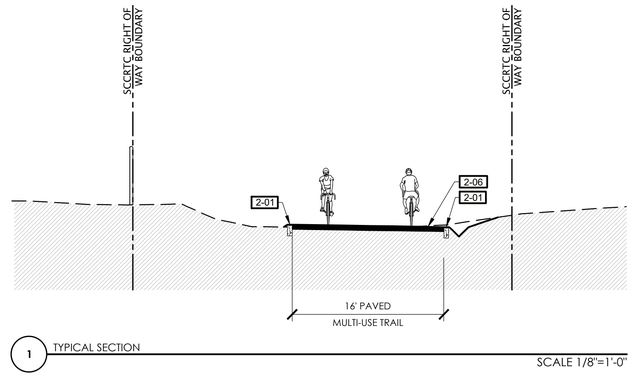


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



1 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.01
VAULT NO.	

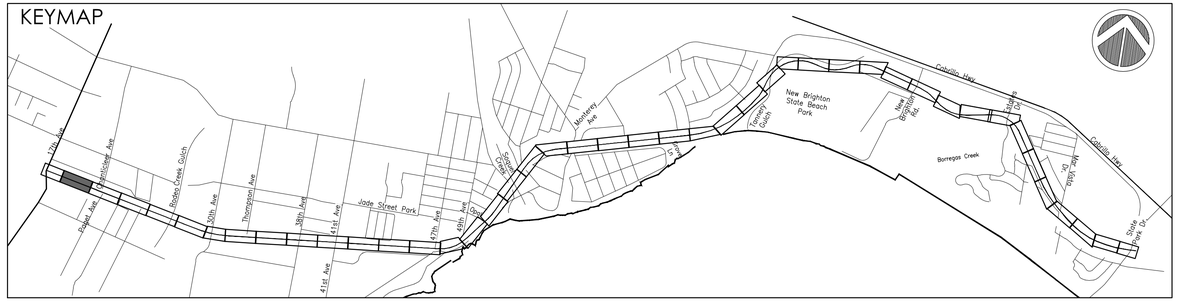
Layout Tab Name: CP-1.01, Images: county-logo-black-transparent.png; Xrefs: KEYMAP-0193-06-RCD2D.dwg, PTR-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XSR-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, ESC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, N:\2000\0193-06-RCD2-Santa Cruz Rail Trail-Seg-10-11\Wallace + ash ltd\Landscape-Architecture\Task-B-Schematic Design\Sheet Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSzydelski, Plotted: Feb 11, 2023 - 10:43am

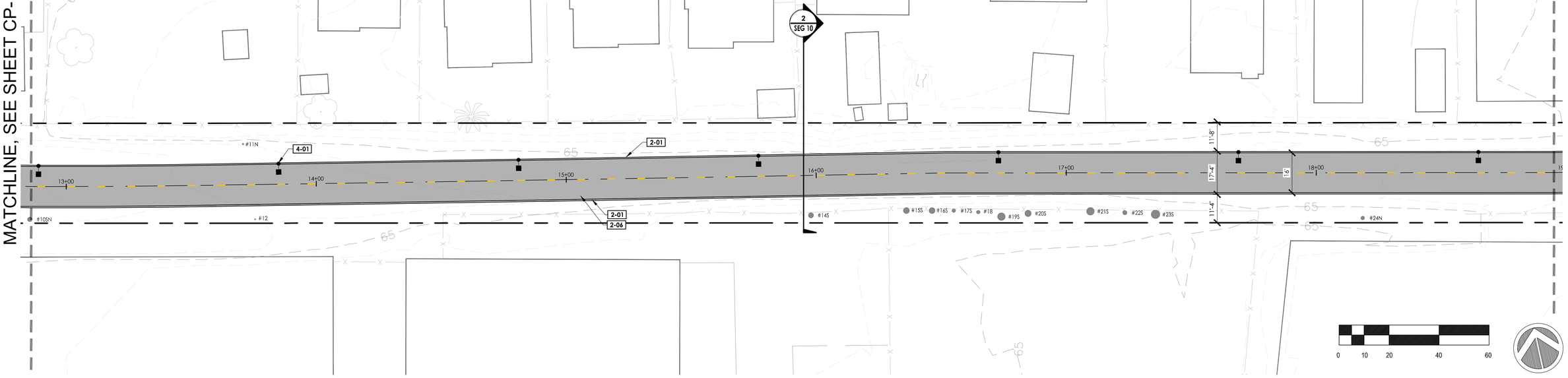
MATCHLINE, SEE SHEET CP-1.01

MATCHLINE, SEE SHEET CP-1.03

CISCO LANE

KEYMAP



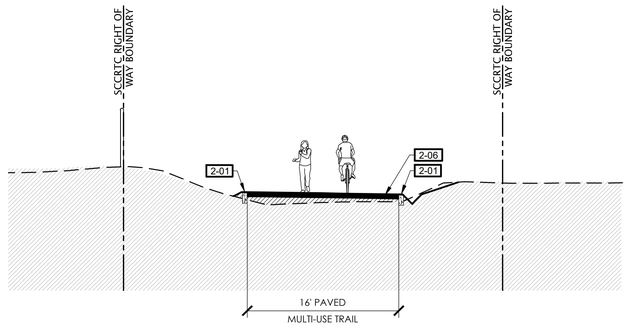


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



2 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

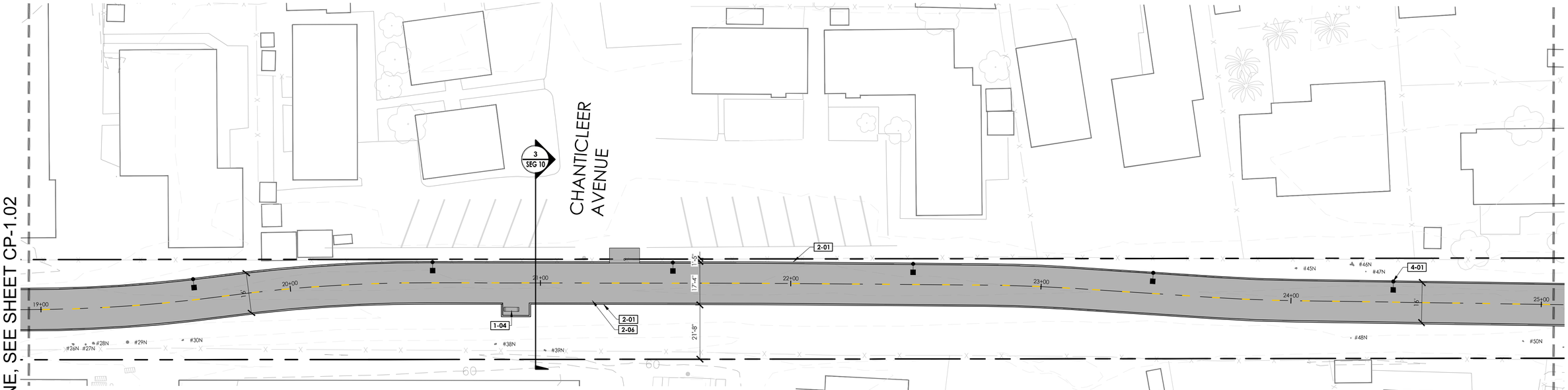
DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.02
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: Name: CP-1.02 Images: county-logo-black-transparent.png; ...\Info: KEYMAP-0193-06-RBT-S10.dwg; XTR-0193-06-RBT.dwg; XC-0193-06-RBT-S10.dwg; XR-0193-06-RBT-S10.dwg; XT-0193-06-RBT-S10.dwg; SEC-0193-06-RBT-S10.dwg; XC-0193-06-RBT-S10.dwg; XR-0193-06-RBT-S10.dwg; N:\000\10193-06-RBT-S10-Santa Cruz Rail Trail\Dwg\10-11\Xrefs\xrk with Trail\Landscape-Architecture\Task-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMDujakovic, Plotted: Feb 11, 2023 - 10:44am

MATCHLINE, SEE SHEET CP-1.02



MATCHLINE, SEE SHEET CP-1.04



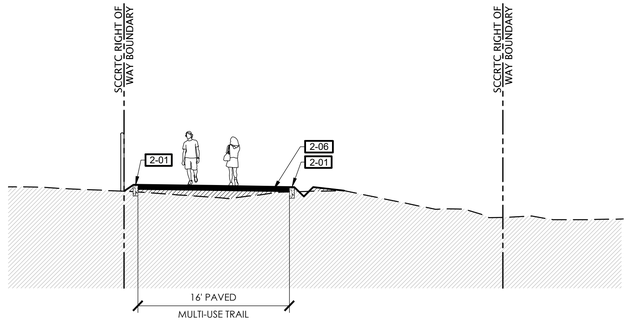


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



3 TYPICAL SECTION

SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

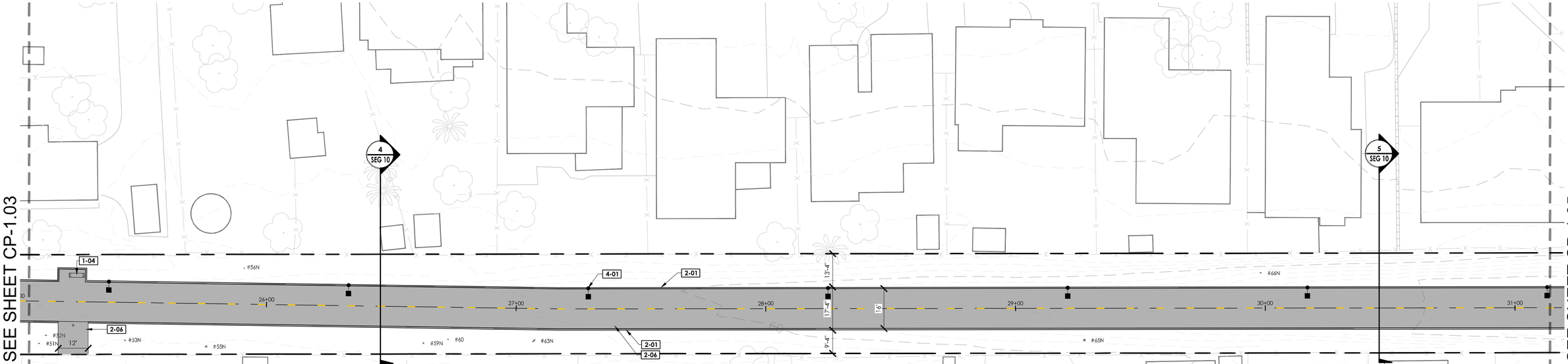
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.03
VAULT NO.	

Layout Tab Name: CP-1.03, Images: exerby-Hwy-block-transparent.png; , Xrefs: KEYMAP-0193-06-RCFD.dwg, XTR-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XSH-0193-06-RBT-S10.dwg, XP-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XV-0193-06-RBT-S10.dwg, N:\000\10\93-06-RCFD-Santa Cruz-Rail Trail-Seg 10-11\Wallbook with Trail\Landscape-Architecture\Task-B-Schematic Design\Sheet Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSiudeikis, Plotted: Feb 11, 2023 - 10:44am

MATCHLINE, SEE SHEET CP-1.03



MATCHLINE, SEE SHEET CP-1.05

KEYMAP

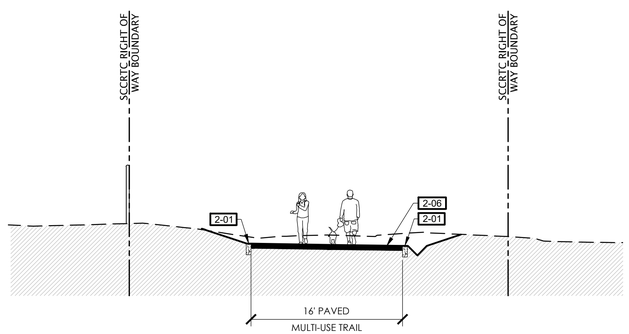


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

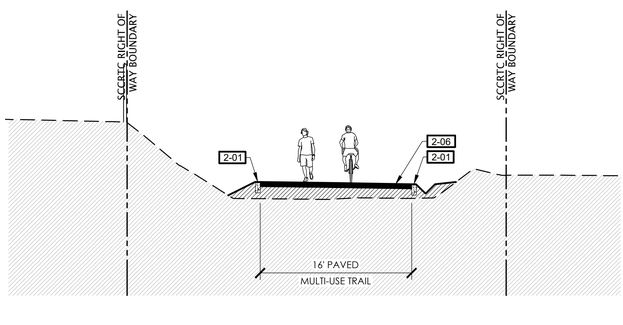
LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



4 TYPICAL SECTION

SCALE 1/8"=1'-0"



5 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
COUNTY OF SANTACRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

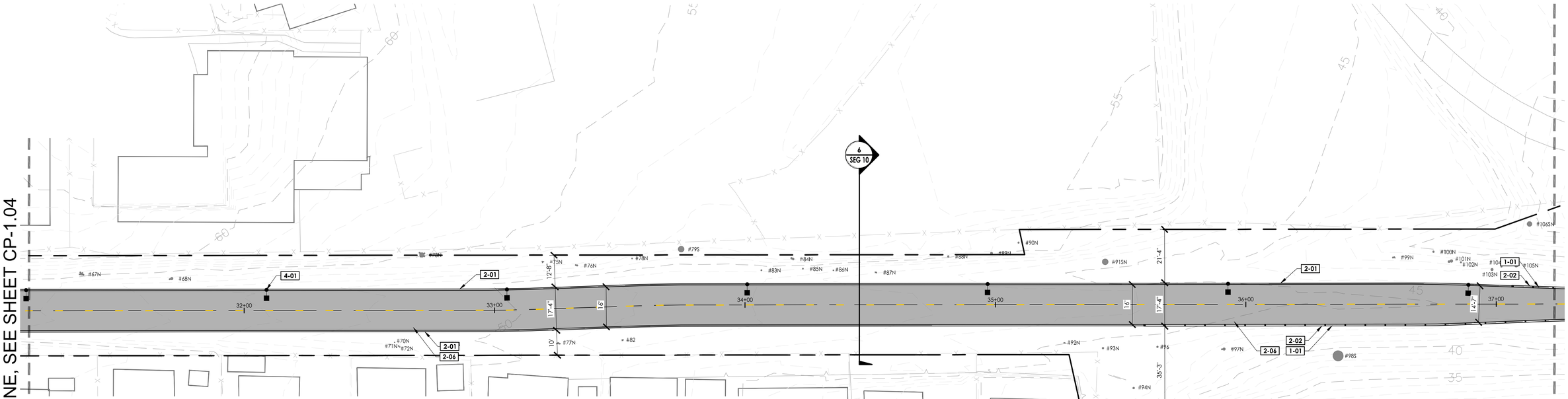
DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.04
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout File Name: CP-1.04_Images_county-logo-black-transparent.png Xrefs: I:\DWGs\CP-0193-06-RPOD.dwg, XTR-0193-06-RBT.dwg, XC-0193-06-RBT-510.dwg, XSB-0193-06-RBT-510.dwg, XT-0193-06-RBT-510.dwg, SEC-0193-06-RBT-510.dwg, XH-0193-06-RBT-510.dwg, XC-0193-06-RBT-510.dwg, N:\2001\0193-06-RCSD-Santa Cruz-Rail\Trails-Segs 10-11\Workspace with Trail\Landscape-Architecture\Trail-Rt-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMDziadek, Plotted: Feb 11, 2023 - 10:45am

MATCHLINE, SEE SHEET CP-1.04

MATCHLINE, SEE SHEET CP-1.06



KEYMAP



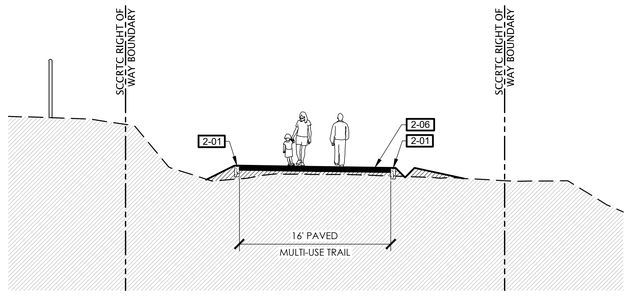
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



6 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

CP-1.05

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: 'Name': CP-1.05, Images: county-logo-black-transparent.png; , Xrefs: KEYMAP-0193-06-RBT20.dwg, XTR-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XSA-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SSC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XS-0193-06-RBT-S10.dwg
N:\000\10\193-06-RBT20-Santa Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Landscape-Architecture\Task-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSiadimas, Plotted: Feb 11, 2023 - 10:46am

MATCHLINE, SEE SHEET CP-1.05

RODEO GULCH

RODEO GULCH BRIDGE

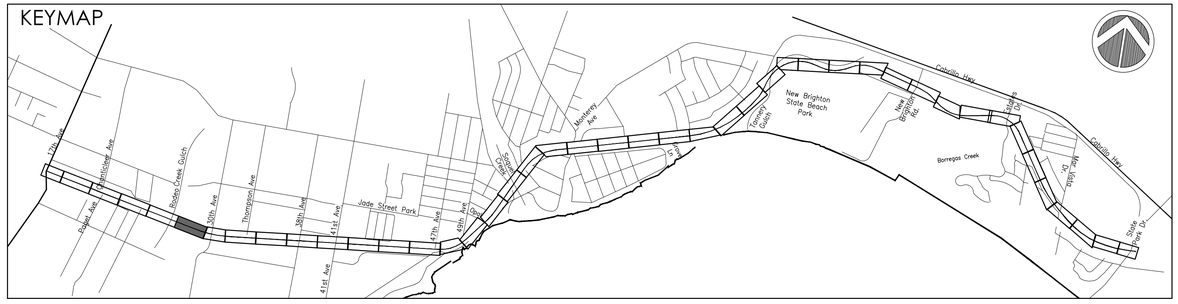
SEE BP-2.01 FOR BRIDGE PLANS

MATCHLINE, SEE SHEET CP-1.07

7
SEG 10

0 10 20 40 60

KEYMAP

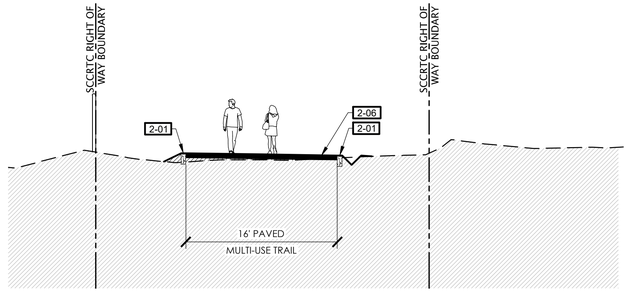


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



7 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

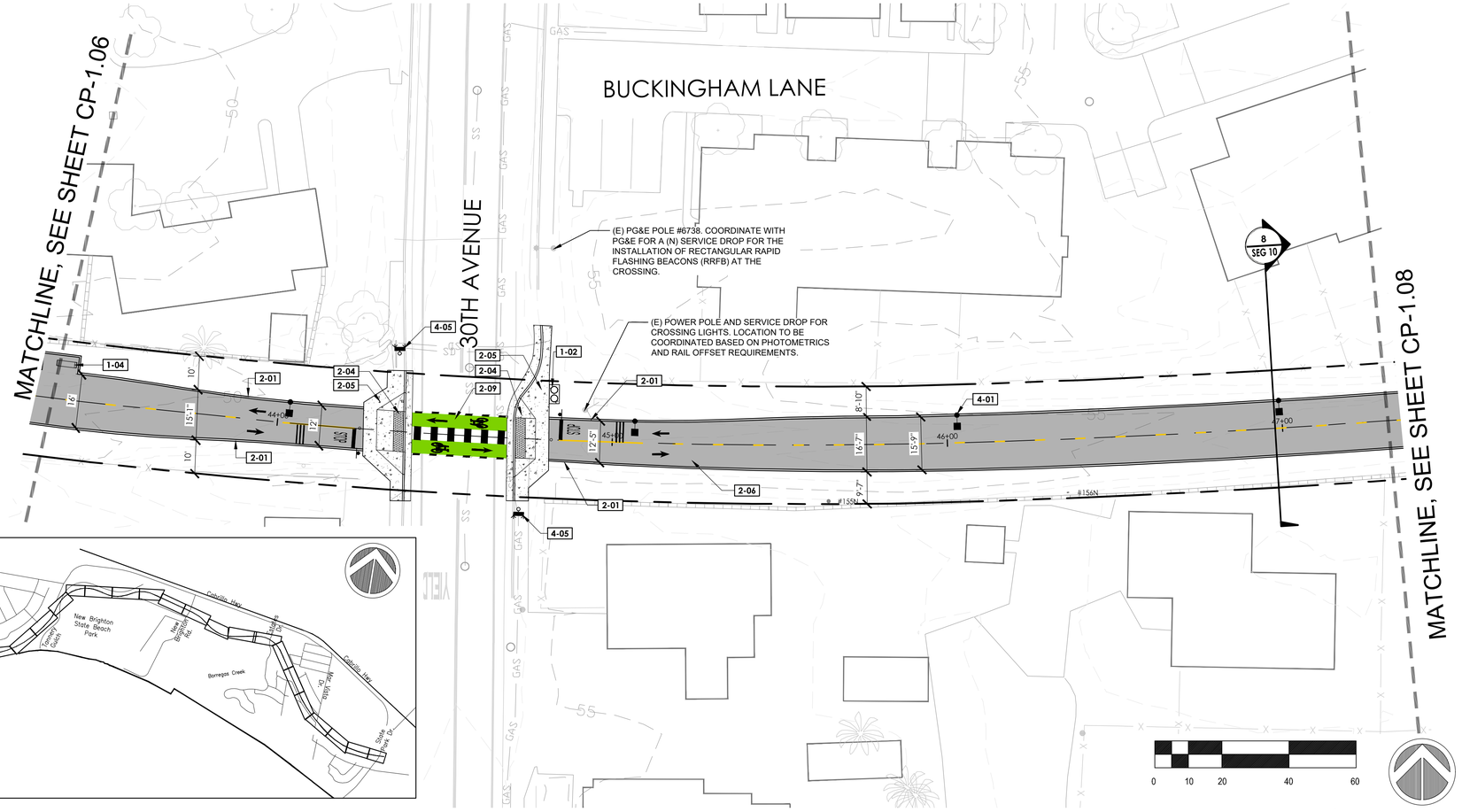
REFERENCES
FIELD BOOK:

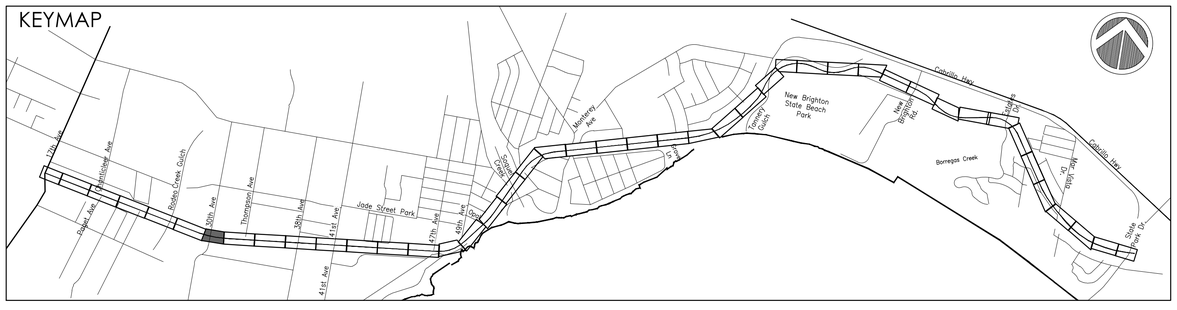
DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.06
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.06, Images: county-logo-black-transparent.png; ; Prefix: K:\DWG\CP-0193-06-RBT-S10.dwg, XR-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XTB-0193-06-RBT-S10.dwg, XSB-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, N:\000\10193-06-AC20-Santa Cruz Rail-Trail\Dgn 10-11\Rollback with Trail\Landscape-Architecture\State-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMDujakovic, Plotted: Feb 11, 2023 - 10:46am



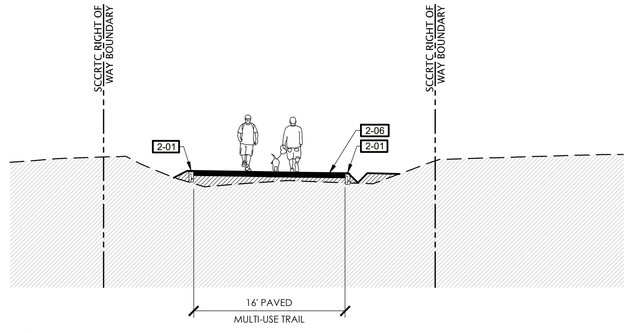


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



8 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

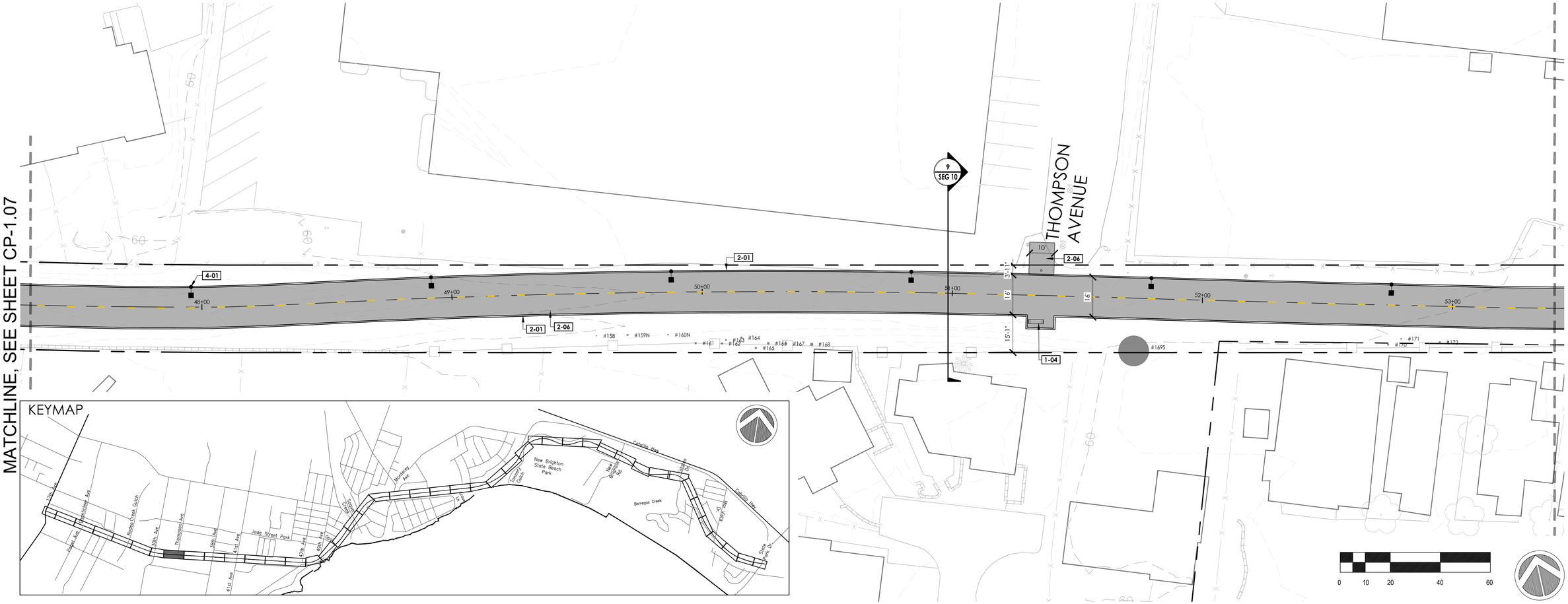
DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.07
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.07, Images: county-logo-black-transparent.png; , Xrefs: KEYMAP-0193-06-RCD20.dwg, XTR-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XSH-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XV-0193-06-RBT-S10.dwg, N:\2001\0193-06-RCD20-Santa Cruz-Rail Trail-Segment 10-11\Drawings\Architecture\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSiudzinski, Plotted: Feb 11, 2023 - 10:47pm

MATCHLINE, SEE SHEET CP-1.07



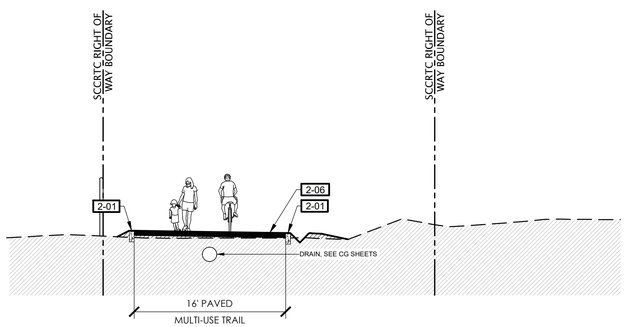
MATCHLINE, SEE SHEET CP-1.09

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



9 TYPICAL SECTION

SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.08
VAULT NO.	

Layout Tab Name: CP-1.08 Images: county-logo-black-transparent.png Xrefs: 6DWG#-0193-06-RCSD.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XSB-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XC-0001(193)-06-RCSD-Santa Cruz-Rail-Trail-Seg-10-11\Landscape - with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: MMSzabelski, Plotted: Feb 11, 2023 - 10:47am

MATCHLINE, SEE SHEET CP-1.08

MATCHLINE, SEE SHEET CP-1.10



KEYMAP

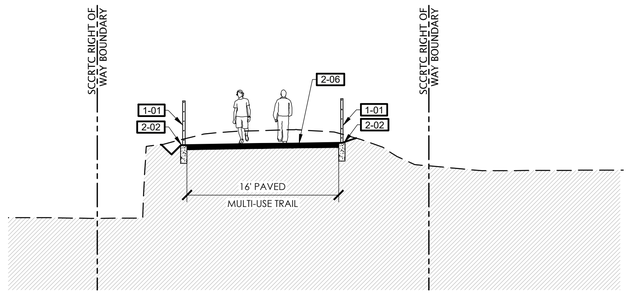


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



10 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

CP-1.09

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: 'Name': CP-1.09, Images: county-logo-black-transparent.png , Xrefs: KEYMAP-0193-06-RDS20.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XSA-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SSC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XG-0193-06-RBT-S10.dwg, SSC-0193-06-RBT-S10.dwg, N:\000\10\193-06-RDS20-Santa Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Landscape-Architecture\Stair-B-Schematic Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSiadimas, Plotted: Feb 11, 2023 - 10:48am

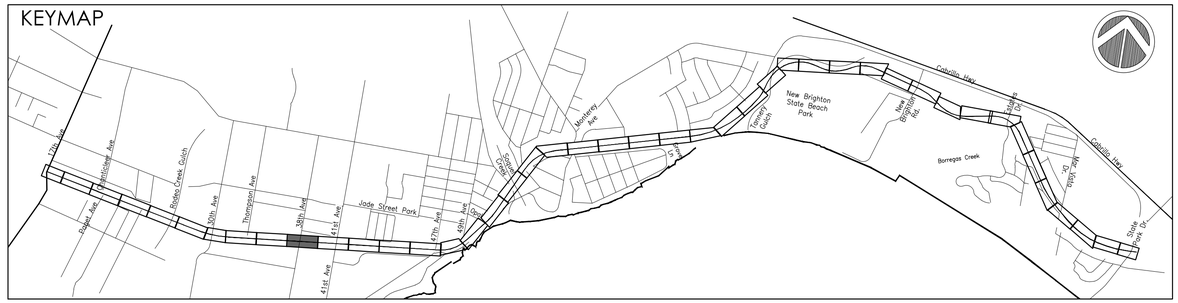
MATCHLINE, SEE SHEET CP-1.09

MATCHLINE, SEE SHEET CP-1.11

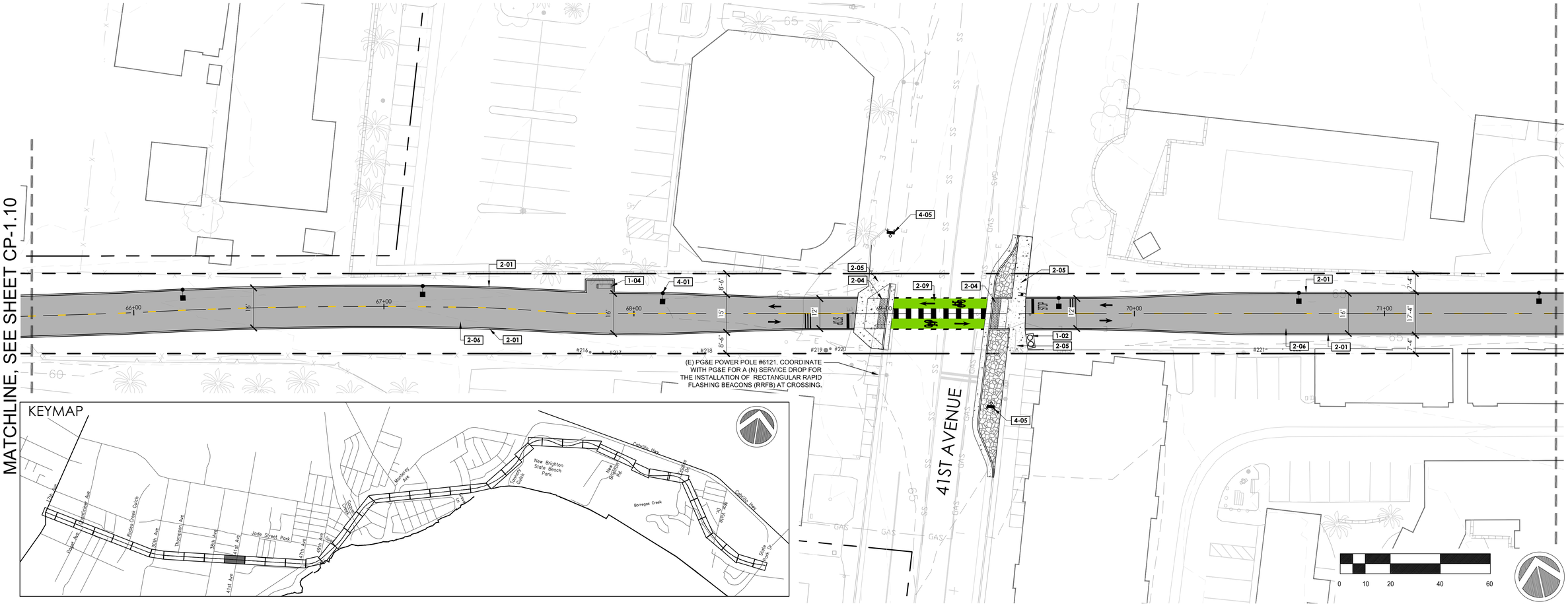
(E) PG&E POWER POLE AT 38th AND MELTON ST. COORDINATE WITH PG&E FOR A (N) SERVICE DROP FOR THE INSTALLATION OF RECTANGULAR RAPID FLASHING BEACONS (RRFB) AT CROSSING.

38TH AVENUE

KEYMAP


Cliff Dr.
Rio Del Mar Blvd.
Aptos Creek Rd.
Soquel Dr.
Bonita Dr.
Rio Del Mar
Aptos Creek
Polo Dr.
Trout Gulch R

MATCHLINE, SEE SHEET CP-1.10



MATCHLINE, SEE SHEET CP-1.12

KEYMAP

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

CP-1.11

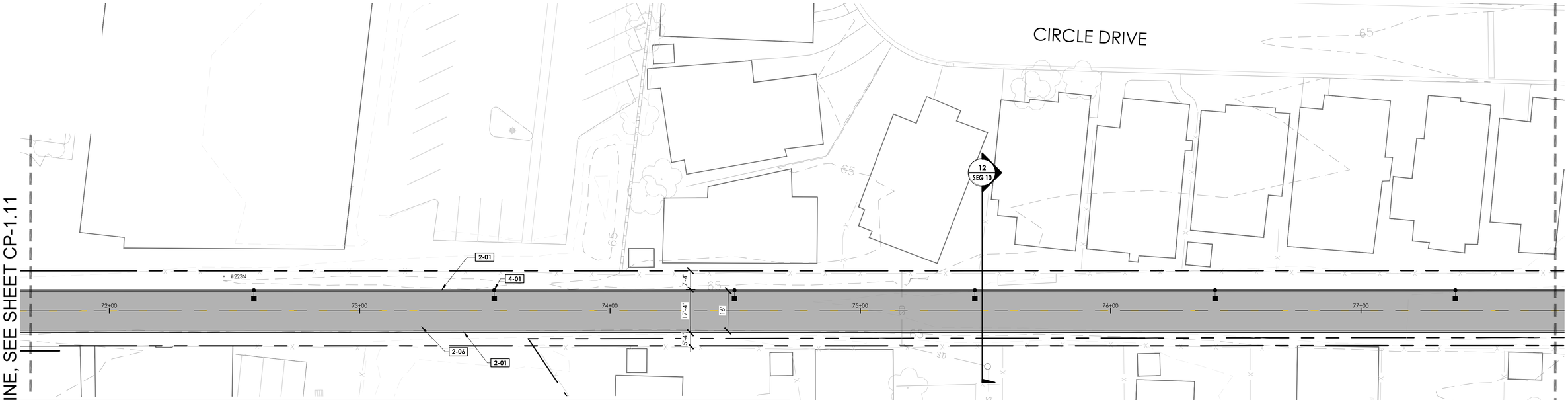
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.11; Images: north-loop-black-transparent.png; ; Prefix: K:\RMA\P-0193-06-RCP\Dwg; XTB-0193-06-RBT.dwg; XC-0193-06-RBT-S10.dwg; XSB-0193-06-RBT-S10.dwg; XT-0193-06-RBT-S10.dwg; SEC-0193-06-RBT-S10.dwg; XH-0193-06-RBT-S10.dwg; XN:\000\10\193-06-RCP\S-Santa Cruz Rail-Trail-Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMDjukelic, Plotted: Feb 11, 2023 - 10:48am

MATCHLINE, SEE SHEET CP-1.11

CIRCLE DRIVE



MATCHLINE, SEE SHEET CP-1.13

KEYMAP

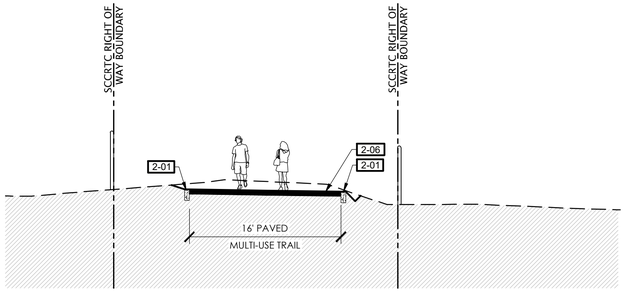


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



12 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

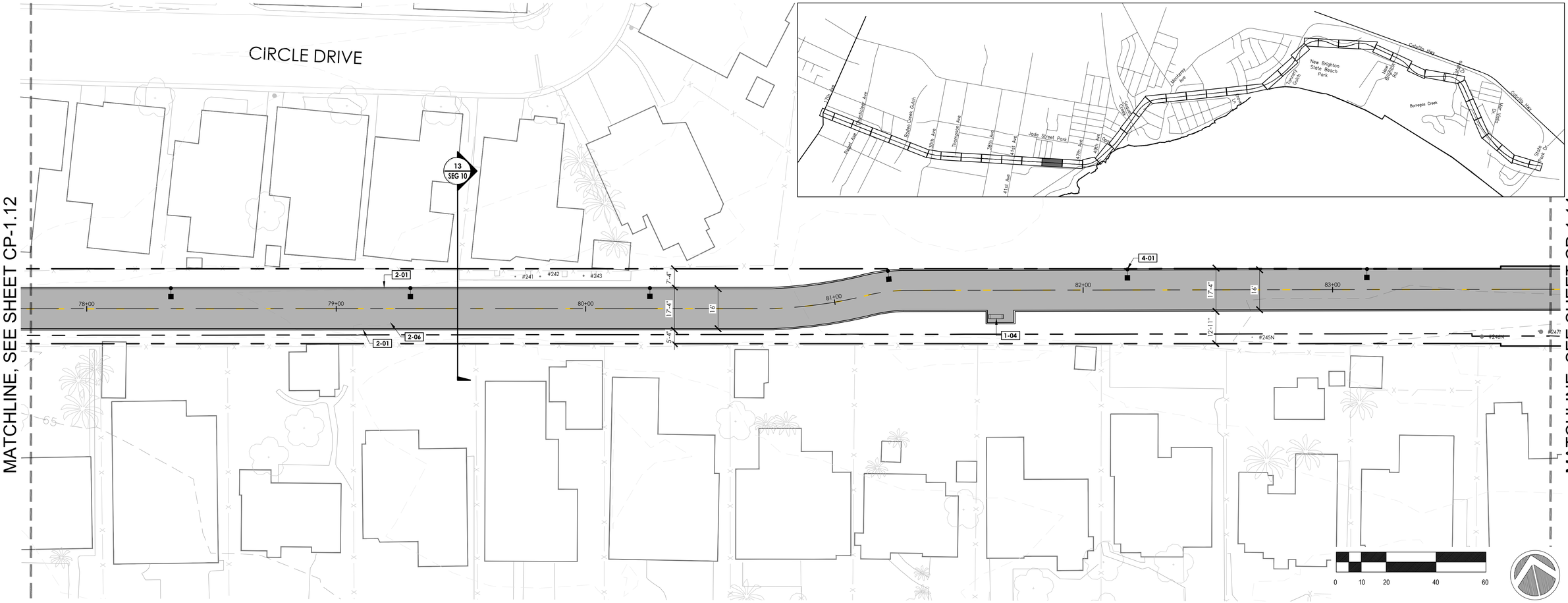
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	MMS		CP-1.12
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.12, Keymap: exerby-Keys-Maps-Keymapped.png , Prefix KEYMAP-0193-06-RBT20.dwg, XTR-0193-06-RBT-S10.dwg, XR-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XSH-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SSC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XV-0193-06-RBT-S10.dwg, N:\DOT\0193-06-RCTP-Santa Cruz-Rail Trail-Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSiudeikis, Plotted: Feb 11, 2023 - 10:49am

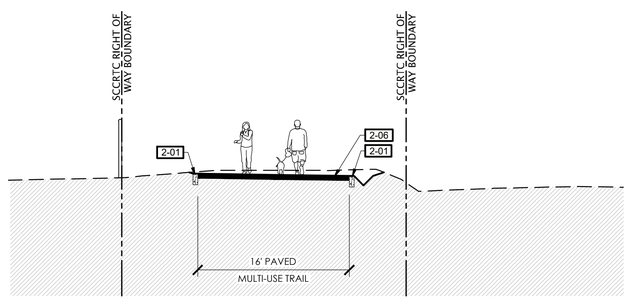


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



13 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	MMS		CP-1.13
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.13, Images: county-logo-black-transparent.png , Xrefs: KEYMAP-0193-06-RBTD.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XSB-0193-06-RBT-S10.dwg, XP-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-N:\2000\10185-06-RCDS-Santa Cruz Rail-Trail-Seg-10-11\Windows with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: MMSubakkali, Plotted: Feb 11, 2023 - 10:49am

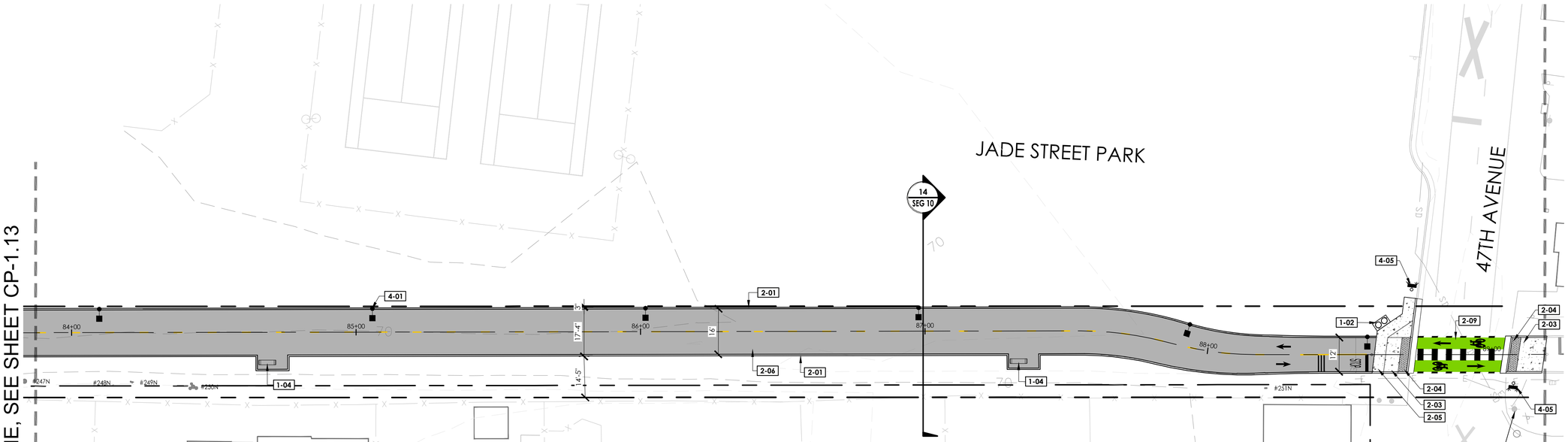
MATCHLINE, SEE SHEET CP-1.13

JADE STREET PARK

14
SEG 10

47TH AVENUE

END OF SEGMENT 10
MATCHLINE, SEE SHEET CP-1.15



KEYMAP



(E) PG&E POWER POLE AT CORNER OF PORTOLA DR. AND 47th AVE. COORDINATE INSTALLATION OF (N) POLE AND LIGHT FIXTURE FOR RAILTRAIL PATHWAY CROSSING AT THIS LOCATION.

PORTOLA DRIVE

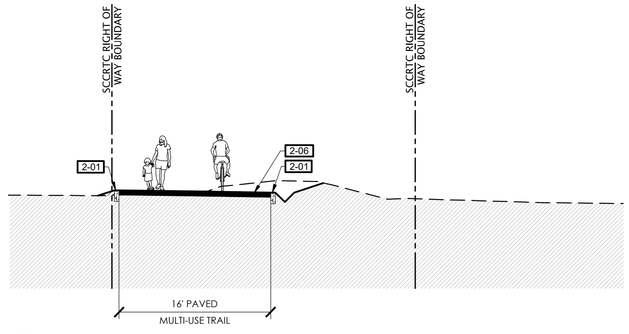
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
UTILITIES	
4-01	PROPOSED LIGHT
4-05	LED RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



14 TYPICAL SECTION

SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.14
VAULT NO.	

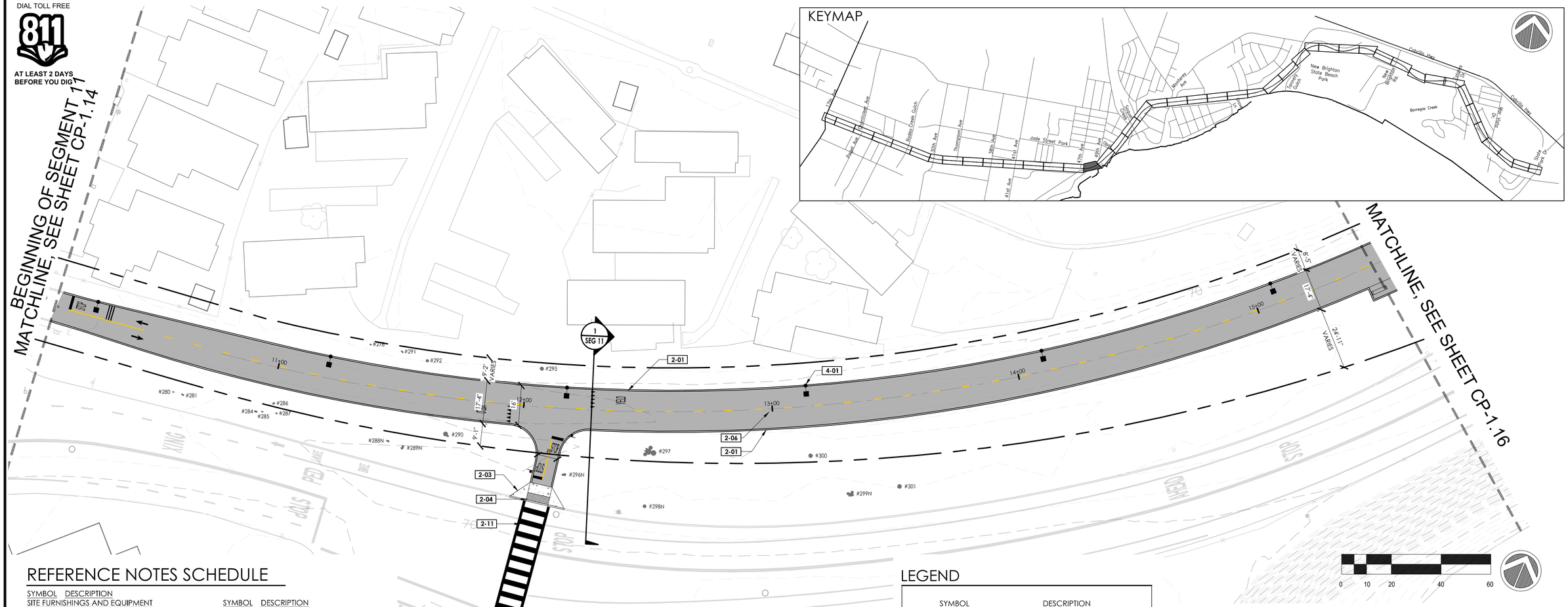
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.14, Images: martin-stein-black-transparent.png; , Prefix: XDWG# 0193-06-RD20.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT.dwg, XSH-0193-06-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, N:\000\10\193-06-RD20-Santa Cruz-Rail-Trail-Seg-10-11\Rollback with Trail\Landscape-Architecture\Trail-B-Scheme\6c Design\Sheet-Files\Segment 10\CP-0193-06-RBT-S10.dwg, Plotted By: KMSojubeiki, Plotted: Feb 11, 2023 - 10:50am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

BEGINNING OF SEGMENT 11
MATCHLINE, SEE SHEET CP-1.14

MATCHLINE, SEE SHEET CP-1.16

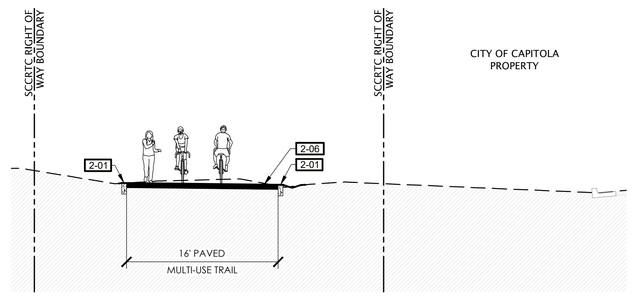


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



1 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

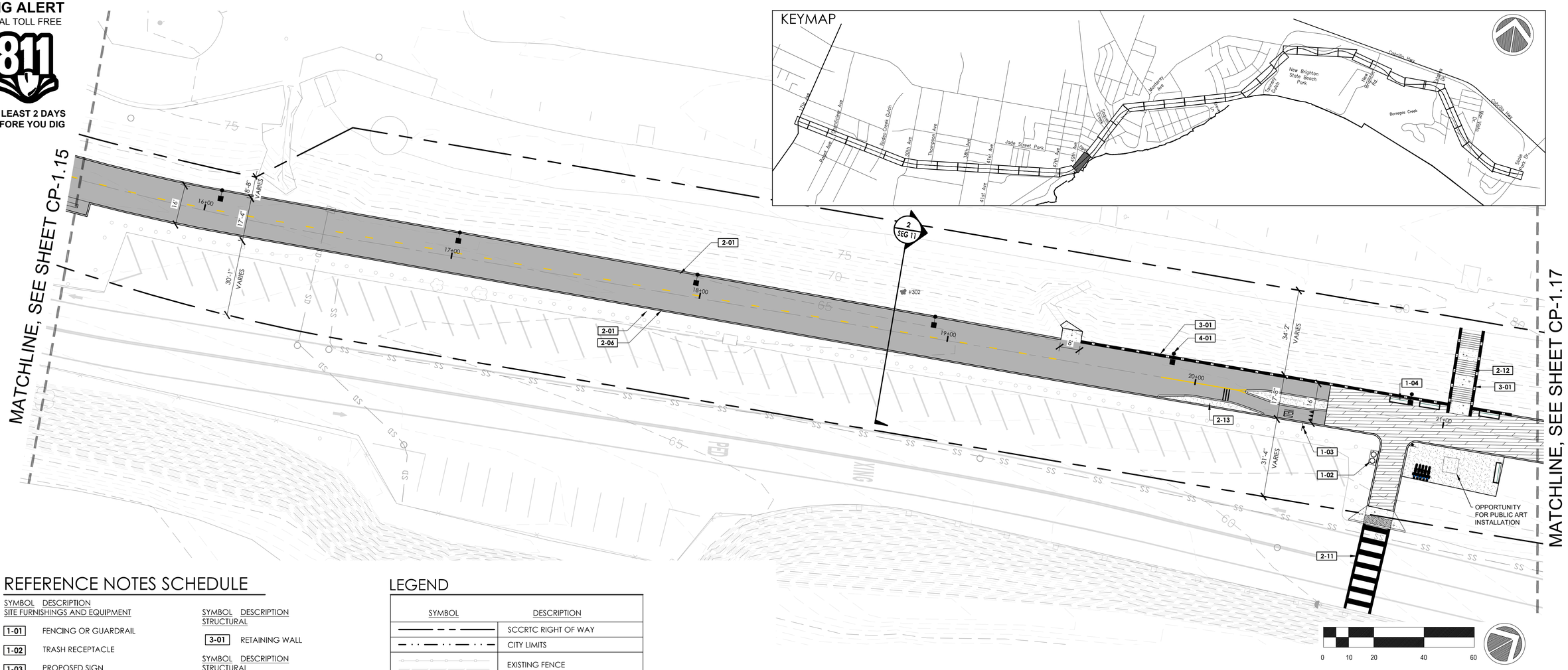
DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.15
VAULT NO.

Layout Tab Name: CP-1.15, Images: county-logo-black-transparent.png, 07397-mid.jpg, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, XDWN-0193-06-RDS.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RDS-S11.dwg, N:\2000\0193-06-RDS\Santa Cruz-Rail Trail-Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMSubotkoski, Plotted: Feb 11, 2023 - 10:04pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.15



MATCHLINE, SEE SHEET CP-1.17

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

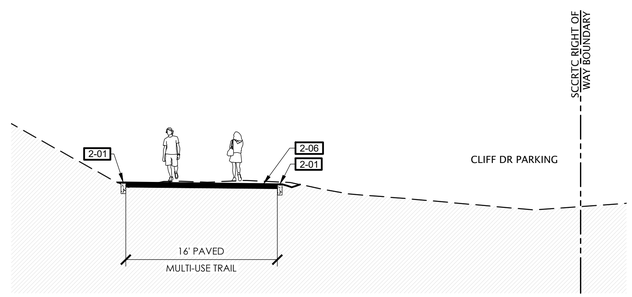
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



2 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.16
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.16, Images: county-logo-black-transparent.png; 07567-mid.dgn ; Xrefs: XTB-0193-06-RBT.dwg, XSA-0193-06-RBT-S11.dwg, XSTAMP-0193-06-RBDG.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\000\0193-06-RDDG-Santa Cruz Rail Trail-Seg 10-11\Bidbook with Trail\Landscape Architecture\Sec B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDoubleA, Plotted: Feb 11, 2023 - 10:04am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.16

MATCHLINE, SEE SHEET CP-1.18

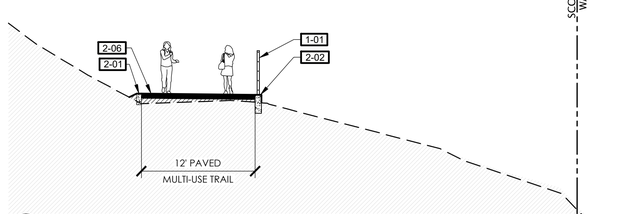


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



3 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	MMS		CP-1.17
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

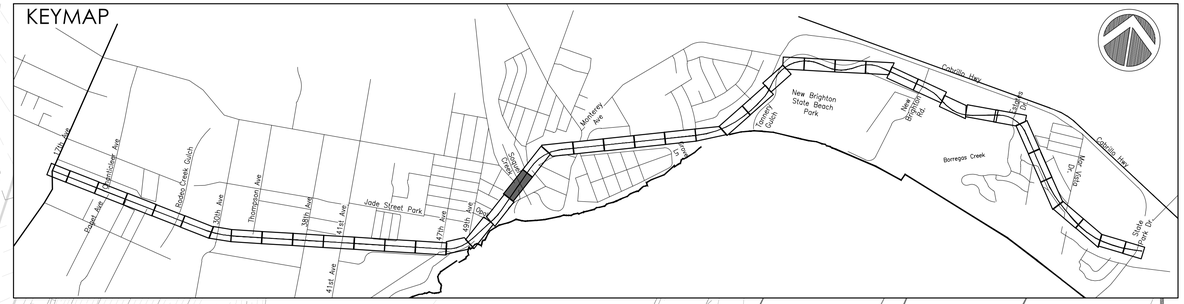
Layout Tab Name: CP-1.17 | Images: county-logo-black-transparent.png - 07097-mid.dgn - Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBTA.dgn, Pln-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11-Segment 11.dwg, XC-0193-06-RBT-S11-Segment 10.dwg, XC-0193-06-RBT-S11-Segment 9.dwg, XC-0193-06-RBT-S11-Segment 8.dwg, XC-0193-06-RBT-S11-Segment 7.dwg, XC-0193-06-RBT-S11-Segment 6.dwg, XC-0193-06-RBT-S11-Segment 5.dwg, XC-0193-06-RBT-S11-Segment 4.dwg, XC-0193-06-RBT-S11-Segment 3.dwg, XC-0193-06-RBT-S11-Segment 2.dwg, XC-0193-06-RBT-S11-Segment 1.dwg, SEC-0193-06-RBT-S11.dwg

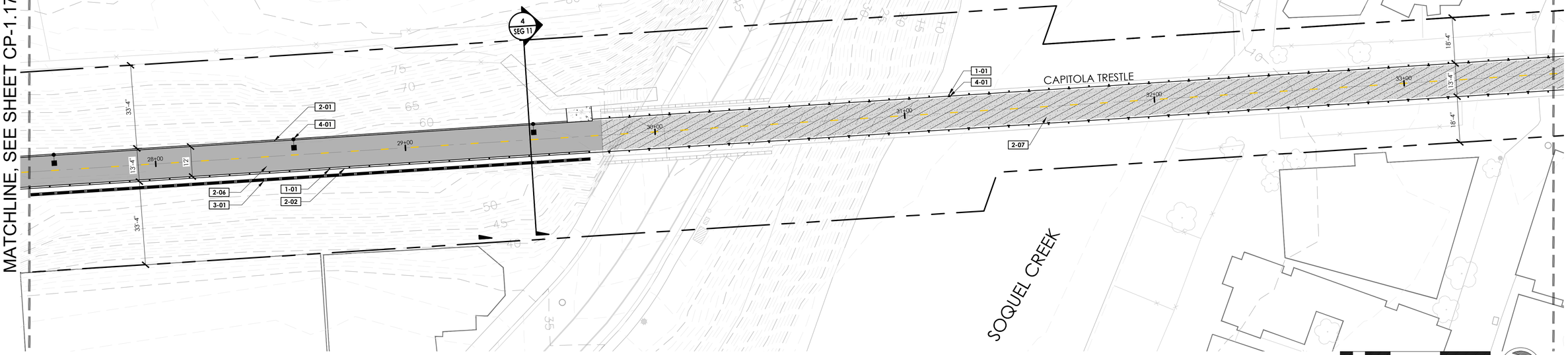
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.17

MATCHLINE, SEE SHEET CP-1.19

KEYMAP



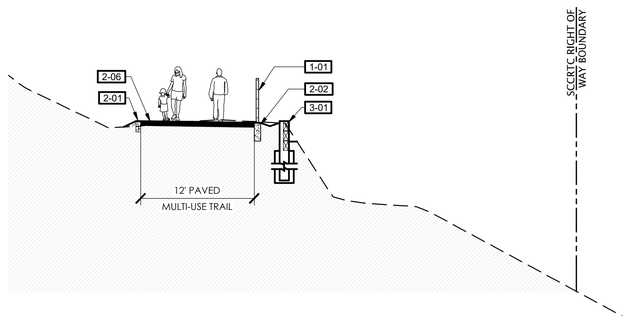


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



4 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

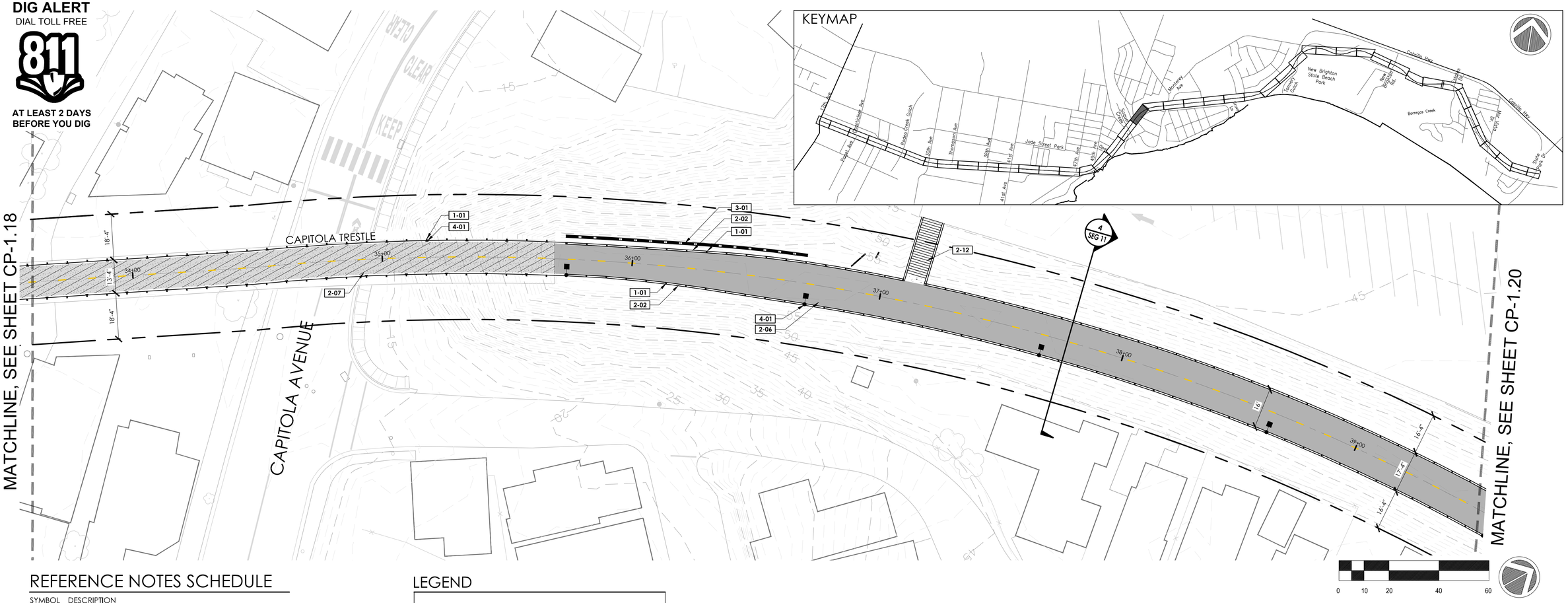
CP-1.18

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.18, Images: county-logo-black-transparent.png; 07567-mid.dgn; Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, XSTAMP-0193-06-RR20.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\000\0193-06-RR20-Santa Cruz Rail Trail-Seg 10-11\Bidbook with Tech\Landscape Architecture\Sec-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDoubleck, Plotted: Feb 11, 2023 - 10:05pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

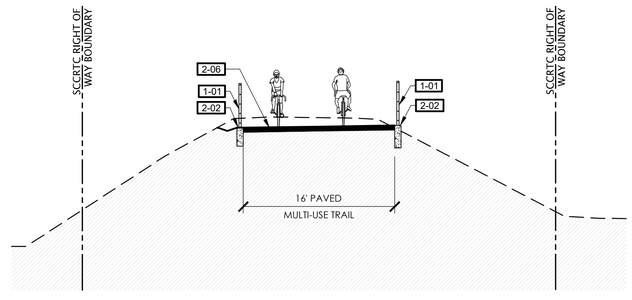


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



5 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.19
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: 'Name': CP-1.19, Xrefs: county-hwys-black-transparent.png, 07093-mid.dgn, Xrefs: XTB-0193-06-RBT.dwg, XTB-0193-06-RBT-S11.dwg, XTB-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



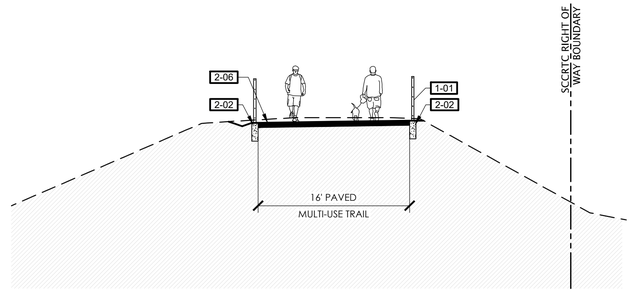


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



6 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CONSTRUCTION KEYNOTE PLANS

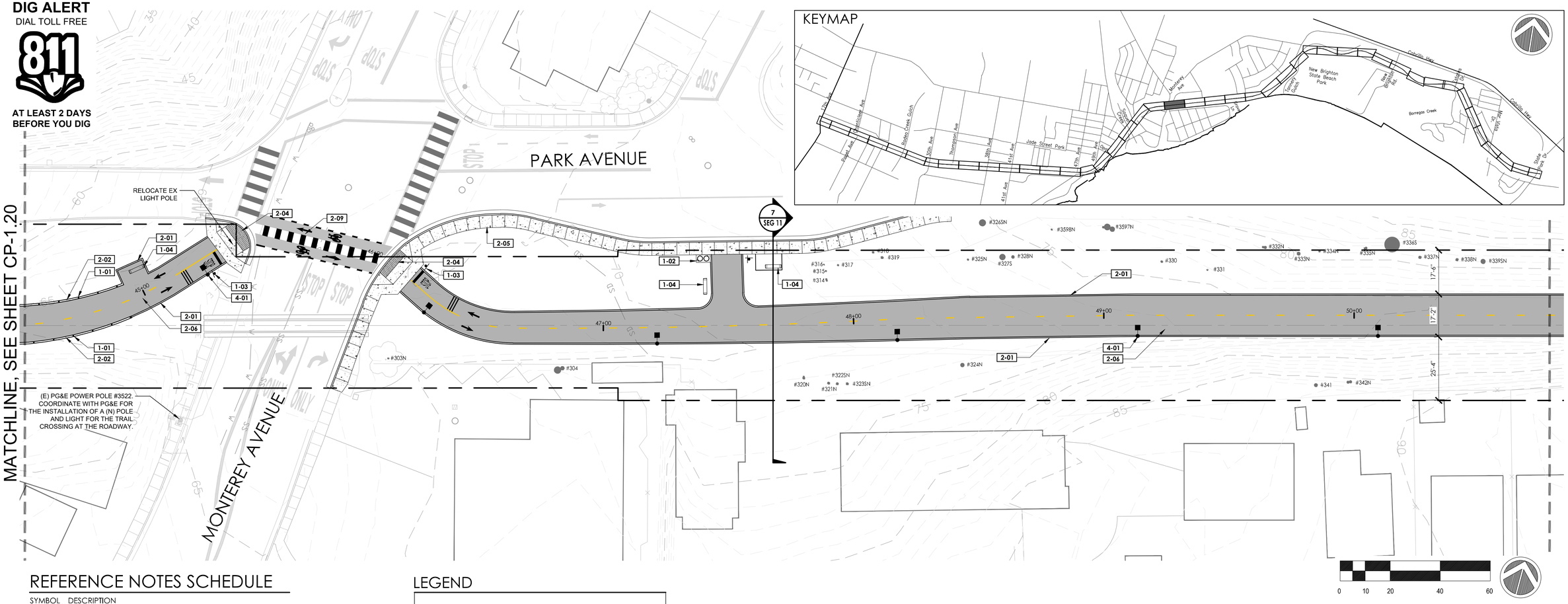
REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.20
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: 'Name': CP-1.20, Images: county-logo-black-transparent.png, 07001-mid.dgn, Xrefs: XTB-0193-06-RBT.dwg, XTB-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XP-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0220-Santa Cruz-Rail-Trail-Seg-10-11 Wallace with Trail\Landscape-Architecture\1Sec-B-Schemes\5. Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMSzakmeis, Plotted: Feb 11, 2023 - 10:05pm
N:\0001\0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XP-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0220-Santa Cruz-Rail-Trail-Seg-10-11\Wallace with Trail\Landscape-Architecture\1Sec-B-Schemes\5. Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMSzakmeis, Plotted: Feb 11, 2023 - 10:05pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

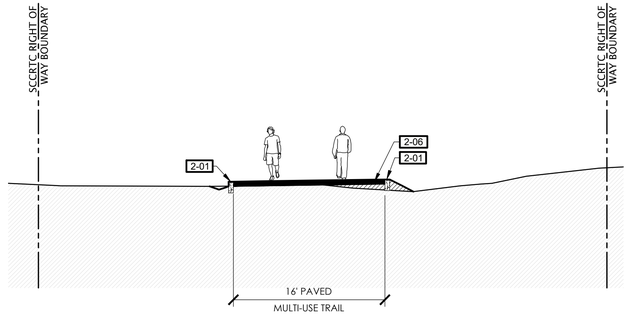


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



7 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

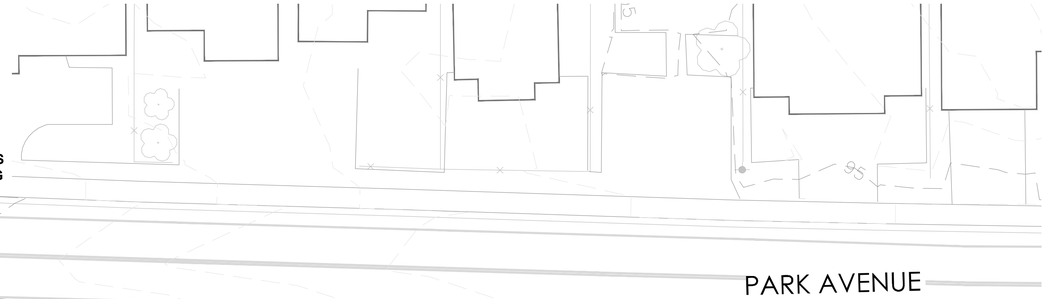
CONSTRUCTION KEYNOTE PLANS

REFERENCES	DATE 02/10/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN MMS	CP-1.21	
DRAWING #: CP-0193-06-RBT-S11	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.21, Images: county-logo-black-transparent.png, 075871-mid.jpg, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, XDWMP-0193-06-RBDP.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XS-0193-06-RBT-S11.dwg, P:\DWG\0193-06-RCDP-Santa Cruz Rail Trail-Seg-10-11\Notebook with Trail\Landscape Architecture\Train B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDaSilveira, Plotted: Feb 11, 2023 – 10:06pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

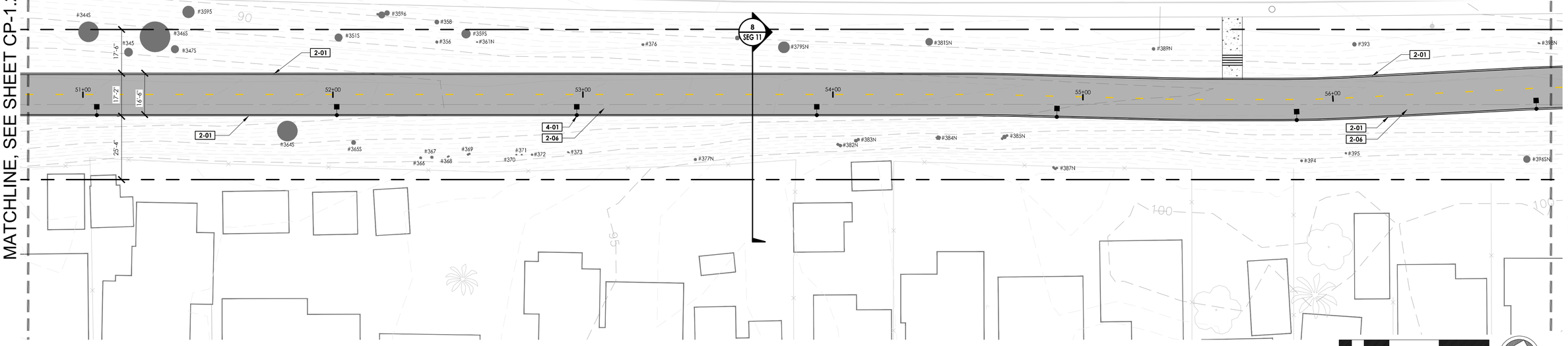


KEYMAP



MATCHLINE, SEE SHEET CP-1.21

MATCHLINE, SEE SHEET CP-1.23

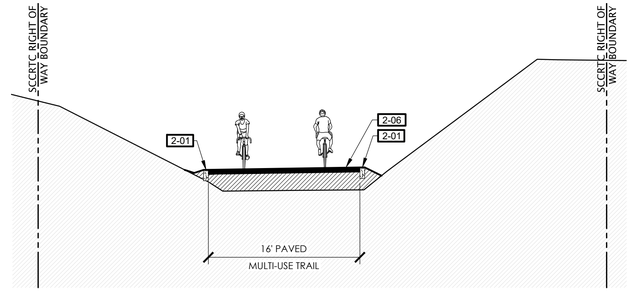


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



8 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

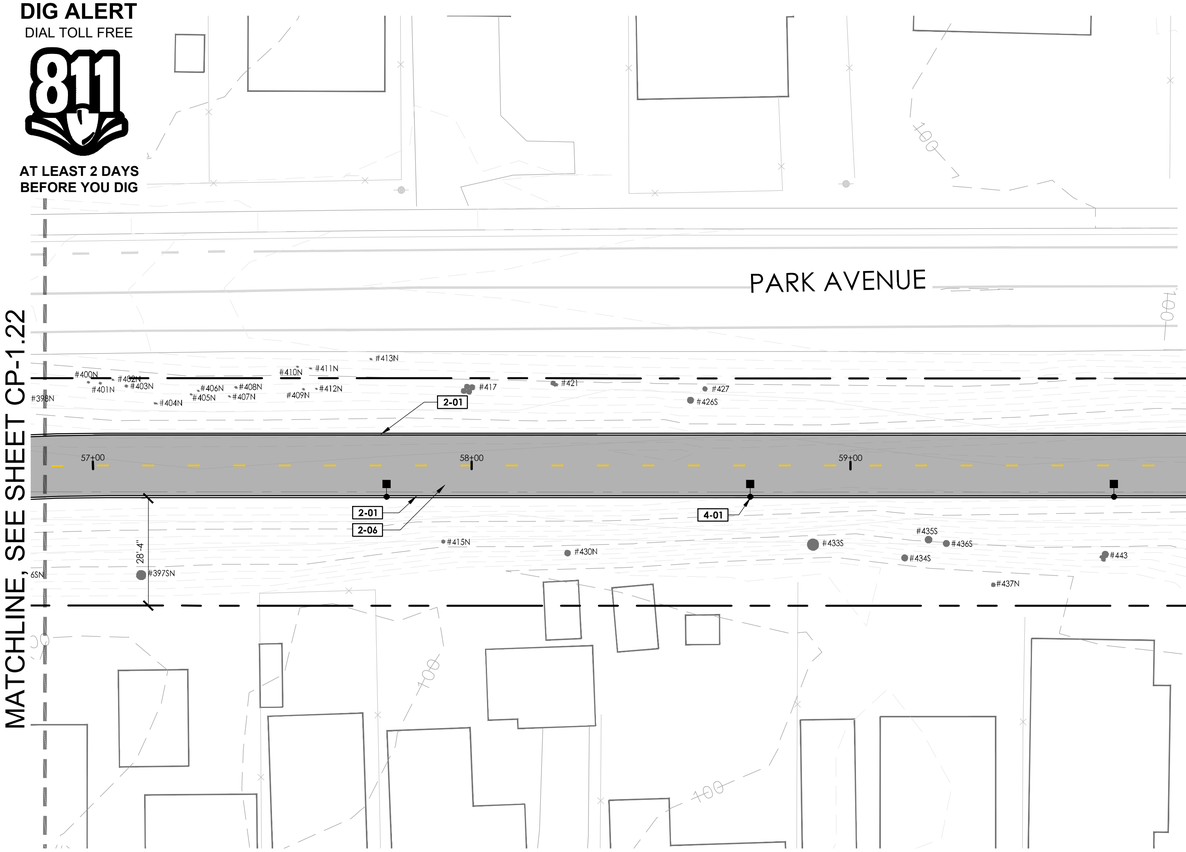
DRAWING #:
CP-0193-06-RBT-S11

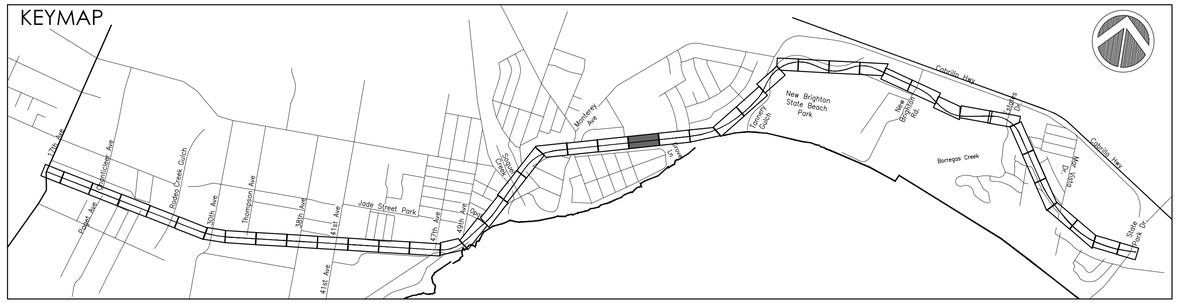
DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.22
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.22 Images: county-logo-black-transparent.png (75%).mod.jpg Xrefs: XTB-0193-06-RBT.dwg XSB-0193-06-RBT-S11.dwg XDWG-0193-06-RBDD.dwg XH-0193-06-RBT-S11.dwg XC-0193-06-RBT-S11.dwg XT-0193-06-RBT-S11.dwg
N:\000\10\193-06-RCDS-Santa Cruz Rail Trail\Dwg\10-11\Bidbook with Trail\Landscape Architecture\1Tasks-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg Plotted By: KMDeBellekt, Plotted: Feb 11, 2023 - 10:06pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





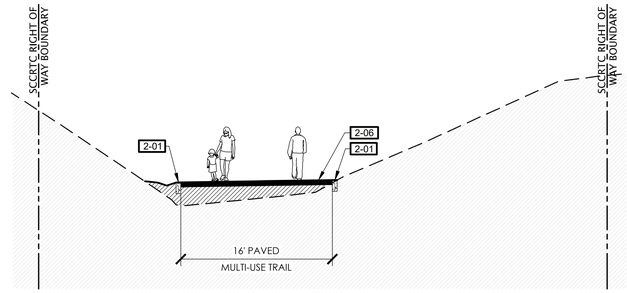
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



9 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.23
VAULT NO.	

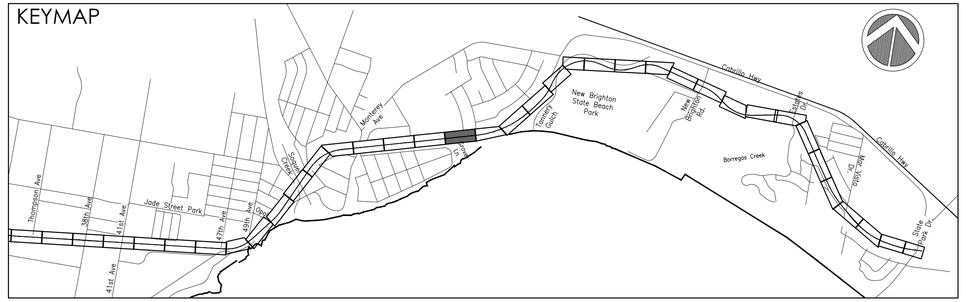
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.23, Images: county-logo-black-transparent.png, 07067-mid.jpg, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\DOT\0193-06-RCZO-Santa Cruz-Rail-Trail-Seg-10-11\Rollbook with Trail\Landscape-Architecture\Xtab-B-Sheets\6. Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMSzabelski, Plotted: Feb 11, 2023 - 10:06am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

(E) STREET LIGHT AT CORNER OF PARK AVE. AND WESLEY ST. COORDINATE WITH PG&E CITY FOR EXTENSION OF POWER CIRCUIT TO (N) LIGHT AND POLE AT PARK AVE. AND GROVE LANE TRAIL CROSSING.

KEYMAP



PARK AVENUE

MATCHLINE, SEE SHEET CP-1.23

MATCHLINE, SEE SHEET CP-1.25

ESCALONA GULCH

GROVE LANE

STOP

10
SEG 11

63+00 64+00 65+00 66+00 67+00 68+00 69+00

21'-10" 21'-7" 23'-3" 49'-1" 12'-6" 14'-8"

2-01 2-06 4-01 1-02 2-05

0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

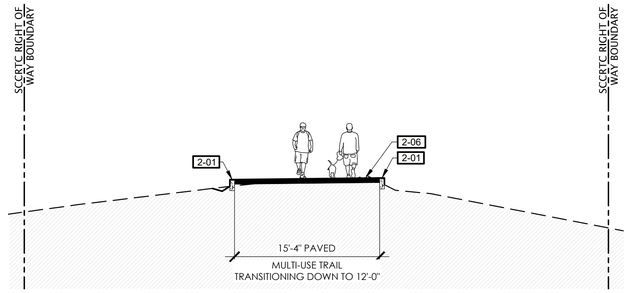
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



10 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

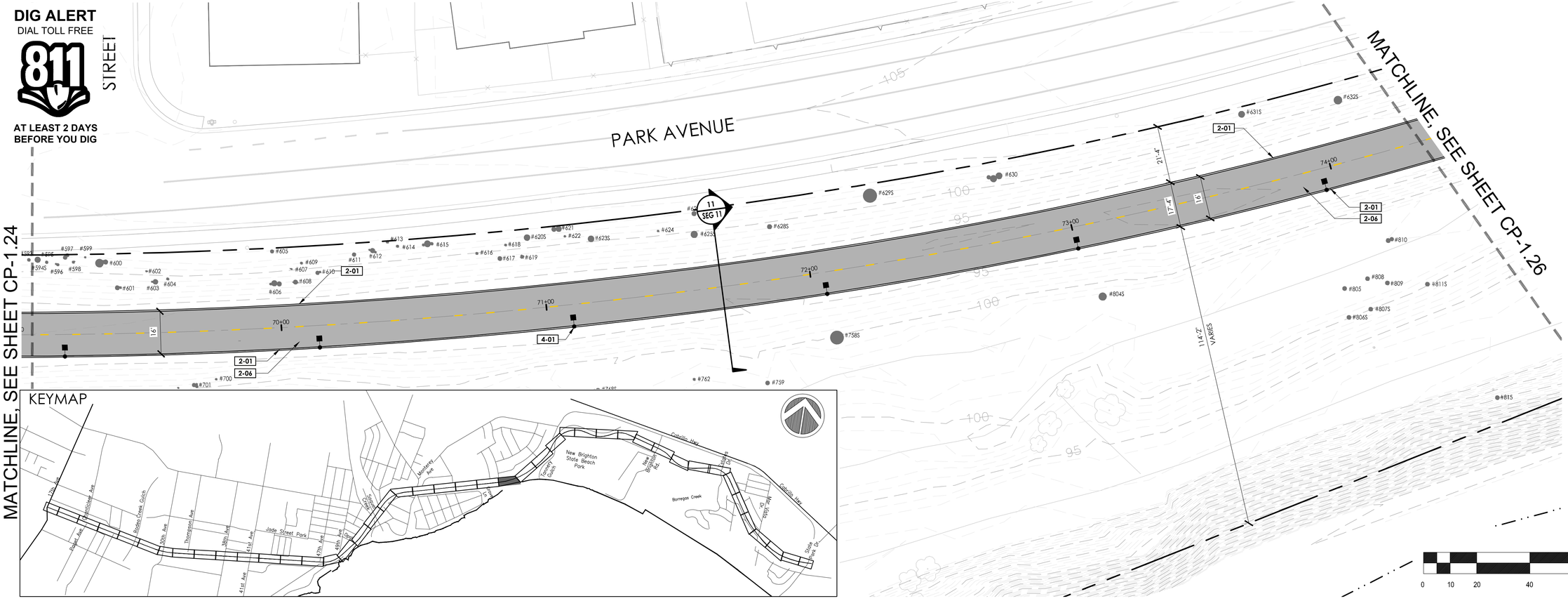
DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.24
VAULT NO.

Layout Tab Name: CP-1.24, Images: county-logo-black-transparent.png, 07097-mid.jpg, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RCP.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RWY-S11.dwg, XC-0193-06-RCP-S11.dwg, N:\2000\0193-06-RCP-Santa Cruz-Rail-Trail-Eng-15-11\Working with Trail\Landscape-Architecture\Visio-06-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMSadeleke, Plotted: Feb 11, 2023 - 10:18pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

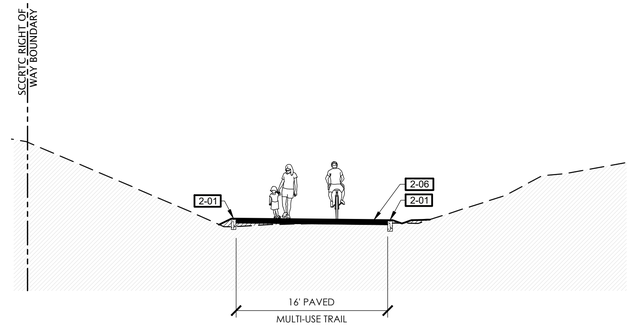
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



11 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

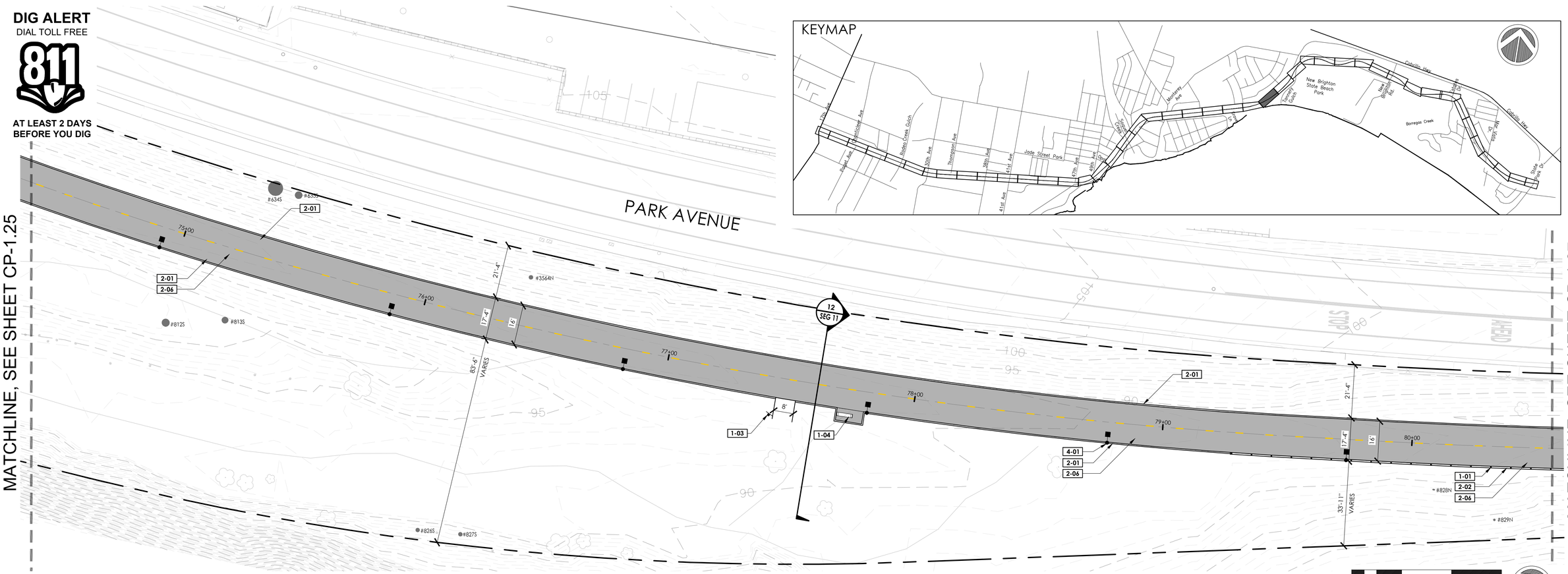
DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.25
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.25, Images: county-logo-black-transparent.png; 23901-mod.jpg; ; Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg
N:\2000\0193-06-RCSD-Santa Cruz Rail-Trail-Segs-10-11\Workbook with Trail\Landscape Architecture\Task-B-Schematic Design\Street-Plan\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDuckstein, Plotted: Feb 11, 2023 - 10:07pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

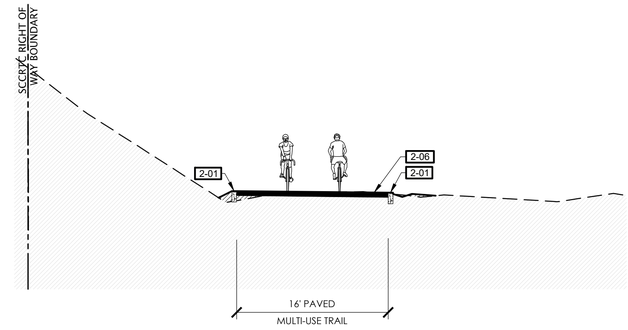
3-01	RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



12 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

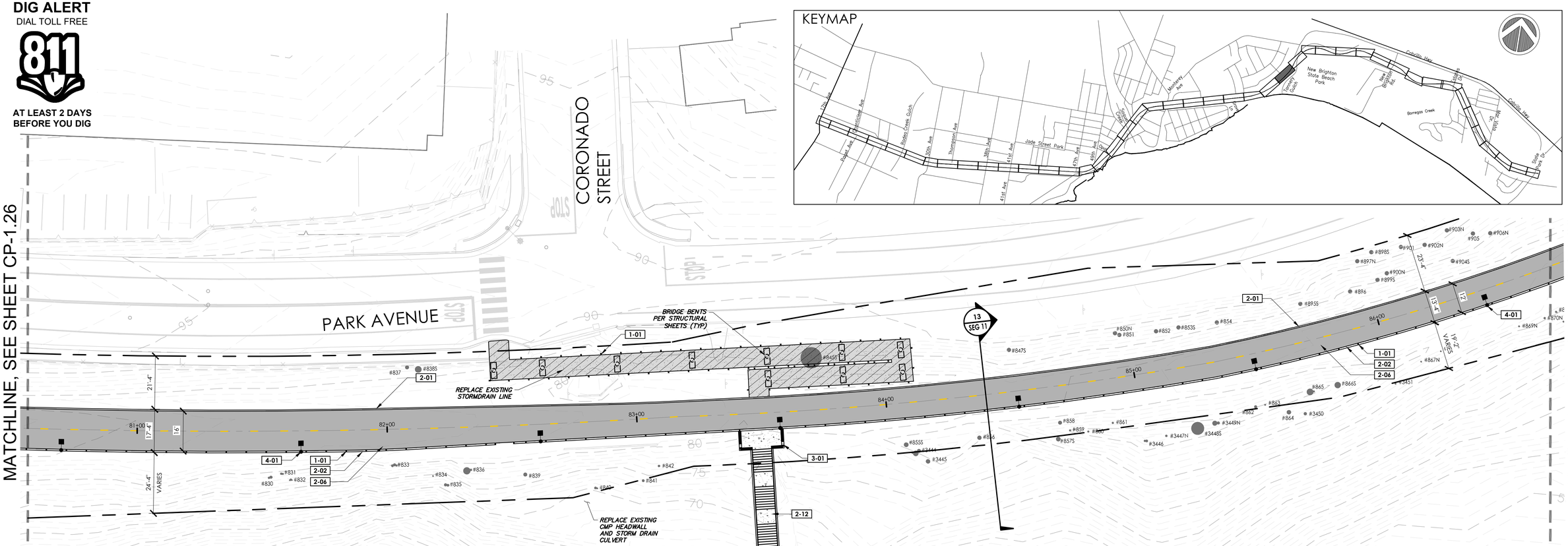
DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.26
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.26, Images: county-logo-black-transparent.png, 273971-mid.jpg>, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, SCC-0193-06-RBT-S11.dwg
N:\2021\10193-06-RCP2-Santa-Cruz-Rail-Trail-Segs-10-11\Workbook with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDubielski, Plotted: Feb 11, 2023 - 10:07pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

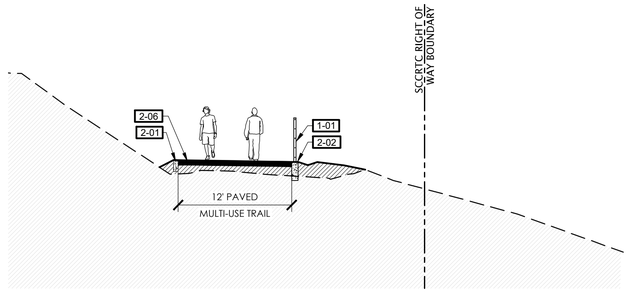
3-01	RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



13 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

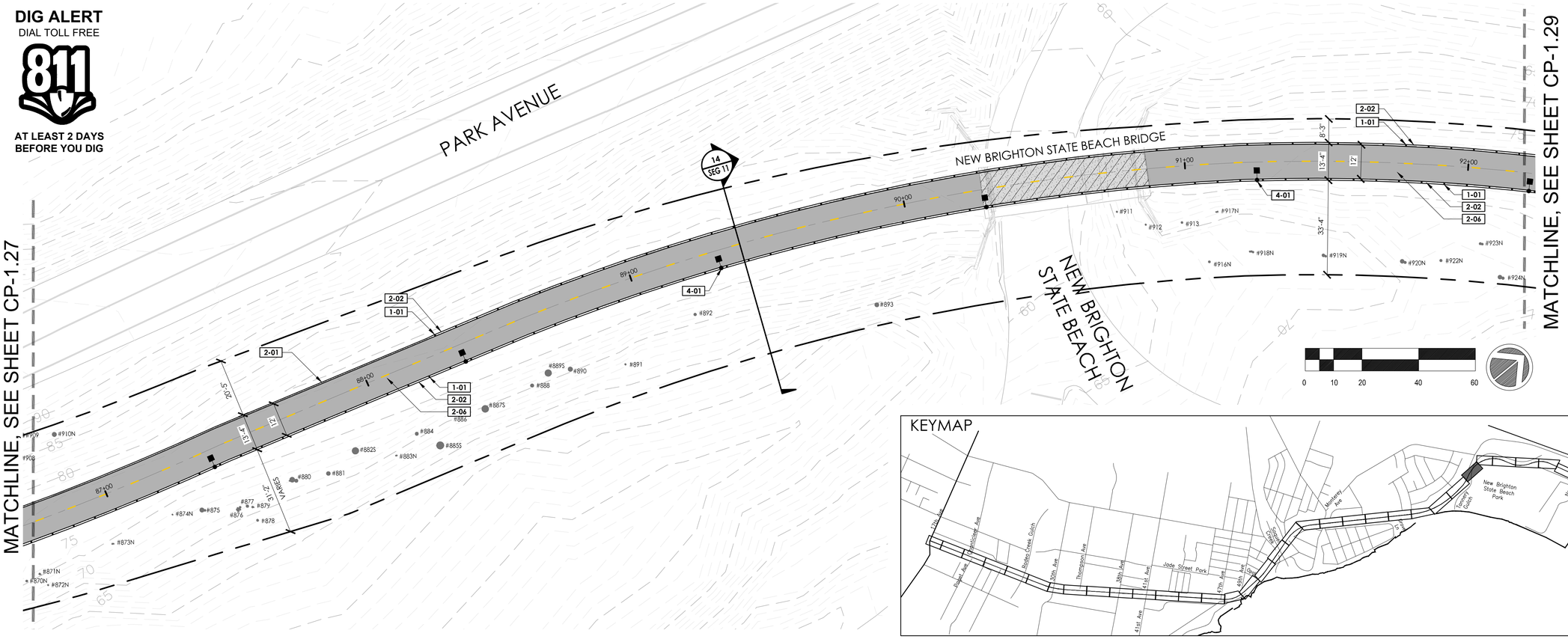
CONSTRUCTION KEYNOTE PLANS

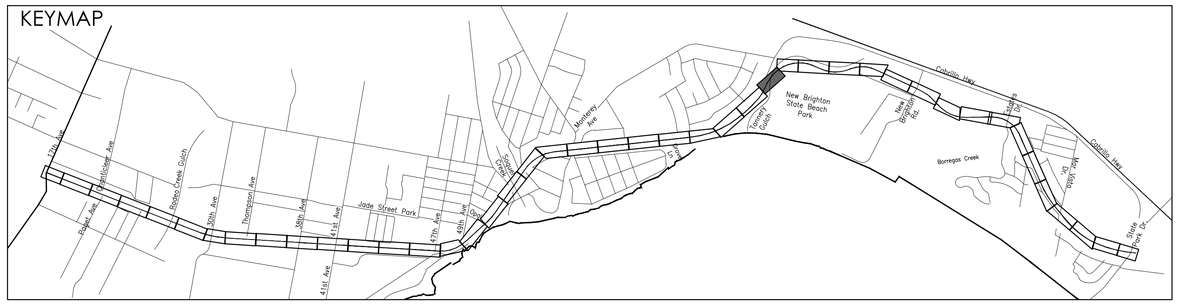
REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.27
VAULT NO.	

Layout Tab Name: CP-1.27 | Image: county-logo-black-transparent.png, 07307--mrd.jpg, Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, XDWAY-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RCP-S11.dwg, N:\000\0193-06-RCP-Santa Cruz-Rail Trail\Dwg-10-11\Rollbank with Trail\Landscape-Architecture\Plan-&-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMSobieski, Plotted: Feb 11, 2023 - 10:07pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

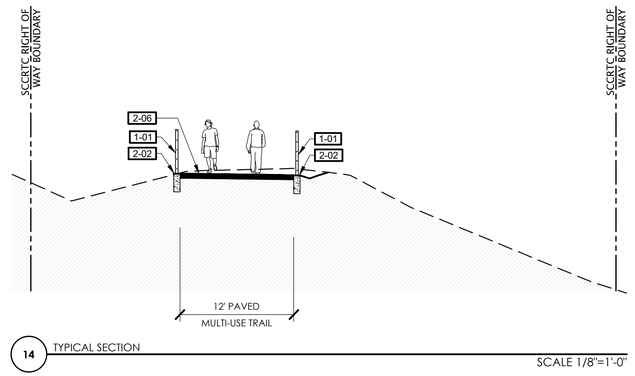
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



14 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

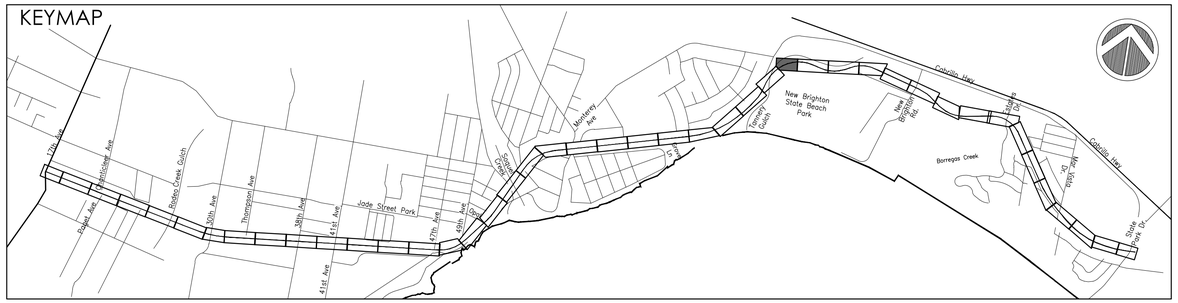
SCALE AS SHOWN
CP-1.28
VAULT NO.

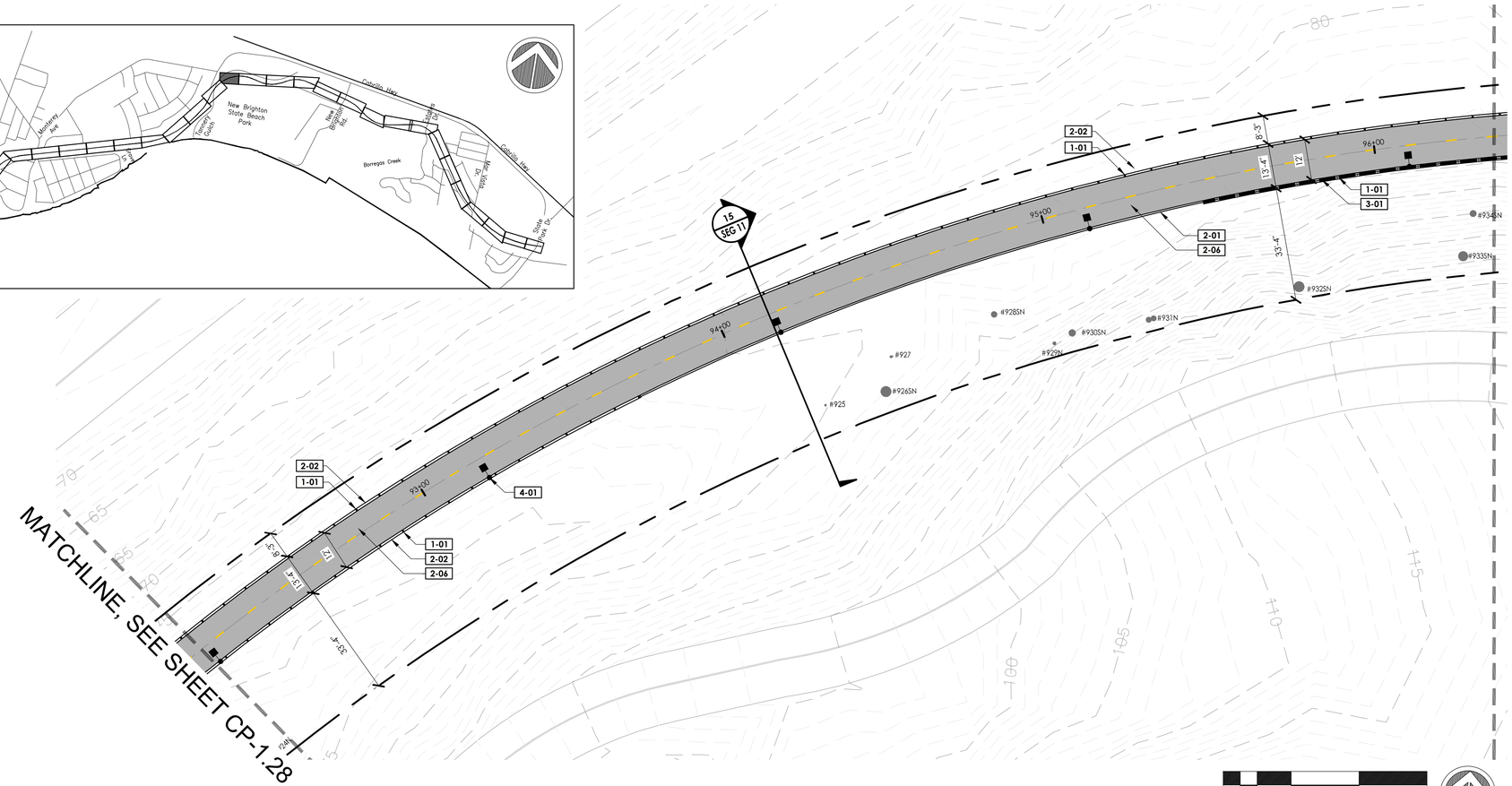
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.28, Xrefs: county-logo-black-transparent.png, 07087-mnd.dgn, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\2020\10165-06-RCDS-Santa Cruz-Rail-Trail-Seg-10-11\Windows with Trail\Landscape-Architecture\Tasks-Bs-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMScolefield, Plotted: Feb 12, 2023 - 8:40am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

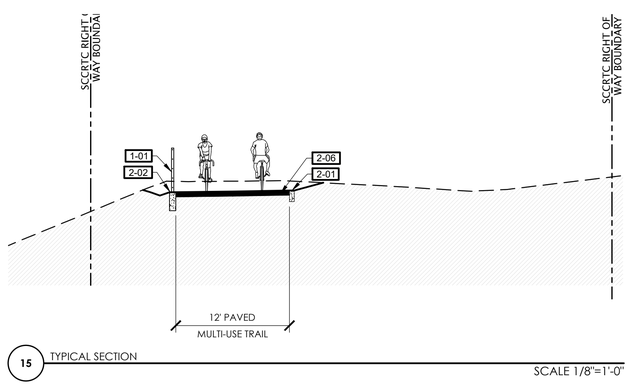
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



15 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

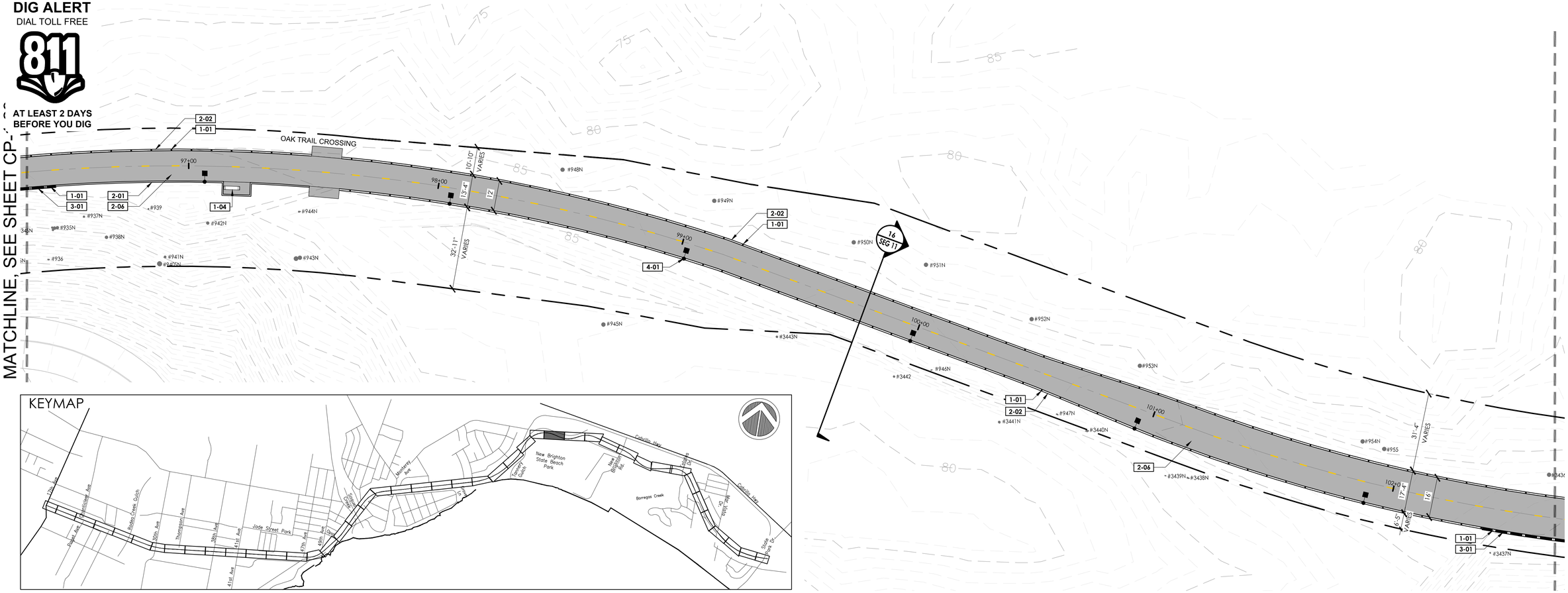
DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	KS		CP-1.29
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.29, Images: county-logo-black-transparent.png, 07097-mid.dgn; -- Xrefs: XTR-0193-06-RBT.dwg, XSR-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBTS11.dwg, PH-0193-06-RBT-S11.dwg, XT-0193-06-RWF-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RCZS-Santa-Cruz-Rail-Trail-Seg-10-11 Wildbone with Trail\Landscape-Architecture\Task-3b-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMSackfield, Plotted: Feb 12, 2023 -- 8:49am
N:\2000\0193-06-RCZS-Santa-Cruz-Rail-Trail-Seg-10-11\Wildbone with Trail\Landscape-Architecture\Task-3b-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.30



KEYMAP

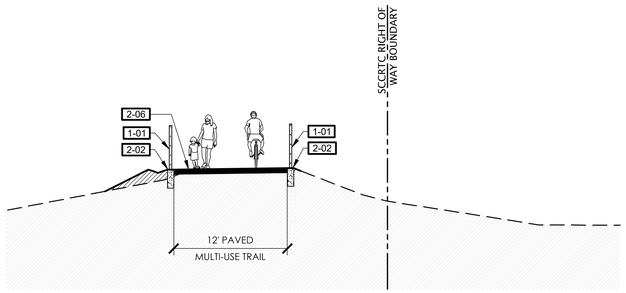
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)

0 10 20 40 60



16 TYPICAL SECTION
SCALE 1/8"=1'-0"

MATCHLINE, SEE SHEET CP-1.31

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

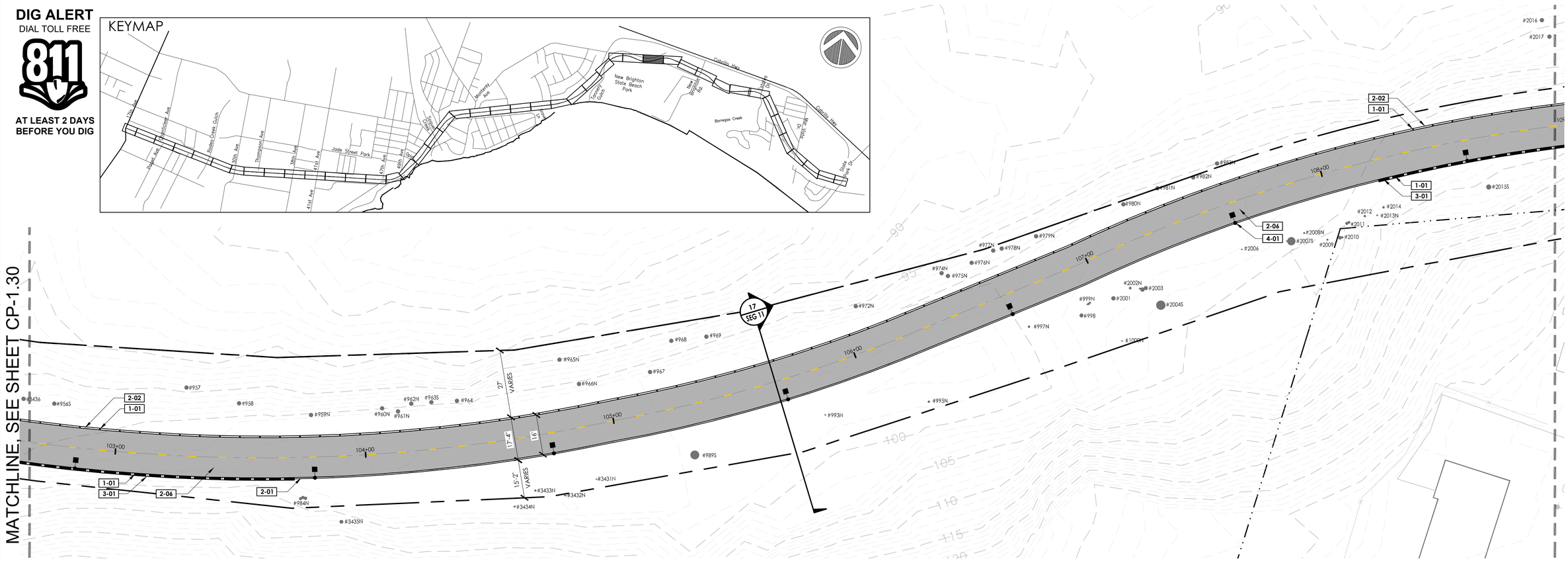
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.30
VAULT NO.

Layout Tab Name: CP-1.30, Images: county-logo-black-transparent.png, 07097-mnd.dgn, Xrefs: XTB-0193-06-RBT-S11.dwg, XSB-0193-06-RBT-S11.dwg, XEMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\2000\0193-06-RBT-S11\dwg\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMSokolnicki, Plotted: Feb 12, 2023 - 8:46am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP

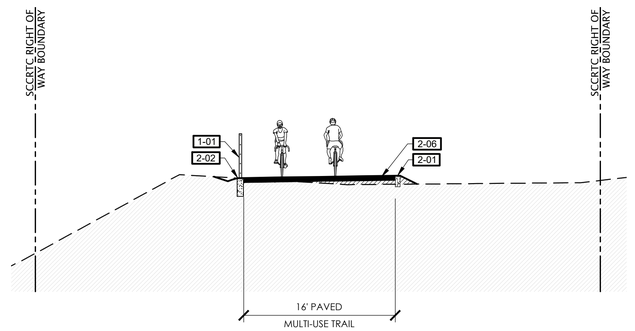


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



17 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.31
VAULT NO.

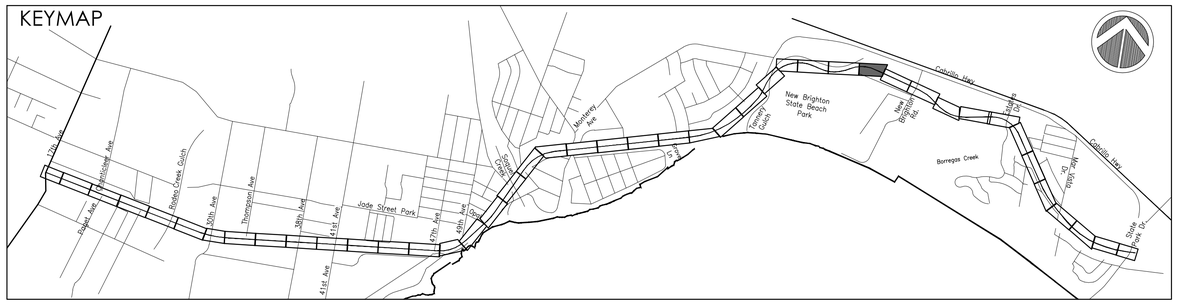
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.31, Images: county-logo-black-transparent.png; 07567-mid.dgn; Xrefs: XTB-0193-06-RBT.dwg, XSH-0193-06-RBT-S11.dwg, XDWM-0193-06-RD20.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg
N:\000\0193-06-RD20-Santa Cruz Rail Trail-Seg 10-11\Bidback with Trail\Landscape Architecture\Tan & Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMSolchaki, Plotted: Feb 12, 2023 - 8:49am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.31

MATCHLINE, SEE SHEET CP-1.33

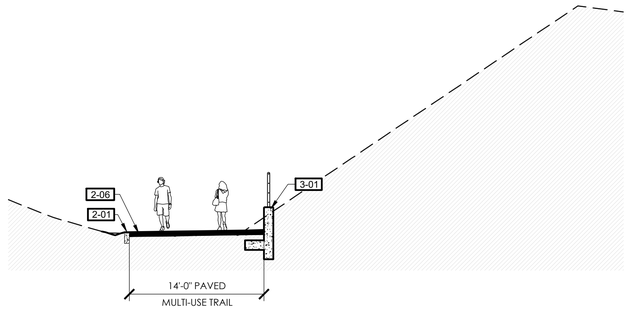


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



18 TYPICAL SECTION
SCALE 1/8"=1'-0"

0 10 20 40 60

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.32
VAULT NO.	

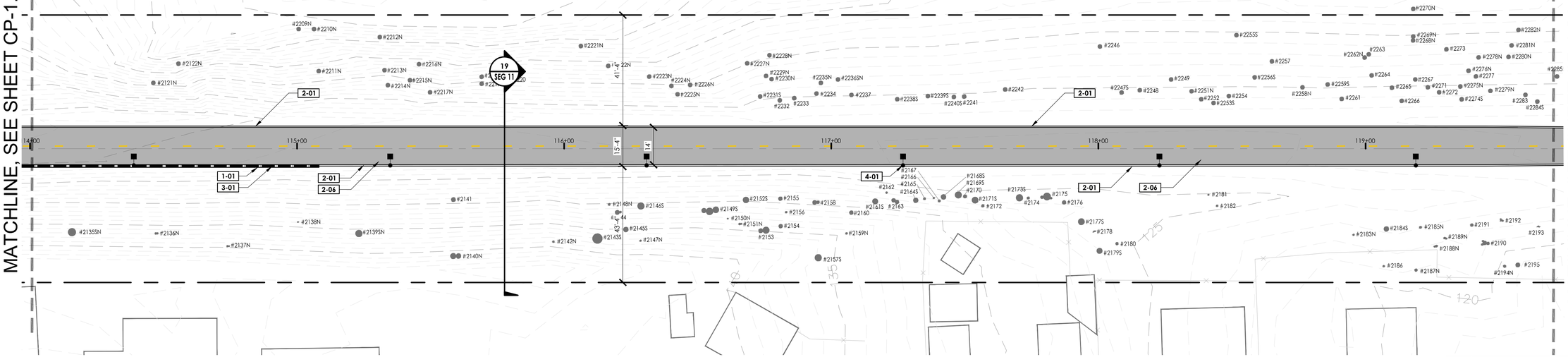
Layout Tab Name: CP-1.32 Imagery: county-imagery-blocks-transparent.sozy 07297-mid.ztz Xrefs: XTB-0193-06-RBT.dwg XSX-0193-06-RBT.dwg XKEYMAP-0193-06-RBT-S11.dwg XP-0193-06-RBT-S11.dwg XC-0193-06-RBT-S11.dwg N:\000\10193-06-4020-Santa Cruz Rail-Trail\Dwg\10-11\Xrefdwg\ with Trail\Landscape-Architecture\Tab-B-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDoubleday, Plotted: Feb 12, 2023 - 8:50am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET CP-1.32



MATCHLINE, SEE SHEET CP-1.34

0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

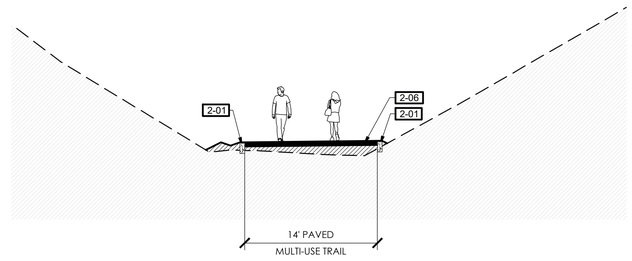
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



19 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

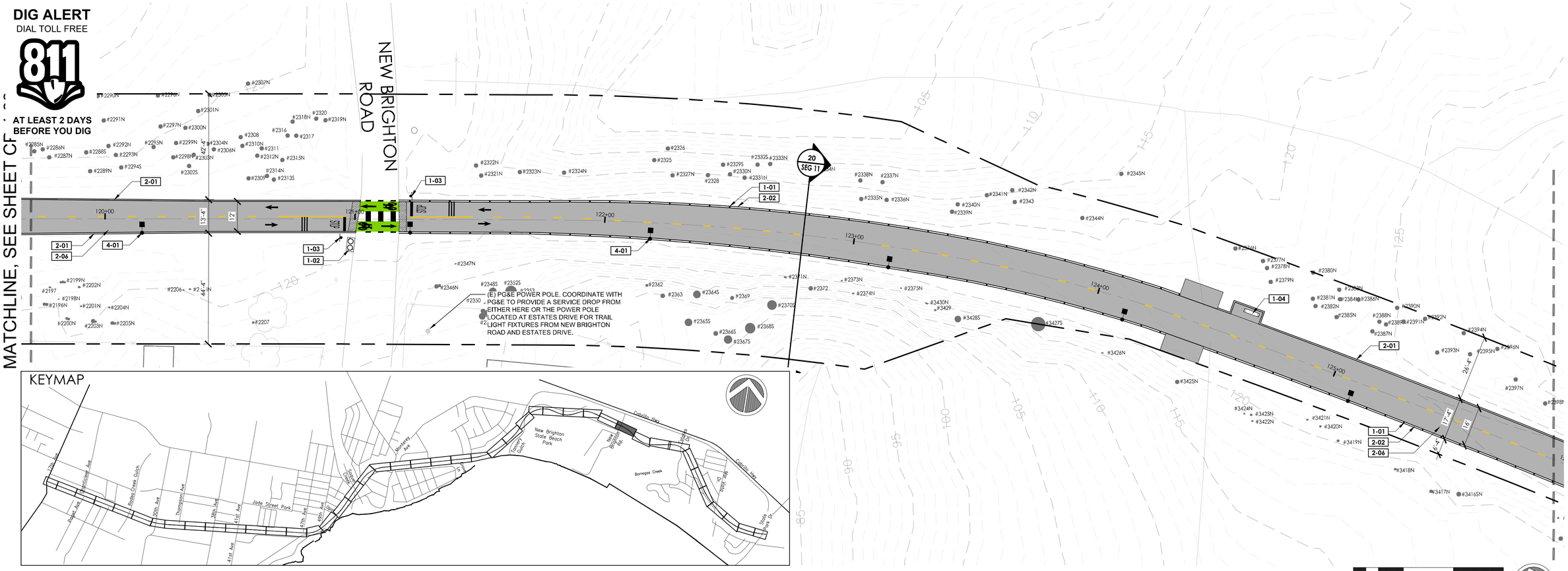
DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.33
VAULT NO.

Layout Tab Name: CP-1.33, Images: county-logo-Metric-transparent.png, CP007-mid.tif, ... Prefix: X:\Rail-06-RBT-S11.dwg, XR-0193-06-RBT-S11.dwg, XCMAP-0193-06-RBT-S11.dwg, XCMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\2020\10\193-06-RBT-S11.dwg, SEC-0193-06-RBT-S11.dwg, N:\2020\10\193-06-RBT-S11\Drawings\Rail-Trail-Seg-10-11\Workbook with Trail\Landscape Architecture\Vase-to-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMDuckless, Plotted: Feb 12, 2023 - 8:50am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

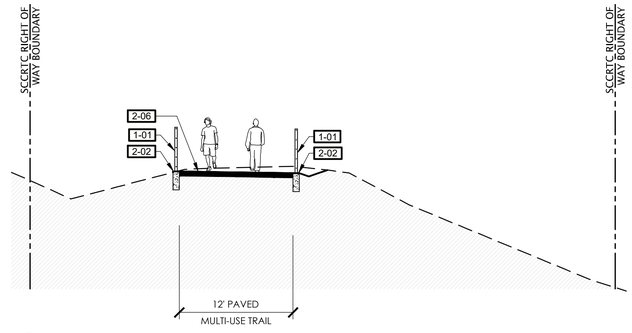
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

0 10 20 40 60



20 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

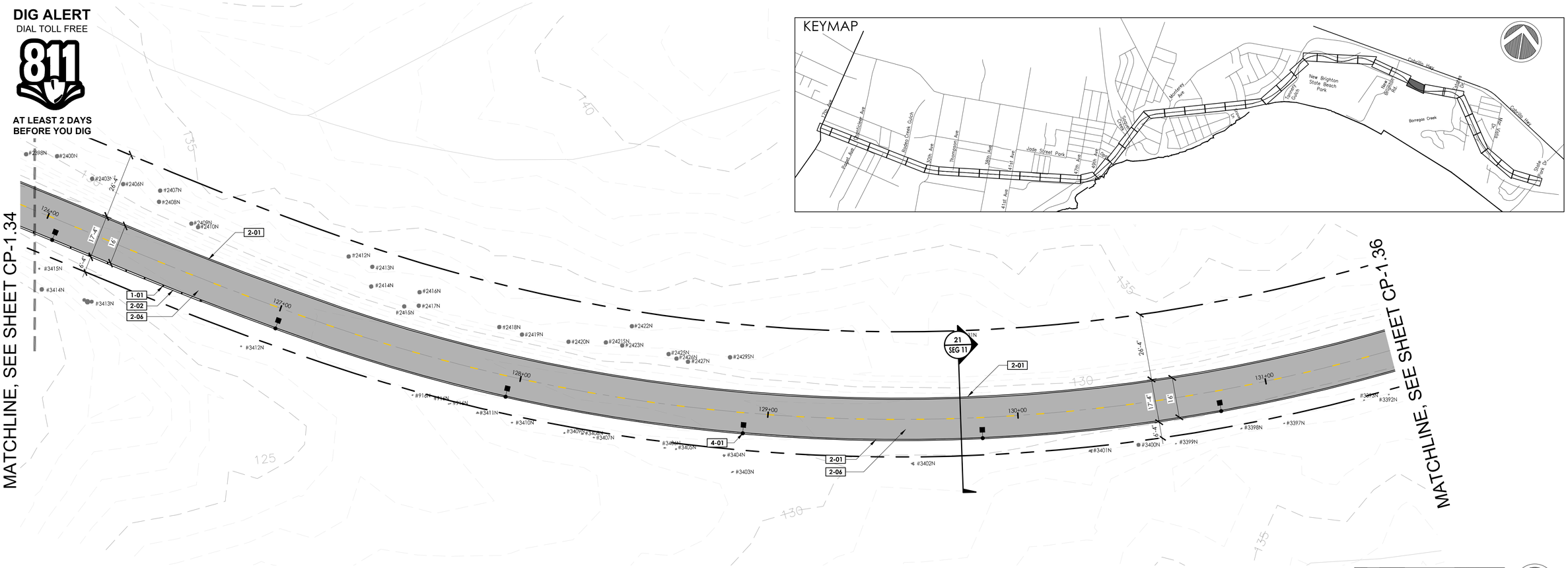
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.34
VAULT NO.	

Layout Tab Name: CP-1.34, Images: county-logo-black-transparent.png; 07567-mid.jpg; Xrefs: XTB-0193-06-RBT.dwg, XSH-0193-06-RBT-S11.dwg, XDTAIL-0193-06-RBDD.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBDD-Santa-Cruz-Rail-Trail-Seg-10-11(Rollback with TrailLineAlign-Architecture\15in-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDubiel, Plotted: Feb 12, 2023 – 8:50am
N:\2021\0193-06-RDDS-Santa-Cruz-Rail-Trail-Seg-10-11\Rollback with TrailLineAlign-Architecture\15in-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

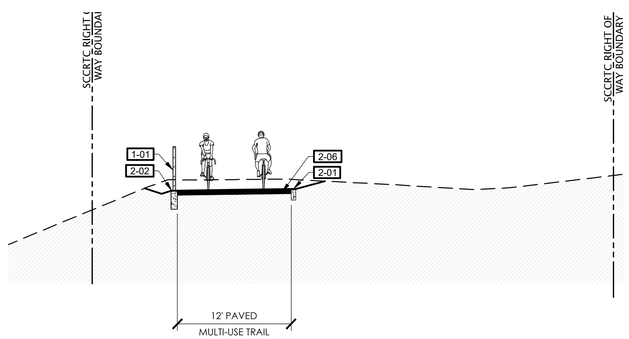


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



21 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #: CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

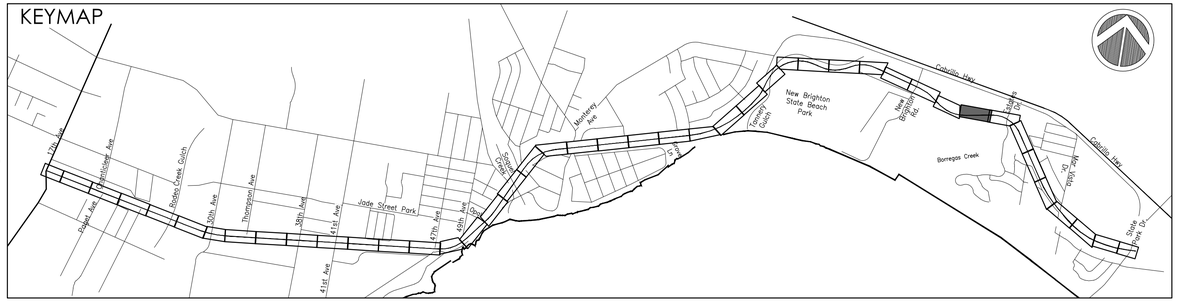
SCALE AS SHOWN
CP-1.35
VAULT NO.

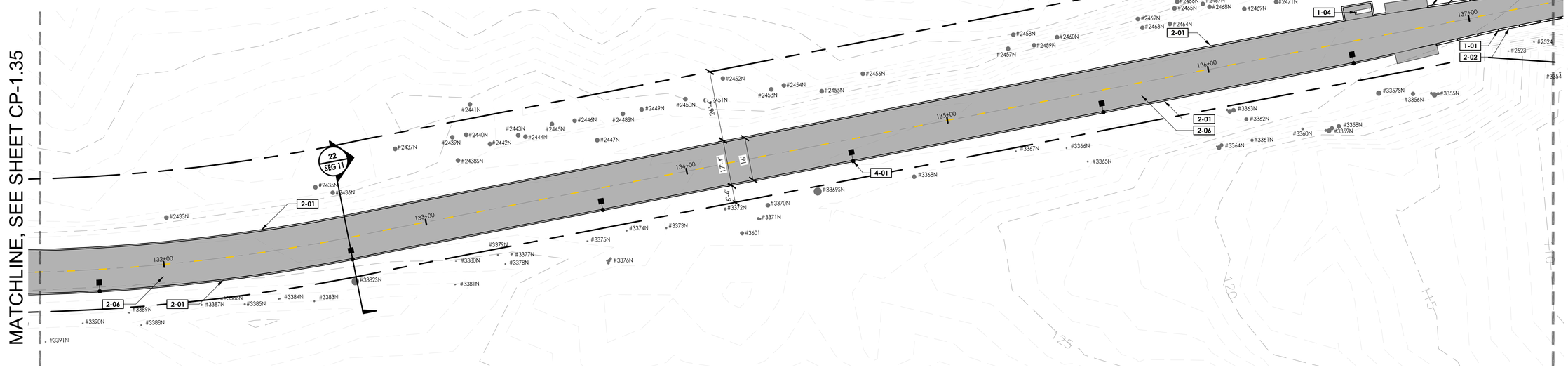
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.35, Images: county-logo-black-transparent.png; 07067-md.dyn; Xrefs: XTB-0193-06-RBT.dwg, XSX-0193-06-RBT-S11.dwg, XDMAP-0193-06-RDD.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\000\0193-06-RDD-Santa Cruz Rail Trail-Segs 10-11\Bidblock with Trail\Landscape-Architecture\Tasks-B-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDoubleis, Plotted: Feb 12, 2023 - 8:51am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





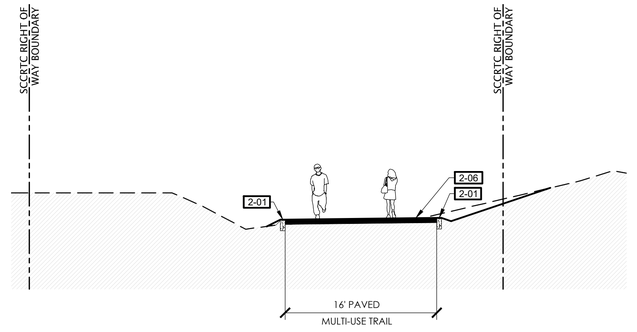
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

0 10 20 40 60



22 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	KS		CP-1.36
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.36, Xrefs: county-logo-black-transparent.png, 07001-mid.dgn, Xrefs: XTB-0193-06-RBT.dwg, XTB-0193-06-RBT-S11.dwg, XTB-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.36

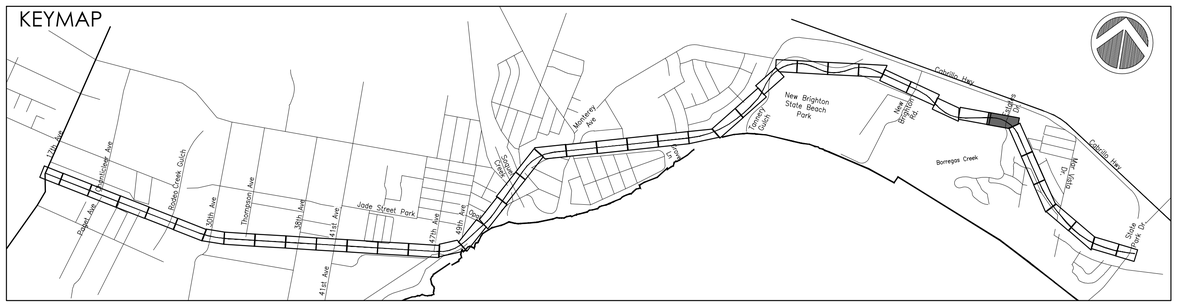
BORREGAS CREEK

ESTATES DRIVE

INSTALL HMA AND CONFORM TO EXISTING GRADES WHERE TRACK PLANS WERE REMOVED

MATCHLINE, SEE SHEET CP-1.38

KEYMAP

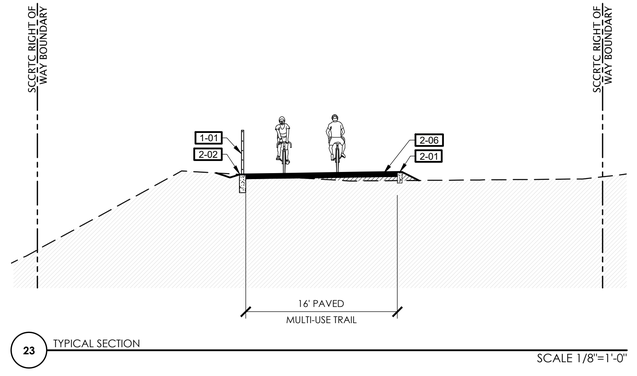


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



23 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.37
VAULT NO.	

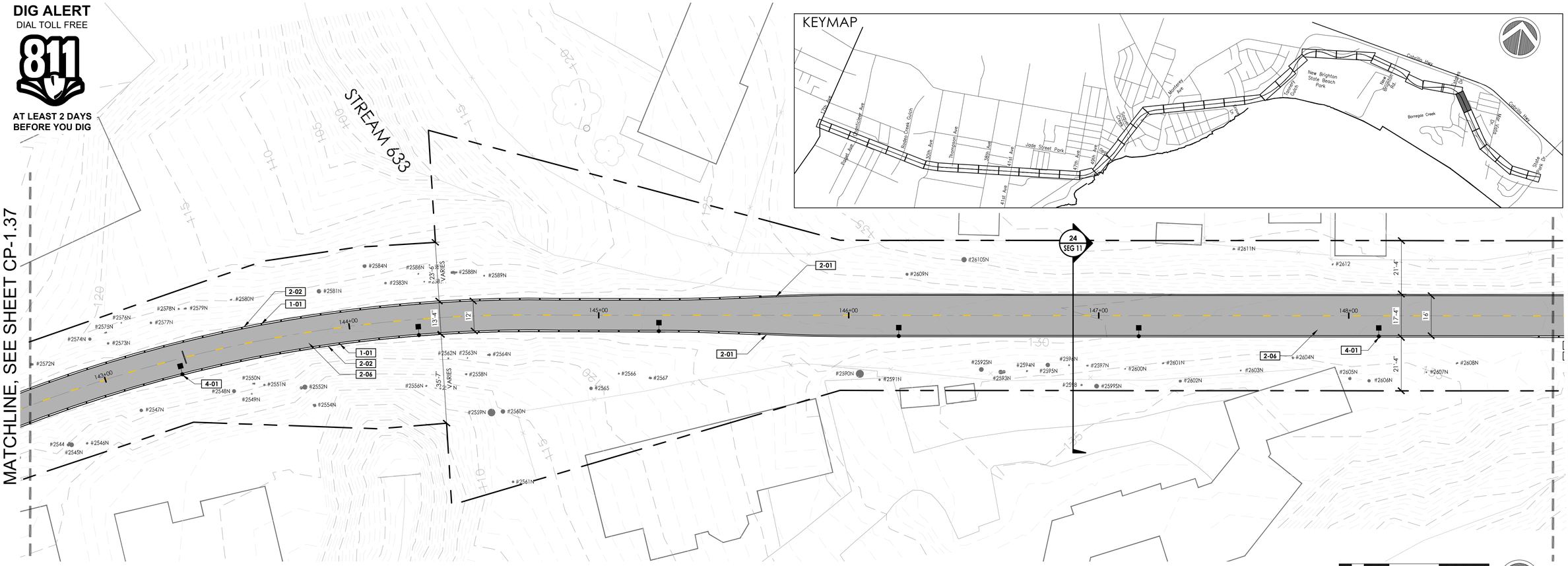
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.37 Images: county-logo-black-transparent.png (75167-mod.jpg ... Xrefs: XTB-0193-06-RBT.dwg XSB-0193-06-RBT-S11.dwg XDWG-0193-06-RBDD.dwg XH-0193-06-RBT-S11.dwg XT-0193-06-RBT-S11.dwg XC-0193-06-RBT-S11.dwg N:\2021\0193-06-RCDS-Santa Cruz Rail Trail\Dwg\10-11\Bidbook with Trail\Landscape Architecture\1Tran-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDeBartelo, Plotted: Feb 12, 2023 – 8:51am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.37

MATCHLINE, SEE SHEET CP-1.39

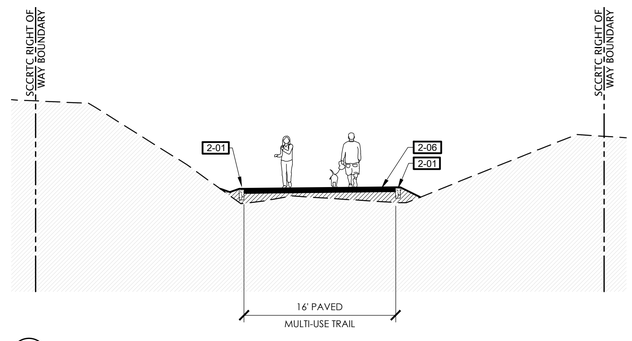


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



24 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Comino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.38
VAULT NO.	

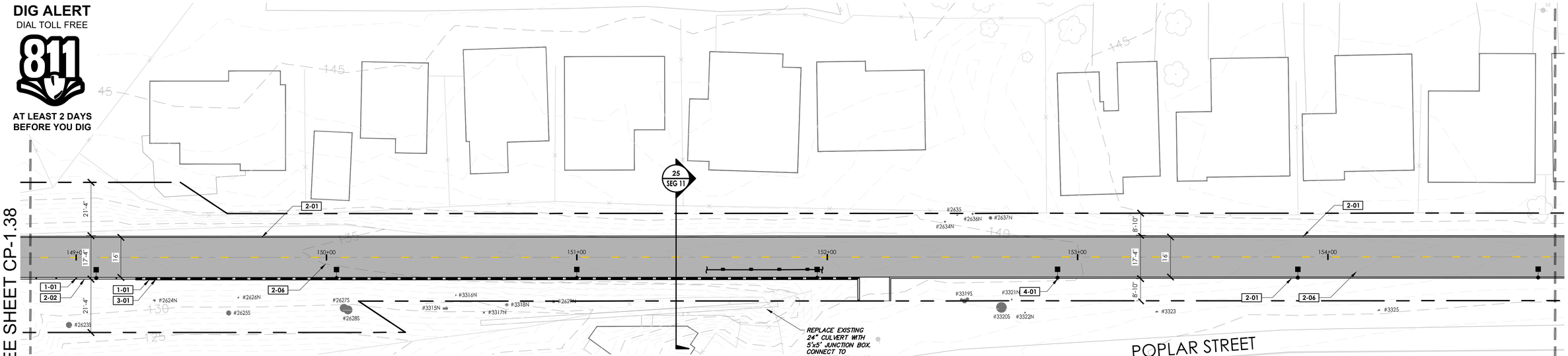
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.38, Images: county-logo-black-transparent.png; P2991-mid.jpg; ; Xrefs: XTB-0193-06-RBT.dwg; XSB-0193-06-RBT-S11.dwg; KEYMP-0193-06-RBT-S11.dwg; KEYMP-0193-06-RBT-S11.dwg; XC-0193-06-RBT-S11.dwg; XT-0193-06-RBT-S11.dwg; XC-0193-06-RBT-S11.dwg; N:\000\10\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Workbook with Trail\Landscape-Architecture\Trail-B-Scheme06 Design\Street-Files\Segment 11\XP-0193-06-RBT-S11.dwg, Plotted By: KMDuBakeski, Plotted: Feb 12, 2023 - 8:51am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.38

MATCHLINE, SEE SHEET CP-1.40





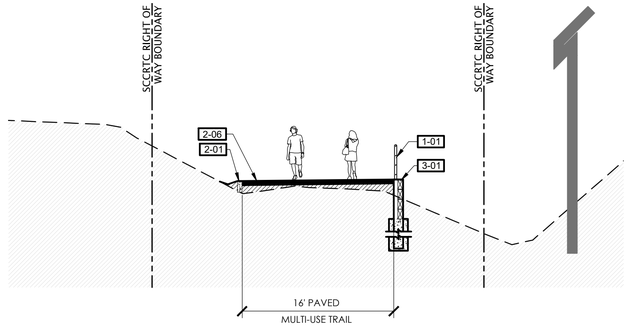
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



25 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.39
VAULT NO.	

Layout Tab Name: CP-1.39, Images: county-logo-black-transparent.png, P2397-mid.jpg, ; Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBCP.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, N:\2001\0193-06-RCZD-Santa-Cruz-Rail-Trail-Segs-10-11\Notebook with Trail\Landscape-Architecture\Task-B-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: KMDuBakeski, Plotted: Feb 12, 2023 - 8:50am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

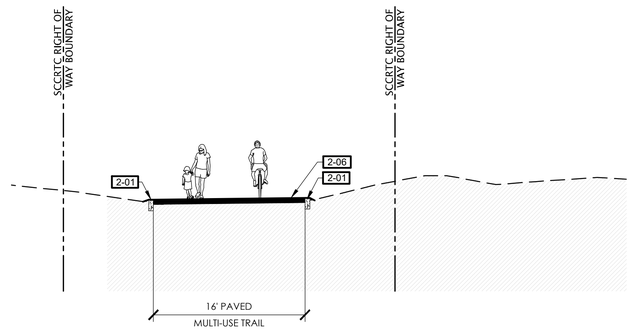
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



26 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

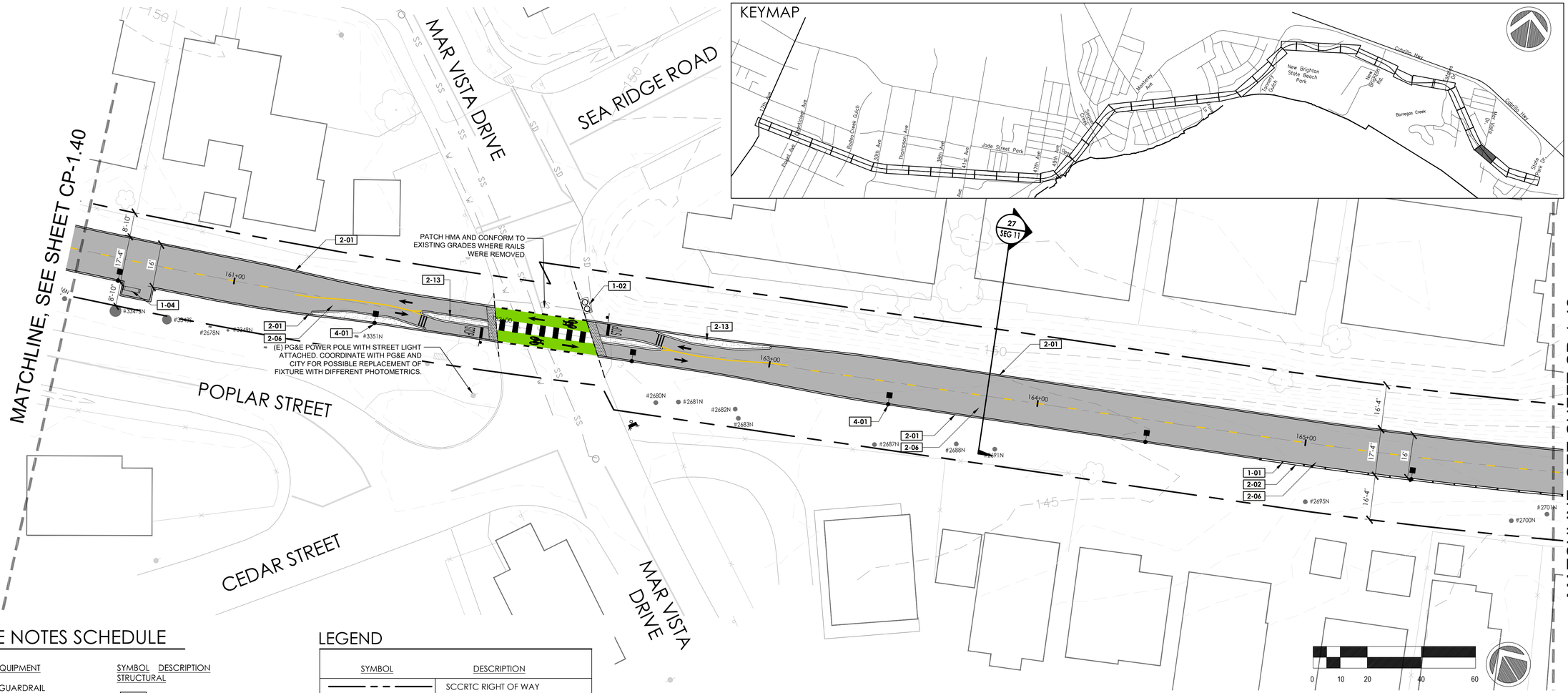
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.40
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: Name: CP-1.40, Images: county-logo-Mono-transparent.png (2507) mod.dgn, Prefix: XTR-0193-06-RBT.dwg, XSR-0193-06-RBT-S11.dwg, XDWG-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XT-0193-06-RBT-S11.dwg, XC-N:\2001\10\193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Windows with Trail\Landscape-Architecture\Vase-to-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMDoolittle, Plotted: Feb 12, 2023 - 8:50am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

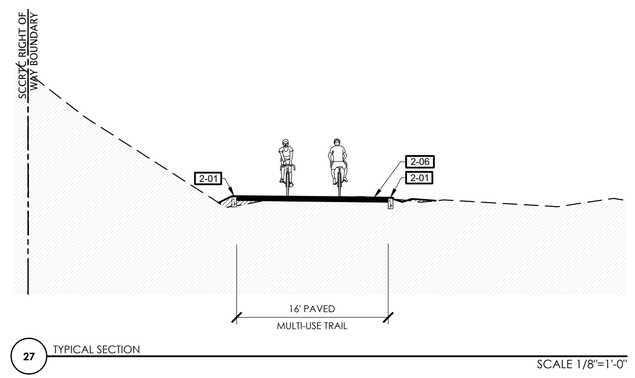


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



27 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

THE COUNTY OF SANTA CRUZ 1850

COUNTY OF
SANTACRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:
DRAWING #:
CP-0193-06-RBT-S11

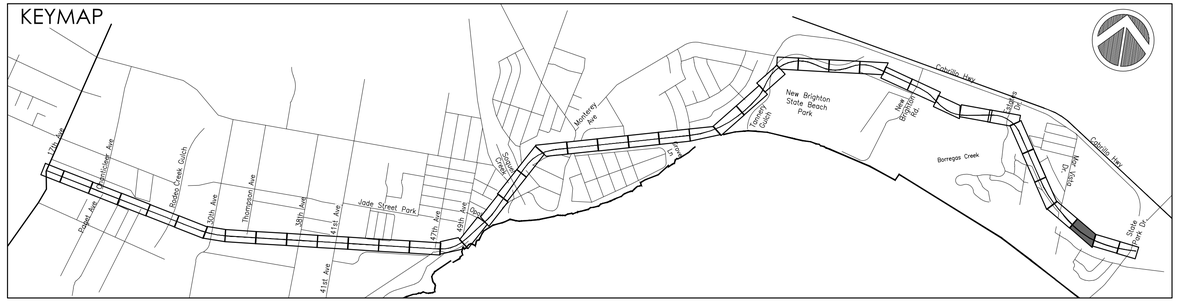
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.41
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.41 , Images , county-logo-Mono-transparent.png , CP2021-mod.stg , , Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, XDMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, SEC-0193-06-RBT-S11.dwg, N:\2020\10\193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Windows with Trail\Landscape-Architecture\Vase-to-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MMDoolittle, Plotted: Feb 11, 2023 - 10:12am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET CP-1.41

MATCHLINE, SEE SHEET CP-1.43



0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

- 1-01 FENCING OR GUARDRAIL
- 1-02 TRASH RECEPTACLE
- 1-03 PROPOSED SIGN
- 1-04 BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6"-8" WIDE CURB
- 2-03 CURB RAMP
- 2-04 DETECTABLE WARNING SURFACE
- 2-05 CONCRETE SIDEWALK
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 PREFABRICATED FRP DECKING
- 2-09 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED STAIRS
- 2-13 TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

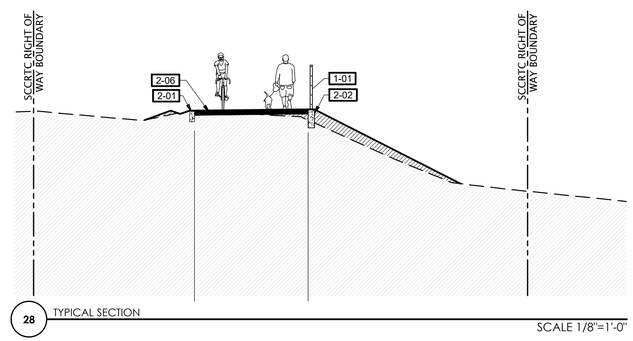
- 3-01 RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

- 4-01 PROPOSED LIGHT
- 4-05 RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



28 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

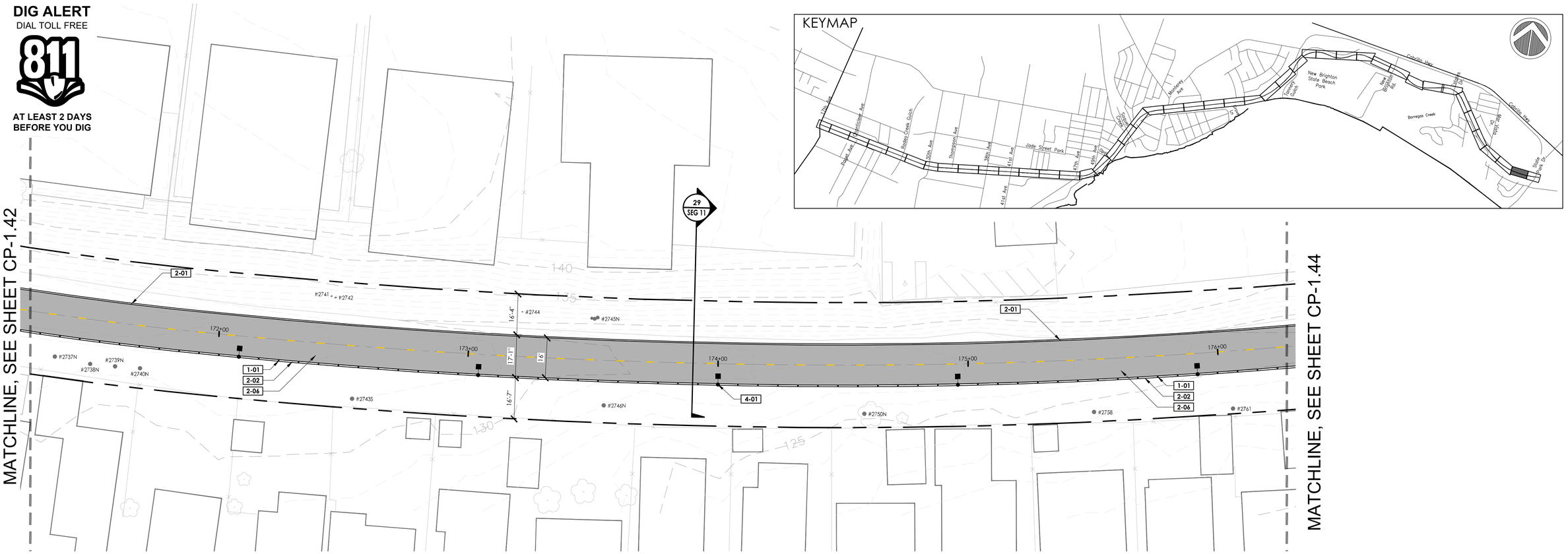
DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	CP-1.42
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: CP-1.42 Images: county-logo-black-transparent.png (7360 x 4912 px) Xrefs: XTB-0193-06-RBT.dwg XSB-0193-06-RBT-S11.dwg XDWMP-0193-06-RBDD.dwg XH-0193-06-RBT-S11.dwg XT-0193-06-RBT-S11.dwg XC-0193-06-RBT-S11.dwg N:\DOT\0193-06-RCDS-Santa Cruz Rail Trail-Seg-10-11\Bidback with Trail\Landscape Architecture\Tan-B-Schematic Design\Sheet Files\Segment 11\CP-0193-06-RBT-S11.dwg Plotted By: KMDuBakele, Plotted: Feb 11, 2023 – 10:12pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



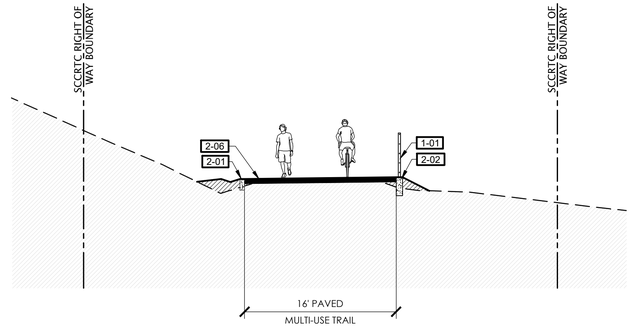
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

0 10 20 40 60



29 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

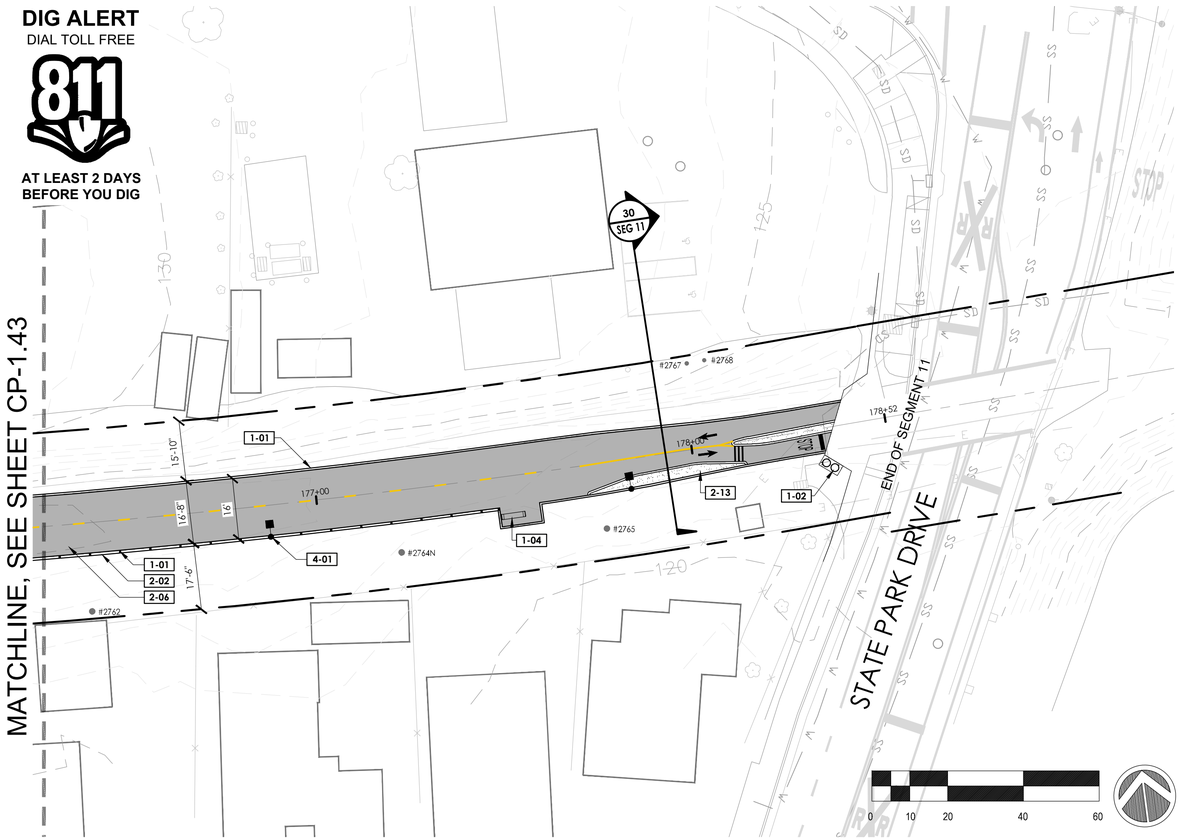
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
CP-1.43
VAULT NO.

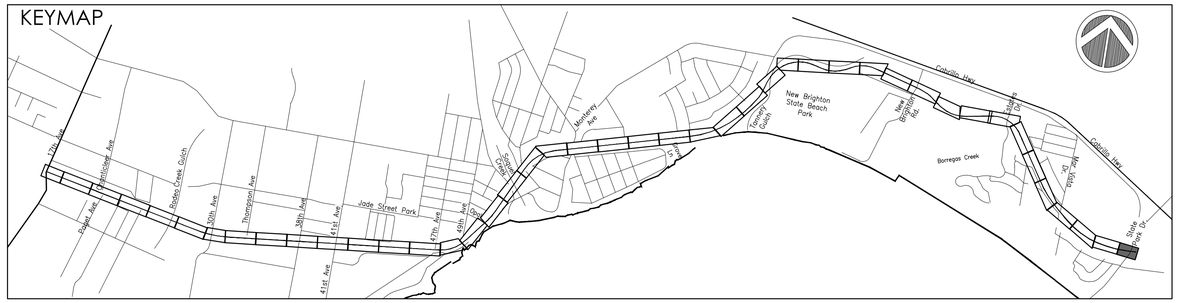
Layout File Name: CP-1.43_Images_county-logo-Mono-transparent.png; 07907-mid.jpg; ...\Refs_XTR-0193-06-RBT.dwg; XSR-0193-06-RBT-S11.dwg; KEYMAP-0193-06-RKDR.dwg; XH-0193-06-RBT-S11.dwg; XT-0193-06-RBT-S11.dwg; XC-0193-06-RBT-S11.dwg; SEC-0193-06-RBT-S11.dwg; N:\2021\19193-06-RKDR-Santa-Cruz-Rail-Trail-Seg-10-11\Landscape with Trail\Landscape Architecture\Task-8b-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg, Plotted By: MaKayleMel, Plotted: Feb 11, 2023 - 10:12pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET CP-1.43



KEYMAP

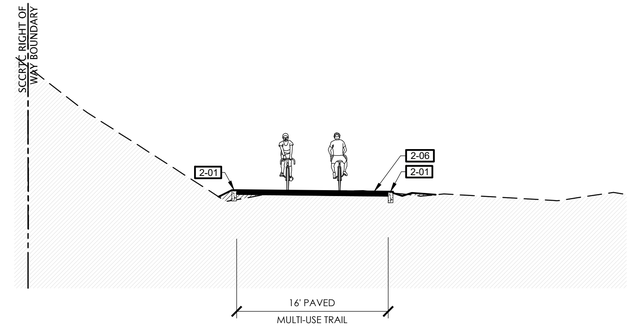


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



30 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Comino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

CONSTRUCTION KEYNOTE PLANS

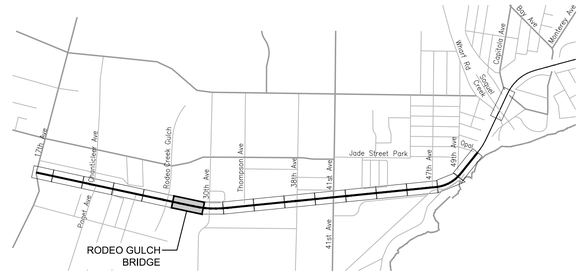
REFERENCES
FIELD BOOK:

DRAWING #:
CP-0193-06-RBT-S11

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	KS		CP-1.44
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

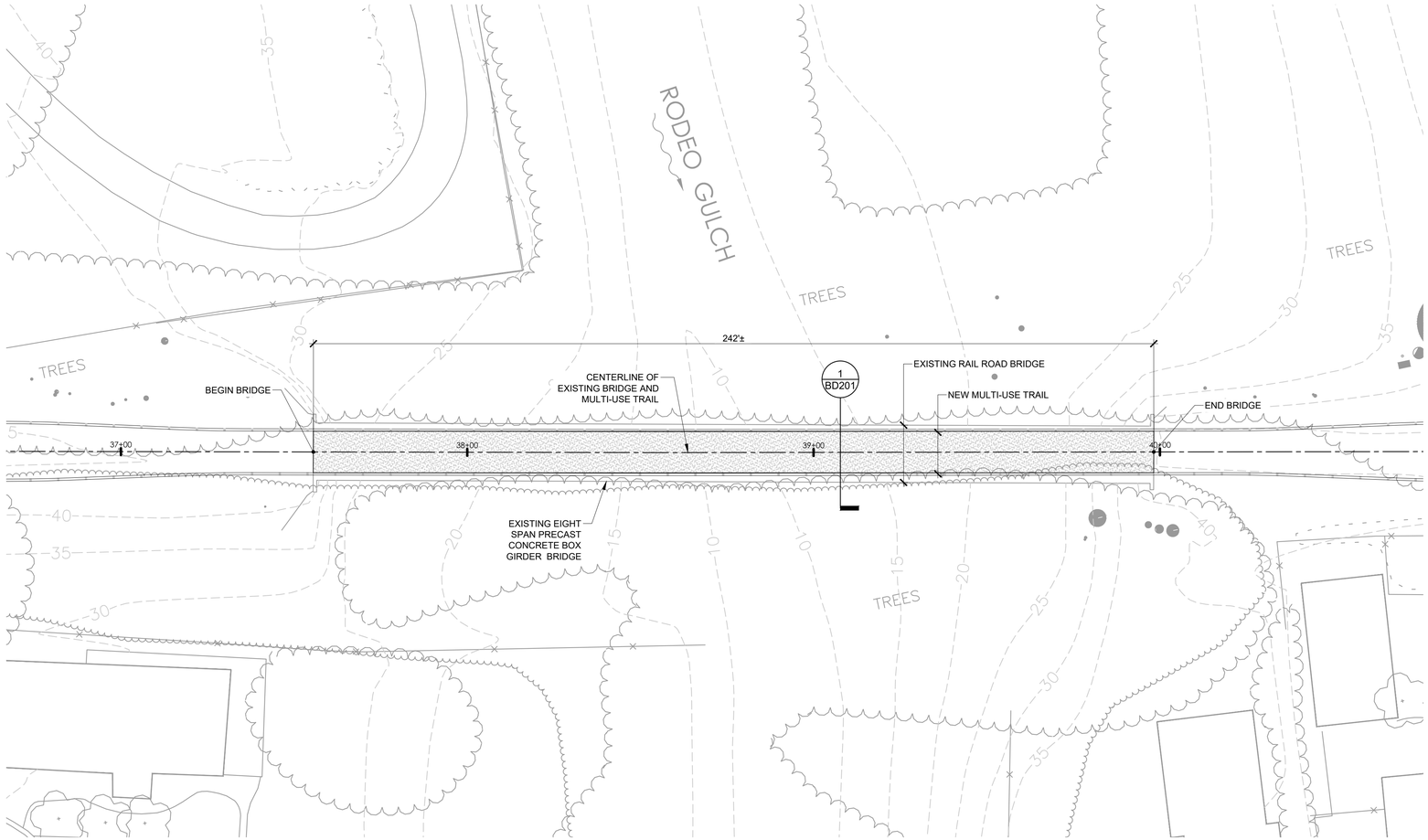
Layout Tab Name: CP-1.44, Images: county-logo-black-transparent.png, 273093-mid.jpg, , Xrefs: XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XH-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XS-0193-06-RBT-S11.dwg, Plotted By: KMDubielski, Plotted: Feb 11, 2023 - 10:12pm
N:\DOT\0193-06-RCP\Santa Cruz Rail+Trail-Segs-10-11\Notebook with Trail\Landscape-Architecture\Task-B-Schematic Design\Sheet-Files\Segment 11\CP-0193-06-RBT-S11.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



STRUCTURAL KEY MAP - SEGMENT 10

SCALE: NTS



BRIDGE PLAN

SCALE: 1" = 20'

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

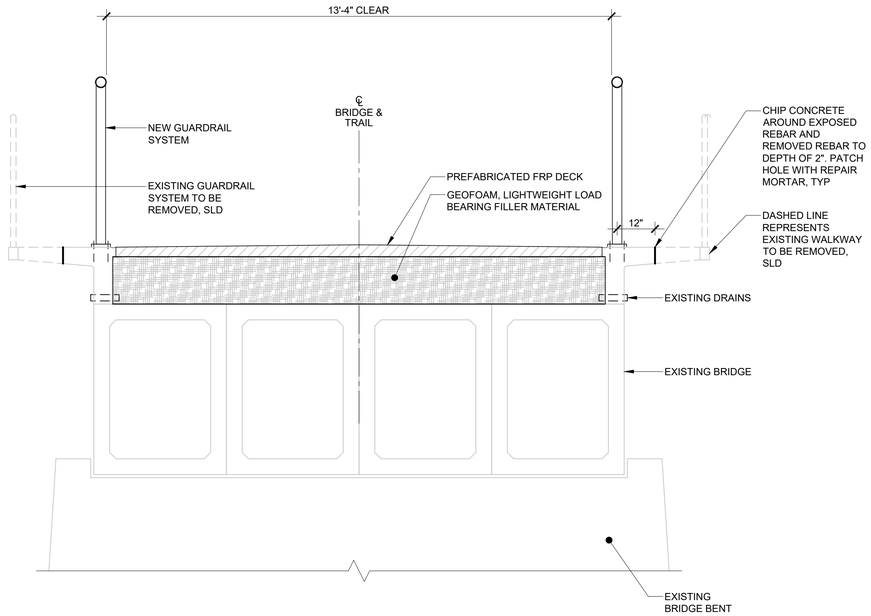
REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
RODEO GULCH BRIDGE GENERAL PLAN SHEET

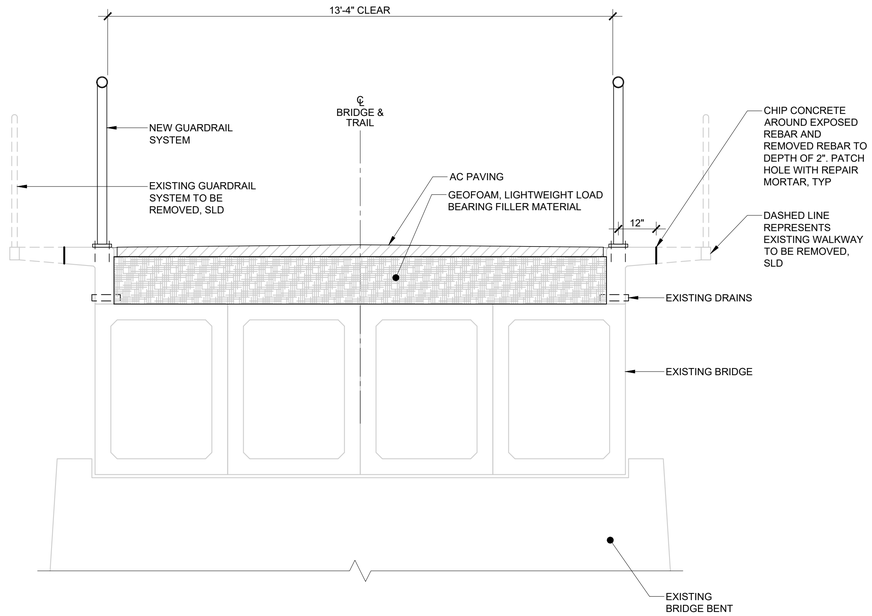
REFERENCES	DATE 02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN EDD	BP-1.01
DRAWING #:	DESIGN PD	VAULT NO.
	CHECKED PD	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23



FRP DECK OPTION 2

SCALE: 1/2" = 1'-0"



AC PAVING OPTION 1

SCALE: 1/2" = 1'-0"

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

COUNTY OF
SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
RODEO GULCH BRIDGE DETAILS

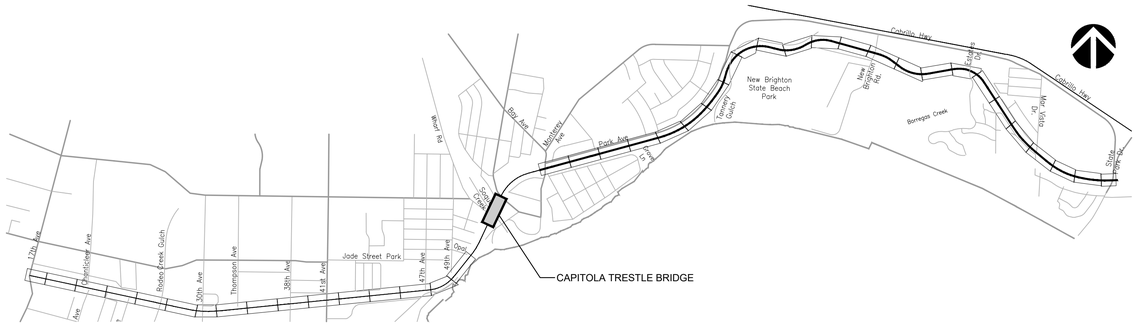
REFERENCES
FIELD BOOK:
DRAWING #:

DATE	02/10/2023
DRAWN	EDD
DESIGN	PD
CHECKED	PD

SCALE AS SHOWN
BD-1.01
VAULT NO.

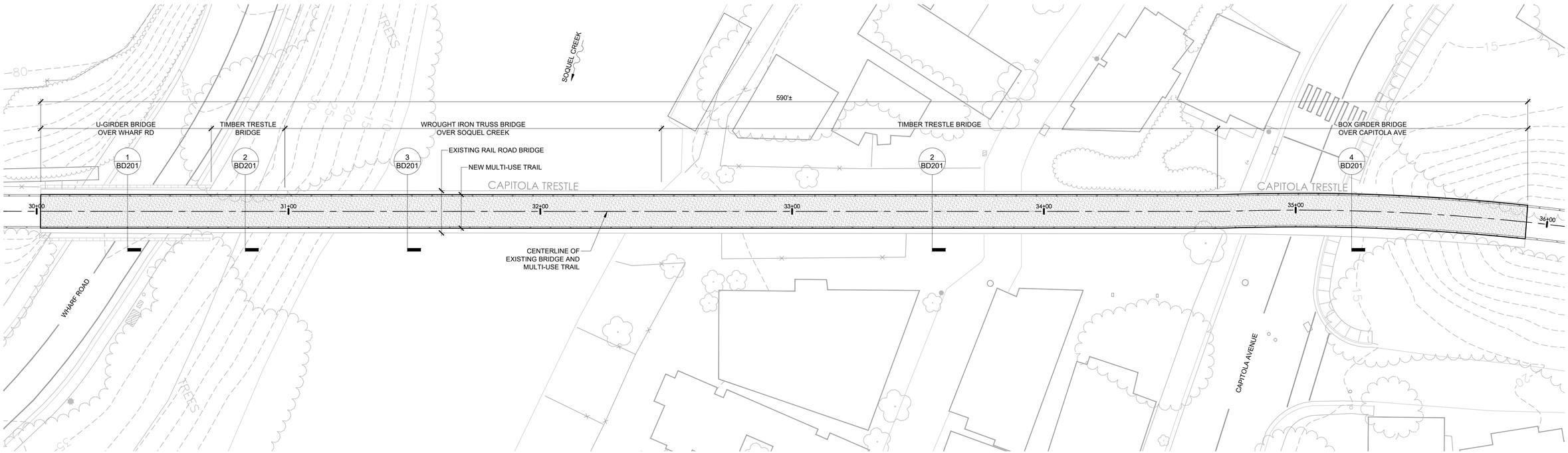
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



STRUCTURAL KEY MAP

SCALE: NTS



BRIDGE PLAN

SCALE: 1" = 10'

10' 0 5' 10' 20'
1" = 10'

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

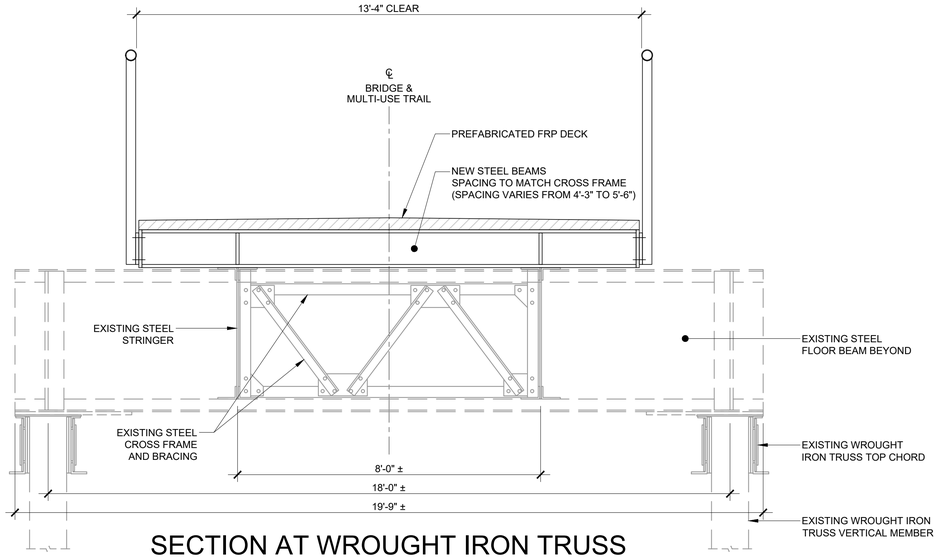
MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CAPITOLA TRESTLE BRIDGE GENERAL PLAN SHEET

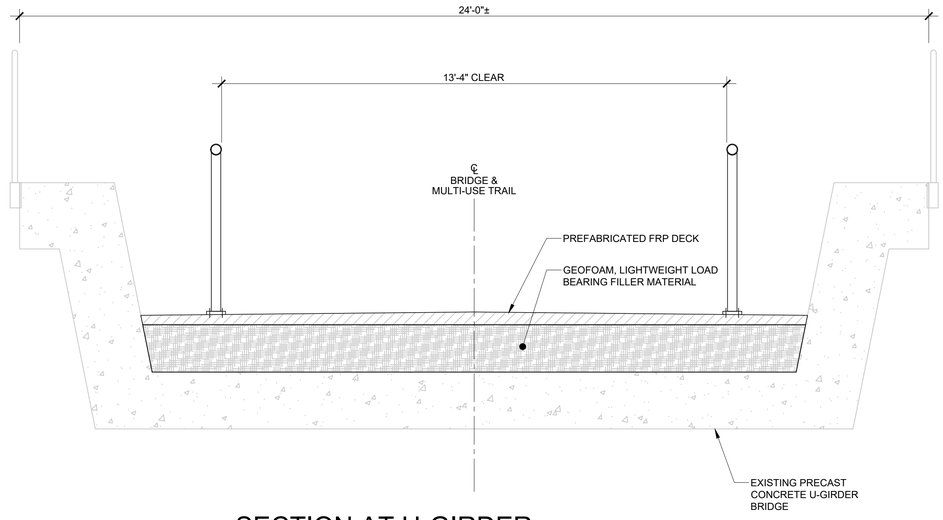
REFERENCES	DATE 02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN ED	BP-2.01
DRAWING #:	DESIGN PD	VAULT NO.
	CHECKED PD	



SECTION AT WROUGHT IRON TRUSS
SOQUEL CREEK BRIDGE

3

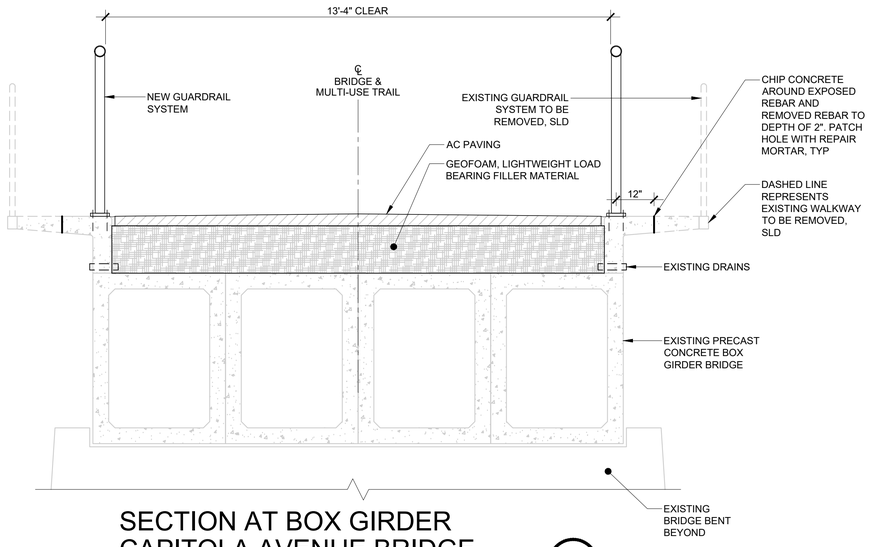
SCALE: 1/2" = 1'-0"



SECTION AT U-GIRDER
WHARF ROAD BRIDGE

1

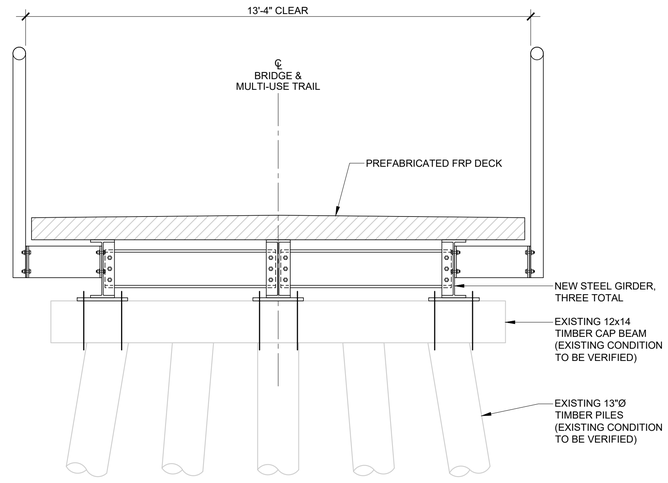
SCALE: 1/2" = 1'-0"



SECTION AT BOX GIRDER
CAPITOLA AVENUE BRIDGE

4

SCALE: 1/2" = 1'-0"



SECTION AT TIMBER TRESTLE

2

SCALE: 1/2" = 1'-0"

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
CAPITOLA TRESTLE BRIDGE DETAILS

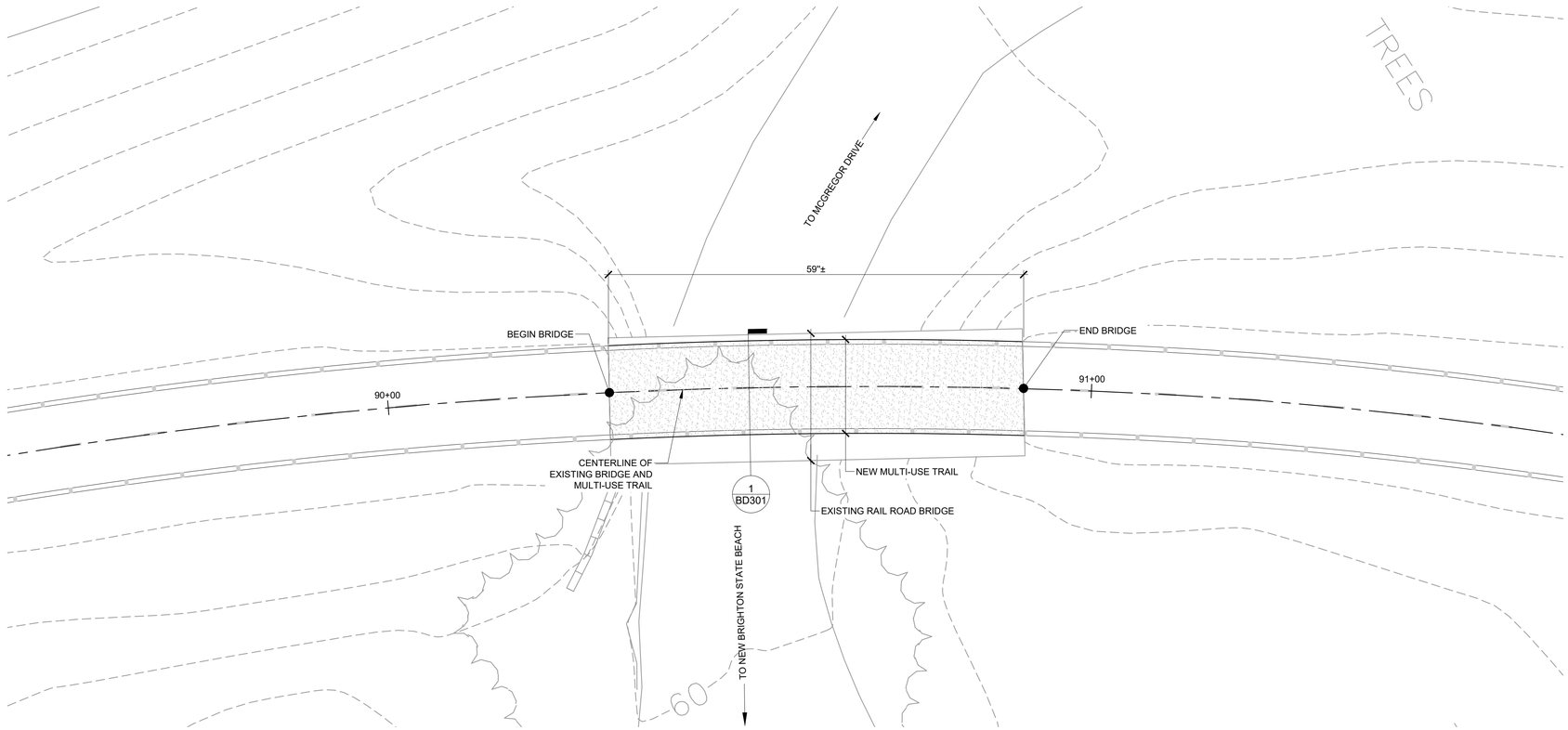
REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	EDD	BD-2.01
DRAWING #:	DESIGN	PD	VAULT NO.
	CHECKED	PD	

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



STRUCTURAL KEY MAP - SEGMENT 11

SCALE: NTS



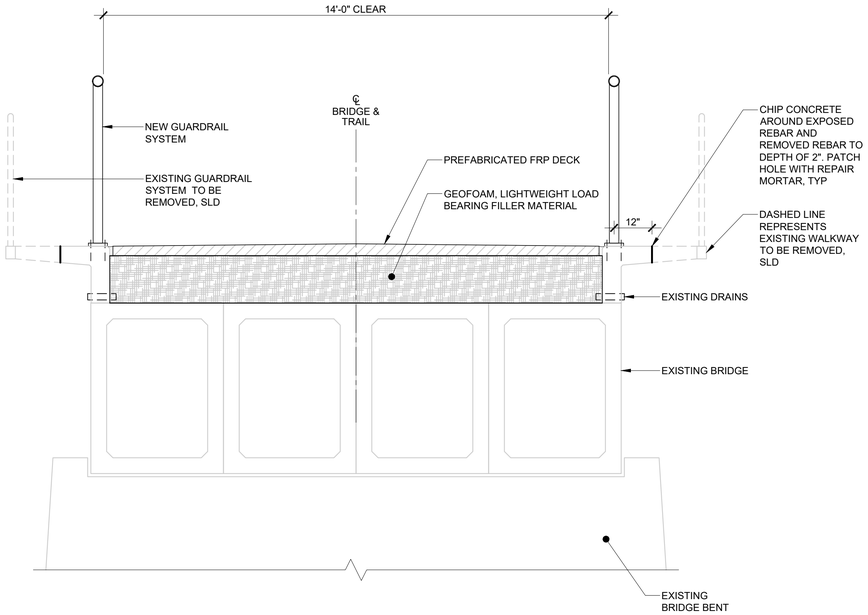
BRIDGE PLAN

SCALE: 1" = 10'

10' 0 5' 10' 20'
1" = 10'

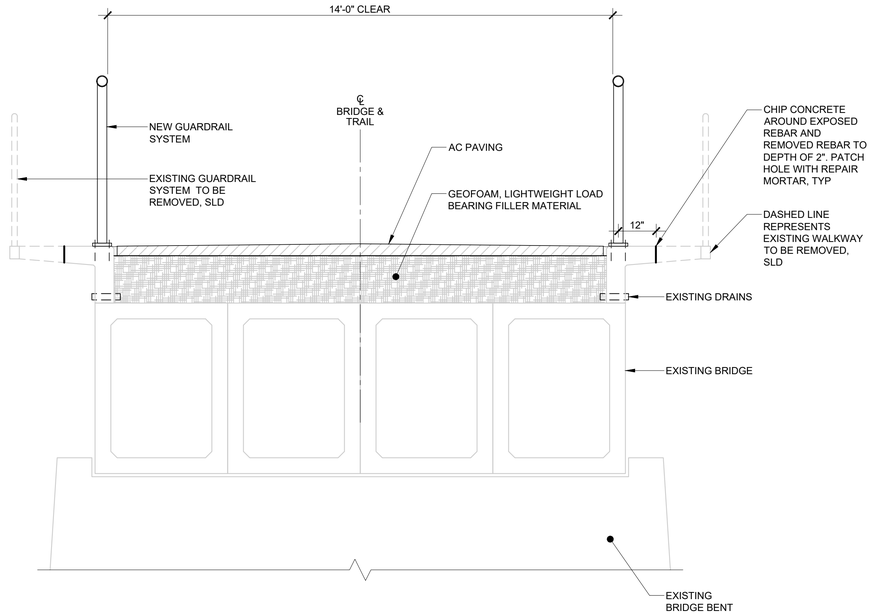
TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

MME CIVIL • STRUCTURAL ENGINEERING 224 Walnut Avenue • Suite B 831.426.3186 • www.m-me.com	REVISIONS	COUNTY OF SANTA CRUZ DEPARTMENT OF PUBLIC WORKS 701 Ocean Street, Room 410 Santa Cruz, CA 95060	RAIL TRAIL SEGMENTS 10 & 11 TRAIL ON THE RAIL LINE (INTERIM TRAIL) NEW BRIGHTON STATE BEACH BRIDGE GENERAL PLAN SHEET	REFERENCES FIELD BOOK: DRAWING #:	DATE 02/10/2023 DRAWN ED DESIGN PD CHECKED PD	SCALE AS SHOWN BP-3.01 VAULT NO.



FRP DECK OPTION 2

SCALE: 1/2" = 1'-0"



AC PAVING OPTION 1

SCALE: 1/2" = 1'-0"

MME
CIVIL • STRUCTURAL ENGINEERING
224 Walnut Avenue • Suite B
831.426.3186 • www.m-me.com

REVISIONS

COUNTY OF
SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

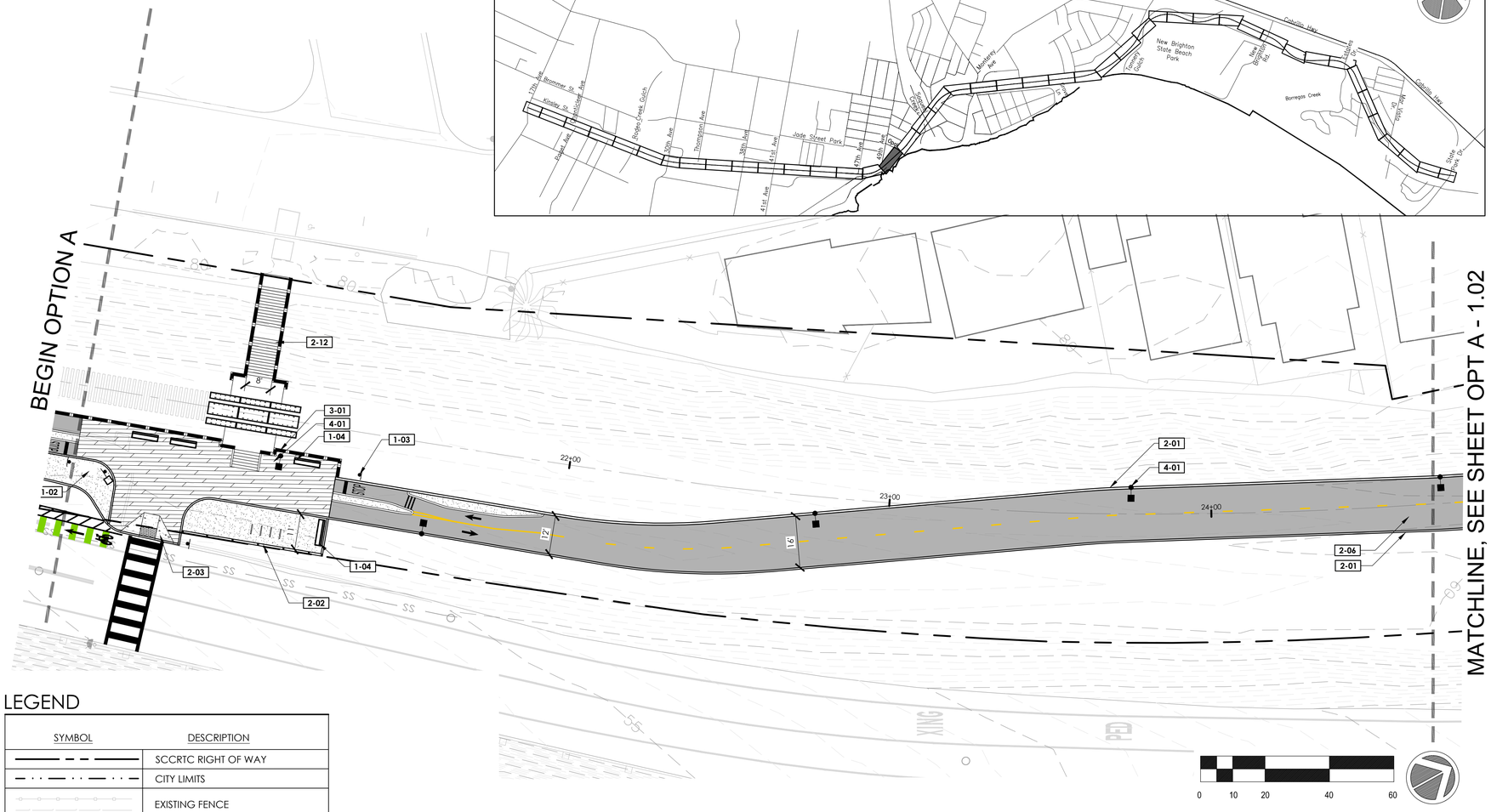
RAIL TRAIL SEGMENTS 10 & 11
TRAIL ON THE RAIL LINE (INTERIM TRAIL)
NEW BRIGHTON STATE PARK BRIDGE DETAILS

REFERENCES	DATE 02/10/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN ED	BD-3.01	
DRAWING #:	DESIGN PD	VAULT NO.	
	CHECKED PD		

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS
MATCHLINE, SEE SHEET OPT A - 1.02

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

3-01	RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

DESIGN OPTION A

REFERENCES
FIELD BOOK:
DRAWING #:

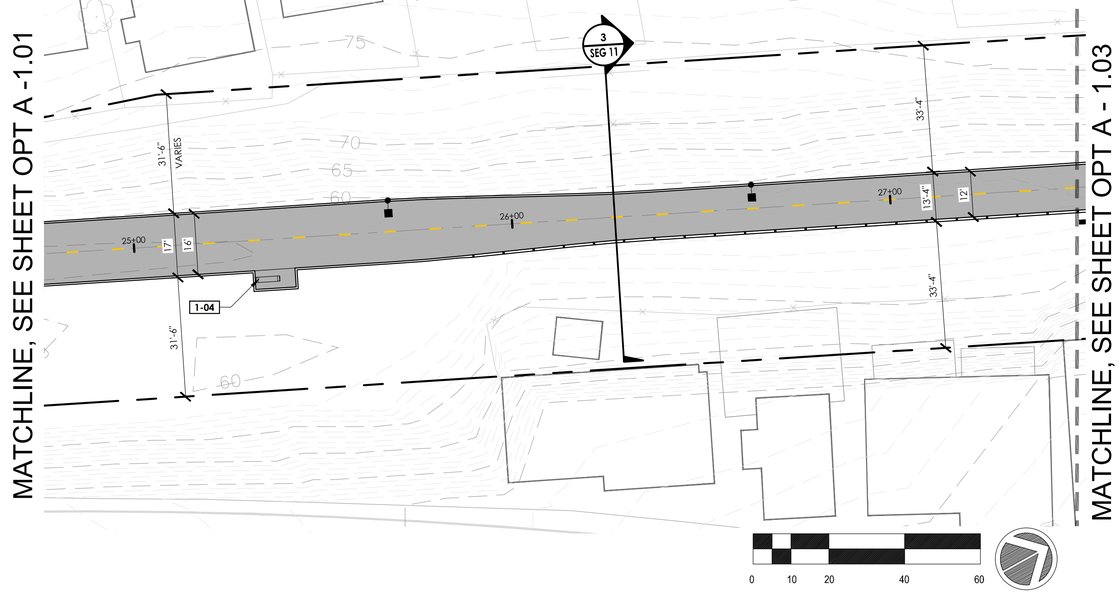
DATE	05/15/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
OPT A - 1.01
VAULT NO.

Layout Tab Name: OPT A - 1.01, Image: county-logo-black-transparent.png, Xref: XTB-0193-06-RWT.dwg, XSB-0193-06-RWT.dwg, SEC-0193-06-RBT-511.dwg, C:\Users\mmiskate\AppData\Local\Temp\AcPublish_17680\Q1-Cap Tree-0193-06-Opt-511.dwg, Plotted By: mmiskate, Plotted: May 15, 2023 - 2:38pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

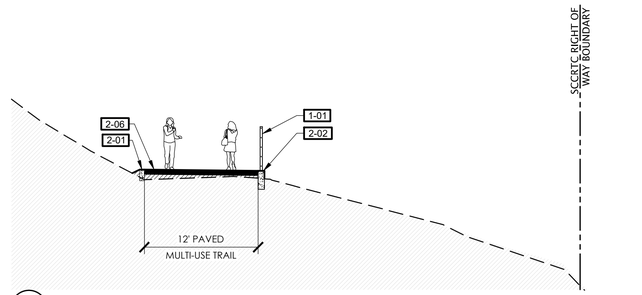
3-01	RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



3 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

DESIGN OPTION A

REFERENCES
FIELD BOOK:
DRAWING #:

DATE	05/15/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
OPT A - 1.02
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS

Layout Tab Name: OP-1.17, Images: county-logo-black-transparent.png, 273971-mid.jpg, ; Xrefs: XTB-0193-06-RRT.dwg, XSB-0193-06-RRT-511.dwg, KEYMAP-0193-06-RRT-511.dwg, XP-0193-06-RRT-511.dwg, XT-0193-06-RRT-511.dwg, XC-0193-06-RRT-511.dwg, N:\2021\10193-06-RCZD-Santa-Cruz-Rail-Trail-Segs-10-11\Workbook with Trail\Landscape-Architecture\Task-8-Schematic Design\Sheet-Files\Segment 11\OP-0193-06-RRT-511.dwg, Plotted By: KMDuBakeski, Plotted: Feb 11, 2023 - 10:04pm

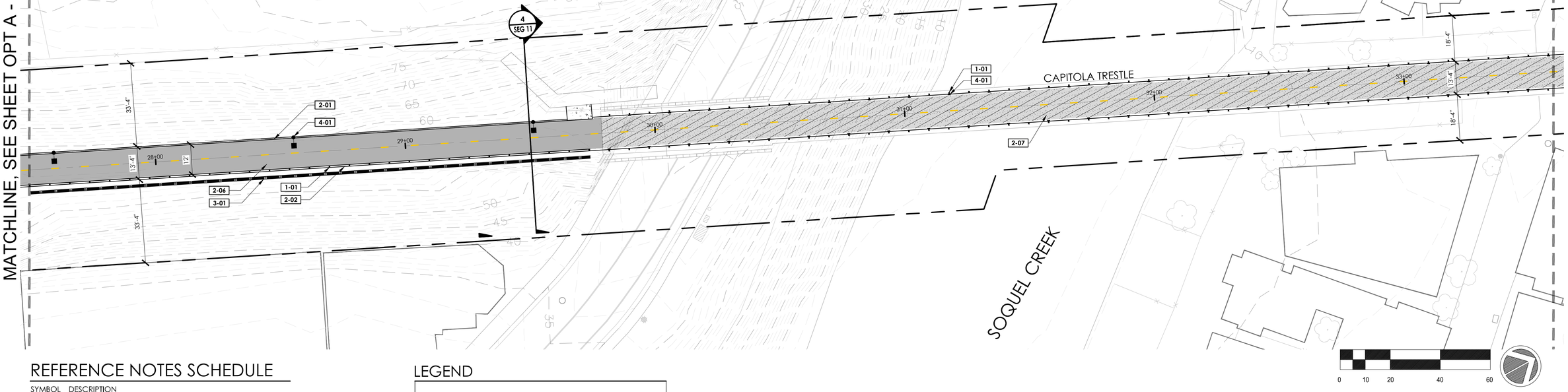
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET OPT A - 1.02

MATCHLINE, SEE SHEET OPT A - 1.04

KEYMAP



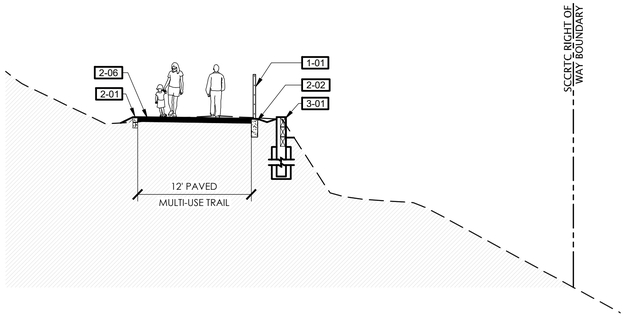


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



4 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

DESIGN OPTION A

REFERENCES	DATE 05/15/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN MMS	OPT A - 1.03
DRAWING #:	DESIGN KS/MS	VAULT NO.
	CHECKED MS	

Layout Tab Name: OP-1.18, Images: county-logo-black-transparent.png, 07567-mid.dgn , Xrefs: XTB-0193-06-RBT-511.dwg, XSB-0193-06-RBT-511.dwg, XDWMP-0193-06-RBT-511.dwg, XH-0193-06-RBT-511.dwg, XC-0193-06-RBT-511.dwg, XC-0193-06-RBT-511-Alt.dwg, XC-0193-06-RBT-511-Alt2.dwg, XC-0193-06-RBT-511-Alt3.dwg, XC-0193-06-RBT-511-Alt4.dwg, XC-0193-06-RBT-511-Alt5.dwg, XC-0193-06-RBT-511-Alt6.dwg, XC-0193-06-RBT-511-Alt7.dwg, XC-0193-06-RBT-511-Alt8.dwg, XC-0193-06-RBT-511-Alt9.dwg, XC-0193-06-RBT-511-Alt10.dwg, XC-0193-06-RBT-511-Alt11.dwg, XC-0193-06-RBT-511-Alt12.dwg, XC-0193-06-RBT-511-Alt13.dwg, XC-0193-06-RBT-511-Alt14.dwg, XC-0193-06-RBT-511-Alt15.dwg, XC-0193-06-RBT-511-Alt16.dwg, XC-0193-06-RBT-511-Alt17.dwg, XC-0193-06-RBT-511-Alt18.dwg, XC-0193-06-RBT-511-Alt19.dwg, XC-0193-06-RBT-511-Alt20.dwg, XC-0193-06-RBT-511-Alt21.dwg, XC-0193-06-RBT-511-Alt22.dwg, XC-0193-06-RBT-511-Alt23.dwg, XC-0193-06-RBT-511-Alt24.dwg, XC-0193-06-RBT-511-Alt25.dwg, XC-0193-06-RBT-511-Alt26.dwg, XC-0193-06-RBT-511-Alt27.dwg, XC-0193-06-RBT-511-Alt28.dwg, XC-0193-06-RBT-511-Alt29.dwg, XC-0193-06-RBT-511-Alt30.dwg, XC-0193-06-RBT-511-Alt31.dwg, XC-0193-06-RBT-511-Alt32.dwg, XC-0193-06-RBT-511-Alt33.dwg, XC-0193-06-RBT-511-Alt34.dwg, XC-0193-06-RBT-511-Alt35.dwg, XC-0193-06-RBT-511-Alt36.dwg, XC-0193-06-RBT-511-Alt37.dwg, XC-0193-06-RBT-511-Alt38.dwg, XC-0193-06-RBT-511-Alt39.dwg, XC-0193-06-RBT-511-Alt40.dwg, XC-0193-06-RBT-511-Alt41.dwg,

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET OPT A - 1.03

MATCHLINE, SEE SHEET OPT A - 1.05

CAPITOLA AVENUE

CAPITOLA TRESTLE

KEEP CLEAR

KEYMAP



1-01 FENCING OR GUARDRAIL
4-01 PROPOSED LIGHT
3-01 RETAINING WALL
2-02 6"-8" WIDE CURB
2-07 PREFABRICATED FRP DECKING
2-12 PROPOSED STAIRS

4 SEG 11

18'-4" 13'-4" 18'-4"

34+00 35+00 36+00 37+00 38+00 39+00

16' 16'-4" 17'-4" 16'-4"

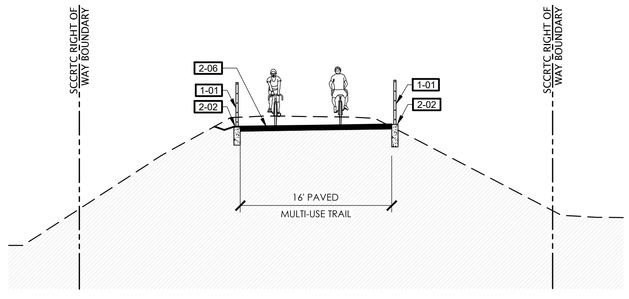
0 10 20 40 60

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING RELOCATED PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



5 TYPICAL SECTION
SCALE 1/8"=1'-0"

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

DESIGN OPTION A

REFERENCES	DATE 05/15/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN MMS	OPT A - 1.04	
DRAWING #:	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

Layout Tab: 'Name': OP-1.19, Images: county-logo-black-transparent.png, 07597-mid.dpz, Xrefs: XTB-01X3-DA-RBT.dwg, XTB-01X3-DA-RBT-511.dwg, XDWG-01X3-DA-RBT-511.dwg, XC-01X3-DA-RDSD.dwg, XH-01X3-DA-RBT-511.dwg, XT-01X3-DA-RWT-511.dwg, XC-01X3-DA-RDSD-Santa-Cruz-Rail-Trail-Seg-10-11\Roldbook with Trail\Landscape-Architecture\1Sets-B-Schematic Design\Sheet-Files\Segment 11\OP-01X3-DA-RBT-511.dwg, Plotted By: KMSzakowski, Plotted: Feb 11, 2023 - 10:05pm
N:\2001\01X3-DA-RDSD-Santa-Cruz-Rail-Trail-Seg-10-11\Roldbook with Trail\Landscape-Architecture\1Sets-B-Schematic Design\Sheet-Files\Segment 11\OP-01X3-DA-RBT-511.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



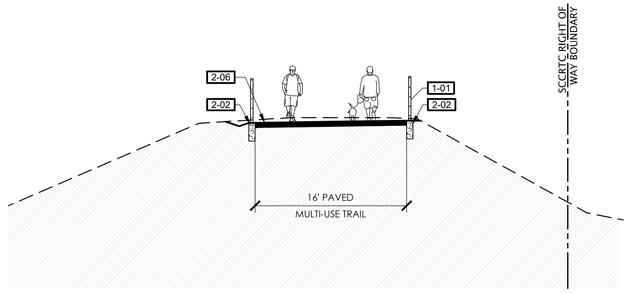


REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
STRUCTURAL	
4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE



6 TYPICAL SECTION
SCALE 1/8"=1'-0"

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

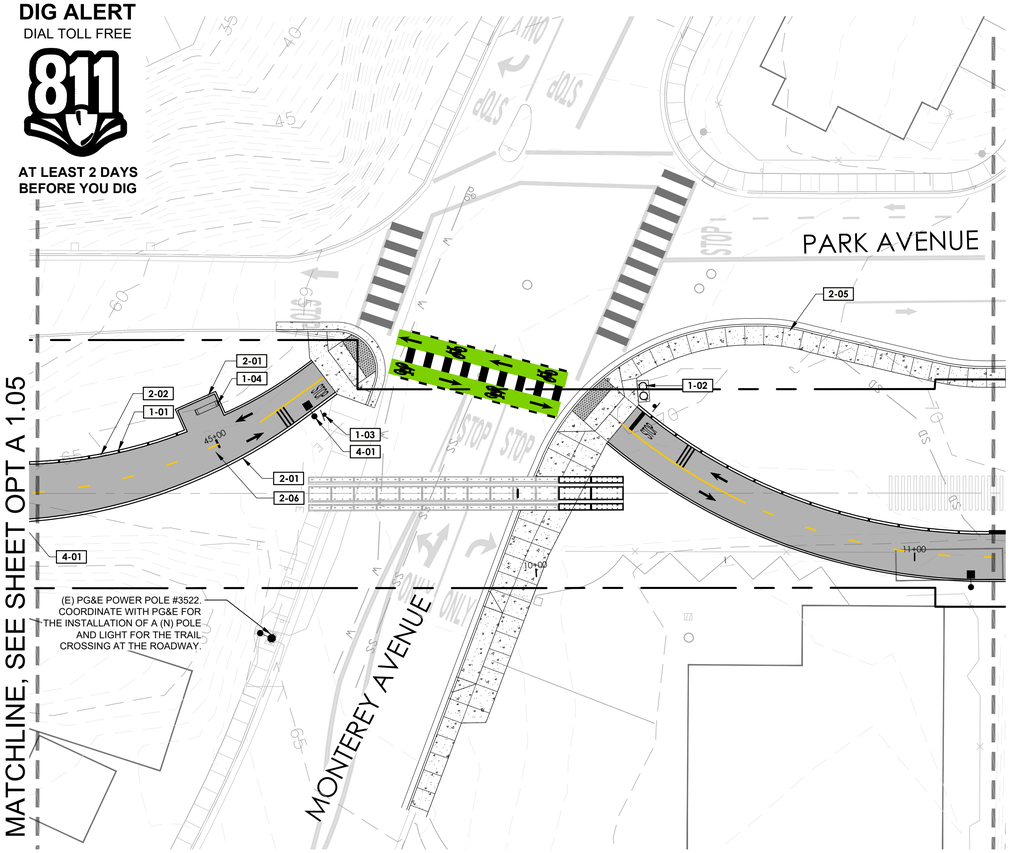
DESIGN OPTION A

REFERENCES	DATE 05/15/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN MMS	OPT A - 1.05
DRAWING #:	DESIGN KS/MS	VAULT NO.
	CHECKED MS	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS

Layout Tab: "Sheet - OP - 1.05" Image: county-logo-black-transparent.png, 07/07/-mm.dpz Xrefs: XTB-0193-D6-RBT.dwg, XSB-0193-D6-RBT.dwg, XTB-0193-D6-RBT-511.dwg, XTB-0193-D6-RBT-511.dwg, XT-0193-D6-RBT-511.dwg, XC-0193-D6-RBT-511.dwg, XC-0193-D6-RCZD-Santa Cruz-Rail-Trail-Segment 11\Layouts\Layout-Plan-10-11\Wallbook with Trail\Landscape-Architecture\1Sale-B-Sheets\E Design\Sheet-Files\Segment 11\OP-0193-D6-RBT-511.dwg, Plotted By: KMSzakmeis, Plotted: Feb 11, 2023 - 10:05pm
N:\2001\0193-D6-RCZD-Santa Cruz-Rail-Trail-Segment 11\Layouts\Layout-Plan-10-11\Wallbook with Trail\Landscape-Architecture\1Sale-B-Sheets\E Design\Sheet-Files\Segment 11\OP-0193-D6-RBT-511.dwg

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



MATCHLINE, SEE SHEET OPT A 1.05

END OF OPTION A

KEYMAP



REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT

1-01	FENCING OR GUARDRAIL
1-02	TRASH RECEPTACLE
1-03	PROPOSED SIGN
1-04	BENCH

SYMBOL DESCRIPTION
PEDESTRIAN AND TRAFFIC CONTROL

2-01	6"-8" WIDE CURB
2-03	CURB RAMP
2-04	DETECTABLE WARNING SURFACE
2-05	CONCRETE SIDEWALK
2-06	HMA PAVEMENT (TRAIL)
2-07	PREFABRICATED FRP DECKING
2-09	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED STAIRS
2-13	TRAIL CHICANE

SYMBOL DESCRIPTION
STRUCTURAL

3-01	RETAINING WALL

SYMBOL DESCRIPTION
STRUCTURAL

4-01	PROPOSED LIGHT
4-05	RRFB (RECTANGULAR RAPID FLASHING BEACON)

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RRFB (RECTANGULAR RAPID FLASHING BEACON)
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
EXISTING; RELOCATED; PROPOSED	SIGNS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	FIBERGLASS REINFORCED POLYMER DECK ON EXISTING BRIDGE

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS

rrm design group
rrmdesign.com | (949) 361-7950
30300 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL)

DESIGN OPTION A

REFERENCES
FIELD BOOK:
DRAWING #:

DATE	05/15/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	OPT A - 1.06
VAULT NO.	

Layout Tab Name: OPT A - 1.06, Image: county-logo-black-transparent.png, Xref: XTB-0193-06-RMT.dwg, XSB-0193-06-RMT-511.dwg, XCH-0193-06-RD20.dwg, XH-Cap Tree-0193-06-Opt-511.dwg, KEYMAP-0193-06-RD20.dwg, XC-Cap Tree-0193-06-Opt-511.dwg, SEC-0193-06-RBT-511.dwg
C:\Users\mmistake\AppData\Local\Temp\AcPublish_17680\Q2-Cap Tree-0193-06-Opt-511.dwg, Plotted By: mmistake, Plotted: May 15, 2023 - 2:38pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

REFERENCE NOTES SCHEDULE

SYMBOL DESCRIPTION

SITE FURNISHINGS AND EQUIPMENT

- 1-01 CONCRETE TRACK PANEL
- 1-02 SEPARATION FENCING
- 1-03 PROPOSED SIGN
- 1-04 RELOCATED PAY STATION
- 1-05 TRASH RECEPTACLES
- 1-06 BENCH
- 1-07 CROSSWALK BARRIER
- 1-08 BIKE RACKS
- 1-09 FLEXIBLE BOLLARD
- 1-10 GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

- 2-01 6" WIDE CURB
- 2-02 8" WIDE CURB
- 2-03 6" CURB AND GUTTER
- 2-04 CURB RAMP
- 2-05 DETECTABLE WARNING SURFACE
- 2-06 HMA PAVEMENT (TRAIL)
- 2-07 HMA PAVEMENT (ROAD)
- 2-08 CONCRETE SIDEWALK
- 2-09 CONTINENTAL CROSSWALK STRIPING
- 2-10 CROSSBIKE MARKINGS
- 2-11 LADDER CROSSWALK STRIPING
- 2-12 PROPOSED AT-GRADE CROSSING
- 2-13 PROPOSED STAIRS
- 2-14 TRAIL CHICANE

STRUCTURAL

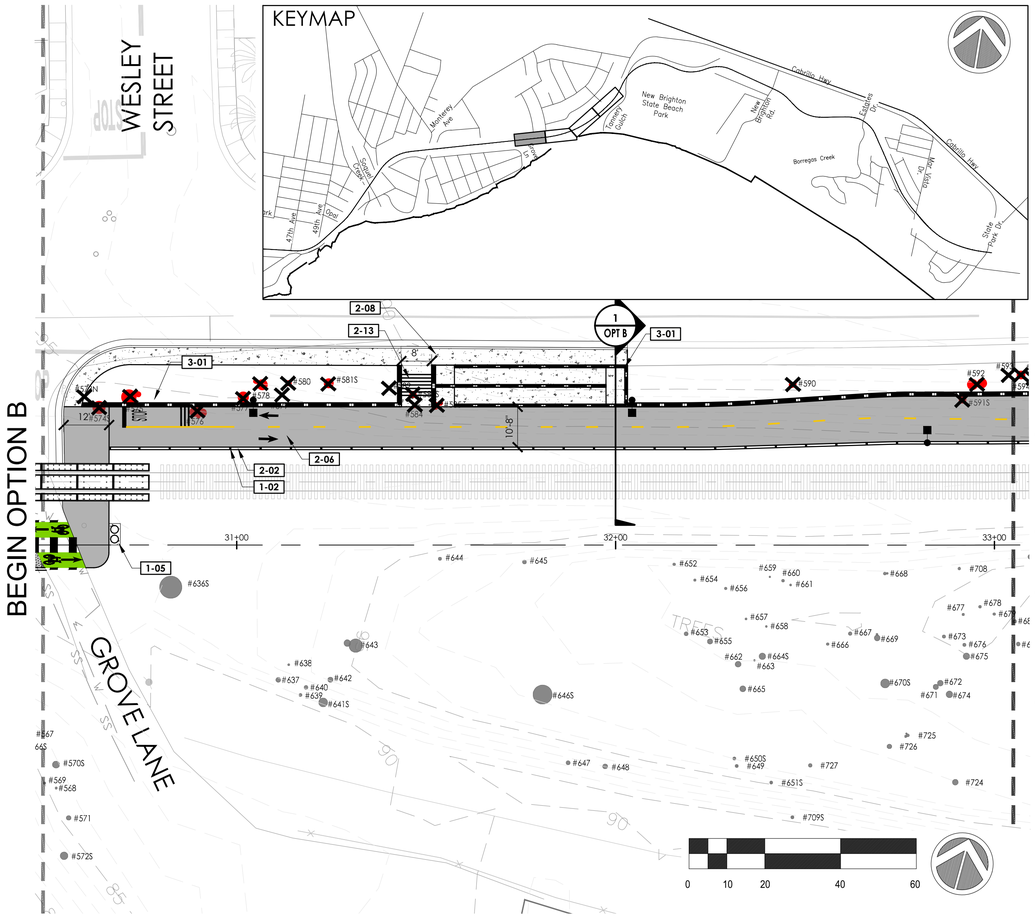
- 3-01 RETAINING WALL
- 3-02 VIADUCT
- 3-03 ABUTMENT
- 3-04 BRIDGE

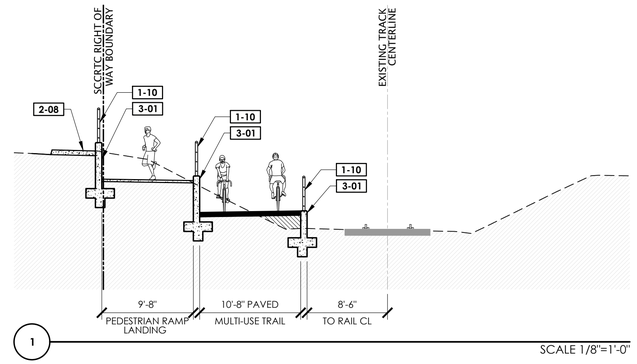
UTILITIES

- 4-01 PIP EXISTING RAIL EQUIPMENT
- 4-02 PROPOSED LIGHT
- 4-03 NEW LIGHT FIXTURE ON EXISTING POLE
- 4-05 SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
#581S	TREE REMOVALS





PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DESIGN OPTION B

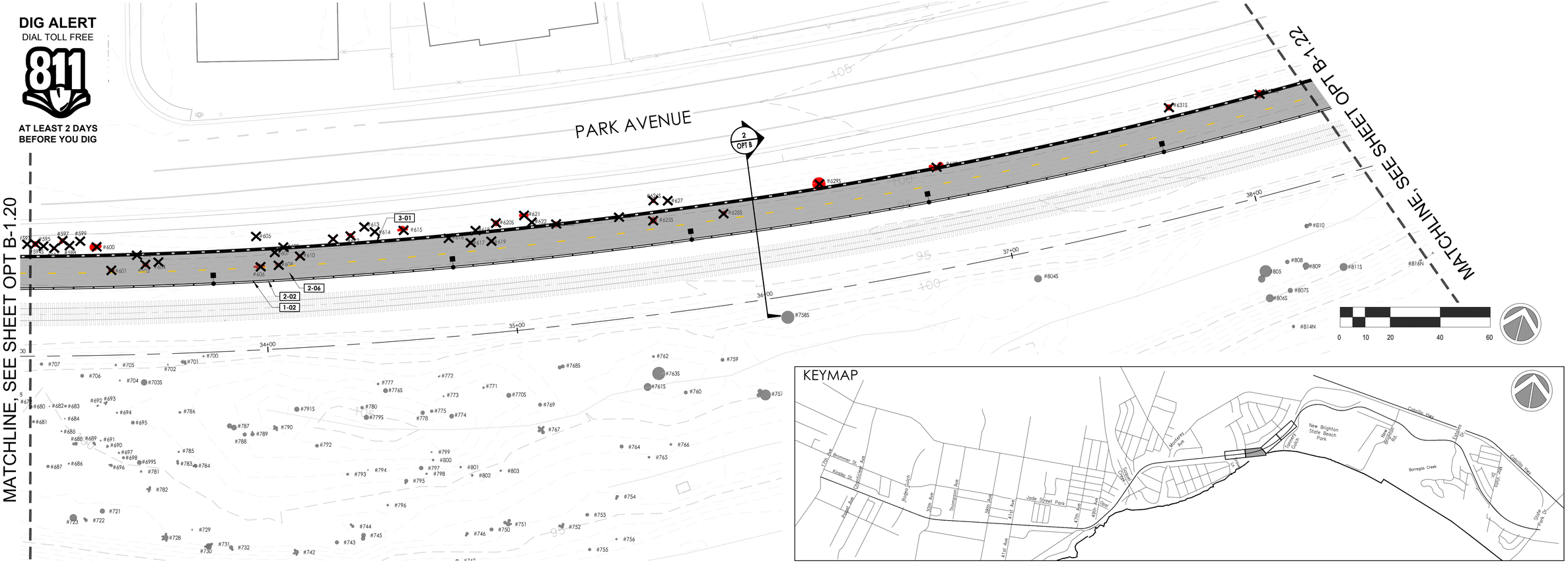
REFERENCES
FIELD BOOK:
DRAWING #: CORONADO CP

DATE	05/15/2023	SCALE	AS SHOWN
DRAWN	KS		OPT B-1.01
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 05/15/23
MATCHLINE, SEE SHEET OPT B-1.21

Layout_Tab_Name: OPT B-1.01, Images: county-logo-green-transparent.png, Xrefs: XTB_Coronado-0193-06-RWT.dwg, XSTAMP-0193-06-RWOD.dwg, XC_Coronado-0193-06-RWT-511.dwg, XH_Coronado-0193-06-RWT-511.dwg, XT_Coronado-0193-06-RWT-511.dwg, XR_Coronado-0193-06-RWT-511-GRADE.dwg
C:\Users\rymoldask\AppData\Local\Temp\AcPublish_14264\Coronado OP.dwg, Plotted By: rymoldask, Plotted: Jun 14, 2023 - 6:56pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



REFERENCE NOTES SCHEDULE

SITE FURNISHINGS AND EQUIPMENT

SYMBOL	DESCRIPTION
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM

PEDESTRIAN AND TRAFFIC CONTROL

2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE

STRUCTURAL

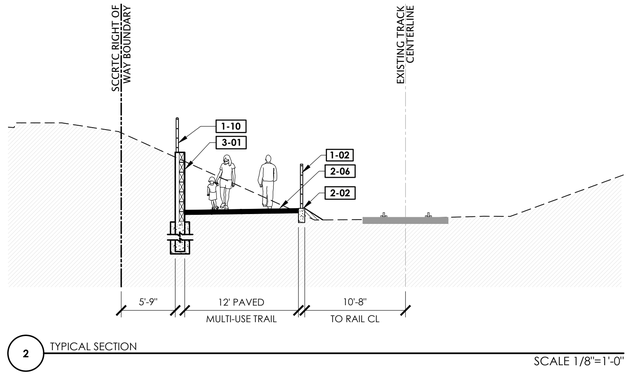
3-01	RETAINING WALL
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE

UTILITIES

4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
#581S	TREE REMOVALS



2 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)
DESIGN OPTION B

REFERENCES
FIELD BOOK:
DRAWING #:
CORONADO CP

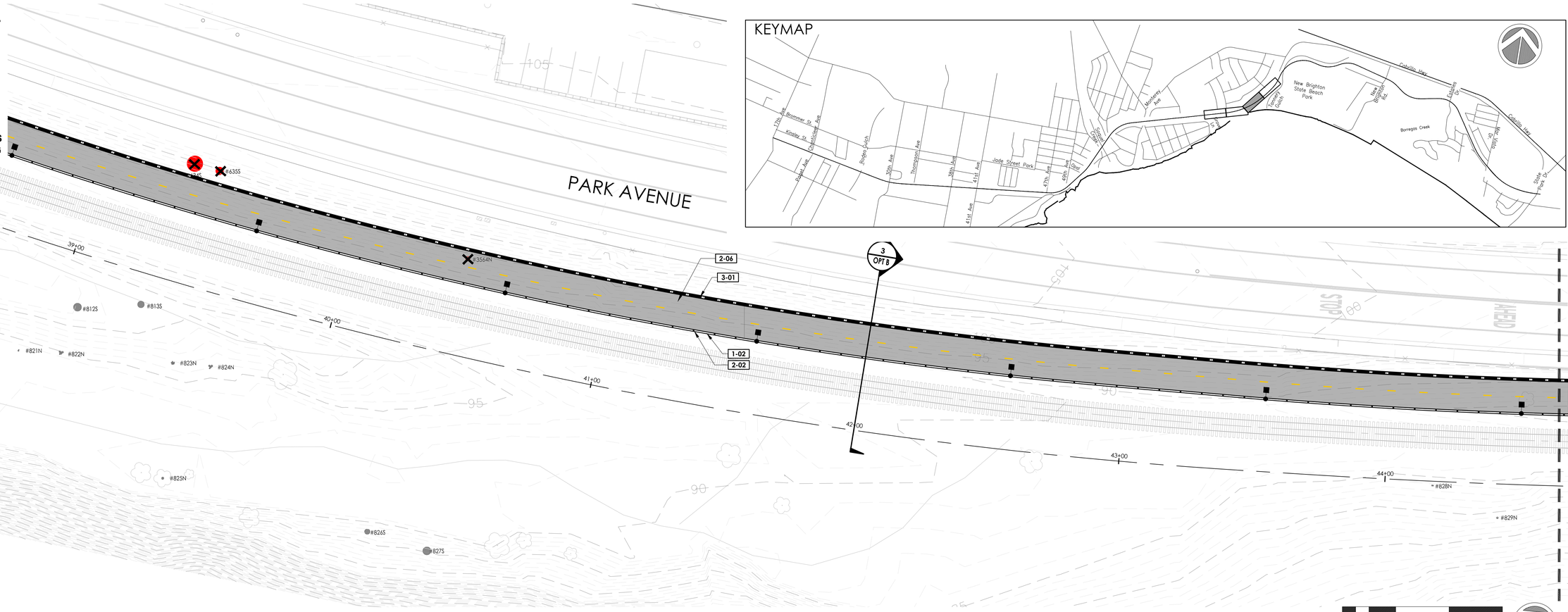
DATE	05/15/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
OPT B-1.02
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 05/15/23

Layout Tab Name: OPT B-1.02, Images: county-logo-green-transparent.png, Xrefs: XTB Coronado-0193-06-RMT.dwg, KEYMAP-0193-06-RMT.dwg, RC Coronado-0193-06-RMT-511.dwg, XM Coronado-0193-06-RMT-511.dwg, XT Coronado-0193-06-RMT-511.dwg, XR Coronado-0193-06-RCD.dwg, RC Coronado-0193-06-RMT-511.dwg, C:\Users\mmistaske\AppData\Local\Temp\AcPublish_1436A\Coronado CP.dwg, Plotted By: mmistaske, Plotted: Jun 14, 2023 – 6:05pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



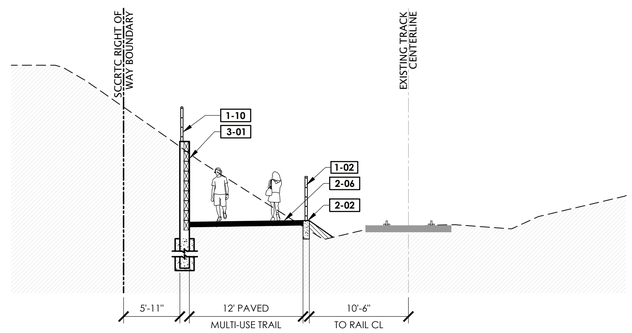
REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
SITE FURNISHINGS AND EQUIPMENT	
1-01	CONCRETE TRACK PANEL
1-02	SEPARATION FENCING
1-03	PROPOSED SIGN
1-04	RELOCATED PAY STATION
1-05	TRASH RECEPTACLES
1-06	BENCH
1-07	CROSSWALK BARRIER
1-08	BIKE RACKS
1-09	FLEXIBLE BOLLARD
1-10	GUARDRAIL SYSTEM
PEDESTRIAN AND TRAFFIC CONTROL	
2-01	6" WIDE CURB
2-02	8" WIDE CURB
2-03	6" CURB AND GUTTER
2-04	CURB RAMP
2-05	DETECTABLE WARNING SURFACE
2-06	HMA PAVEMENT (TRAIL)
2-07	HMA PAVEMENT (ROAD)
2-08	CONCRETE SIDEWALK
2-09	CONTINENTAL CROSSWALK STRIPING
2-10	CROSSBIKE MARKINGS
2-11	LADDER CROSSWALK STRIPING
2-12	PROPOSED AT-GRADE CROSSING
2-13	PROPOSED STAIRS
2-14	TRAIL CHICANE
STRUCTURAL	
3-01	RETAINING WALL
3-02	VIADUCT
3-03	ABUTMENT
3-04	BRIDGE
UTILITIES	
4-01	PIP EXISTING RAIL EQUIPMENT
4-02	PROPOSED LIGHT
4-03	NEW LIGHT FIXTURE ON EXISTING POLE
4-05	SOLAR LED W11-15 CROSSING SIGN

LEGEND

SYMBOL	DESCRIPTION
	SCCRTC RIGHT OF WAY
	CITY LIMITS
	EXISTING FENCE
	FENCE OR GUARDRAIL ON CURB, WALL, VIADUCT OR BRIDGE
	RETAINING WALL, SEE WP SHEETS
LIGHT ON EX. FIXTURE; ROADWAY LIGHT; TRAIL LIGHT; RECESSED LIGHT IN POST	PROPOSED LIGHTS
	CONCRETE PAVEMENT
	HMA PAVEMENT (TRAIL)
	VIADUCT WITH FIBERGLASS REINFORCED POLYMER DECK
	BRIDGE WITH FIBERGLASS REINFORCED POLYMER DECK
	DECOMPOSED GRANITE
#581S	TREE REMOVALS

0 10 20 40 60



3 TYPICAL SECTION
SCALE 1/8"=1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DESIGN OPTION B

REFERENCES
FIELD BOOK:
DRAWING #: CORONADO CP

DATE	05/15/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	OPT B-1.03
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 05/15/23

Layout Tab Name: OPT B-1.03 Images: county-logo-green-transparent.png , WHITE STR Coronado-0193-06-RMT.dwg , KEYMAP-0193-06-RMT.dwg , KEYMAP-0193-06-RDY.dwg , XC Coronado-0193-06-RMT-511.dwg , XR Coronado-0193-06-RMT-511.dwg , XT Coronado-0193-06-RMT-511.dwg , XH Coronado-0193-06-RMT-511.dwg , SEC-0193-06-RMT-511.dwg , SEC-0193-06-RMT-511-ZOOM1.dwg
C:\Users\mmassee\AppData\Local\Temp\AcPublish_14264\Coronado OPT.dwg Plotted By: mmassee, Plotted: Jun 14, 2023 – 7:20pm

DEPARTMENT OF PUBLIC WORKS
RAIL TRAIL SEGMENTS 10 - 11 TRAIL NEXT TO THE RAIL LINE
(ULTIMATE TRAIL CONFIGURATION)
17th Avenue to State Park Drive

PROJECT DESCRIPTION

SEGMENT 10 INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED ALONG THE SANTA CRUZ BRANCH RAIL LINE FROM THE EAST SIDE OF 17TH AVENUE TO THE EAST SIDE OF 47TH AVENUE. THIS SEGMENT ALSO INCLUDES RAIL OPERATIONS EQUIPMENT RELOCATION AND APPROXIMATELY ONE MILE OF TRACK REMOVAL AND RECONSTRUCTION.

SEGMENT 11 INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED ALONG THE SANTA CRUZ BRANCH RAIL LINE FROM THE EAST SIDE OF 47TH AVENUE TO OPAL STREET WHERE THE TRAIL DIVERTS ONTO EXISITNG BIKE AND PEDESTRIAN FACILITIES THROUGH CAPITOLA VILLAGE TO MONTEREY AVENUE. IMPROVEMENTS TO THE EXISITNG BIKE AND PEDESTRIAN FACILITIES THROUGH THE VILLAGE INCLUDE NEW DIRECTIONAL SIGNAGE AND PAVEMENT MARKINGS. CONSTRUCTION OF THE MULTI-USE TRAIL PICKS UP ON THE WEST SIDE OF MONTEREY AVENUE ALONG THE SANTA CRUZ BRANCH RAIL LINE AND CONTINUES TO THE WEST SIDE OF STATE PARK DRIVE.

PROJECT DIRECTORY

OWNER
SANTA CRUZ COUNTY REGIONAL
TRANSPORTATION COMMISSION
CONTACT: GRACE BLAKESLEE PHONE: (831) 460-3200
RAIL CONTACT: TOMMY TRAVERS FAX: (831) 460-6178

LANDSCAPE ARCHITECT
RRM DESIGN GROUP
3765 SOUTH HIGUERA, SUITE 102 PHONE: (949) 361-7950
SAN LUIS OBISPO, CA 93401 FAX: (949) 361-7955
CONTACT: MIKE SHERROD

CIVIL ENGINEER
RRM DESIGN GROUP
325 DAVIS STREET PHONE: (510) 751-4910
SAN LEANDRO, CA 94577 FAX: (510) 686-4910
CONTACT: DARREN CHOY

ELECTRICAL ENGINEER
THOMA ELECTRIC
3562 EMPLEO ST. PHONE: (805) 543-3850
SAN LUIS OBISPO, CA
CONTACT: CHRIS PATCHIN

GEOTECHNICAL ENGINEER
PACIFIC CREST ENGINEERING
444 AIRPORT BLVD PHONE: (831) 722-9446
WATSONVILLE, CA 95076
CONTACT: ELIZABETH MITCHELL

STRUCTURAL ENGINEER
MESITI-MILLER ENGINEERING
224 WALNUT ST, SUITE B PHONE: (831) 426-3186
SANTA CRUZ, CA 95060
CONTACT: DALE HENDSBEE

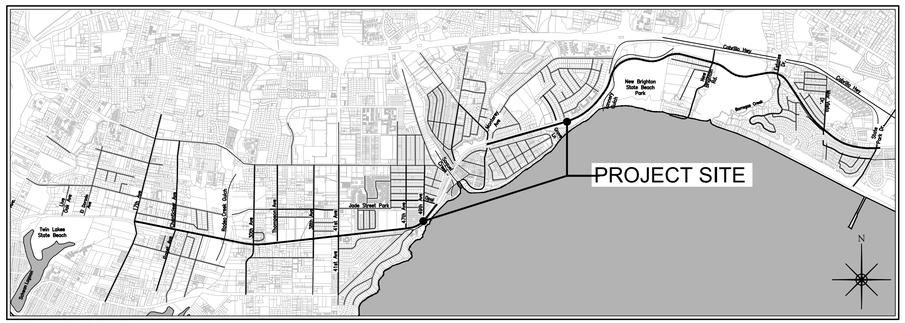
TRAFFIC ENGINEER
WHITLOCK & WEINBERGER (W-TRANS)
1276 LINCOLN AVE, SUITE 204 PHONE: (510) 444-2600
SAN JOSE, CA 9525
CONTACT: STEVE FITZSIMMONS

RAIL ENGINEER
ZEPHYR UAS/RAIL (ZUI)
725 W TOWN & COUNTRY RD, SUITE 550 PHONE: (714) 835-6355
ORANGE, CA 92868
CONTACT: ALFRED YALDA

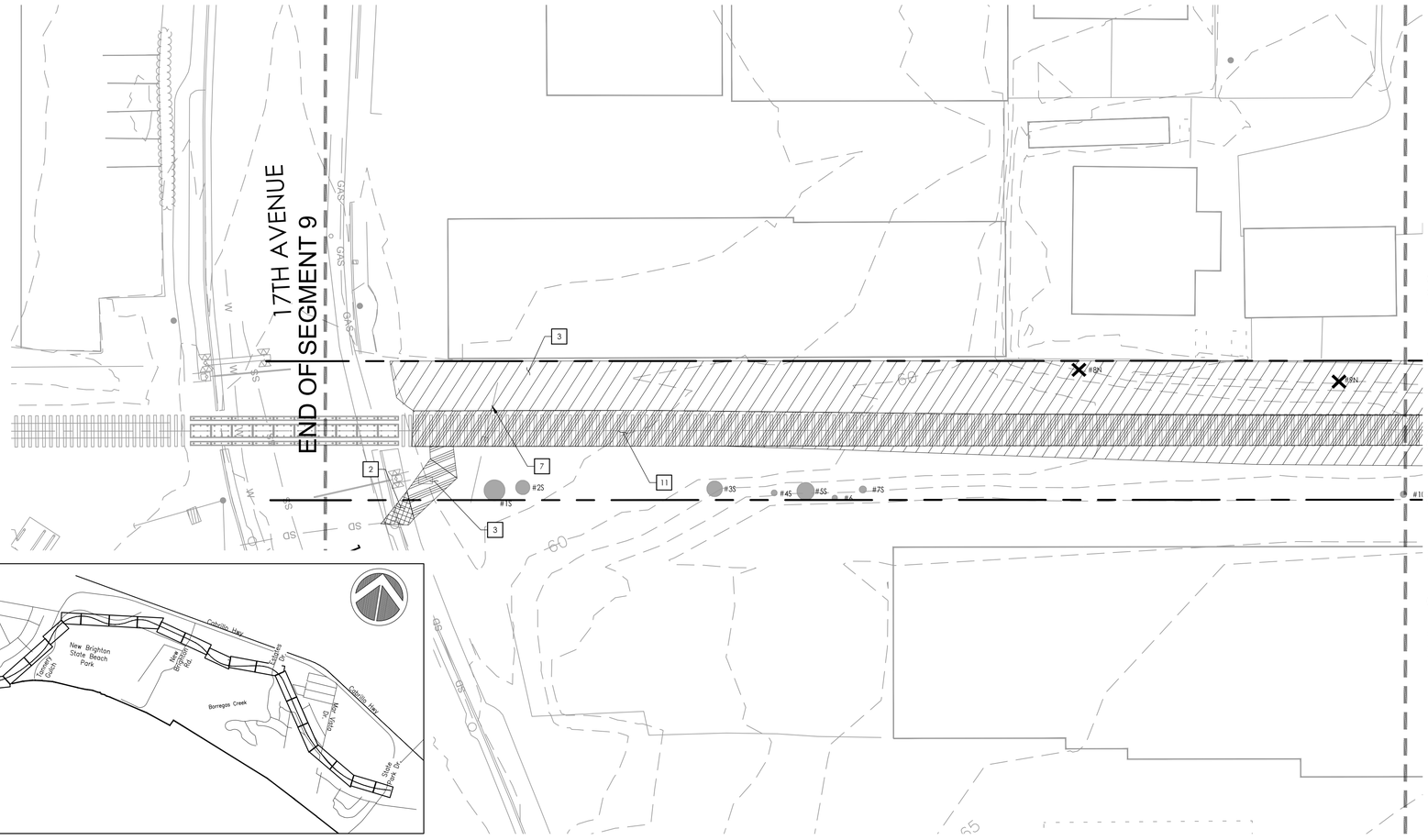
CLIENT
COUNTY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT
CONTACT: ROB TIDMORE
PHONE: (831) 454-2160
FAX: (831) 454-2385

SECONDARY CLIENT
CITY OF CAPITOLA
PUBLIC WORKS DEPARTMENT
CONTACT: KAILASH MOZUMDER
PHONE: (831) 475-7300

VICINITY MAP


PROJECT SITE
Capitola Way
New Brighton State Beach Park
Bonita Dr
Bonita Dr
Bonita Dr

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC
SCALE	AS SHOWN
	DM-1.01
VAULT NO.	

Layout Tab Name: DM-1.01, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, \\corp\vm\vm-lab\2001\0193-06-RDDS-Santa Cruz Rail Trail-Seg 10-11\Rail with Trail\Engineering\DesDev\Sheet-Files\Segment 10\04-0193-06-RWT-S10.dwg, Plotted By: jolvanmeta, Plotted: Feb 14, 2023 - 9:28am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

CISCO LANE

MATCHLINE, SEE SHEET DM-1.01

MATCHLINE, SEE SHEET DM-1.03

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

0 10 20 40 60

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.02
VAULT NO.

Layout Tab Name: DM-1.02, Image: county-logo-black-transparent.png, Xrefs: X1-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XP-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCZO.dwg, XH-0193-06-RWT-S10.dwg, SSC-0193-06-RWT-S10.dwg, XU1-0193-06-RWT-S10.dwg, XGB-0193-06-RWT-S10.dwg, XUT-0193-06-RWT-S10.dwg, Xref

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.02

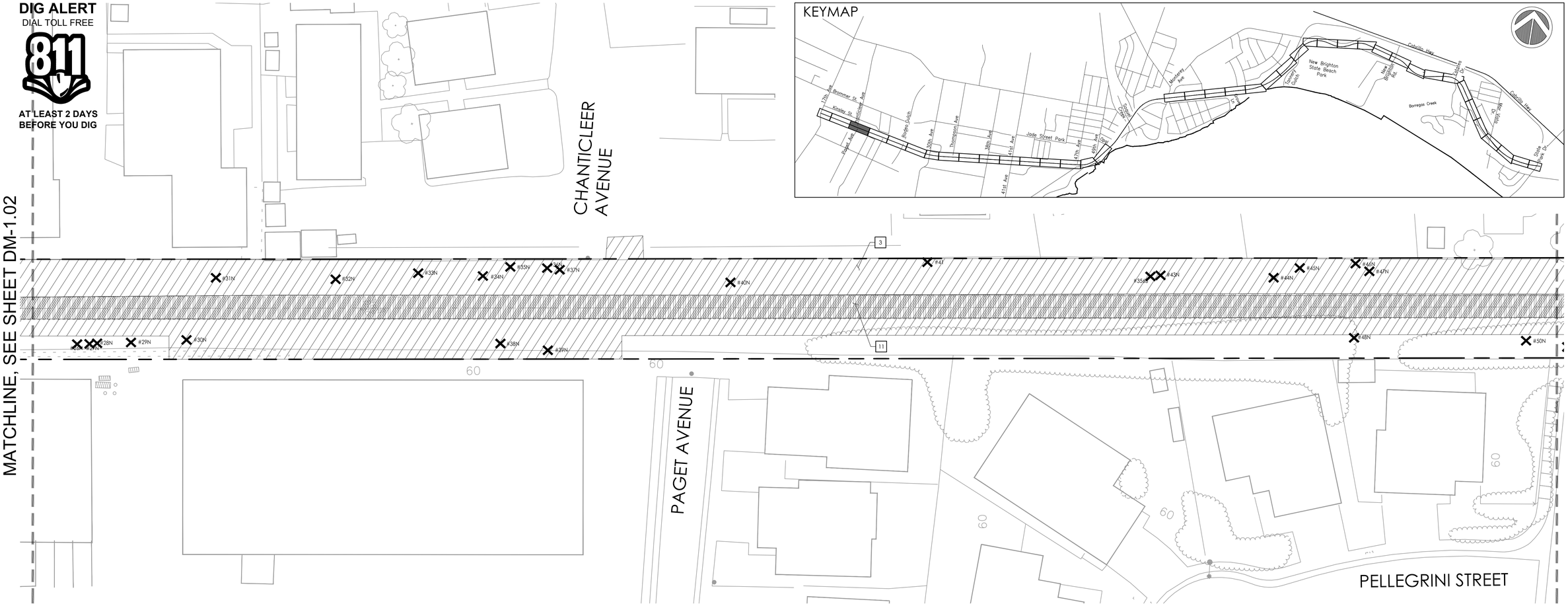
MATCHLINE, SEE SHEET DM-1.04

CHANTICLEER AVENUE

PAGET AVENUE

PELLEGRINI STREET

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

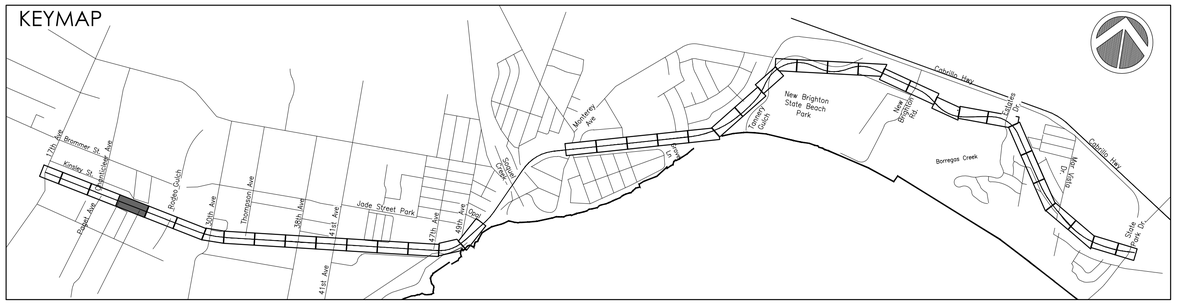
DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC
SCALE	AS SHOWN
	DM-1.03
VAULT NO.	

Layout Tab Name: DM-1.03, Images: county-logo-black-transparent.png, Xrefs: PT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XLP-0193-06-RWT-S10.dwg, SCC-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, KC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg
\\Corp\rmn\sn-lab\0001\0193-06-RWC20-Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Engineering\DataDesk\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dsilvanheira, Plotted: Feb 14, 2023 - 9:28am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET DM-1.03

MATCHLINE, SEE SHEET DM-1.05

CORCORAN AVENUE

SOQUEL DRIVE



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC
SCALE	AS SHOWN
	DM-1.04
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.04, Images: county-logo-black-transparent.png, Xrefs: X:\0193-06-RWT-S10.dwg, XTR-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg
\\corp\vm\vm-sbfs\0001\0193-06-RWT-S10\Rail with Trail\Engineering\DesDev\Sheet-Files\Segment 10\04-0193-06-RWT-S10.dwg, Plotted By: jolsonmeins, Plotted: Feb 14, 2023 - 9:28am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.04

MATCHLINE, SEE SHEET DM-1.06

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23


KEYMAP
17th Ave
Brommer St
Capitola Ave
Kinsley St
Stockton Ave
Rodeo Gulch
Bonita Dr
38th Ave
Thompson Ave
36th Ave
41st Ave
Jade Street Park
47th Ave
49th Ave
Opal Creek
Monterey Ave
New Brighton State Beach Park
Tanery Gulch
Capitola
Soquel
Borregas Creek
Cabrillo Hwy
Ave
Ave
Ave

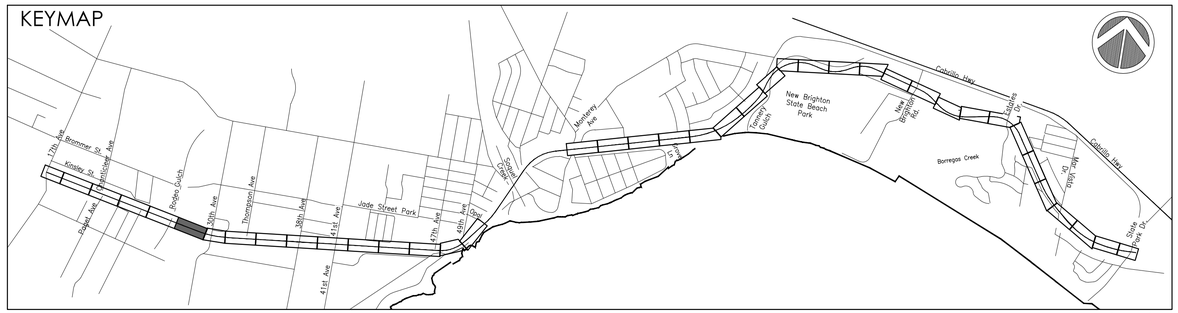
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

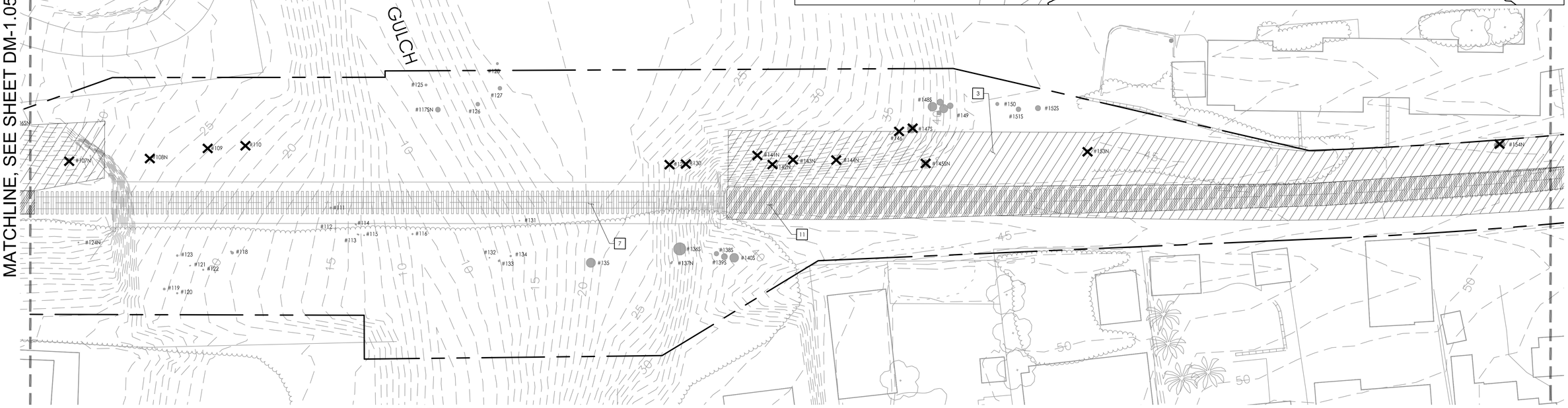
MATCHLINE, SEE SHEET DM-1.05

MATCHLINE, SEE SHEET DM-1.07

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

RODEO GULCH





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTIING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

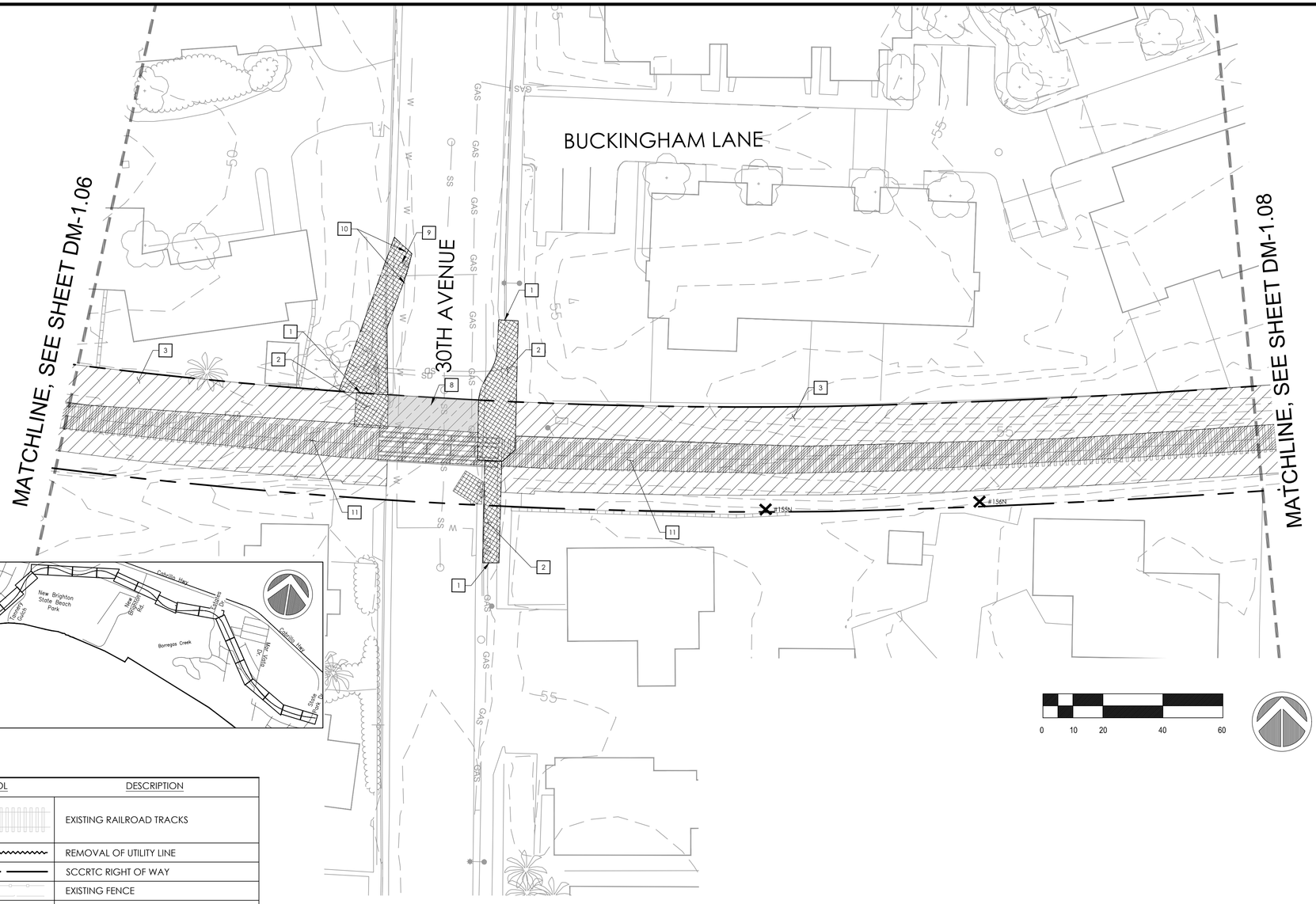
DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

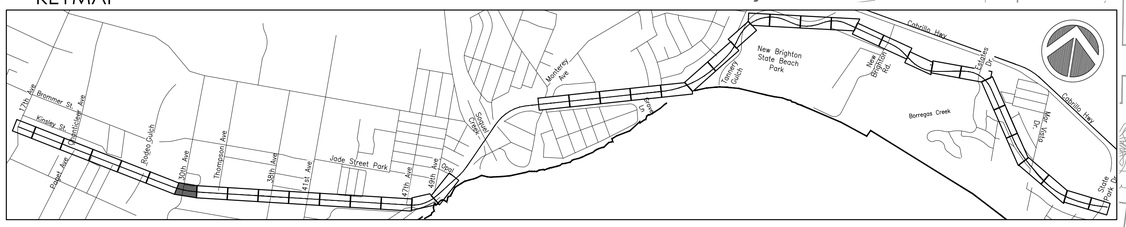
SCALE AS SHOWN
DM-1.06
VAULT NO.

Layout Tab: Name: DM-1.06, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XBR-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, XCMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XUT-0193-06-RWT-S10.dwg, \\corp\vm\on-site\2020\10\93-06-RCDC-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dnhothorne, Plotted: Feb 14, 2023 - 9:29am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.07, Image: county-logo-black-transparent.png, Xref: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCD1.dwg, SH-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RCD2.dwg, SEC-0193-06-RWT-S10.dwg, \\Corp\rmm\san-vols\2001\0193-06-RCD2-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dsilvestrini, Plotted: Feb 14, 2023 - 12:29pm

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #: DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.07
VAULT NO.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.07

MATCHLINE, SEE SHEET DM-1.09

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

KEYMAP



THOMPSON AVENUE

#158 #159PN #160N #161 #162 #163 #164 #165 #166 #167 #168 #169S #171 #172

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

0 10 20 40 60

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.08
VAULT NO.

Layout Tab: Name: DM-1.08, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, XUT-0193-06-RWT-S10.dwg
\\Corp\smb\sn-nas\2001\0193-06-RCDC-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dnolanhorna, Plotted: Apr 10, 2023 - 3:29pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.08

MATCHLINE, SEE SHEET DM-1.10



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

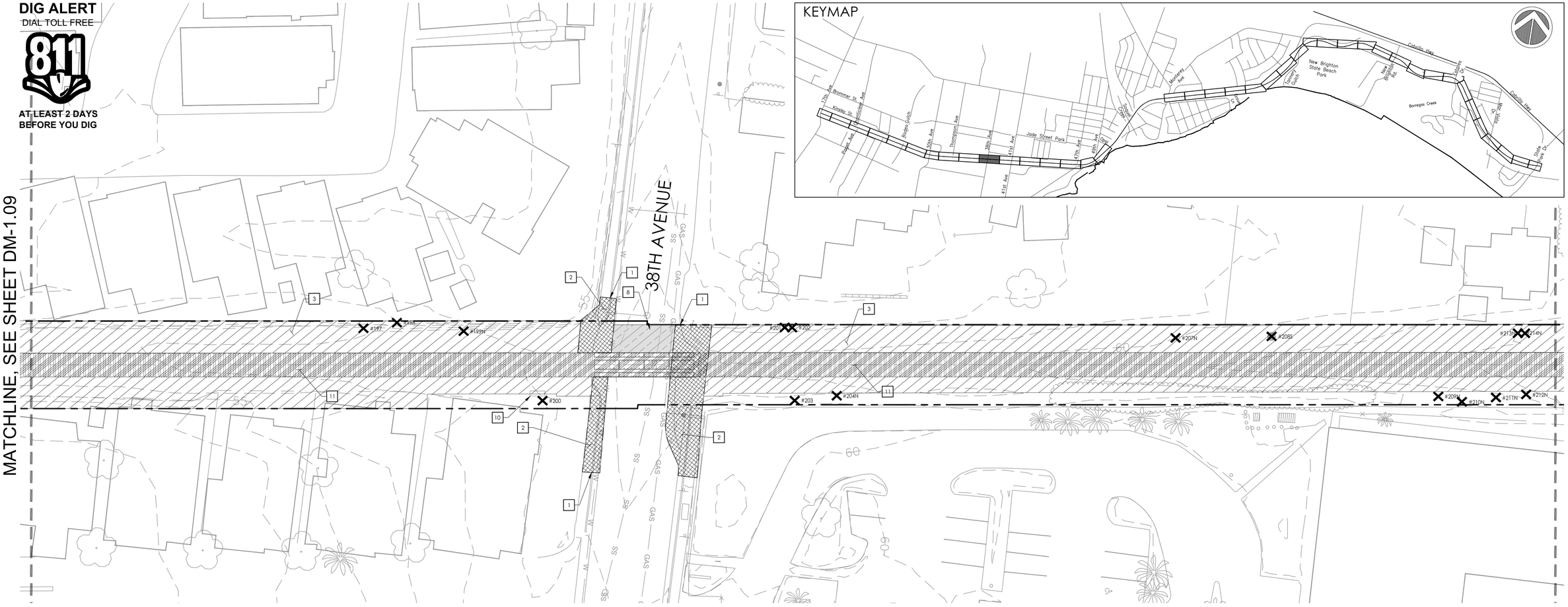
SCALE AS SHOWN
DM-1.09
VAULT NO.

Layout Tab Name: DM-1.09, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg, \\corp\rmm\san-mateo\2021\0193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dsivonhenna, Plotted: Apr 10, 2023 - 3:29pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.09

MATCHLINE, SEE SHEET DM-1.11



KEYMAP

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC
SCALE	AS SHOWN
	DM-1.10
VAULT NO.	

Layout Tab Name: DM-1.10, Image: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWP.dwg, XH-0193-06-RWT-S10.dwg, XUT-0193-06-RWT-S10.dwg
\\Corp.\rrm\Jobs\2021\0193-06-RWP-S10-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\SheDocs\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dsilvastevens, Plotted: Apr 10, 2023 - 3:29pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET DM-1.10

MATCHLINE, SEE SHEET DM-1.12

41ST AVENUE

#215N #217 #218 #220 #221 #222

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.11
VAULT NO.

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

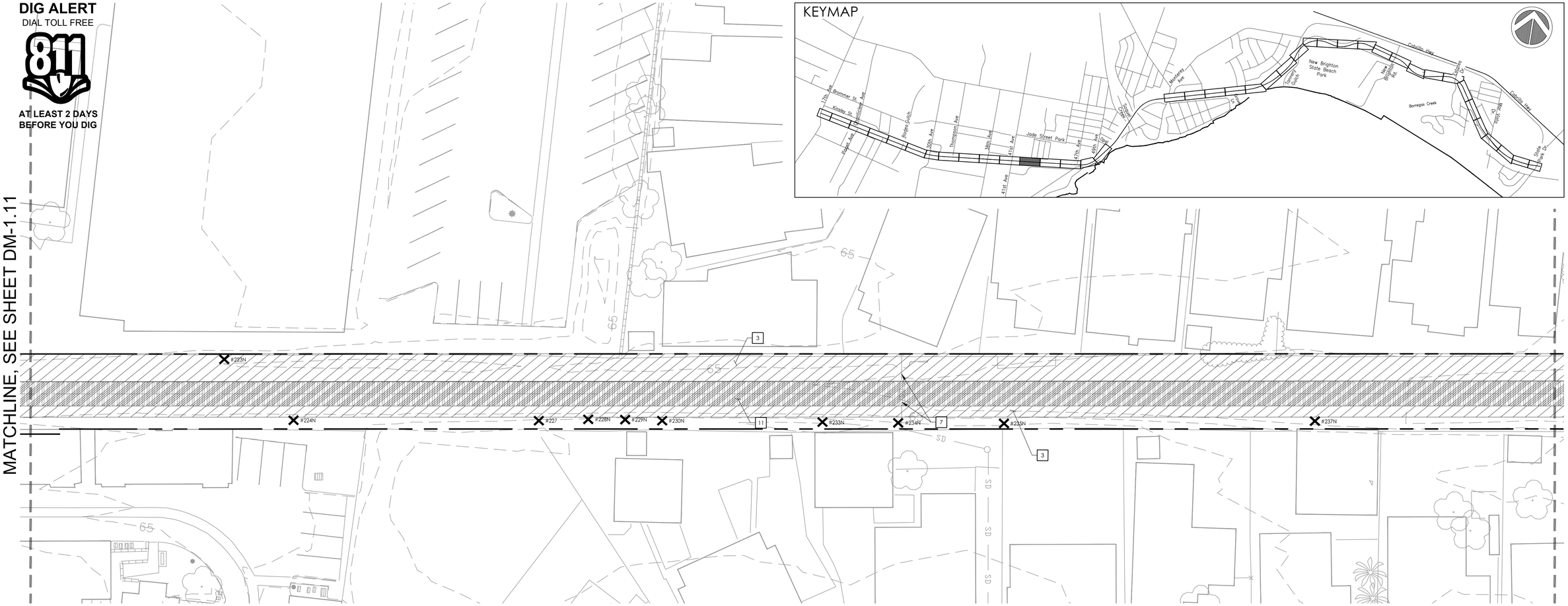
Layout Tab Name: DM-1.11, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RWT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWD.dwg, XH-0193-06-RWT-S10.dwg, XLT-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, Plotted: Apr 10, 2023 - 3:29pm
\\corp\vm\vm-sb\2001\0193-06-RDZP-Santa-Cruz-Rail-Trail-Seg-10-11\Bid with Trail\Engineering\DesDev\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: jolvanmens, Plotted: Apr 10, 2023 - 3:29pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.11

MATCHLINE, SEE SHEET DM-1.13

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.12
VAULT NO.

Layout Tab Name: DM-1.12, Images: county-logo-black-transparent.png, Xrefs: PT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, XUT-0193-06-RWT-S10.dwg, XLM-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, XSB-0193-06-RWT-S10.dwg, KC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWT-S10.dwg, XH-0193-06-RWT-S10.dwg
\\Corp\rmn\sn-lab\0001\0193-06-RCDC-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\DataDesk\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dsilvanheira, Plotted: Feb 14, 2023 – 9:30am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

CIRCLE DRIVE

KEYMAP



JADE STREET PARK

MATCHLINE, SEE SHEET DM-1.12

MATCHLINE, SEE SHEET DM-1.14

#238N #239N #240N #241 #242 #243 #244N #245N #246N #247

3 11

65

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTIING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC

SCALE AS SHOWN
DM-1.13
VAULT NO.

Layout Tab: Name: DM-1.13, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RWT-S10.dwg, XBB-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-JADE.dwg, XH-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, \\corp\rmm\on-site\2021\0193-06-RCDC-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 10\DM-0193-06-RWT-S10.dwg, Plotted By: dnolanhorna, Plotted: Feb 14, 2023 - 9:23am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.13

JADE STREET PARK

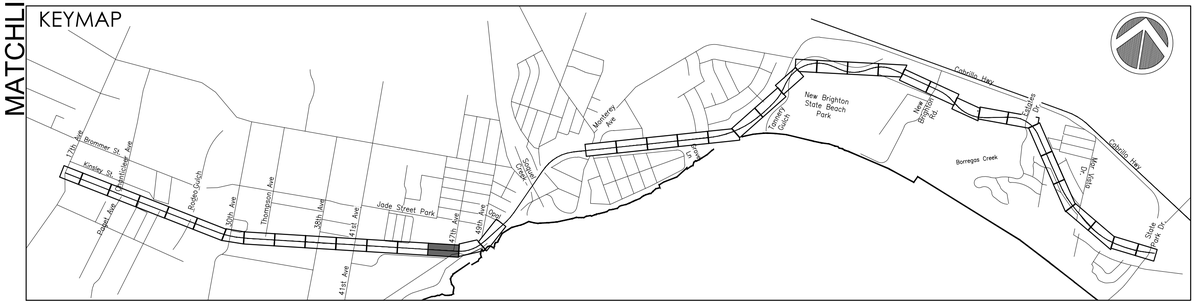
47TH AVENUE

PORTOLA DRIVE

MATCHLINE, SEE SHEET DM-1.15 (SEGMENT 11)

#247N #248N #249N #250N #251N

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S10

DATE	02/10/2023
DRAWN	RPE
DESIGN	DNH
CHECKED	DC
SCALE	AS SHOWN
	DM-1.14
VAULT NO.	

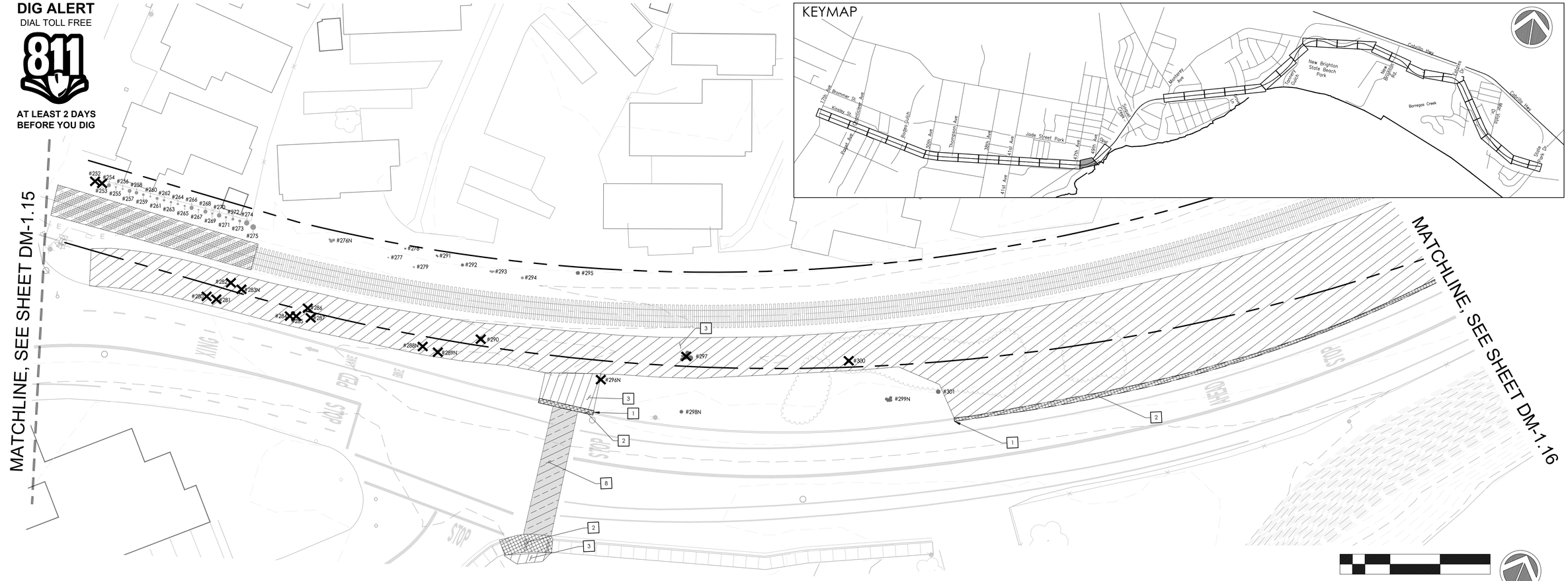
Layout Tab Name: DM-1.14, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RWT.dwg, XSR-0193-06-RWT-S10.dwg, XC-0193-06-RWT-S10.dwg, KEYMAP-0193-06-RWD.dwg, XH-0193-06-RWT-S10.dwg, SEC-0193-06-RWT-S10.dwg, \\corp\vm\sm-sbb\2001\0193-06-RDDS-Santa Cruz Rail Trail-Seg 10-11\Bid with Trail\Engineering\DesDev\Sheet Files\Segment 10\04-0193-06-RWT-S10.dwg, Plotted By: jsilvamena, Plotted: Feb 14, 2023 - 9:31am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.15

MATCHLINE, SEE SHEET DM-1.16

KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.15
VAULT NO.

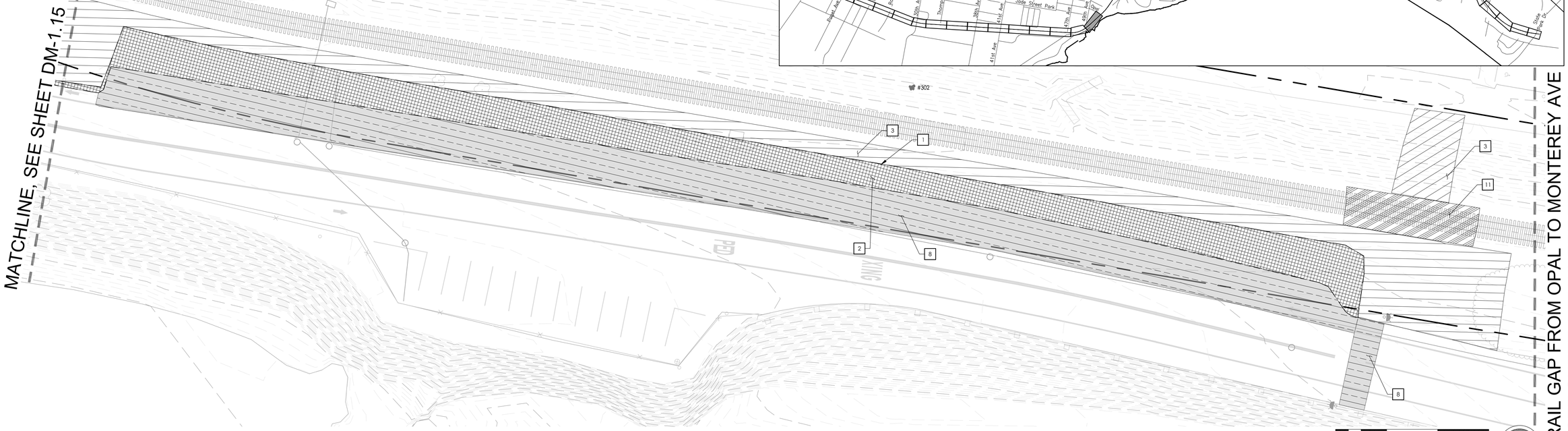
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.15, Images: county-logo-black-transparent.png; , Refs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RWT.dwg, XSR-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT.dwg, \\corp\vm\on-ssk\0001\0193-06-RCSC-Santa-Cruz-Rail-Trail-Seg-10-11\Wall mch Trail\Engineering\Dwgs\Dwgs\Sheet Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dnsonnens, Plotted: Feb 14, 2023 - 8:54am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.15





MATCHLINE, SEE SHEET DM-1.17

TRAIL GAP FROM OPAL TO MONTEREY AVE
SEE SHEET 1.17 WHERE TRAIL BEGINS

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

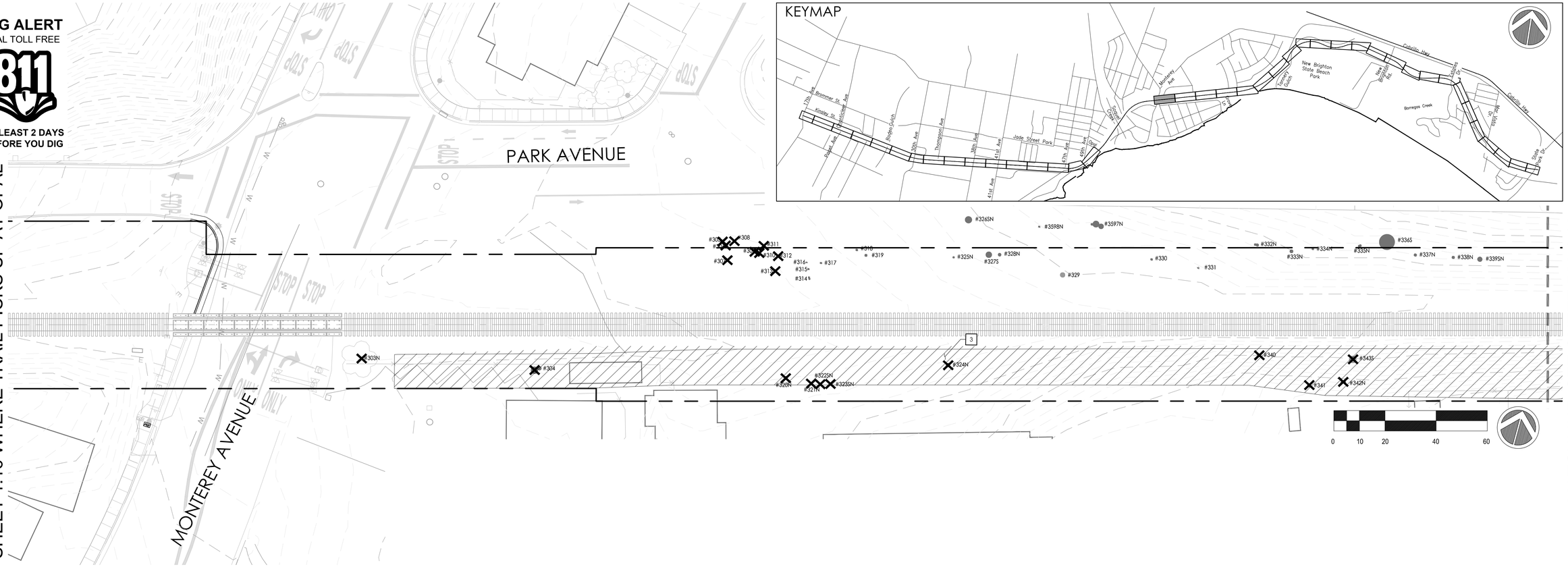
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.16
VAULT NO.

Layout Tab: Name: DM-1.16, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XTB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg
\\corp\nm\on-site\2020\10\93-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dmontoma, Plotted: Feb 14, 2023 - 5:37pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL GAP FROM OPAL TO MONTEREY AVE SEE SHEET 1.16 WHERE TRAIL PICKS UP AT OPAL



KEYMAP

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PARK AVENUE

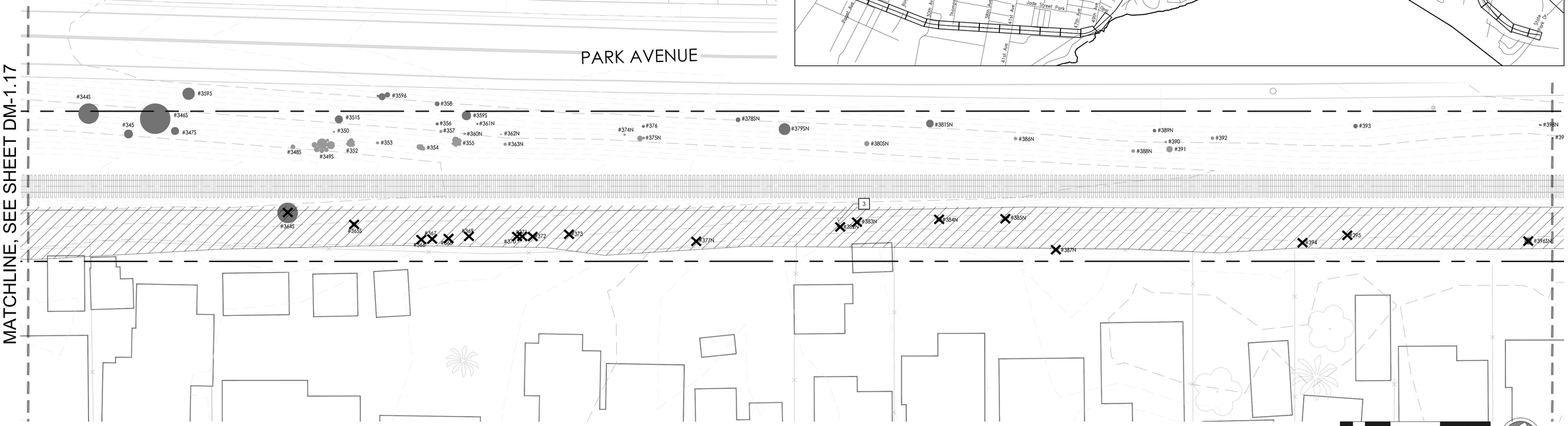
KEYMAP



MATCHLINE, SEE SHEET DM-1.17

MATCHLINE, SEE SHEET DM-1.19

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.18
VAULT NO.	

Layout Tab Name: DM-1.18, Images: county-logo-black-transparent.png, , Xrefs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RWT.dwg, XSR-P193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, XDWN-0193-06-RC20.dwg
\\corp\vm\un-isis\0001\0193-06-RC20-Santa Cruz Rail Trail-Seg 10-11\Bid sets Trail\Engineering\Sheets\Sheet Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dnsonmans, Plotted: Feb 14, 2023 - 6:03pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PARK AVENUE

KEYMAP



MATCHLINE, SEE SHEET DM-1.18

MATCHLINE, SEE SHEET DM-1.20

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

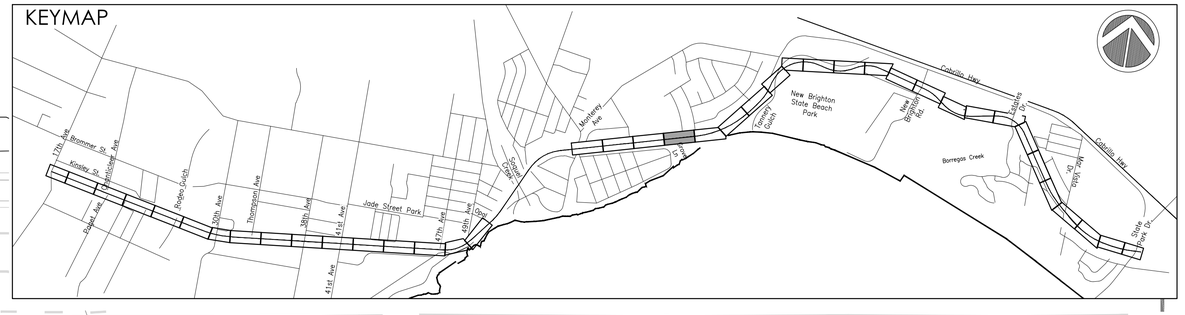
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.19
VAULT NO.	

Layout Tab Name: DM-1.19, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg; XTB-0193-06-RWT.dwg; XSB-0193-06-RWT-S11.dwg; XC-0193-06-RWT-S11.dwg; KEYMAP-0193-06-RWT-S11.dwg; KEYMAP-0193-06-RC20.dwg
\\Users\mm\on-site\2000\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Bar arch Trail\Engineering\Design\Sheet Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dmoshemi, Plotted: Feb 14, 2023 - 8:06pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

(E) STREET LIGHT AT CORNER OF PARK AVE. AND WESLEY ST. COORDINATE WITH PG&E CITY FOR EXTENSION OF POWER CIRCUIT TO (N) LIGHT AND POLE AT PARK AVE. AND GROVE LANE TRAIL CROSSING.

KEYMAP



PARK AVENUE

ESCALONA GULCH

GROVE LANE

MATCHLINE, SEE SHEET DM-1.19

MATCHLINE, SEE SHEET DM-1.21

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

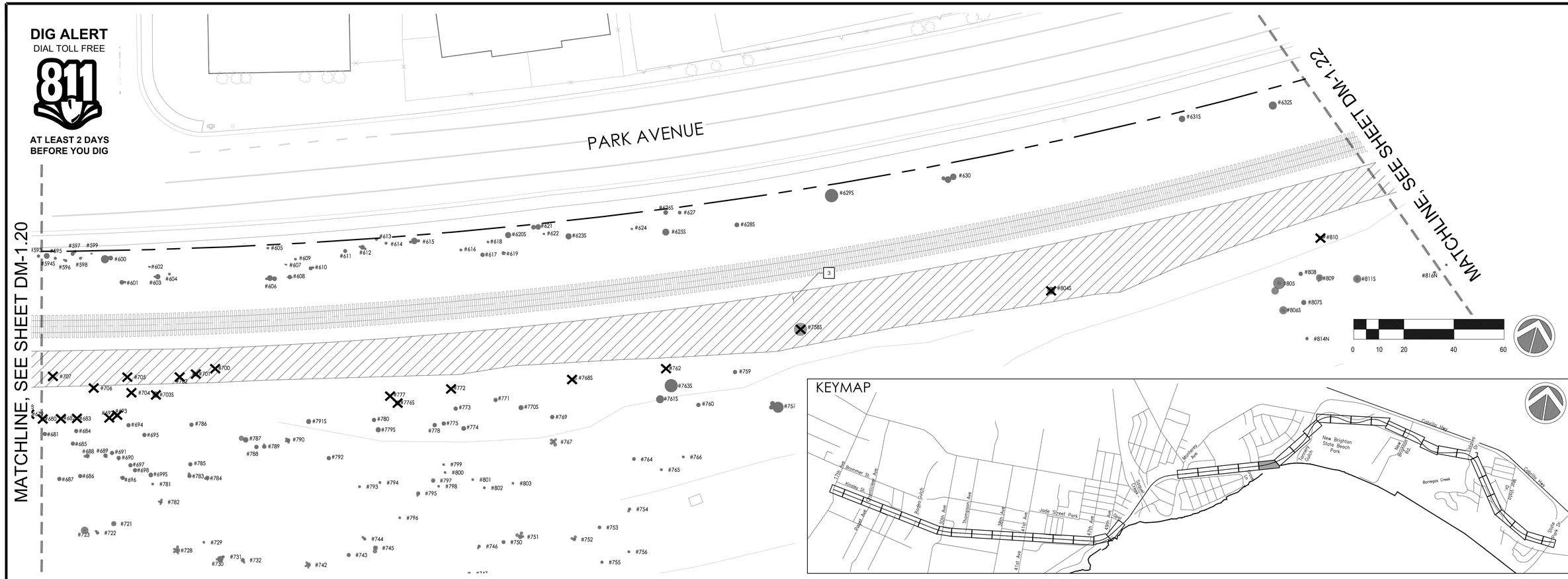
DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.20
VAULT NO.

Layout Tab Name: DM-1.20, Images: county-logo-black-transparent.png , XrefN: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCP.dwg
\\Corp\rmm\on-site\2020\10-193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Bid with Trail\Engineering\Detailed\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dshoshtema, Plotted: Apr 10, 2023 - 4:26pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

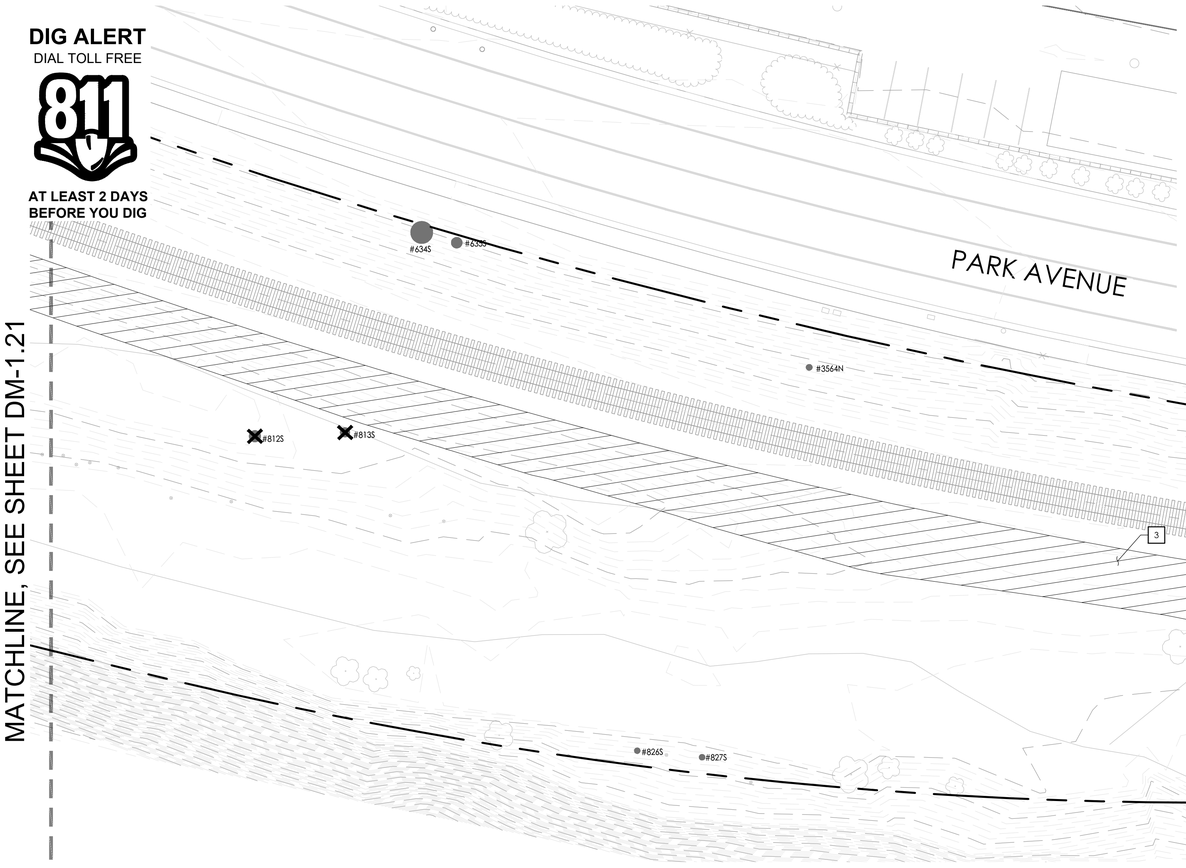
DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.21
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.21, Images: county-logo-black-transparent.png, Xrefs: PT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWP.dwg
\\Corp\vm\usr-ask\0001\0193-06-RCPD-Santa Cruz Rail Trail-Seg-10-11\Rail with Trail\Engineering\DataDesk\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dskvarkenis, Plotted: Apr 10, 2023 — 4:29pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





MATCHLINE, SEE SHEET DM-1.21

MATCHLINE, SEE SHEET DM-1.23

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

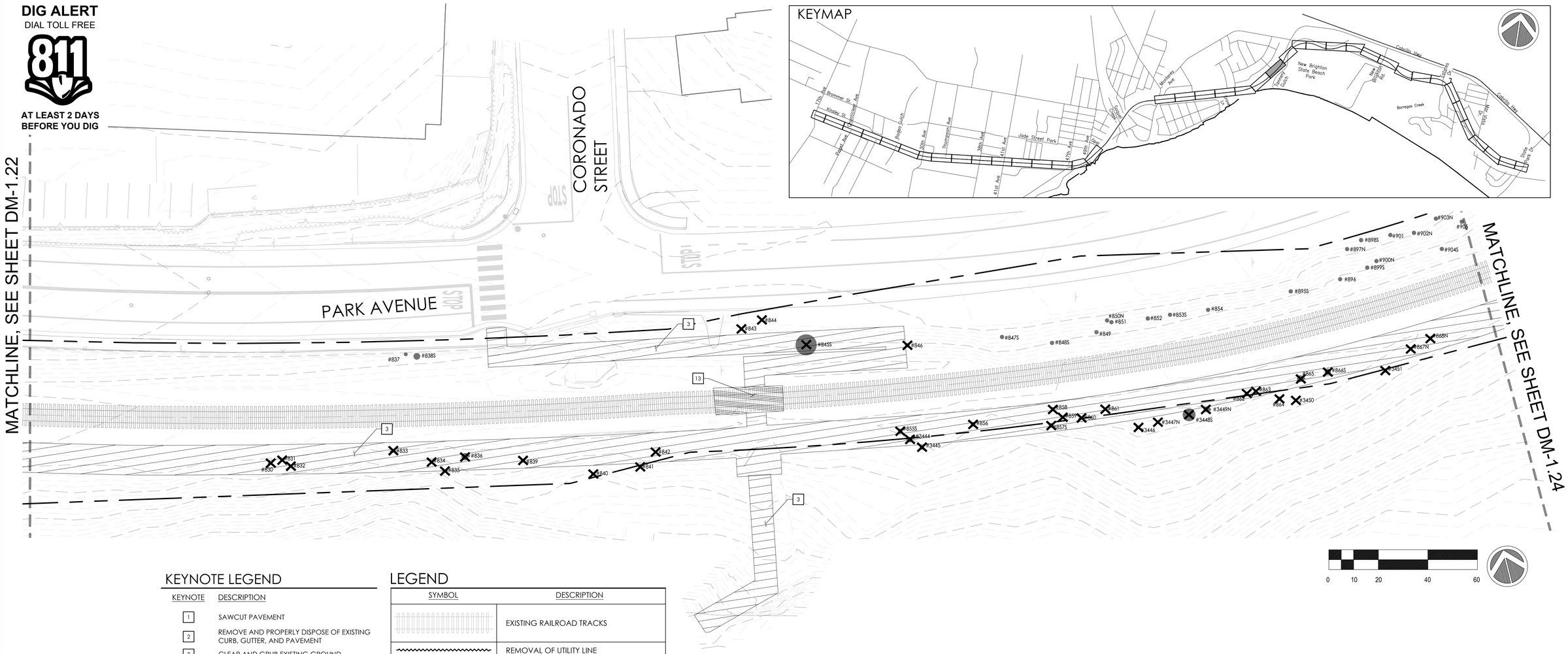
DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.22
VAULT NO.

Layout Tab: Name: DM-1.22, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT-S11.dwg, K:\Corp\rrm\on-site\2020\10-916-06-RCDC-Santa-Cruz-Rail-Trail-Seg-10-11\Bar with Trail\Engineering\Design\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dwoolsenma, Plotted: Feb 14, 2023 - 6:15am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

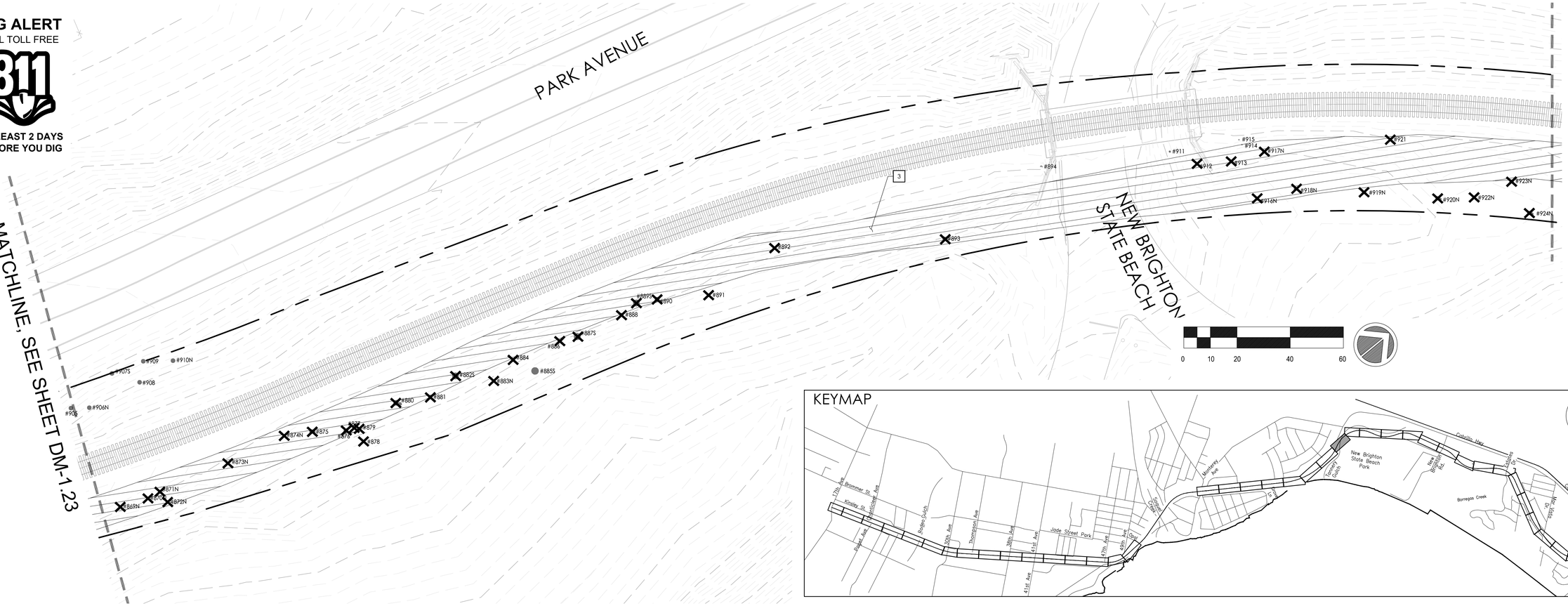
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.23
VAULT NO.	

Layout Tab Name: DM-1.23, Images: county-logo-black-transparent.png, Xrefs: PT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT.dwg
\\Corp\vm\usr-sta\USR1\0193-06-RWT\Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Engineering\DataDesk\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsilvanteme, Plotted: Feb 14, 2023 - 6:18am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYMAP

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

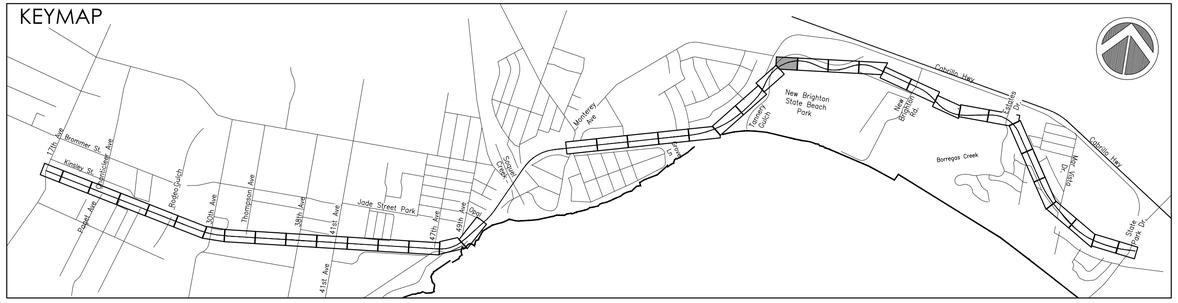
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.24
VAULT NO.	

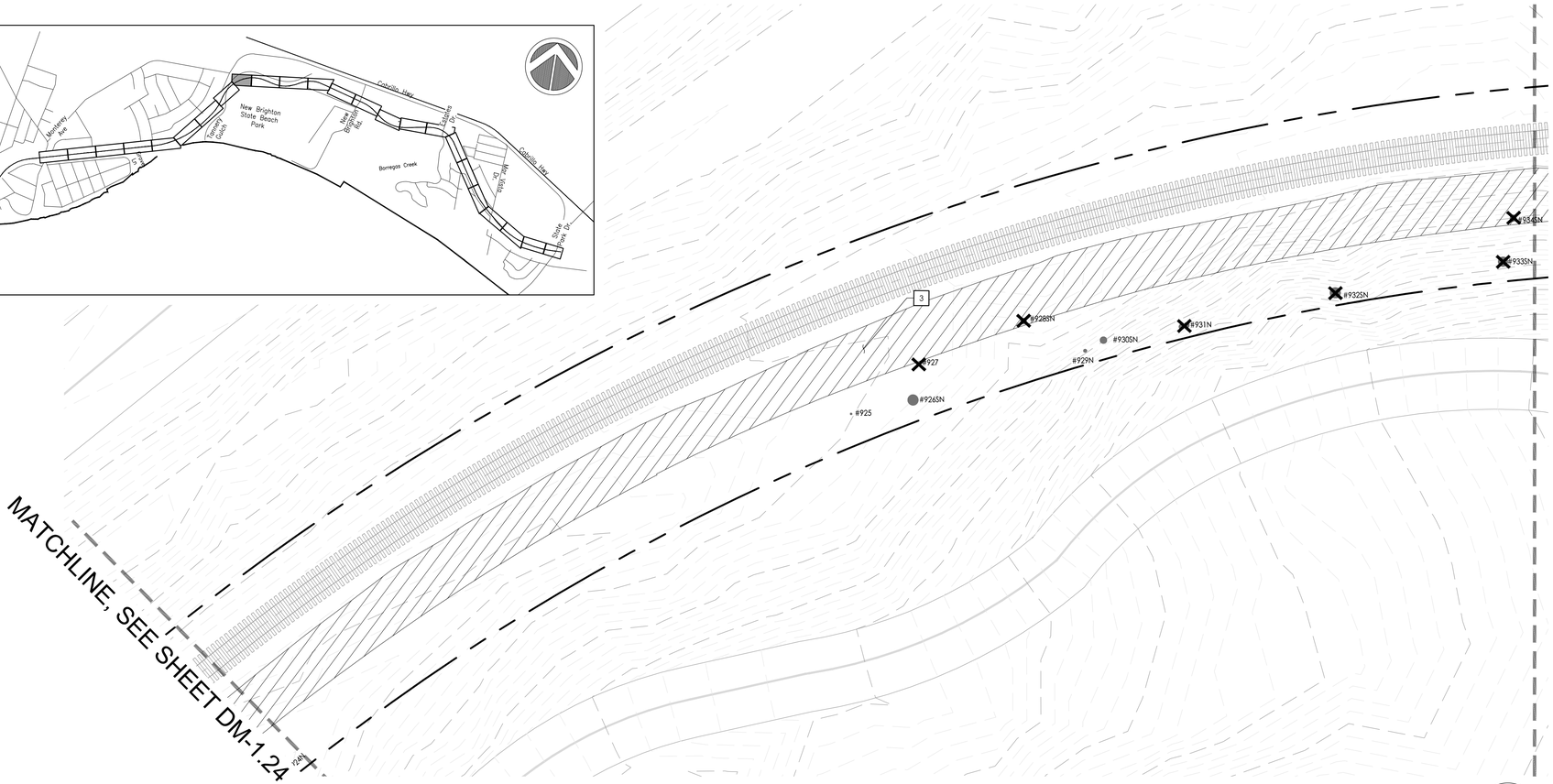
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.24, Images: county-logo-black-transparent.png, Xrefs: X:\0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, X:\0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCZO.dwg
Plotted: Feb 14, 2023 - 6:21pm By: dsivashenko, Plotted By: dsivashenko, Plotted: Feb 14, 2023 - 6:21pm
\\Corp\rrm\Jobs-wA\2021\0193-06-RCZO-Santa-Cruz-Rail-Trail-Segs-10-11\Bid with Trail\Engineering\DataDesk\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsivashenko, Plotted: Feb 14, 2023 - 6:21pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

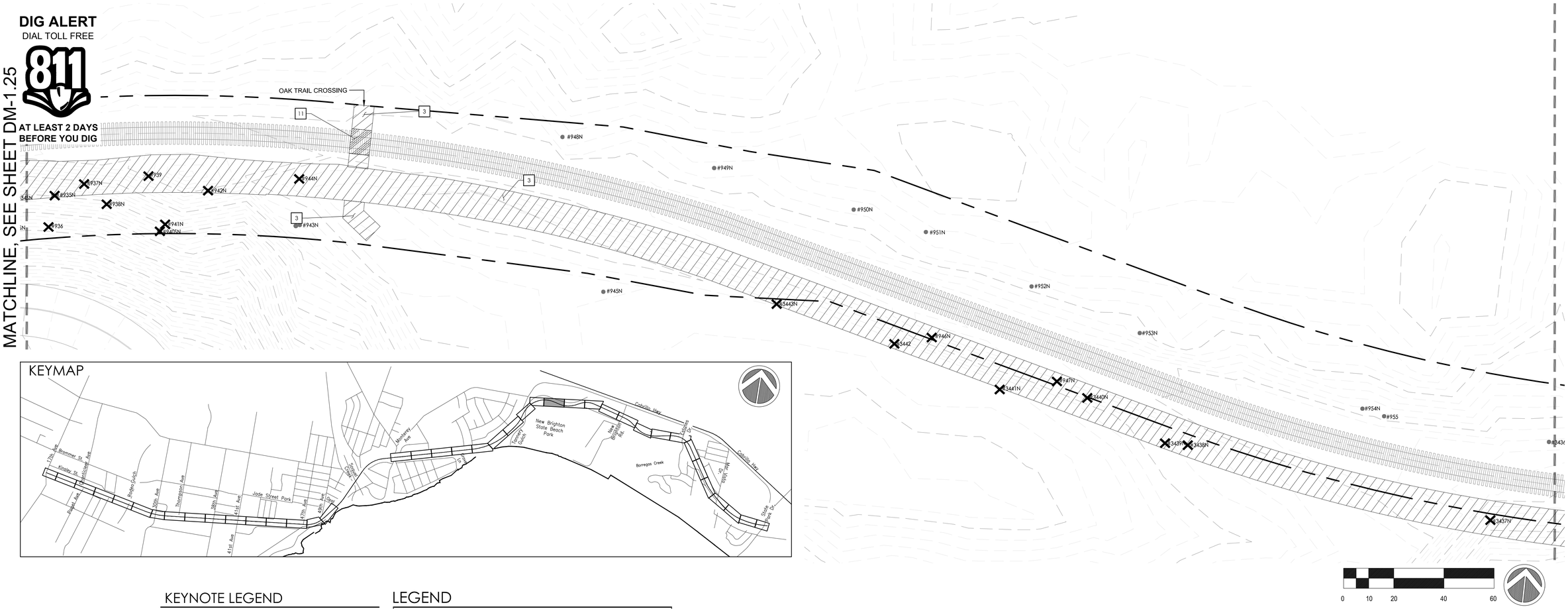
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.25
VAULT NO.

Layout Tab Name: DM-1.25, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg; XTB-0193-06-RWT-S11.dwg; XSB-0193-06-RWT-S11.dwg; XC-0193-06-RWT-S11.dwg; XCB-0193-06-RWT-S11.dwg; XDM-0193-06-RC20.dwg
\\corp\rmm\sn-sta\2001\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Bar arm Trail\Engineering\Decker\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dnaumann, Plotted: Feb 14, 2023 - 6:24am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.25



KEYMAP

0 10 20 40 60

MATCHLINE, SEE SHEET DM-1.27
TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.26
VAULT NO.	

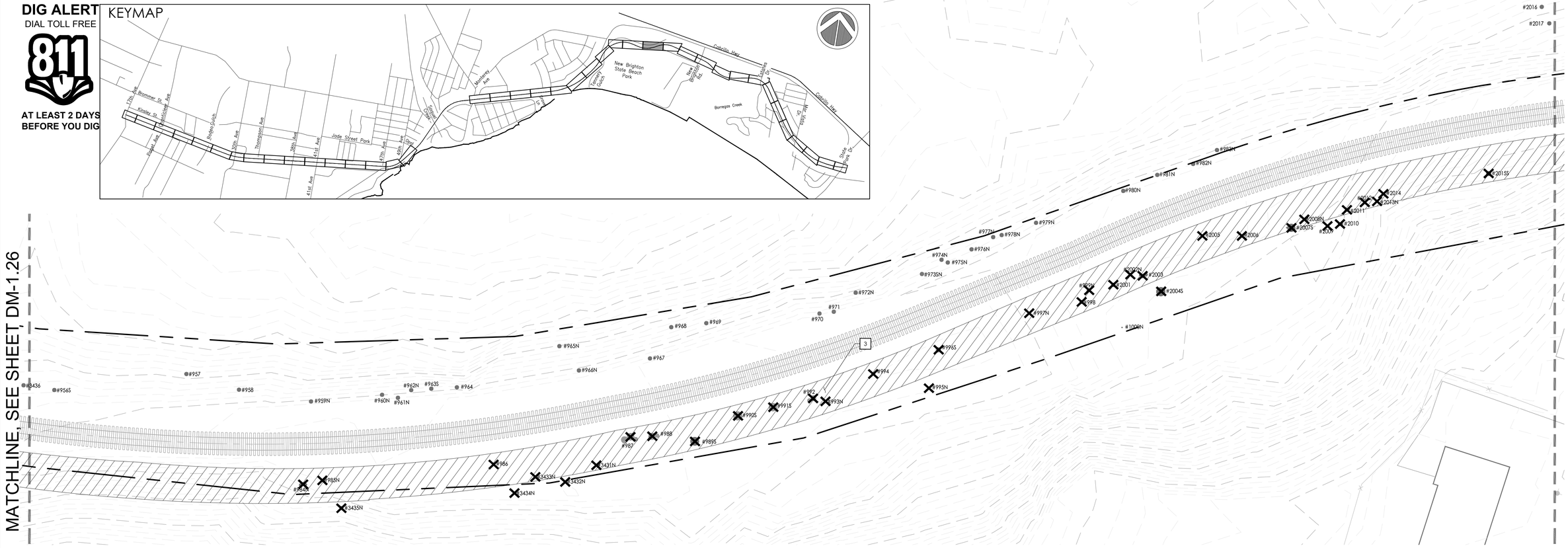
Layout Tab Name: DM-1.26, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XD-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg, \\corp\rmm\san-data\2021\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Design\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsvoboda, Plotted: Feb 14, 2023 - 6:27pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP

MATCHLINE, SEE SHEET DM-1.26

MATCHLINE, SEE SHEET DM-1.28



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.27

VAULT NO.

Layout Tab Name: DM-1.27, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RP20.dwg
\\Corp\rmm\on-site\2001\10193-06_RCPD-Santa Cruz Rail-Trail-Seg-10-11\Bid sets Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsuontams, Plotted: Feb 14, 2023 - 6:30am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.27

MATCHLINE, SEE SHEET DM-1.29



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.28, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCD0.dwg
\\Cosrv\rrm\sm-sta\2001\0193-06-RCD0-Santa-Cruz-Rail-Trail-Seg-1-10-11\Mail auto Trail\Engineering\Civil4x\Sheet-Files\Segment 11\XM-0193-06-RWT-S11.dwg, Plotted By: ssouvannara, Plotted: Feb 14, 2023 - 6:23pm

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.28
VAULT NO.	

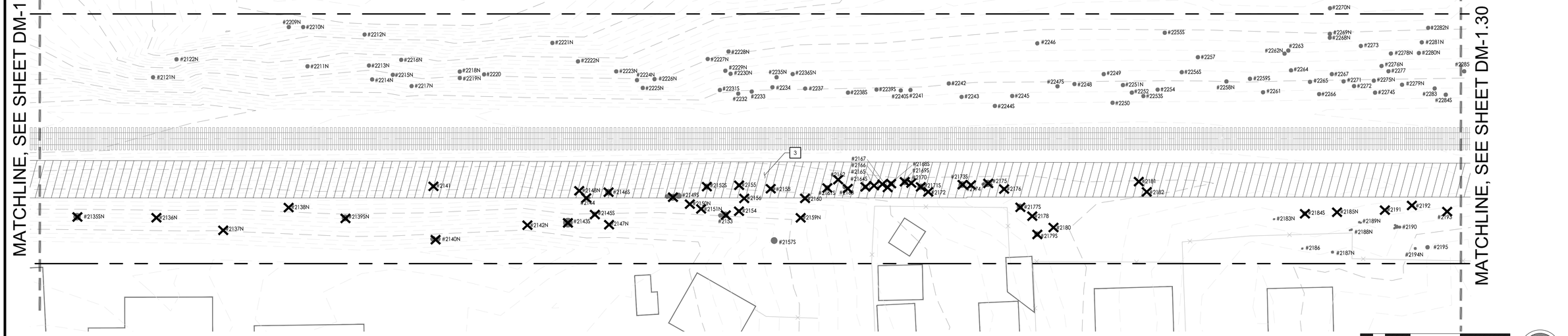
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET DM-1.28

MATCHLINE, SEE SHEET DM-1.30



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.29, Image: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg
I:\corp\rrm\on-site\2021\0193-06-RC20-Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Engineering\Detail\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsvoronkina, Plotted: Feb 14, 2023 - 6:35am

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.29
VAULT NO.

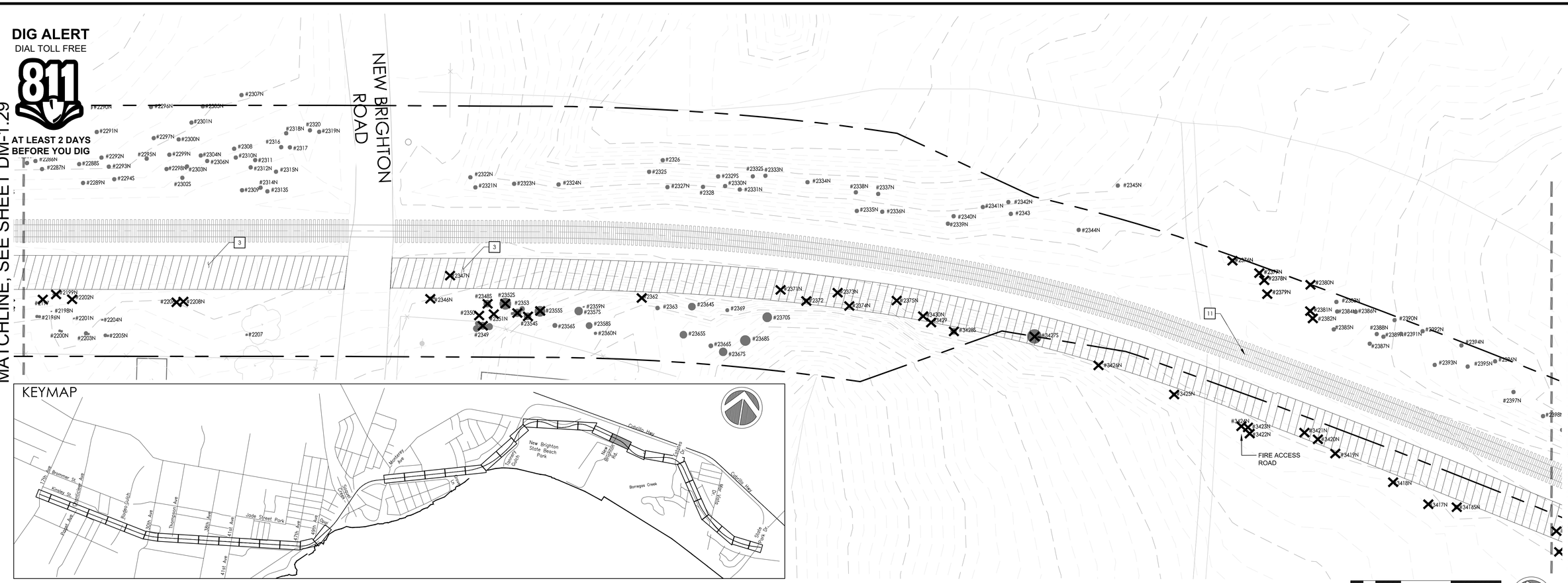
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.29

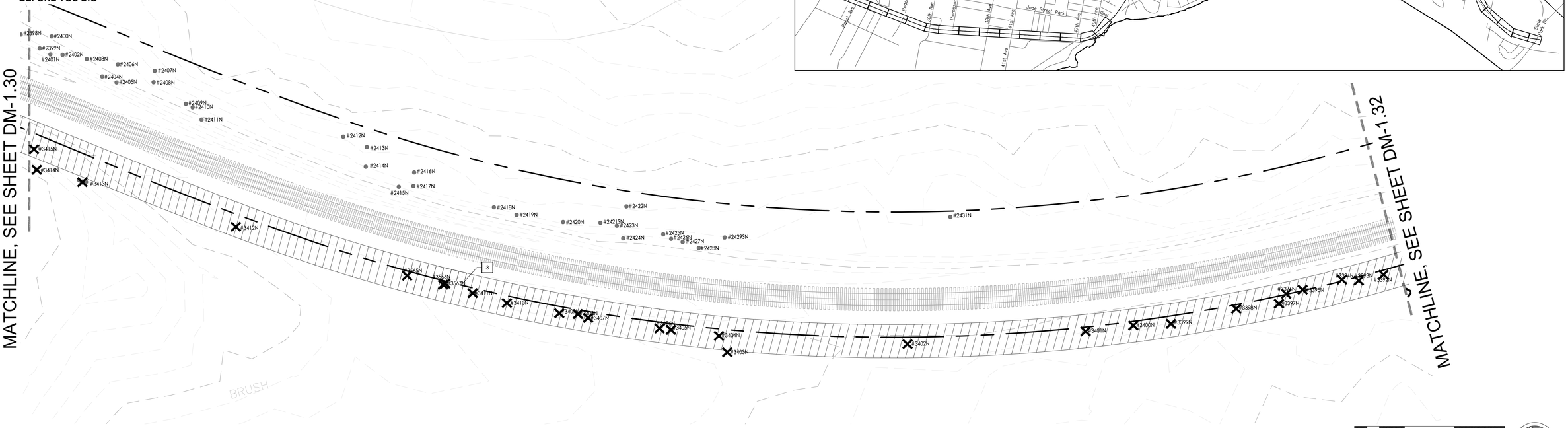
NEW BRIGHTON ROAD

MATCHLINE, SEE SHEET DM-1.21

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)


#2307N
#2290N
#2296N
#2305N
#2301N
#2291N
#2297N
#2300N
#2318N
#2320
#2319N
#2316
#2317
#2308
#2286N
#2287N
#2288S
#2292N
#2295N
#2299N
#2304N
#2306N
#2310N
#2311
#2293N
#2298N
#2303N
#2312N
#2315N
#2289N
#2294S
#2302S
#2314N
#2309N
#2313S
#2322N
#2321N
#2323N
#2324N
#2326
#2325
#2327N
#2328
#2329S
#2330N
#2331N
#2332S
#2333N
#2334N
#2338N
#2337N
#2335N
#2336N
#2345N
#2341N
#2342N
#2340N
#2343
#2339N
#2344N
#2347N
#2346N
#2348S
#2352S
#2353
#2350S
#2351N
#2354S
#2355S
#2359N
#2357S
#2349
#2356S
#2358S
#2360N
#2362
#2363
#2364S
#2369
#2365S
#2366S
#2368S
#2367S
#2370S
#2371N
#2372
#2373N
#2374N
#2375N
#3430N
#3429
#3428S
#3427S
#3426N
#3425N
#3424N
#3423N
#3422N
#3421N
#3420N
#3419N
#3418N
#3417N
#3416S
#2374N
#2377N
#2378N
#2379N
#2380N
#2381N
#2382N
#2384N
#2386N
#2385N
#2388N
#2389N
#2391N
#2390N
#2392N
#2387N
#2394N
#2393N
#2395N
#2396N
#2397N
#2398N
#2399N
#2400N
#2401N
#2402N
#2403N
#2404N
#2405N
#2406N
#2407N
#2408N
#2409N
#2410N
#2411N
#2412N
#2413N
#2414N
#2415N
#2416N
#2417N
#2418N
#2419N
#2420N
#2421N
#2422N
#2423N
#2424N
#2425N
#2426N
#2427N
#2428N
#2429N
#2430N
#2431N
#2432N
#2433N
#2434N
#2435N
#2436N
#2437N
#2438N
#2439N
#2440N
#2441N
#2442N
#2443N
#2444N
#2445N
#2446N
#2447N
#2448N
#2449N
#2450N
#2451N
#2452N
#2453N
#2454N
#2455N
#2456N
#2457N
#2458N
#2459N
#2460N
#2461N
#2462N
#2463N
#2464N
#2465N
#2466N
#2467N
#2468N
#2469N
#2470N
#2471N
#2472N
#2473N
#2474N
#2475N
#2476N
#2477N
#2478N
#2479N
#2480N
#2481N
#2482N
#2483N
#2484N
#2485N
#2486N
#2487N
#2488N
#2489N
#2490N
#2491N
#2492N
#2493N
#2494N
#2495N
#2496N
#2497N
#2498N
#2499N
#2500N
#2501N
#2502N
#2503N
#2504N
#2505N
#2506N
#2507N
#2508N
#2509N
#2510N
#2511N
#2512N
#2513N
#2514N
#2515N
#2516N
#2517N
#2518N
#2519N
#2520N
#2521N
#2522N
#2523N
#2524N
#2525N
#2526N
#2527N
#2528N
#2529N
#2530N
#2531N
#2532N
#2533N
#2534N
#2535N
#2536N
#2537N
#2538N
#2539N
#2540N
#2541N
#2542N
#2543N
#2544N
#2545N
#2546N
#2547N
#2548N
#2549N
#2550N
#2551N
#2552N
#2553N
#2554N
#2555N
#2556N
#2557N
#2558N
#2559N
#2560N
#2561N
#2562N
#2563N
#2564N
#2565N
#2566N
#2567N
#2568N
#2569N
#2570N
#2571N
#2572N
#2573N
#2574N
#2575N
#2576N
#2577N
#2578N
#2579N
#2580N
#2581N
#2582N
#2583N
#2584N
#2585N
#2586N
#2587N
#2588N
#2589N
#2590N
#2591N
#2592N
#2593N
#2594N
#2595N
#2596N
#2597N
#2598N
#2599N
#2600N
#2601N
#2602N
#2603N
#2604N
#2605N
#2606N
#2607N
#2608N
#2609N
#2610N
#2611N
#2612N
#2613N
#2614N
#2615N
#2616N
#2617N
#2618N
#2619N
#2620N
#2621N
#2622N
#2623N
#2624N
#2625N
#2626N
#2627N
#2628N
#2629N
#2630N
#2631N
#2632N
#2633N
#2634N
#2635N
#2636N
#2637N
#2638N
#2639N
#2640N
#2641N
#2642N
#2643N
#2644N
#2645N
#2646N
#2647N
#2648N
#2649N
#2650N
#2651N
#2652N
#2653N
#2654N
#2655N
#2656N
#2657N
#2658N
#2659N
#2660N
#2661N
#2662N
#2663N
#2664N
#2665N
#2666N
#2667N
#2668N
#2669N
#2670N
#2671N
#2672N
#2673N
#2674N
#2675N
#2676N
#2677N
#2678N
#2679N
#2680N
#2681N
#2682N
#2683N
#2684N
#2685N
#2686N
#2687N
#2688N
#2689N
#2690N
#2691N
#2692N
#2693N
#2694N
#2695N
#2696N
#2697N
#2698N
#2699N
#2700N
#2701N
#2702N
#2703N
#2704N
#2705N
#2706N
#2707N
#2708N
#2709N
#2710N
#2711N
#2712N
#2713N
#2714N
#2715N
#2716N
#2717N
#2718N
#2719N
#2720N
#2721N
#2722N
#2723N
#2724N
#2725N
#2726N
#2727N
#2728N
#2729N
#2730N
#2731N
#2732N
#2733N
#2734N
#2735N
#2736N
#2737N
#2738N
#2739N
#2740N
#2741N
#2742N
#2743N
#2744N
#2745N
#2746N
#2747N
#2748N
#2749N
#2750N
#2751N
#2752N
#2753N
#2754N
#2755N
#2756N
#2757N
#2758N
#2759N
#2760N
#2761N
#2762N
#2763N
#2764N
#2765N
#2766N
#2767N
#2768N
#2769N
#2770N
#2771N
#2772N
#2773N
#2774N
#2775N
#2776N
#2777N
#2778N
#2779N
#2780N
#2781N
#2782N
#2783N
#2784N
#2785N
#2786N
#2787N
#2788N
#2789N
#2790N
#2791N
#2792N
#2793N
#2794N
#2795N
#2796N
#2797N
#2798N
#2799N
#2800N
#2801N
#2802N
#2803N
#2804N
#2805N
#2806N
#2807N
#2808N
#2809N
#2810N
#2811N
#2812N
#2813N
#2814N
#2815N
#2816N
#2817N
#2818N
#2819N
#2820N
#2821N
#2822N
#2823N
#2824N
#2825N
#2826N
#2827N
#2828N
#2829N
#2830N
#2831N
#2832N
#2833N
#2834N
#2835N
#2836N
#2837N
#2838N
#2839N
#2840N
#2841N
#2842N
#2843N
#2844N
#2845N
#2846N
#2847N
#2848N
#2849N
#2850N
#2851N
#2852N
#2853N
#2854N
#2855N
#2856N
#2857N
#2858N
#2859N
#2860N
#2861N
#2862N
#2863N
#2864N
#2865N
#2866N
#2867N
#2868N
#2869N
#2870N
#2871N
#2872N
#2873N
#2874N
#2875N
#2876N
#2877N
#2878N
#2879N
#2880N
#2881N
#2882N
#2883N
#2884N
#2885N
#2886N
#2887N
#2888N
#2889N
#2890N
#2891N
#2892N
#2893N
#2894N
#2895N
#2896N
#2897N
#2898N
#2899N
#2900N
#2901N
#2902N
#2903N
#2904N
#2905N
#2906N
#2907N
#2908N
#2909N
#2910N
#2911N
#2912N
#2913N
#2914N
#2915N
#2916N
#2917N
#2918N
#2919N
#2920N
#2921N
#2922N
#2923N
#2924N
#2925N
#2926N
#2927N
#2928N
#2929N
#2930N
#2931N
#2932N
#2933N
#2934N
#2935N
#2936N
#2937N
#2938N
#2939N
#2940N
#2941N
#2942N
#2943N
#2944N
#2945N
#2946N
#2947N
#2948N
#2949N
#2950N
#2951N
#2952N
#2953N
#2954N
#2955N
#2956N
#2957N
#2958N
#2959N
#2960N
#2961N
#2962N
#2963N
#2964N
#2965N
#2966N
#2967N
#2968N
#2969N
#2970N
#2971N
#2972N
#2973N
#2974N
#2975N
#2976N
#2977N
#2978N
#2979N
#2980N
#2981N
#2982N
#2983N
#2984N
#2985N
#2986N
#2987N
#2988N
#2989N
#2990N
#2991N
#2992N
#2993N
#2994N
#2995N
#2996N
#2997N
#2998N
#2999N
#3000N
#3001N
#3002N
#3003N
#3004N
#3005N
#3006N
#3007N
#3008N
#3009N
#3010N
#3011N
#3012N
#3013N
#3014N
#3015N
#3016N
#3017N
#3018N
#3019N
#3020N
#3021N
#3022N
#3023N
#3024N
#3025N
#3026N
#3027N
#3028N
#3029N
#3030N
#3031N
#3032N
#3033N
#3034N
#3035N
#3036N
#3037N
#3038N
#3039N
#3040N
#3041N
#3042N
#3043N
#3044N
#3045N
#3046N
#3047N
#3048N
#3049N
#3050N
#3051N
#3052N
#3053N
#3054N
#3055N
#3056N
#3057N
#3058N
#3059N
#3060N
#3061N
#3062N
#3063N
#3064N
#3065N
#3066N
#3067N
#3068N
#3069N
#3070N
#3071N
#3072N
#3073N
#3074N
#3075N
#3076N
#3077N
#3078N
#3079N
#3080N
#3081N
#3082N
#3083N
#3084N
#3085N
#3086N
#3087N
#3088N
#3089N
#3090N
#3091N
#3092N
#3093N
#3094N
#3095N
#3096N
#3097N
#3098N
#3099N
#3100N
#3101N
#3102N
#3103N
#3104N
#3105N
#3106N
#3107N
#3108N
#3109N
#3110N
#3111N
#3112N
#3113N
#3114N
#3115N
#3116N
#3117N
#3118N
#3119N
#3120N
#3121N
#3122N
#3123N
#3124N
#3125N
#3126N
#3127N
#3128N
#3129N
#3130N
#3131N
#3132N
#3133N
#3134N
#3135N
#3136N
#3137N
#3138N
#3139N
#3140N
#3141N
#3142N
#3143N
#3144N
#3145N
#3146N
#3147N
#3148N
#3149N
#3150N
#3151N
#3152N
#3153N
#3154N
#3155N
#3156N
#3157N
#3158N
#3159N
#3160N
#3161N
#3162N
#3163N
#3164N
#3165N
#3166N
#3167N
#3168N
#3169N
#3170N
#3171N
#3172N
#3173N
#3174N
#3175N
#3176N
#3177N
#3178N
#3179N
#3180N
#3181N
#3182N
#3183N
#3184N
#3185N
#3186N
#3187N
#3188N
#3189N
#3190N
#3191N
#3192N
#3193N
#3194N
#3195N
#3196N
#3197N
#3198N
#3199N
#3200N
#3201N
#3202N
#3203N
#3204N
#3205N
#3206N
#3207N
#3208N
#3209N
#3210N
#3211N
#3212N
#3213N
#3214N
#3215N
#3216N
#3217N
#3218N
#3219N
#3220N
#3221N
#3222N
#3223N
#3224N
#3225N
#3226N
#3227N
#3228N
#3229N
#3230N
#3231N
#3232N
#3233N
#3234N
#3235N
#3236N
#3237N
#3238N
#3239N
#3240N
#3241N
#3242N
#3243N
#3244N
#3245N
#3246N
#3247N
#3248N
#3249N
#3250N
#3251N
#3252N
#3253N
#3254N
#3255N
#3256N
#3257N
#3258N
#3259N
#3260N
#3261N
#3262N
#3263N
#3264N
#3265N
#3266N
#3267N
#3268N
#3269N
#3270N
#3271N
#3272N
#3273N
#3274N
#3275N
#3276N
#3277N
#3278N
#3279N
#3280N
#3281N
#3282N
#3283N
#3284N
#3285N
#3286N
#3287N
#3288N
#3289N
#3290N
#3291N
#3292N
#3293N
#3294N
#3295N
#3296N
#3297N
#3298N
#3299N
#3300N
#3301N
#3302N
#3303N
#3304N
#3305N
#3306N
#3307N
#3308N
#3309N
#3310N
#3311N
#3312N
#3313N
#3314N
#3315N
#3316N
#3317N
#3318N
#3319N
#3320N
#3321N
#3322N
#3323N
#3324N
#3325N
#3326N
#3327N
#3328N
#3329N
#3330N
#3331N
#3332N
#3333N
#3334N
#3335N
#3336N
#3337N
#3338N
#3339N
#3340N
#3341N
#3342N
#3343N
#3344N
#3345N
#3346N
#3347N
#3348N
#3349N
#3350N
#3351N
#3352N
#3353N
#3354N
#3355N
#3356N
#3357N
#3358N
#3359N
#3360N
#3361N
#3362N
#3363N
#3364N
#3365N
#3366N
#3367N
#3368N
#3369N
#3370N
#3371N
#3372N
#3373N
#3374N
#3375N
#3376N
#3377N
#3378N
#3379N
#3380N
#3381N
#3382N
#3383N
#3384N
#3385N
#3386N
#3387N
#3388N
#3389N
#3390N
#3391N
#3392N
#3393N
#3394N
#3395N
#3396N
#3397N
#3398N
#3399N
#3400N
#3401N
#3402N
#3403N
#3404N
#3405N
#3406N
#3407N
#3408N
#3409N
#3410N
#3411N
#3412N
#3413N
#3414N
#3415N
#3416N
#3417N
#3418N
#3419N
#3420N
#3421N
#3422N
#3423N
#3424N
#3425N
#3426N
#3427S
#3428S
#3429
#3430N
#3431N
#3432N
#3433N
#3434N
#3435N
#3436N
#3437N
#3438N
#3439N
#3440N
#3441N
#3442N
#3443N
#3444N
#3445N
#3446N
#3447N
#3448N
#3449N
#3450N
#3451N
#3452N
#3453N
#3454N
#3455N
#3456N
#3457N
#3458N
#3459N
#3460N
#3461N
#3462N
#3463N
#3464N
#3465N
#3466N
#3467N
#3468N
#3469N

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.31, Images: county-logo-black-transparent.png; , Prefix XF: -0193-06-RWT-S11.dwg, XTP: -0193-06-RWT.dwg, XSR: -0193-06-RWT-S11.dwg, XC: -0193-06-RWT-S11.dwg, XD: -0193-06-RWT-S11.dwg, XEMAP: -0193-06-RCD0.dwg
\\Corp\vm\on-site\0001\0193-06-RCD0-Santa-Cruz-Rail-Trail-Seg-1-10-11\Plot with Trail\Engineering\Details\Street-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsouvenirs, Plotted: Feb 14, 2023 - 6:41pm

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

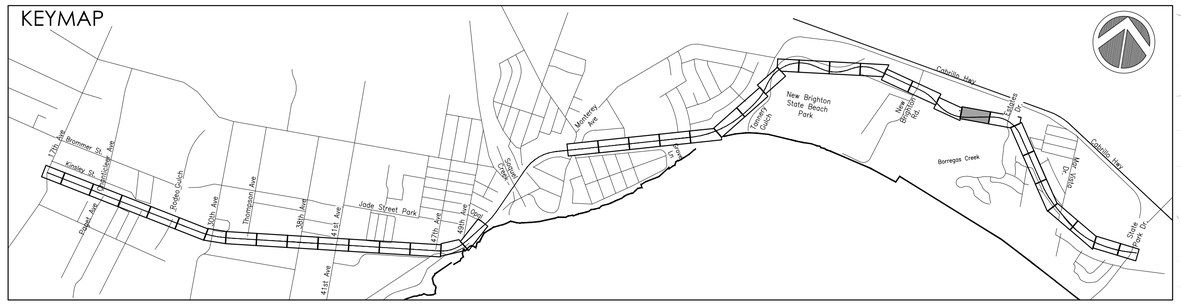
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.31
VAULT NO.	

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP



MATCHLINE, SEE SHEET DM-1.31

MATCHLINE, SEE SHEET DM-1.33

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

BRUSH

3

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.32
VAULT NO.

Layout Tab Name: DM-1.32, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg
\\Corp\rmm\on-site\2001\01\93-06-RC20-Santa Cruz-Rail-Trail-Seg-10-11\Dwl with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsoutomm, Plotted: Feb 14, 2023 - 6:43pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

BORREGAS CREEK

ESTATES DRIVE

MATCHLINE, SEE SHEET DM-1.32

MATCHLINE, SEE SHEET DM-1.34



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.33
VAULT NO.	

Layout Tab Name: DM-1.33 Images: county-logo-black-transparent.png; Xrefs: XC-0193-06-RWT-S11.dwg; XTB-0193-06-RWT.dwg; XSB-0193-06-RWT-S11.dwg; XC-0193-06-RWT-S11.dwg; KEYMAP-0193-06-RK20.dwg
\\Corp\rm\sn-sta\0001\0193-06-RK20-Santa-Cruz-Rail-Trail-Seg-1-10-11\Bid with Trail\Engineering\Civil\Sht\Sheet-Files\Segment 11\XM-0193-06-RWT-S11.dwg, Plotted By: snavarrete, Plotted: Feb 14, 2023 - 6:46pm

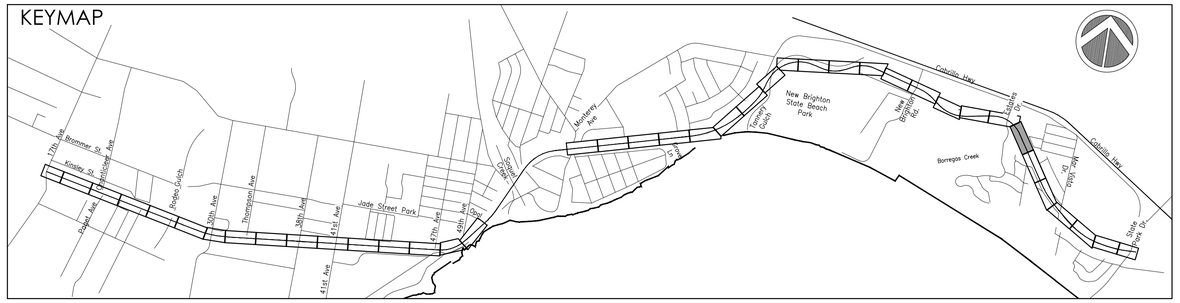
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.33

MATCHLINE, SEE SHEET DM-1.35

STREAM 633

KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

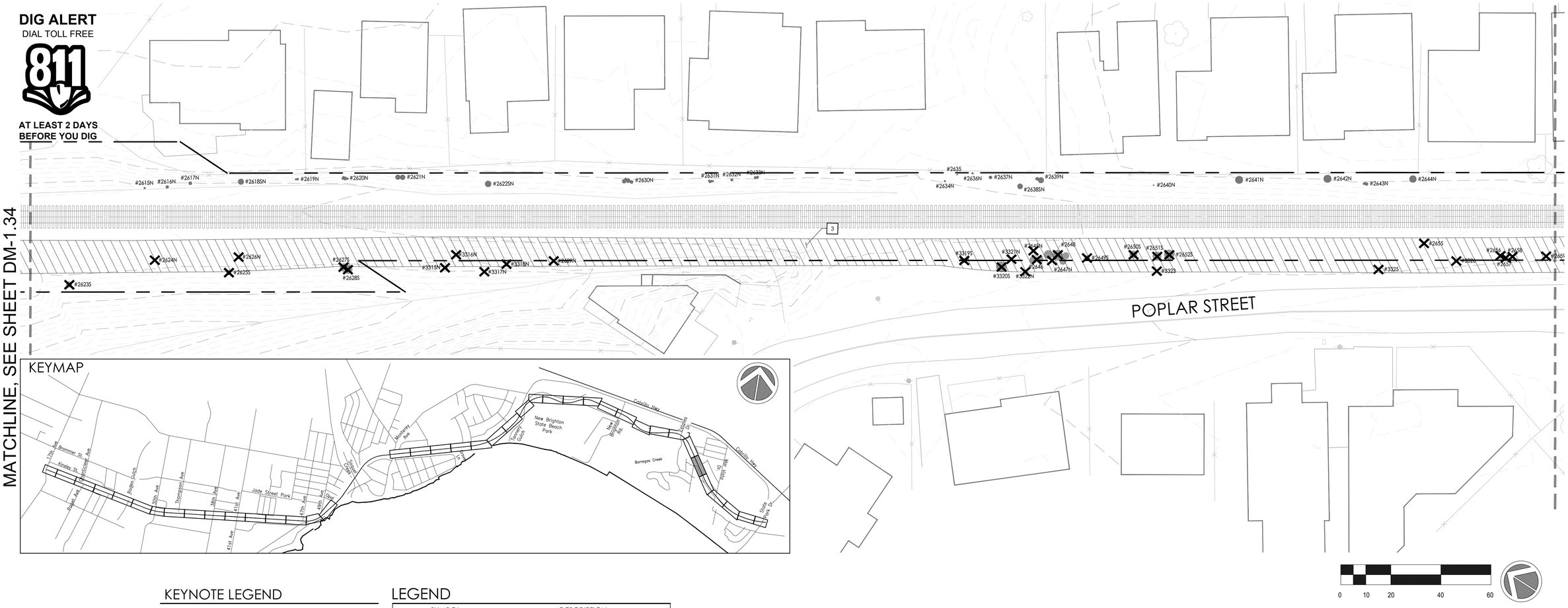
DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.34
VAULT NO.	

Layout Tab Name: DM-1.34, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCZD.dwg
\\Corp\rrm\corr-sva\2021\0193-06-RCZD-Santa Cruz-Rail Trail-Segs 10-11\Bid with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dshoshtaris, Plotted: Feb 14, 2023 - 6:49pm

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.34



MATCHLINE, SEE SHEET DM-1.36

KEYMAP

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.35, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCD0.dwg
\\Corp\rmm\sm-sta\0001\0193-06-RCD0-Santa-Cruz-Rail-Trail-Seg-1-10-11\Bid with Trail\Engineering\Civil3d\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: ksousmena, Plotted: Feb 14, 2023 - 6:52pm

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.35
VAULT NO.	

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS
BEFORE YOU DIG



KEYMAP

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

rrm design group
rrmdesign.com | (949) 361-7950
30332 Corniny Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

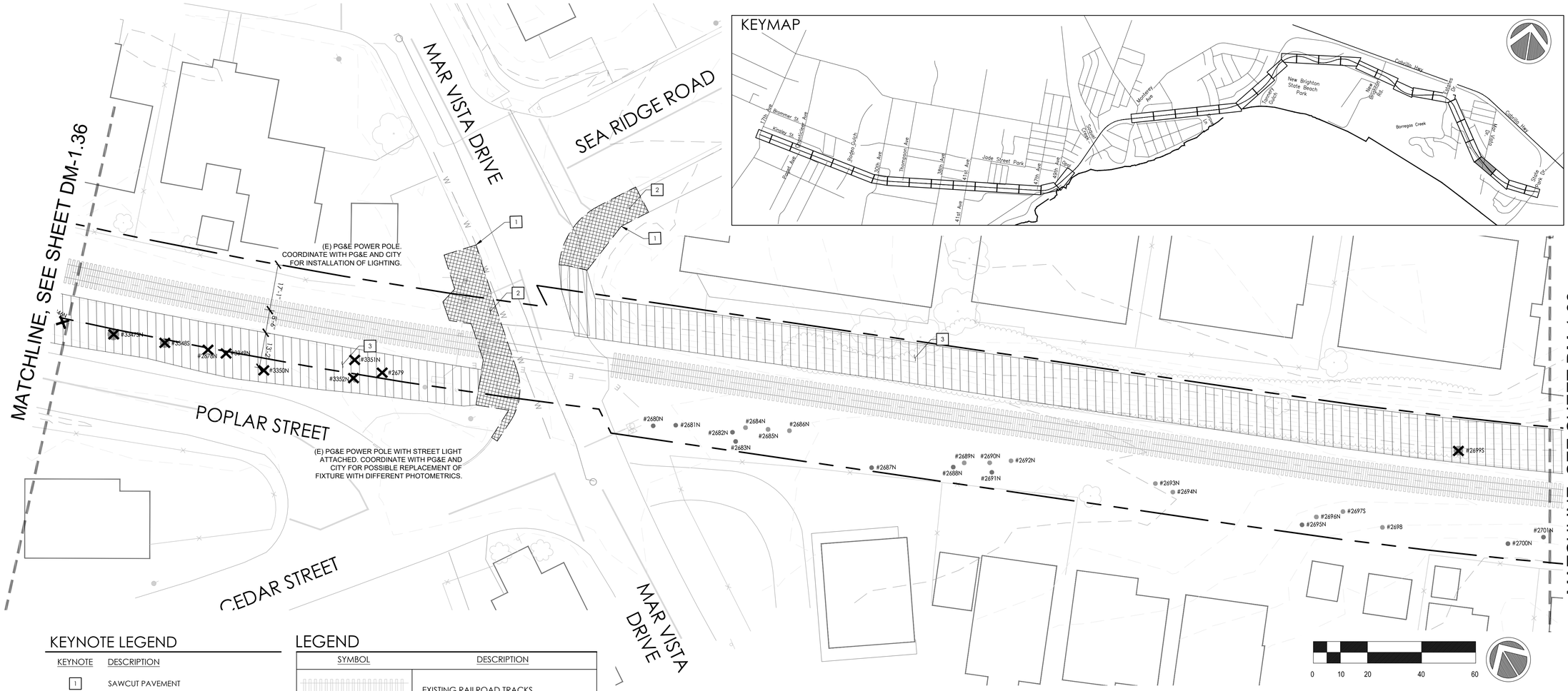
DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.36
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.36, Images: county-logo-black-transparent.png, Xrefs: PT-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RCZD.dwg
I:\Corp\rrm\sn-ark\0001\0193-06-RCZD-Santa Cruz Rail-Trail-Seg-10-11\Rail with Trail\Engineering\DataDesk\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: dsilvanteens, Plotted: Feb 14, 2023 - 6:56am

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

Layout Tab Name: DM-1.37, Image: county-logo-black-transparent.png, Xrefs: P:\0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT.dwg, XC-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RR20.dwg, \\Corp\vm\wm-ias\WM01\0193-06-RR20-Santa-Cruz-Rail-Trail-Seg-10-11\Rail with Trail\Engineering\SketUp\Sheet-Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: alexcontreras, Plotted: Feb 14, 2023 - 6:58pm

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

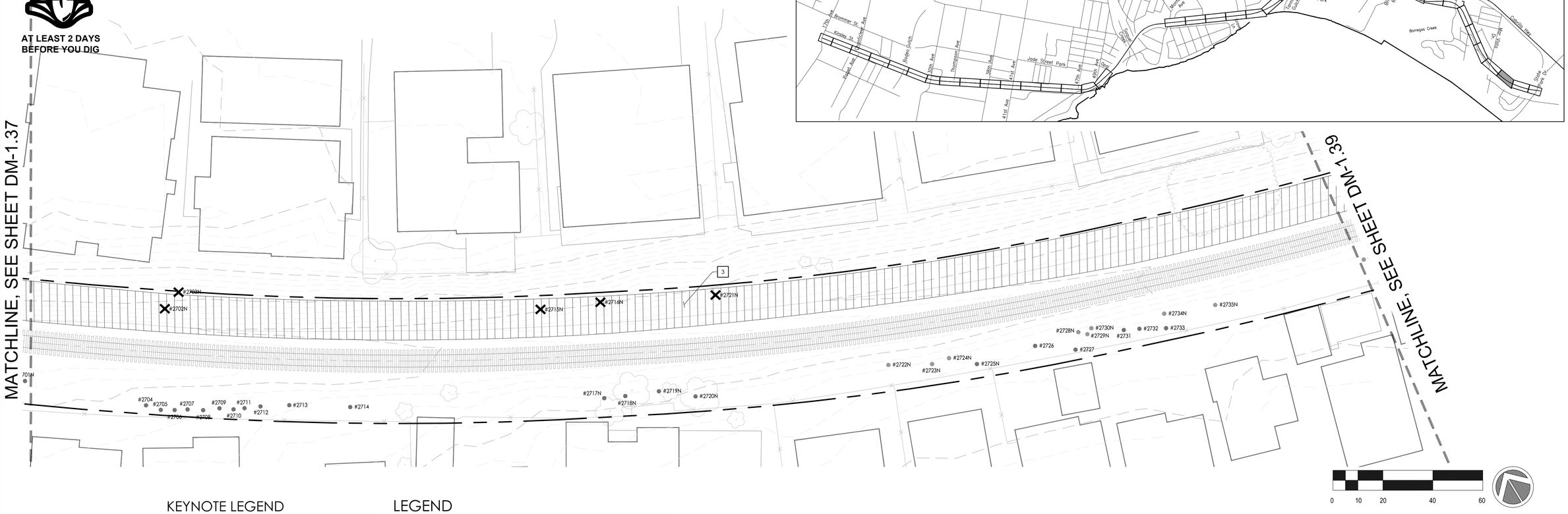
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.37
VAULT NO.	

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.38, Images: county-logo-black-transparent.png; , Xrefs: X:\0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RWT.dwg, \\corp\vm\sw-sw\2007\0193-06-RWT\Design\Data\Civil\Alignment\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: ksiuserems, Plotted: Feb 14, 2023 - 7:51pm

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

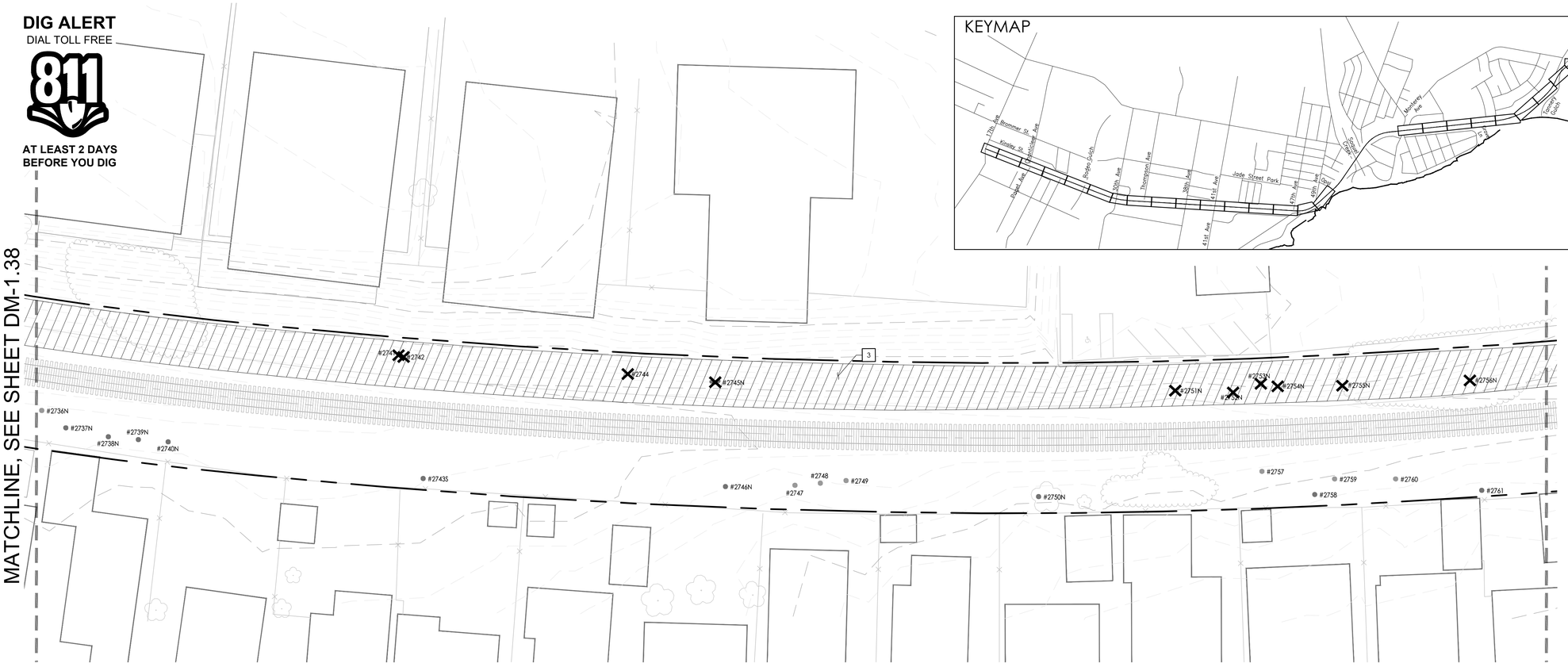
DRAWING #:
DM-0193-06-RWT-S11

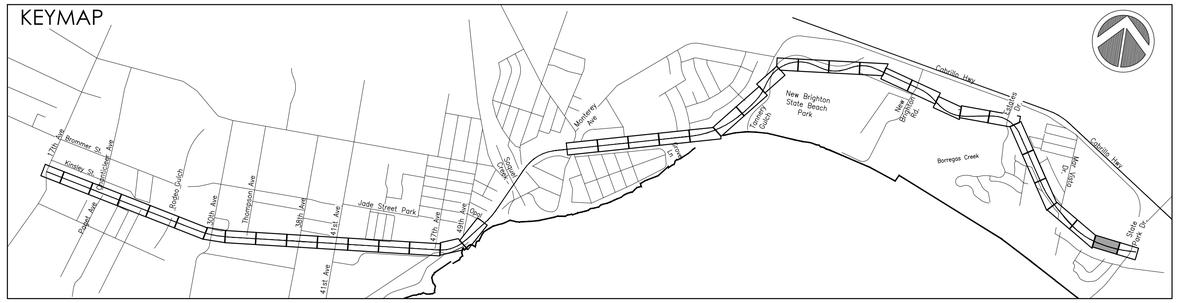
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.38
VAULT NO.	

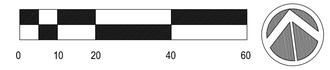
DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.38

MATCHLINE, SEE SHEET DM-1.40







KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.39, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, XT-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RK00.dwg, \\Corp\rmm\rmm-data\0001\0193-06-RK00-Santa Cruz-Rail-Trail-Seg-1b-11\Rail with Trail\Engineering\Details\Sheet-Files\Segment 11\dgn-0193-06-RWT-S11.dwg, Plotted By: dsouzamona, Plotted: Feb 14, 2023 - 7:24am

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

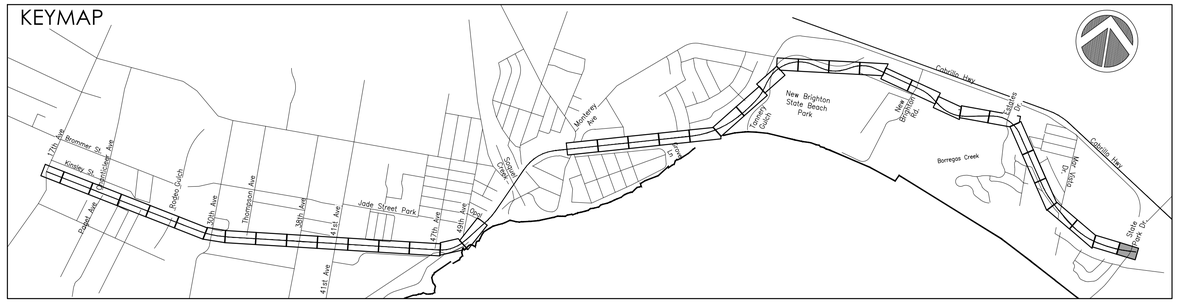
DRAWING #:
DM-0193-06-RWT-S11

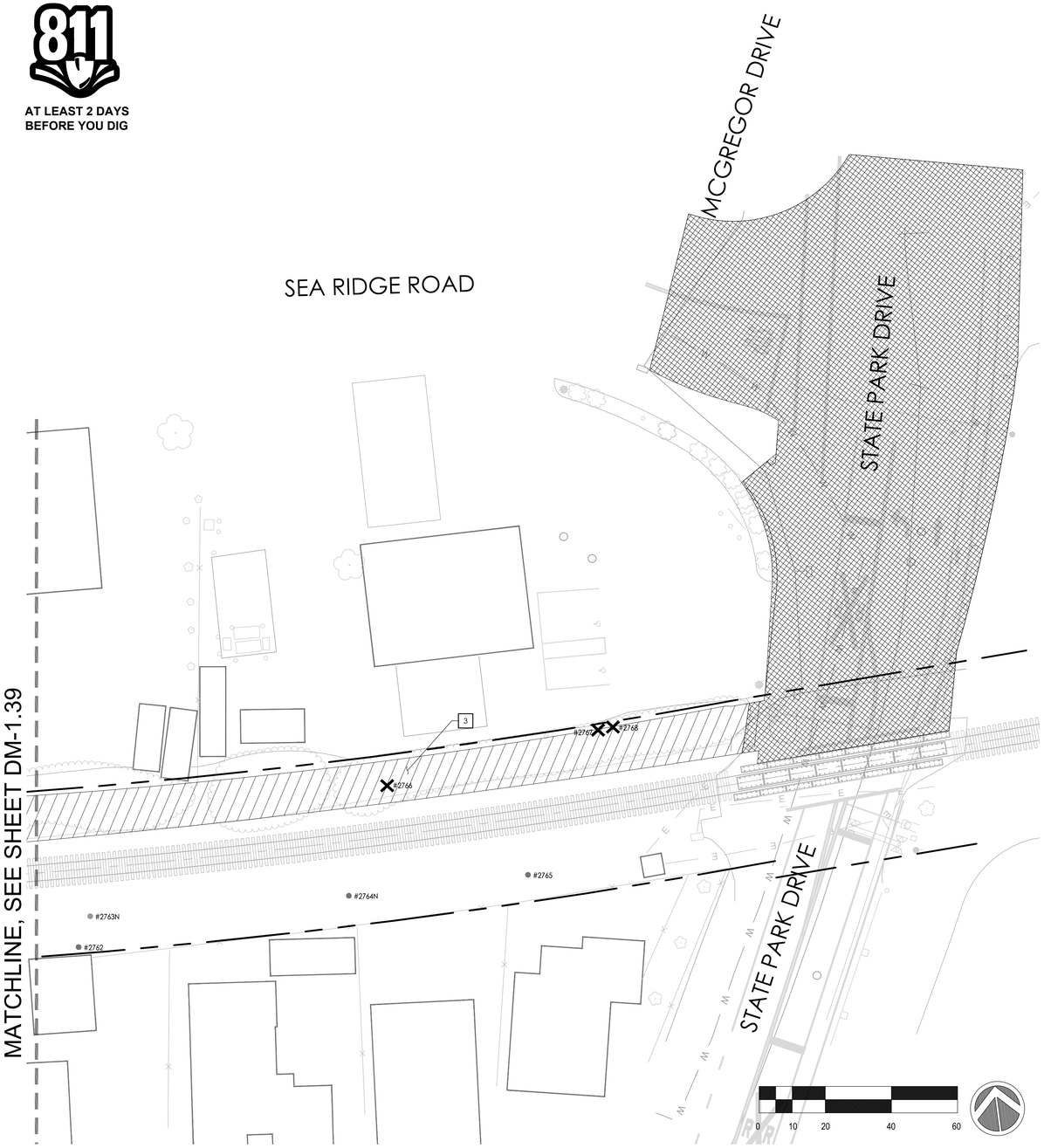
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.39
VAULT NO.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE AND SMOOTH EXISTING DIRT PILES TO ADJACENT AREA
6	PROTECT EXISTING RAILROAD SIGNAL IN PLACE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING OR SIGNAGE
9	REMOVE EXISTING UTILITY
10	RELOCATE EXISTING UTILITY
11	REMOVE RAILS, TIES, OTHER TRACK MATERIAL
12	ABANDON IN PLACE
13	REMOVE CONCRETE TRACK PANEL

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION) REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.40, Images: county-logo-black-transparent.png, Xrefs: SC-0193-06-RWT-S11.dwg, XTB-0193-06-RWT.dwg, XSB-0193-06-RWT-S11.dwg, SC-0193-06-RWT-S11.dwg, KEYMAP-0193-06-RC20.dwg
N:\2000\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Work with Trail\Engineering\Detailed Sheet Files\Segment 11\DM-0193-06-RWT-S11.dwg, Plotted By: AMSzadeski, Plotted: Apr 12, 2023 - 5:25pm

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL NEXT TO THE RAIL LINE (ULTIMATE TRAIL CONFIGURATION)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RWT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.40
VAULT NO.	

DEPARTMENT OF PUBLIC WORKS

RAIL TRAIL SEGMENTS 10 - 11 TRAIL ON THE RAIL LINE (INTERIM TRAIL)

17th Avenue to State Park Drive

PROJECT DESCRIPTION

PICKING UP WHERE SEGMENT 9 TERMINATES, THE SEGMENTS 10 AND 11 PROJECT INCLUDES CONSTRUCTION OF A MULTI-USE TRAIL LOCATED GENERALLY ALONG THE SANTA CRUZ BRANCH RAILROAD CENTERLINE WITH THE REMOVAL OF EXISTING TRACKS AND TIES THROUGH THE PROCESS OF RAILBANKING FROM THE EAST SIDE OF THE 17TH AVENUE TO THE WEST SIDE OF STATE PARK DRIVE.

PROJECT DIRECTORY

OWNER
SANTA CRUZ COUNTY REGIONAL
TRANSPORTATION COMMISSION
CONTACT: GRACE BLAKESLEE PHONE: (831) 460-3200
RAIL CONTACT: TOMMY TRAVERS FAX: (831) 460-6178

LANDSCAPE ARCHITECT
RRM DESIGN GROUP
3765 SOUTH HIGUERA, SUITE 102 PHONE: (949) 361-7950
SAN LUIS OBISPO, CA 93401 FAX: (949) 361-7955
CONTACT: MIKE SHERROD

CIVIL ENGINEER
RRM DESIGN GROUP
325 DAVIS STREET PHONE: (510) 751-4910
SAN LEANDRO, CA 94577 FAX: (510) 686-4910
CONTACT: DARREN CHOY

ELECTRICAL ENGINEER
THOMA ELECTRIC
3562 EMPLEO ST. PHONE: (805) 543-3850
SAN LUIS OBISPO, CA
CONTACT: CHRIS PATCHIN

GEOTECHNICAL ENGINEER
PACIFIC CREST ENGINEERING
444 AIRPORT BLVD PHONE: (831) 722-9446
WATSONVILLE, CA 95076
CONTACT: CHRIS JOHNSON

STRUCTURAL ENGINEER
MESITI-MILLER ENGINEERING
224 WALNUT ST, SUITE B PHONE: (831) 426-3186
SANTA CRUZ, CA 95060
CONTACT: DALE HENDSBEE

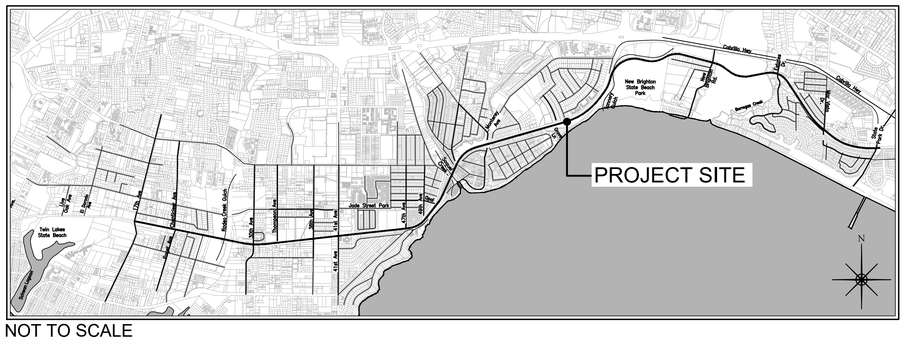
TRAFFIC ENGINEER
WHITLOCK & WEINBERGER (W-TRANS)
1276 LINCOLN AVE, SUITE 204 PHONE: (510) 444-2600
SAN JOSE, CA 9525
CONTACT: STEVE FITZSIMMONS

RAIL ENGINEER
ZEPHYR UAS/RAIL (ZUI)
725 W TOWN & COUNTRY RD, SUITE 550 PHONE: (714) 835-6355
ORANGE, CA 92868
CONTACT: ALFRED YALDA

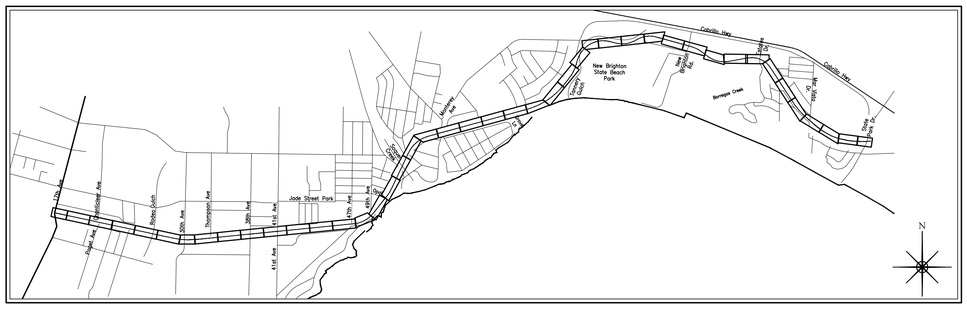
CLIENT
COUNTY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT
CONTACT: ROB TIDMORE
PHONE: (831) 454-2160
FAX: (831) 454-2385

SECONDARY CLIENT
CITY OF CAPITOLA
PUBLIC WORKS DEPARTMENT
CONTACT: KAILASH MOZUMDER
PHONE: (831) 475-7300

VICINITY MAP



NOT TO SCALE



KEY MAP SCALE: 1"=2000'

SHEET INDEX

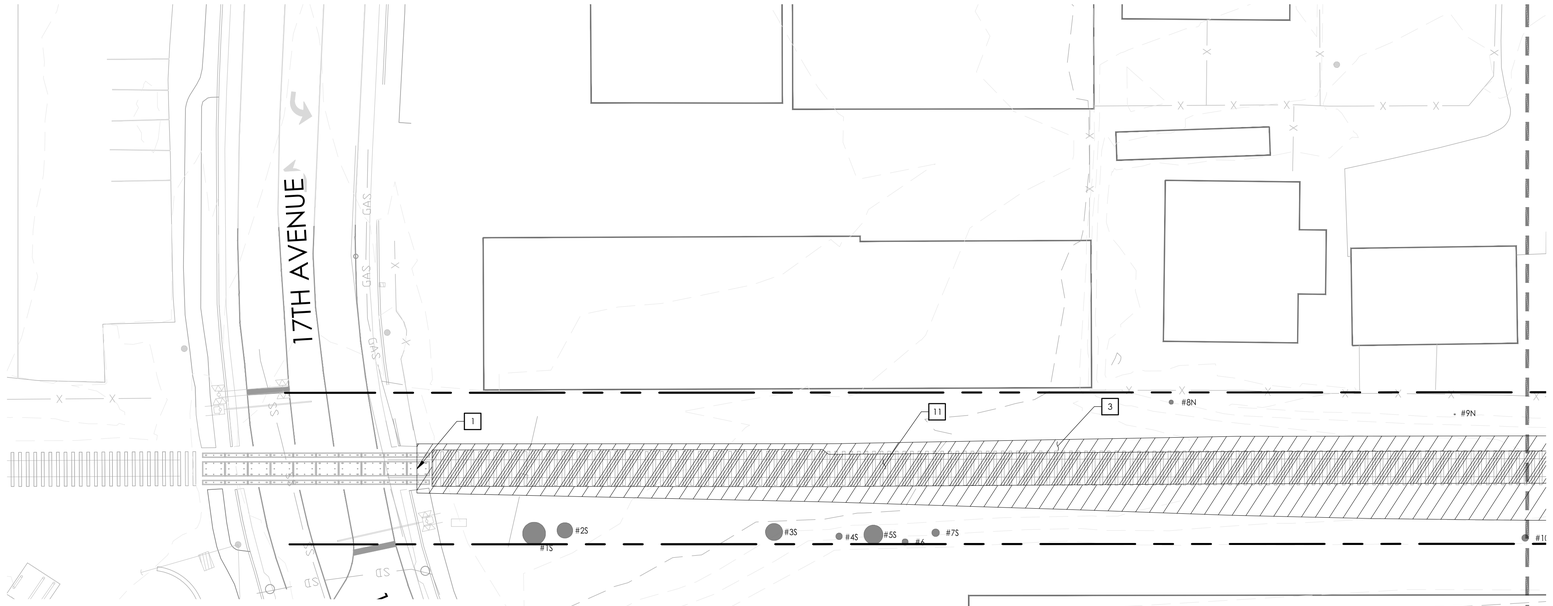
TS-1.01	TITLE SHEET
DM-1.01-1.14	SEGMENT 10 DEMOLITION PLANS
DM-1.15-1.44	SEGMENT 11 DEMOLITION PLANS
CP-1.01-1.14	SEGMENT 10 CONSTRUCTION KEYNOTE PLANS
CP-1.15-1.44	SEGMENT 11 CONSTRUCTION KEYNOTE PLANS
BP-1.01	RODEO GULCH BRIDGE PLAN
BD-1.01	RODEO GULCH BRIDGE DETAILS
BP-2.01	CAPITOLA TRESTLE BRIDGE PLAN
BD-2.01	CAPITOLA TRESTLE BRIDGE DETAILS
BP-3.01	NEW BRIGHTON STATE BEACH BRIDGE PLAN
BD-3.01	NEW BRIGHTON STATE BEACH DETAILS
WD-1.01-1.02	RETAINING WALL DETAIL SHEETS

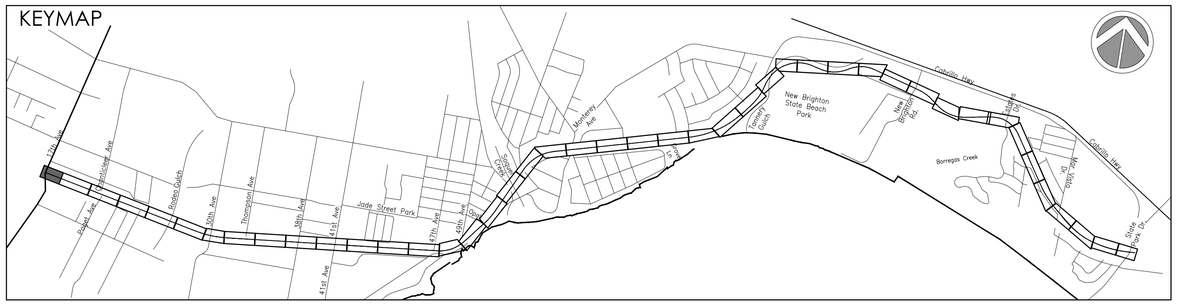
REFINED SCHEMATIC DESIGN SUBMITTAL

FEDERAL PROJECT NO.: ATPL-5936 (154)
STATE PROJECT NO.: 05-2300-0030
COUNTY PROJECT NO.:

REFERENCES	DATE	06/15/23	SCALE AS SHOWN
FIELD BOOK:	DRAWN	KS/EK/MMS	TS-1.01
DRAWING #:	DESIGN	KS/EK/MMS	VAULT NO.
	CHECKED	MS/KS	

Users/kyle.sanchez/Desktop/Segment 10-11 Trail/Segment 10-11 Trail_Title Sheet.dwg, Plotted By: mmeeks, Plotted: Jun 15, 2023 - 7:00am







MATCHLINE, SEE SHEET DM-1.02

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.01

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

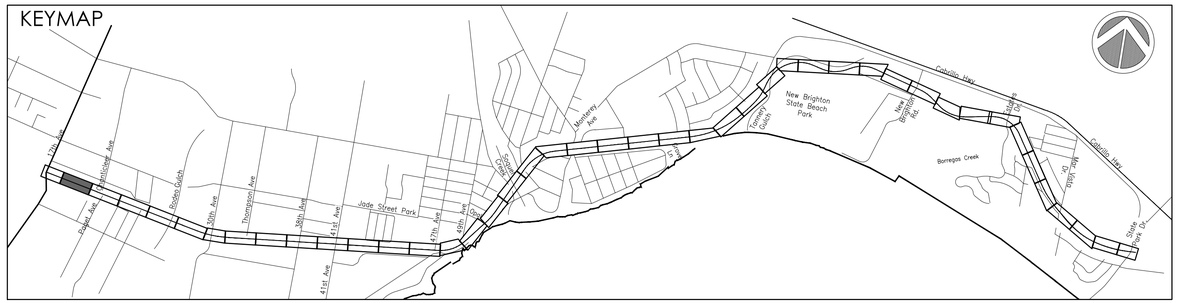
Layout Tab Name: DM-1.01, Images: county-logo-black-transparent.png, , Xrefs: XT-0193-06-RWY-S10.dwg, XTR-0193-06-RBT-S10.dwg, XSR-0193-06-RWY-S10.dwg, XC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10-Rev, KEYMAP-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg
\\Users\mm\on-site\2001\0193-06-RCSC-Santa-Cruz-Rail-Trail-Reg-10-11\Bidtrans with Trail\Engineering\Xrefs\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmotley, Plotted: Feb 11, 2023 - 1:32pm

CISCO LANE

MATCHLINE, SEE SHEET DM-1.01

MATCHLINE, SEE SHEET DM-1.03

KEYMAP



#11N
#10SN
#12
#14S
#15S
#16S
#17S
#18
#19S
#20S
#21S
#22S
#23S
#24N

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32333 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.02

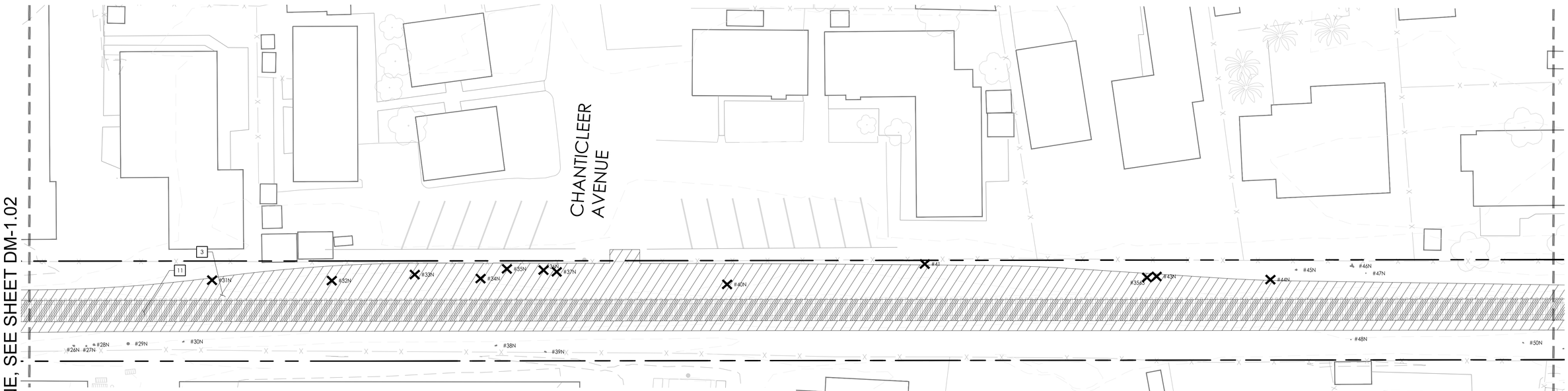
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.02, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RWT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCZD.dwg, XH-0193-06-RBT-S10.dwg, XC-0193-04-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg
I:\Corp\mm\Jobs-Wrk\2021\0193-06-RCZD-Santa Cruz-Rail-Trail-Segs-10-11\Wallbook with Trail\Engineering\DataDex\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:52pm

MATCHLINE, SEE SHEET DM-1.02

CHANTICLEER AVENUE



MATCHLINE, SEE SHEET DM-1.04

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32333 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.03
VAULT NO.

Layout Tab Name: DM-1.03 Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RBT-S10.dwg XTB-0193-06-RBT.dwg XSB-0193-06-RBT-S10.dwg XC-0193-06-RBT-S10.dwg XC-0193-06-RBT-S10.dwg KEYMAP-0193-06-RCZ0.dwg XH-0193-06-RBT-S10.dwg SEC-0193-06-RBT-S10.dwg XC-0193-06-RBT-S10.dwg \\Corp\rmm\Jobs\2021\0193-06-RCZ0-Santa-Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:32pm

MATCHLINE, SEE SHEET DM-1.03

MATCHLINE, SEE SHEET DM-1.05

#56N
#52N
#51N
#53N
#55N
#59N
#60
#61N
#63N
#65N
#66N
11
3

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32333 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.04

VAULT NO.

Layout Tab Name: DM-1.04, Images: county-logo-black-transparent.png, Xrefs: EC-0193-06-RWC-S10.dwg, RTB-0193-06-RBT.dwg, XSB-0193-06-RWC-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCZ0.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S09.dwg, XT-0193-06-RBT-S10.dwg
\\Corp\rmm\Jobs\2021\0193-06-RCZ0-Santa-Cruz-Rail-Trail-Seg-10-11\Wallace with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:32pm

MATCHLINE, SEE SHEET DM-1.04

#67N #68N #72N #75N #76N #78N #79S #83N #84N #85N #86N #87N #88N #89N #90N #91SN #99N #100N #101N #102N #103N #104N #105N #106SN

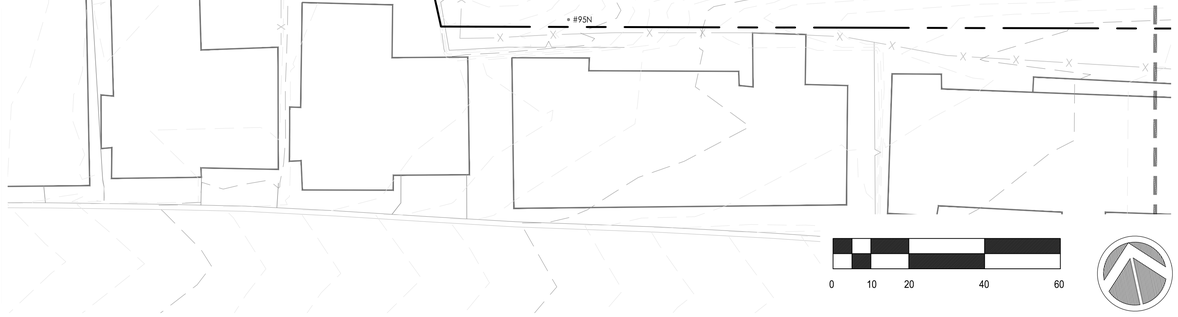
#69N #70N #71N #72N #74N #77N #81N #82 #92N #93N #96 #97N #98S #94N #95N

3 11

MATCHLINE, SEE SHEET DM-1.06

KEYMAP





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE 02/10/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN MMS	DM-1.05	
DRAWING #: DM-0193-06-RBT-S10	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

Layout Tab Name: DM-1.05, Images: county-logo-black-transparent.png; , Refs: XT-0193-06-RWT-S10.dwg, XTR-0193-06-RBT.dwg, XSB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCSD.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, \\corp\rmv\on-site\2007\0193-06-RCSD-Santa-Cruz-Rail-Trail-Seg-1-10-11\Wetlands work files\Engineering\Xrefs\Sheet Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 12:32pm

MATCHLINE, SEE SHEET DM-1.05

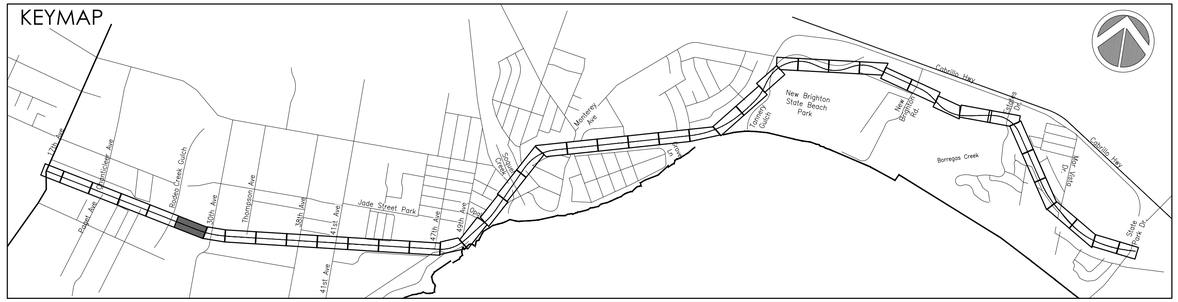
RODEO GULCH

#107N #108N #109 #110 #111 #112 #113 #114 #115 #116 #117 #118 #119 #120 #121 #122 #123 #124N #125 #126 #127 #128 #1175N #129 #130 #131 #132 #133 #134 #135 #136S #137N #138S #139S #140S #140N #141N #142N #143N #144N #145SN #146 #147S #148S #149 #150 #151S #152S #153N #154N

3 7 11

0 10 20 40 60

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

MATCHLINE, SEE SHEET DM-1.07

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

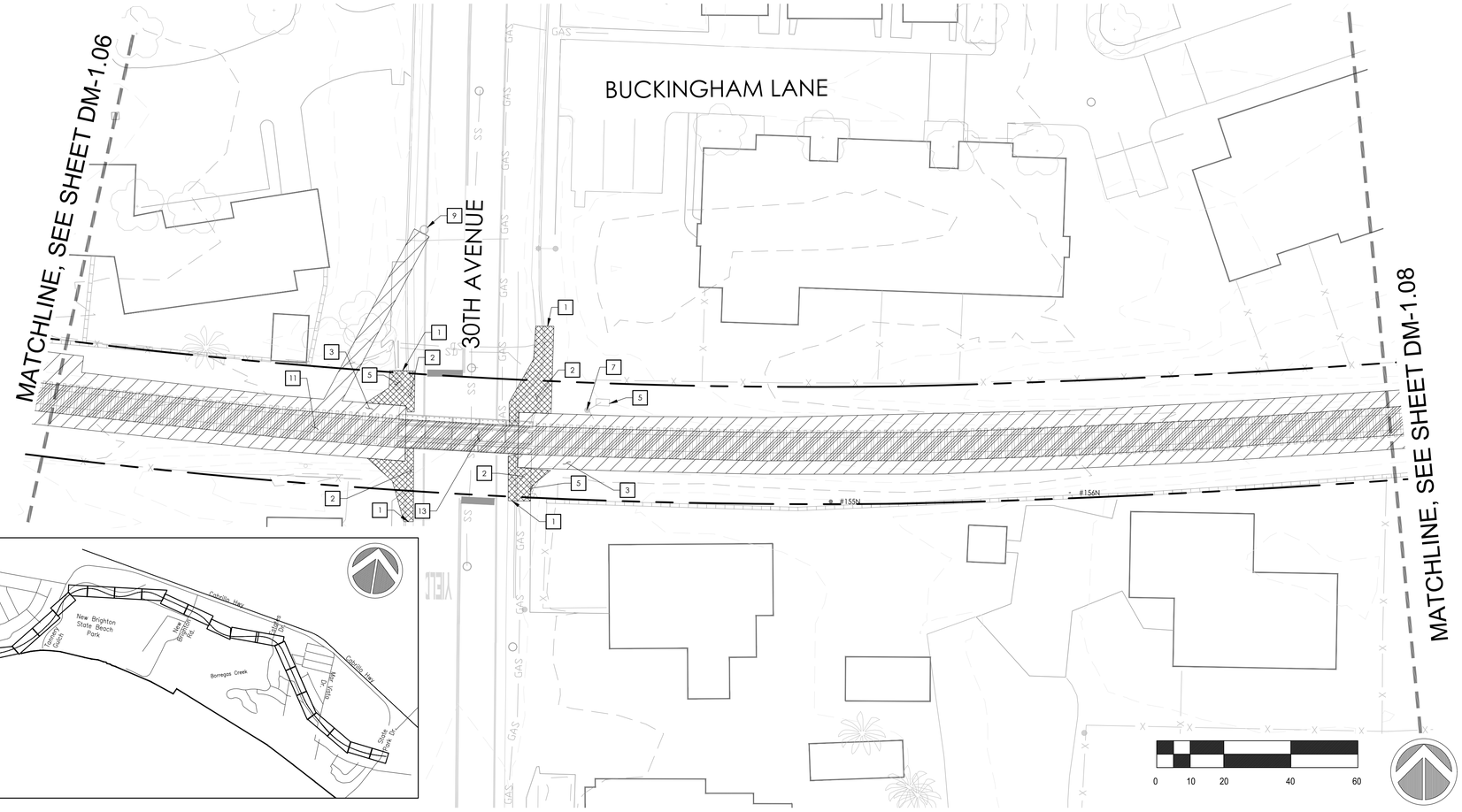
RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

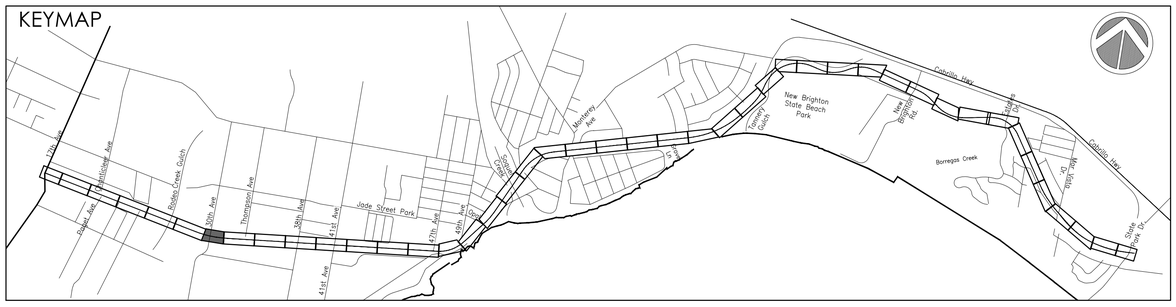
DEMOLITION PLANS

REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	MMS	DM-1.06
DRAWING #: DM-0193-06-RBT-S10	DESIGN	KS/MS	VAULT NO.
	CHECKED	MS	

Layout Tab Name: DM-1.06 Images: county-logo-black-transparent.png Xrefs: EC-0193-06-RWC-S10.dwg XTB-0193-06-RBT.dwg XSB-0193-06-RWT-S10.dwg XC-0193-06-RBT-S10.dwg KEYMAP-0193-06-RCSD.dwg XH-0193-06-RBT-S10.dwg SEC-0193-06-RBT-S10.dwg XC-0193-06-RBT-S10.dwg \\Corp\rmm\Jobs\2021\0193-06-RCSD-Santa-Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:53am



KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.07
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.07, Images: county-logo-black-transparent.png; , Refs: XT-0193-06-RWT-S10.dwg; XTR-0193-06-RBT.dwg; XSB-0193-06-RBT.dwg; XC-0193-06-RBT-S10.dwg; KEYMAP-0193-06-RCSD.dwg; XH-0193-06-RBT-S10.dwg; SEC-0193-06-RBT-S10.dwg; \\corp\rmm\sm-sbk\2001\0193-06-RCSD-Santa-Cruz-Rail-Trail-Seg-1-10-11\Wetlands work files\Engineering\Sandbox\Sheet Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 12:32pm

MATCHLINE, SEE SHEET DM-1.07

MATCHLINE, SEE SHEET DM-1.09

THOMPSON AVENUE

#158 #159N #160N #161 #162 #163 #164 #165 #166 #167 #168 #169S #170 #171 #172

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.08

VAULT NO.

Layout Tab Name: DM-1.08, Images: county-logo-black-transparent.png, Xrefs: EC-0193-06-RBT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCZ0.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:53am
\\Corp\rmm\Jobs\2021\0193-06-RCZ0-Santa-Cruz-Rail-Trail-Seg-10-11\Wallace with Trail\Engineering\DesDev\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:53am

MATCHLINE, SEE SHEET DM-1.08



MATCHLINE, SEE SHEET DM-1.10

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.09
VAULT NO.	

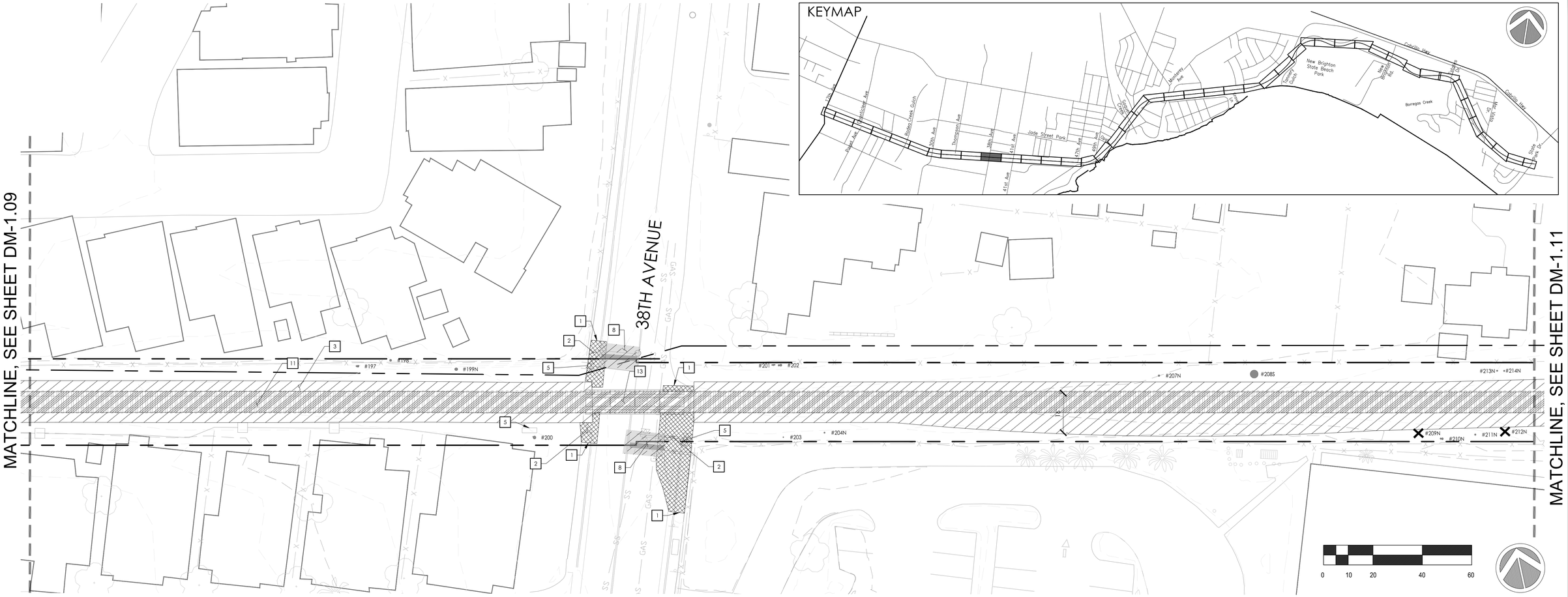
Layout Tab Name: DM-1.09, Images: county-logo-black-transparent.png, , Xrefs: XT-0193-06-RWT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RWT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RD20.dwg, XH-0193-06-RBT-S10.dwg, SSC-0193-06-RBT-S10.dwg, \\Cosnj\vm\sm-sfs\0001\0193-06-RD20-Santa-Cruz-Rail-Trail-Seg-1-10-11\Rollback with Trail\Engineering\SantaCruz\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:34am

MATCHLINE, SEE SHEET DM-1.09

MATCHLINE, SEE SHEET DM-1.11

38TH AVENUE

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.10
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab: Name: DM-1.10, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWY-S10.dwg, XTR-0193-06-RBT.dwg, XSR-0193-06-RWY-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RK00.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-04-RBT-S10.dwg, XT-0193-06-RBT-S10.dwg
\\Corp\vm\sm-sbfs\0001\0193-06-RK00-Santa Cruz Rail Trail\Eng\Engineering\Details\Sheet Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: jmckay, Plotted: Feb 11, 2023 - 3:24pm

MATCHLINE, SEE SHEET DM-1.10

MATCHLINE, SEE SHEET DM-1.12

#213N+ +#214N

#215N

#211N #212N

#216+ #217 #218

#219+ #220

#221+ #222

41ST AVENUE

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.11

VAULT NO.

Layout Tab Name: DM-1.11, Images: county-logo-black-transparent.png, Xrefs: EC-0193-06-RBT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCZO.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, XSB-0193-06-RBT-S10.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCZO.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg
\\Corp\rmm\Jobs\2021\0193-06-RCZO-Santa-Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:24pm

MATCHLINE, SEE SHEET DM-1.11

CIRCLE DRIVE

#223N

#224N

#227

#228N

#229N

#230N

#233N

#234N

#235N

#239N

MATCHLINE, SEE SHEET DM-1.13

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023	SCALE	AS SHOWN
DRAWN	MMS		DM-1.12
DESIGN	KS/MS	VAULT NO.	
CHECKED	MS		

Layout Tab Name: DM-1.12, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RBT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RCDP.dwg, XH-0193-06-RBT-S10.dwg, XEC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XC-0193-06-RCDP-Santa-Cruz-Rail-Trail-Seg-10-11.dwg, XC-0193-06-RBT-S10.dwg, Plotted By: dmcvay, Plotted: Feb 11, 2023 - 7:24am
I:\Corp\mm\Jobs-MM\0001\0193-06-RCDP-Santa-Cruz-Rail-Trail-Seg-10-11\Drawings\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmcvay, Plotted: Feb 11, 2023 - 7:24am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.13
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.13, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RBT-S10.dwg, XTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RBQD.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-04-RBT-S9.dwg, XT-0193-06-RBT-S10.dwg, \\Corp.vm\vm-ala\VOL01\0193-06-RBQD-Santa Cruz Rail-Trail-Seg-10-11\Bidbook with Trail\Engineering\Details\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: jmchoy, Plotted: Feb 11, 2023 -- 3:25pm

MATCHLINE, SEE SHEET DM-1.13

JADE STREET PARK

47TH AVENUE

SEGMENT 10 ENDS HERE
SEGMENT 11 BEGINS HERE

EX TRACK CONTINUES, DEMO DOES NOT FOR SEGMENT 10

#247N #248N #249N #250N #251N

PORTOLA DRIVE

STOP

XING

MATCHLINE, SEE SHEET DM-1.15

KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

PRELIMINARY NOT FOR CONSTRUCTION

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

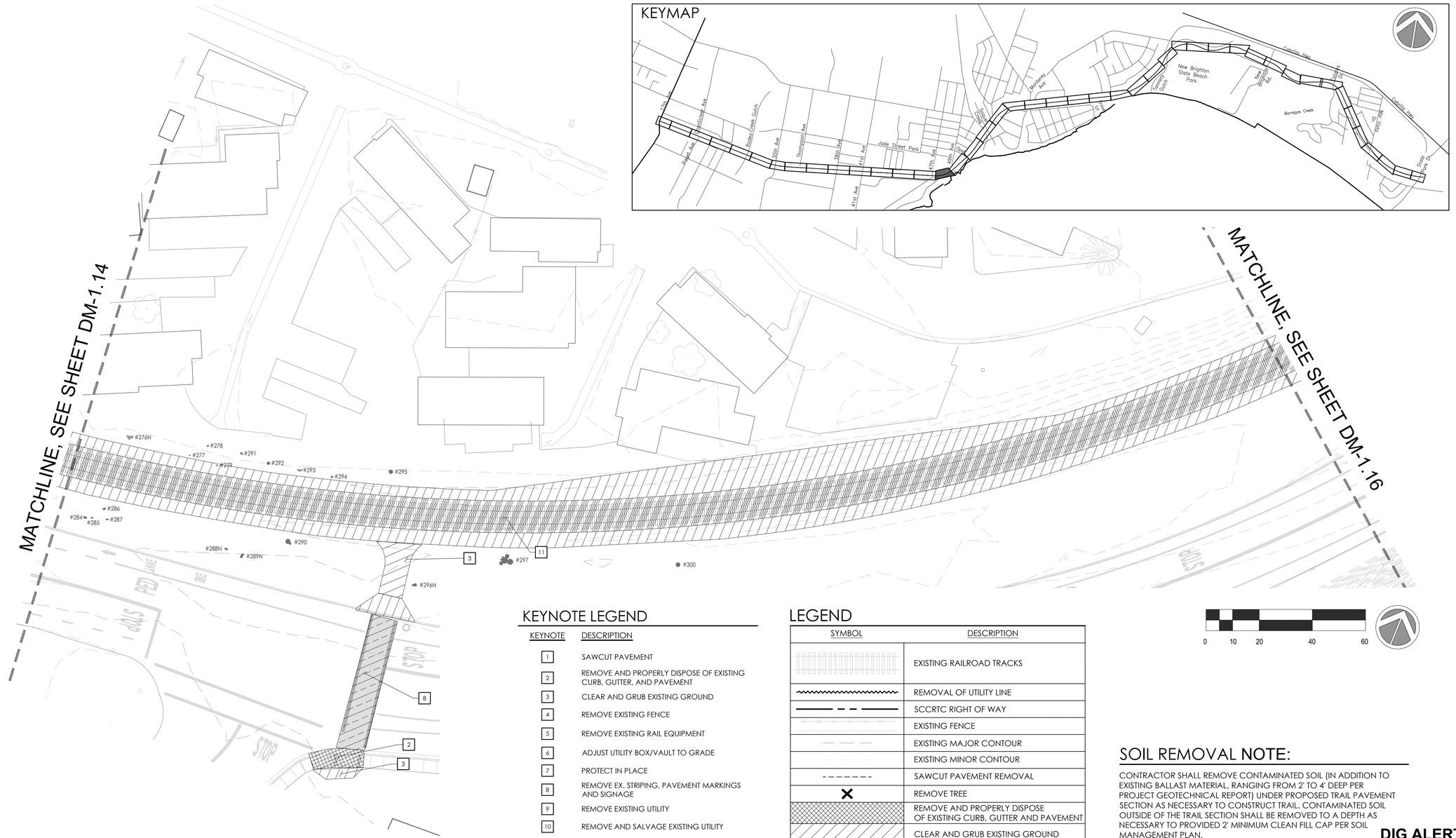
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S10

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.14
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.14, Images: county-logo-black-transparent.png, Xrefs: EC-0193-06-RBT-S10.dwg, RTB-0193-06-RBT.dwg, XSB-0193-06-RBT-S10.dwg, XC-0193-06-RBT-S10.dwg, KEYMAP-0193-06-RBT-S10.dwg, XH-0193-06-RBT-S10.dwg, SEC-0193-06-RBT-S10.dwg, XC-0193-04-RBT-S9.dwg, XT-0193-06-RBT-S10.dwg
\\Corp\rmm\san-ark\2021\0193-06-RDS-Santa-Cruz-Rail-Trail-Seg-1-C-11\Bidbook with Trail\Engineering\Sheets\Sheet-Files\Segment 10\DM-0193-06-RBT-S10.dwg, Plotted By: dmckay, Plotted: Feb 11, 2023 - 7:35pm



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

0 10 20 40 60

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOI MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	MMS	DM-1.15
DRAWING #: DM-0193-06-RBT-S11	DESIGN	KS/MS	VAULT NO.
	CHECKED	MS	

Layout Tab Name: DM-1.15, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBT.dwg, XT-0193-06-RBT-S11.dwg, RETAIN-0193-06-RTA20.dwg, XSB-0193-06-RWF-S11.dwg
\\corp\nm\on-site\2007\0193-06-RCP\Santa Cruz-Rail-Trail-Seg-10-11\Redbank with Trail\Engineering\Detailed\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 12, 2023 - 9:45am



MATCHLINE, SEE SHEET DM-1.15

MATCHLINE, SEE SHEET DM-1.17

#302

3

11

3

3

8

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	MMS	DM-1.16
DRAWING #: DM-0193-06-RBT-S11	DESIGN	KS/MS	VAULT NO.
	CHECKED	MS	

Layout Tab Name: DM-1.16, Images: county-logo-black-transparent.png; , Refs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RBT-S11.dwg, XC-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RD20.dwg, XSB-0193-06-RBT-S11.dwg
\\corp\rmm\on-site\0001\0193-06-RD20-Santa-Cruz-Rail-Trail-Seg-10-11\Wallace with Trail\Engineering\Xrefs\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 8:54am

MATCHLINE, SEE SHEET DM-1.16

MATCHLINE, SEE SHEET DM-1.18

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32333 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.17

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.17, Images: county-logo-black-transparent.png, Xrefs: SC-0193-06-RBT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XSTAMP-0193-06-RTOD.dwg, XSB-0193-06-RBT-S11.dwg, \\Corp\vm\san-sha\2001\0193-06-RCZO-Santa Cruz Rail Trail-Segs 1-11\Bidbook with Trail\Engineering\Dwfiles\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmcfoy, Plotted: Feb 12, 2023 - 8:55am

MATCHLINE, SEE SHEET DM-1.17

MATCHLINE, SEE SHEET DM-1.19



3

11

5

SOQUEL CREEK

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.18
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.18, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTR-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RCZD.dwg, XSB-0193-06-RWT-S11.dwg, \\Corp\rmm\san-ark\2021\0193-06-RCZD-Santa-Cruz-Rail-Trail-Seg-1-10-11\Wallace with Trail\Engineering\SantaCruz\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmcfay, Plotted: Feb 12, 2023 - 8:57am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE 02/10/2023	SCALE AS SHOWN	
FIELD BOOK:	DRAWN MMS	DM-1.19	
DRAWING #: DM-0193-06-RBT-S11	DESIGN KS/MS	VAULT NO.	
	CHECKED MS		

Layout Tab Name: DM-1.19, Images: county-logo-black-transparent.png, , Xrefs: XT-0193-06-RWY-S11.dwg, XTL-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RDD.dwg, XSB-0193-06-RWY-S11.dwg
\\corp\rmm-sta\2001\0193-06-RDD-Santa Cruz Rail Trail-Seg 10-11\Redlines with Trail\Engineering\Meadow\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 8:58am



MATCHLINE, SEE SHEET DM-1.19

MATCHLINE, SEE SHEET DM-1.21

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

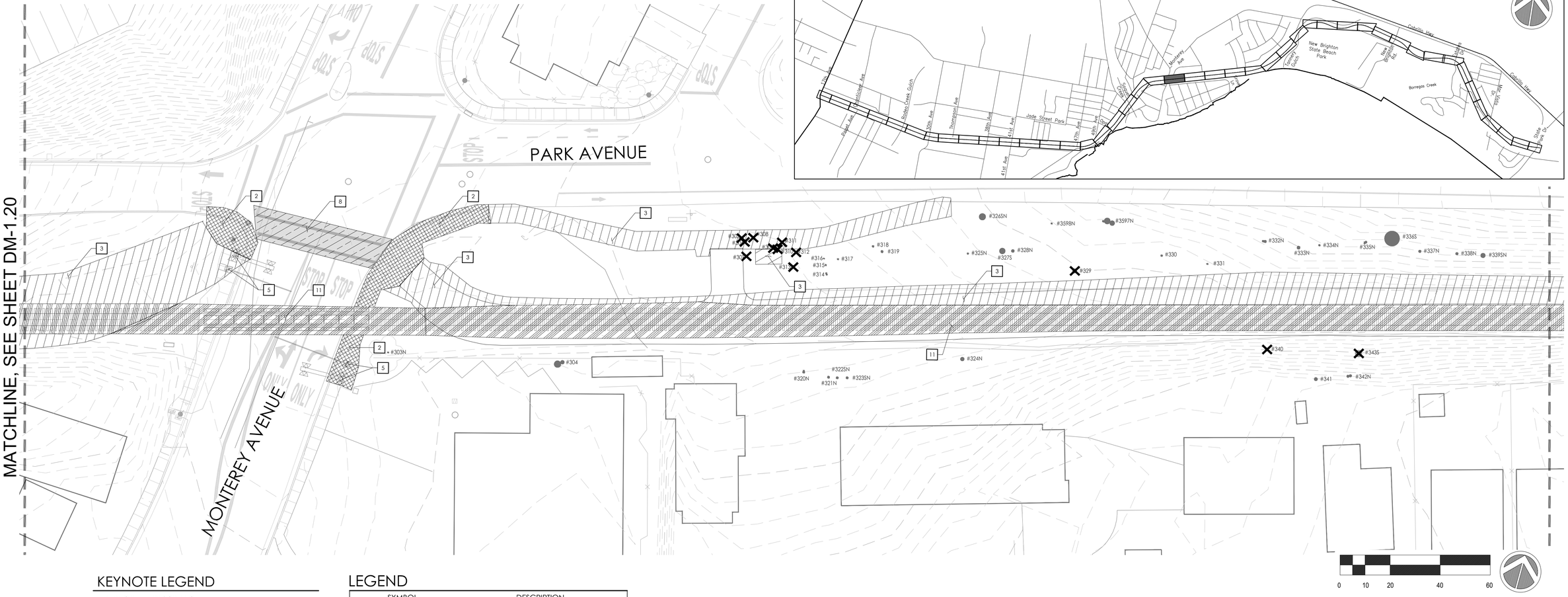
DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.20
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.20, Images: county-logo-black-transparent.png; , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RD20.dwg, XSB-0193-06-RWC-S11.dwg
\\corp\rmm\on-site\0001\0193-06-RD20-Santa-Cruz-Rail-Trail-Seg-10-11\Wallace with Trail\Engineering\Xrefs\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 9:00am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

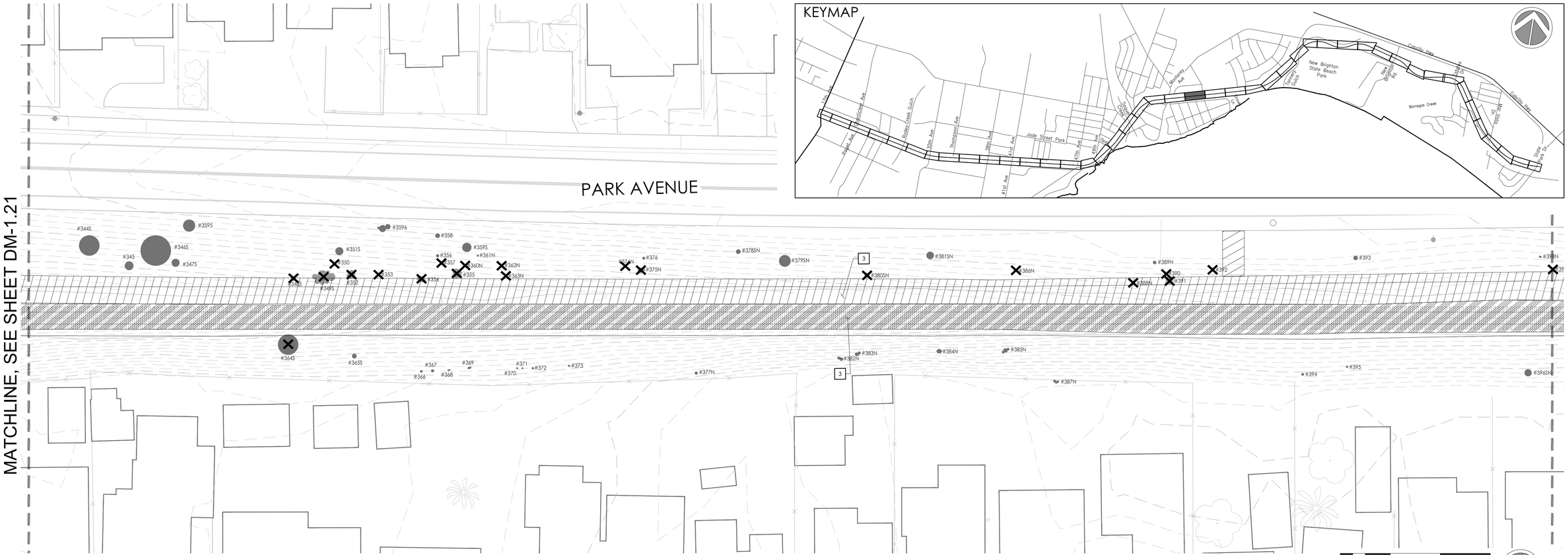
DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.21
VAULT NO.	

Layout Tab Name: DM-1.21, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT.dwg, XT-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RC20.dwg, XSB-0193-06-RWT-S11.dwg, \\Corp\rm\Projects\2021\0193-06-RC20-Santa Cruz-Rail-Trail-Seg-10-11\Bidbook with Trail\Engineering\DataDex\Sheet-Plan\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: jimchoy, Plotted: Feb 12, 2023 - 9:01am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

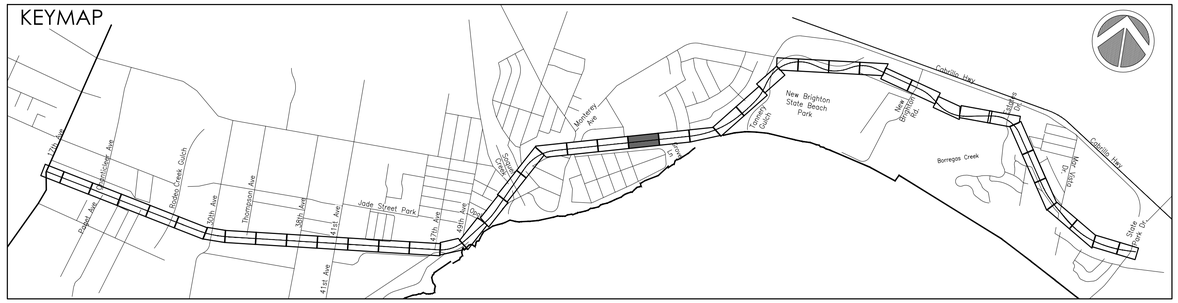
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.22
VAULT NO.

Layout Tab Name: DM-1.22, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBT.dwg, XT-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XC-0193-06-RCD0.dwg, XSB-0193-06-RWF-S11.dwg
\\Corp\rmm\un-ceh\2020\10-93-06-RCDs-Santa Cruz-Rail-Trail-Seg-10-11\Bridges with Trail\Engineering\Sheets\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 12, 2023 - 9:20am



MATCHLINE, SEE SHEET DM-1.22

PARK AVENUE

MATCHLINE, SEE SHEET DM-1.24

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	MMS	DM-1.23
DRAWING #: DM-0193-06-RBT-S11	DESIGN	KS/MS	VAULT NO.
	CHECKED	MS	

Layout Tab Name: DM-1.23, Images: county-logo-black-transparent.png, , XrefN, XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XC-0193-06-RBT-S11.dwg, XSB-0193-06-RBT-S20.dwg, XSB-0193-06-RWT-S11.dwg
\\Users\mm\on-site\2001\0193-06-RCSD-Santa-Cruz-Rail-Trail-Seg-10-11\Bidtime with Trail\Engineering\Xrefs\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 9:54am

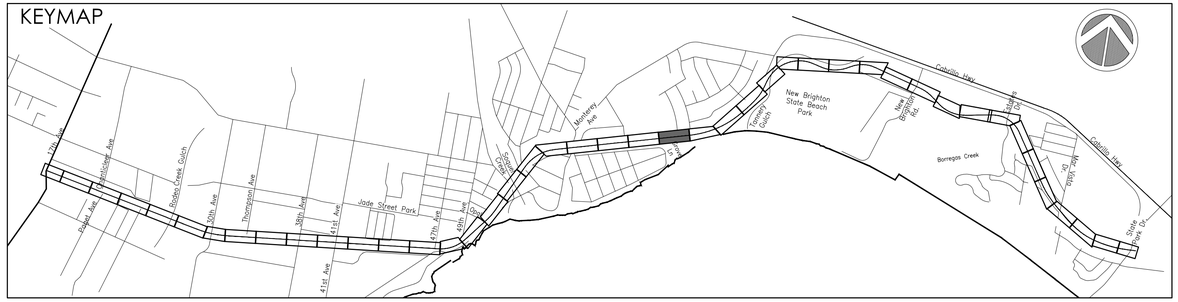
MATCHLINE, SEE SHEET DM-1.23

MATCHLINE, SEE SHEET DM-1.25

PARK AVENUE

ESCALONA GULCH

GROVE LANE



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
✕	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

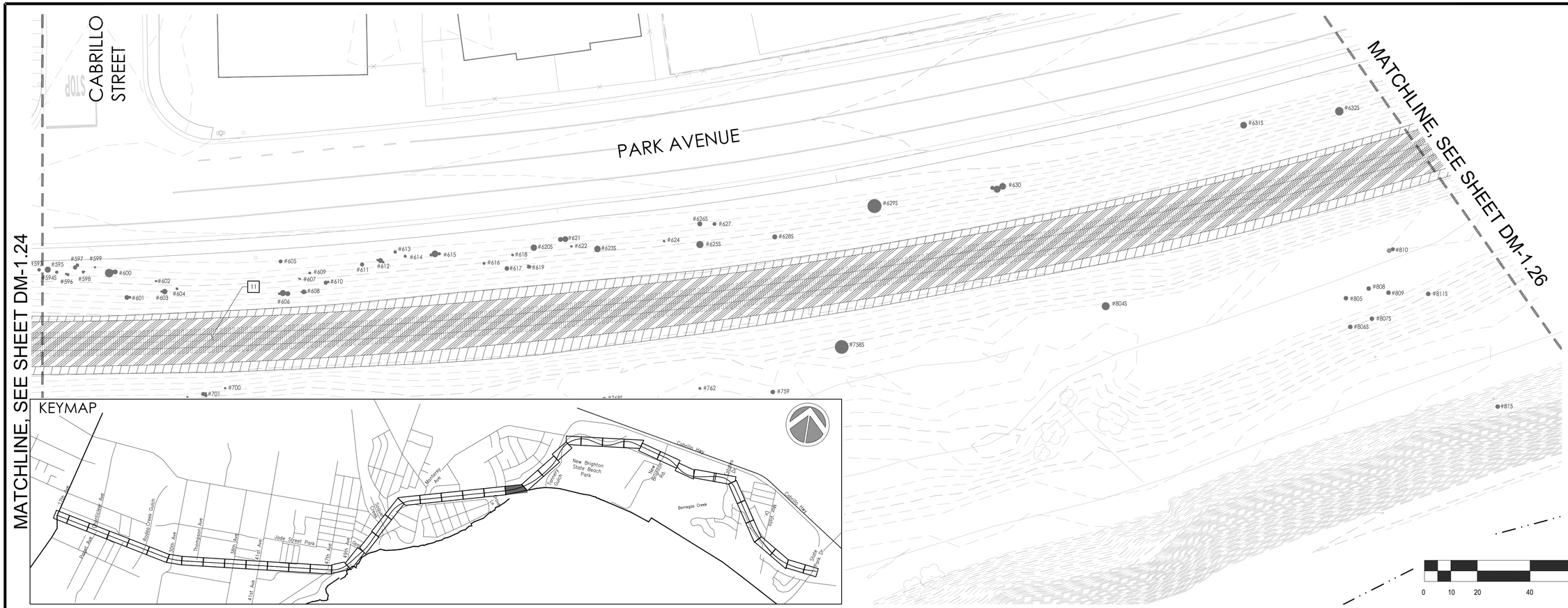
DATE	02/10/2023
DRAWN	MMS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.24

VAULT NO.

Layout Tab Name: DM-1.24, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-PBT-S11.dwg, XTR-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XCMAP-0193-06-RD20.dwg, XSB-0193-06-RBT-S11.dwg
\\Corp\rmm\on-site\2001\0193-06-RD2Ds-Santa-Cruz-Rail-Trail-Seg-10-11\Windows with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmoya, Plotted: Feb 12, 2023 - 9:05am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

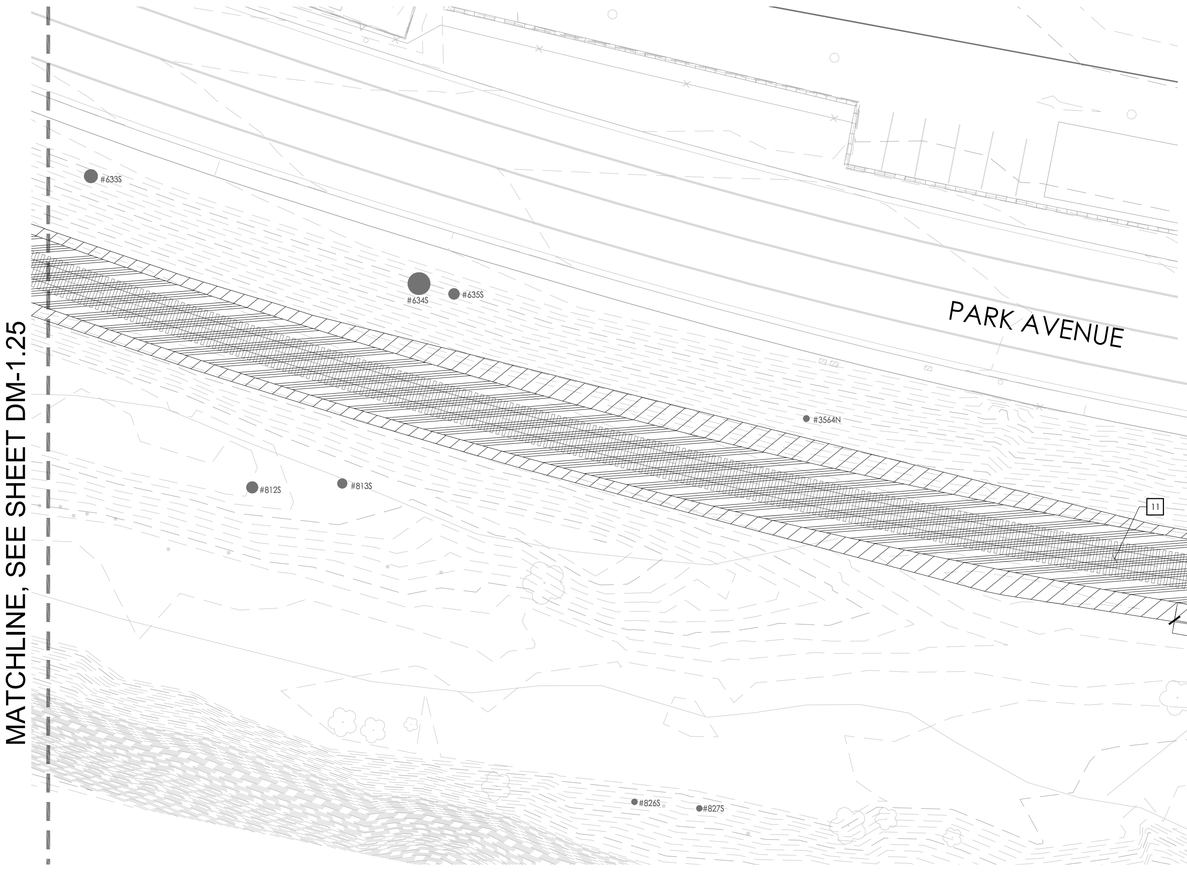
REFERENCES
FIELD BOOK:

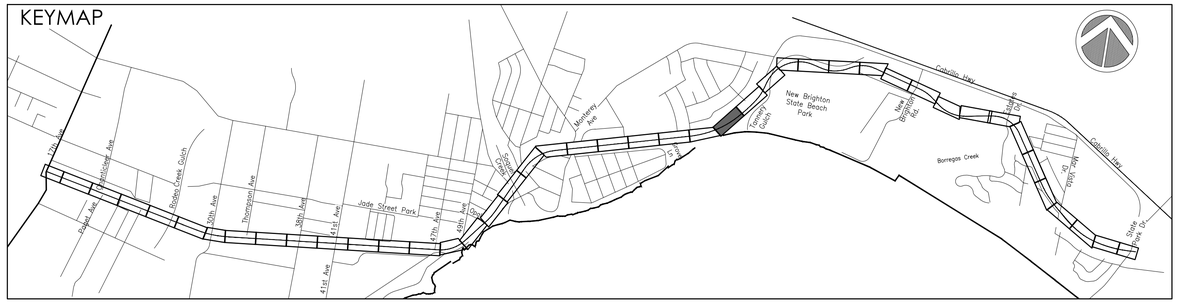
DRAWING #:
DM-0193-06-RBT-S11

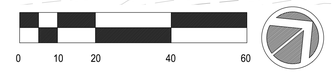
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.25
VAULT NO.	

Layout Tab Name: DM-1.25, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RWT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XKEYMAP-0193-06-RCUD.dwg, XSB-0193-06-RWT-S11.dwg, \\Corp\vm\usr-ark\2021\0193-06-RCUD-Santa-Cruz-Rail-Trail-Segs-10-11\Publish with Trail\Engineering\DataDark\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmcvay, Plotted: Feb 12, 2023 - 9:07am

MATCHLINE, SEE SHEET DM-1.25







MATCHLINE, SEE SHEET DM-1.27

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

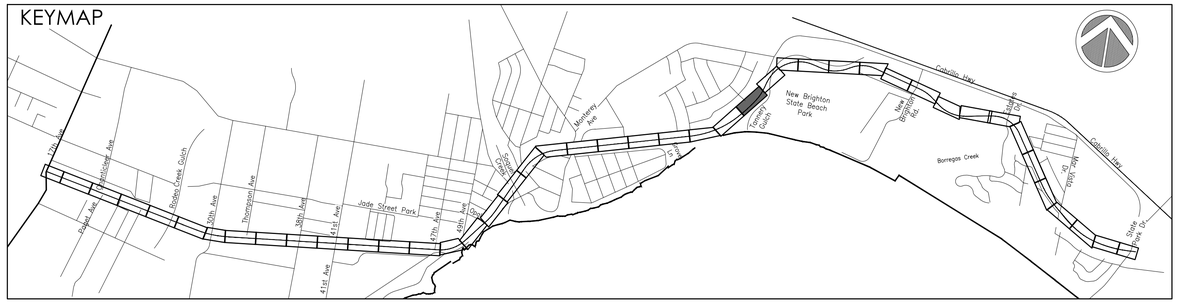
DM-1.26

VAULT NO.

Layout Tab Name: DM-1.26, Images: comfy-rope-black-transparent.png, , Xrefs: XT-0193-06-RWY-S11.dwg, XTs-0193-06-RWY-S11.dwg, XC-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XSB-0193-06-RBT-S11.dwg
\\Corp\rmm\un-ink\2007\0193-06-RCZC-Santa-Cruz-Rail-Trail-Seg-10-11\Redlines with Trail\Engineering\Mendes\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 8:08am

MATCHLINE, SEE SHEET DM-1.26

MATCHLINE, SEE SHEET DM-1.28



CORONADO STREET

PARK AVENUE

STOP

REPLACE EXISTING CMP HEADWALL AND STORM DRAIN CULVERT

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

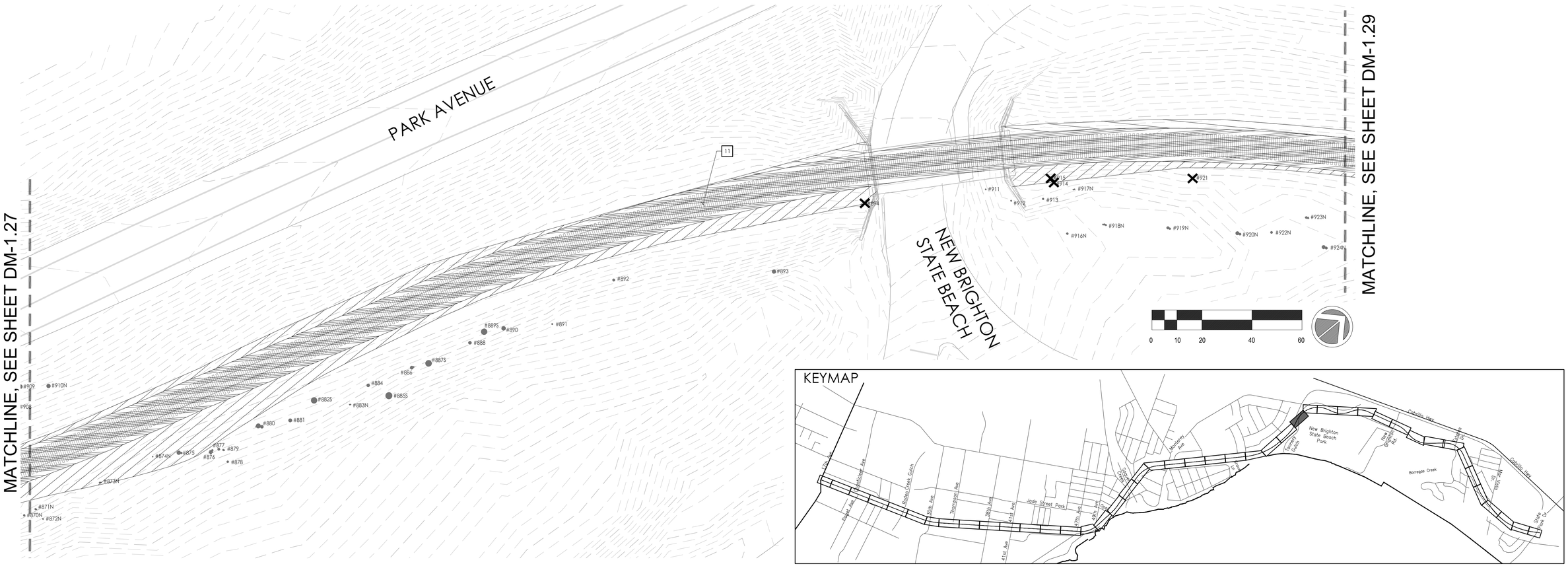
RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES	DATE	02/10/2023	SCALE AS SHOWN
FIELD BOOK:	DRAWN	KS	DM-1.27
DRAWING #: DM-0193-06-RBT-S11	DESIGN	KS/MS	VAULT NO.
	CHECKED	MS	

Layout Tab Name: DM-1.27, Images: county-logo-black-transparent.png, Xrefs: XT-0193-06-RBT-S11.dwg, XTA-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBDD.dwg, XSB-0193-06-RBT-S11.dwg
\\Corp\rmm\san-data\2001\0193-06-RCDD-Santa-Cruz-Rail-Trail-Seg-10-11\Working with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 8:10am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

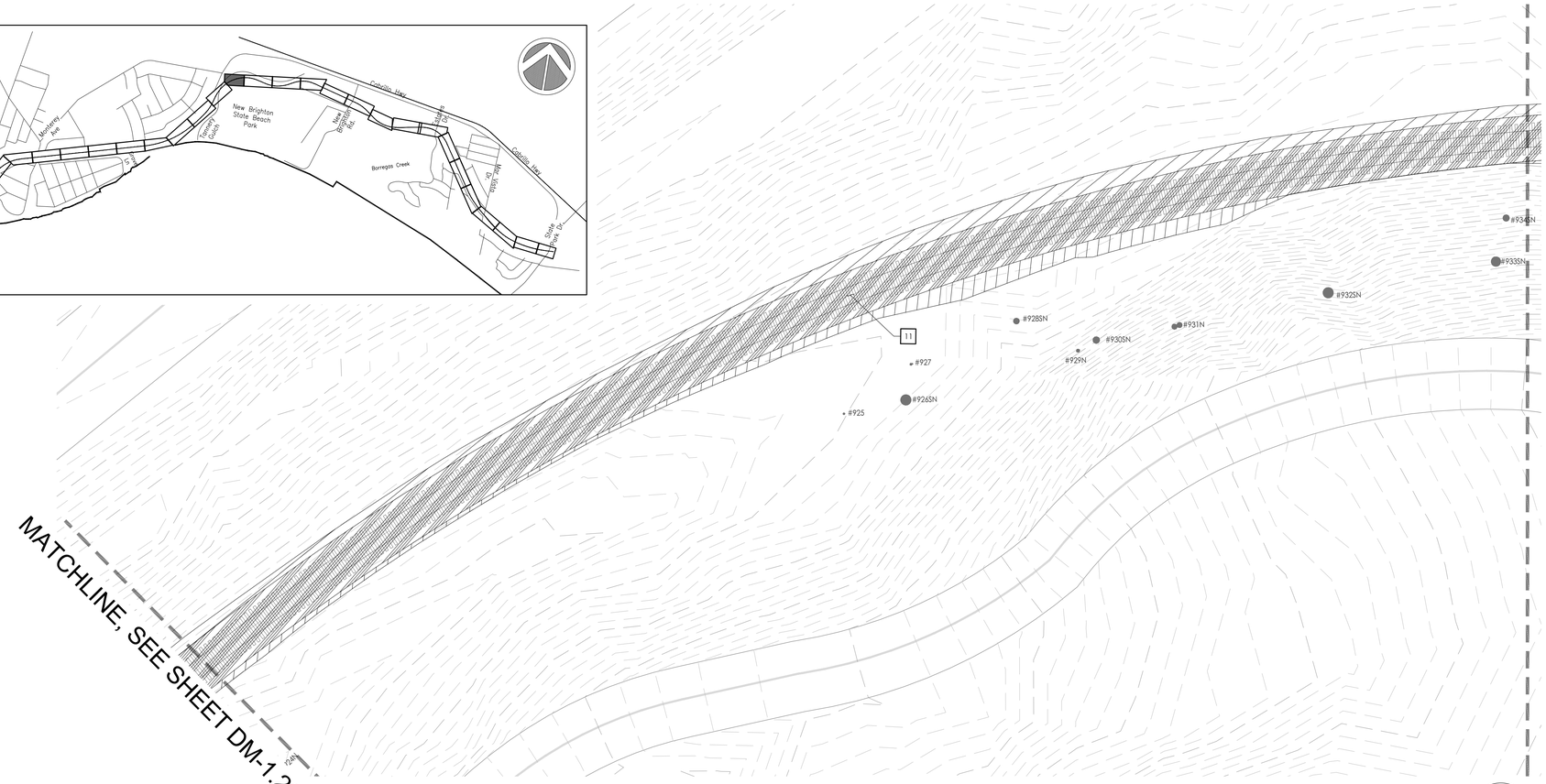
DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.28
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.28, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RBT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XCMAP-0193-06-RC20.dwg, XSB-0193-06-RBT-S11.dwg
\\Corp\rmm\on-work\2021\0193-06-RC20-Santa-Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Engineering\SheDev\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmcvay, Plotted: Feb 12, 2023 - 9:11am





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

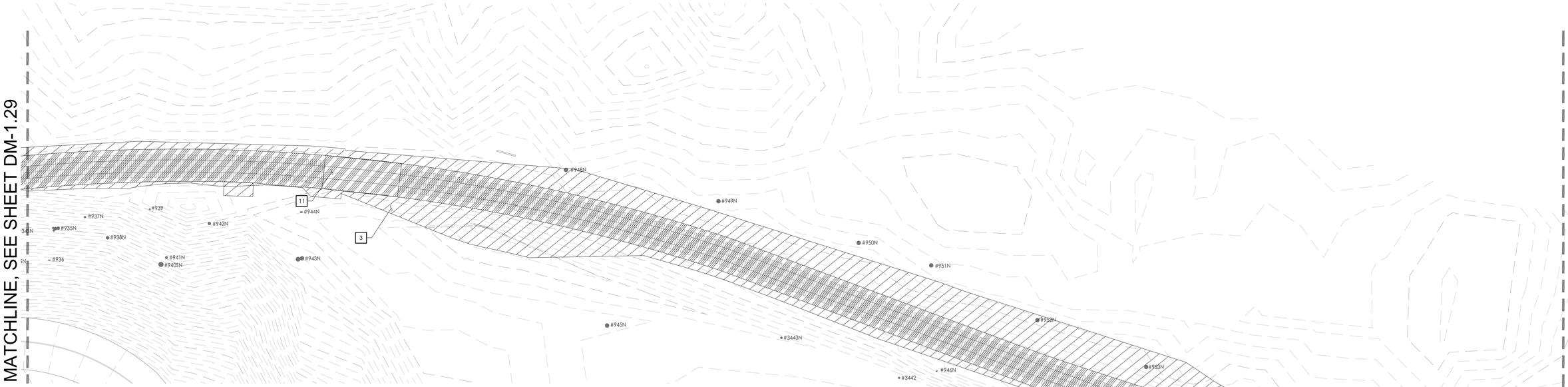
DM-1.29

VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

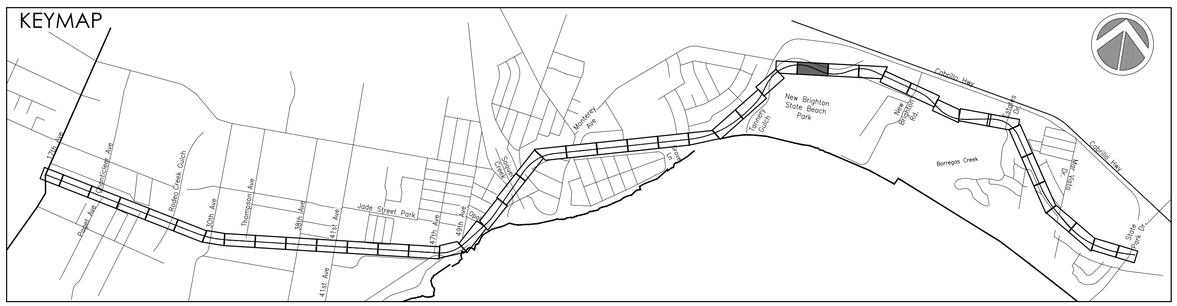
Layout Tab Name: DM-1.29, Images: county-logo-black-transparent.png, _Xrefs: XT-0193-06-RMT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RW20.dwg, XSB-0193-06-RMT-S11.dwg
\\Corp\rmm\on-site\2001\01\93-06-RCZ0-Santa-Cruz-Rail-Trail-Seg-10-11\Working with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmistry, Plotted: Feb 12, 2023 - 9:13am

MATCHLINE, SEE SHEET DM-1.29



MATCHLINE, SEE SHEET DM-1.31

KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

0 10 20 40 60

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

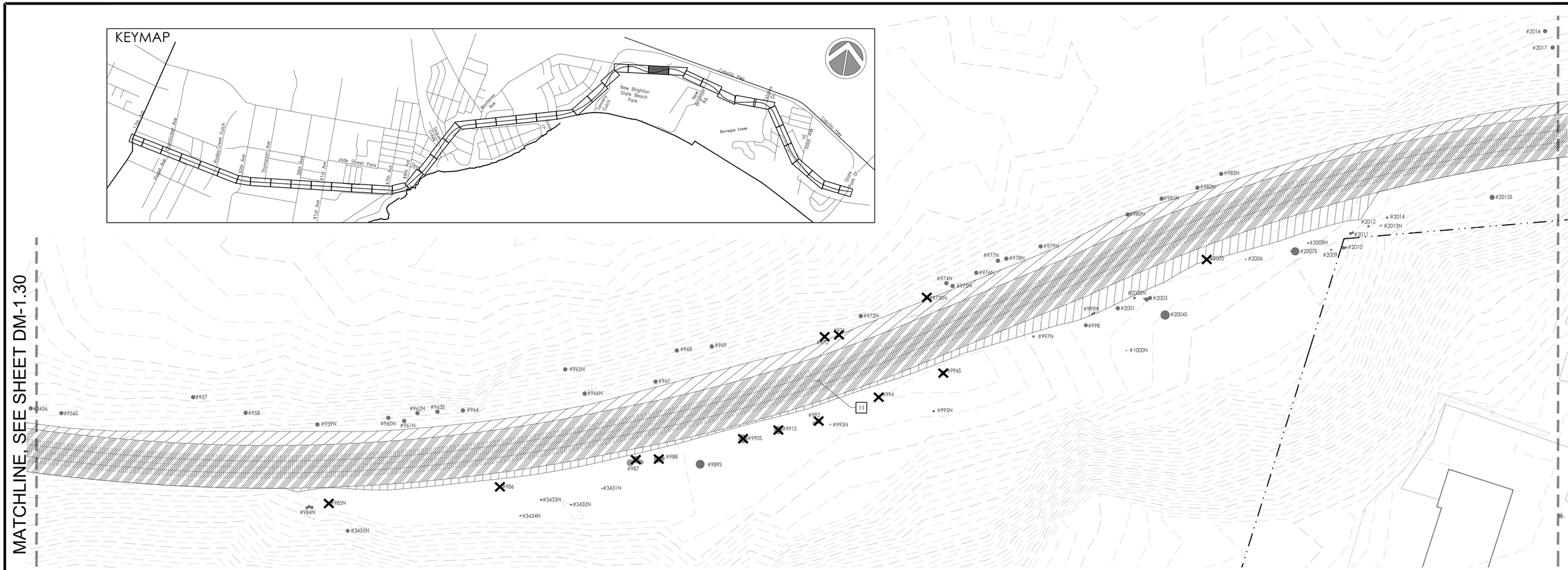
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.30
VAULT NO.

Layout Tab Name: DM-1.30, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBF.dwg, XT-0193-06-RBT-S11.dwg, RETAIN-0193-06-RD20.dwg, XSB-0193-06-RWF-S11.dwg
\\corp\rmm\on-site\2021\0193-06-RD20-Santa Cruz-Rail-Trail-Seg-10-11\Brisbane with Trail\Engineering\Detailed\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 12, 2023 — 9:14am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

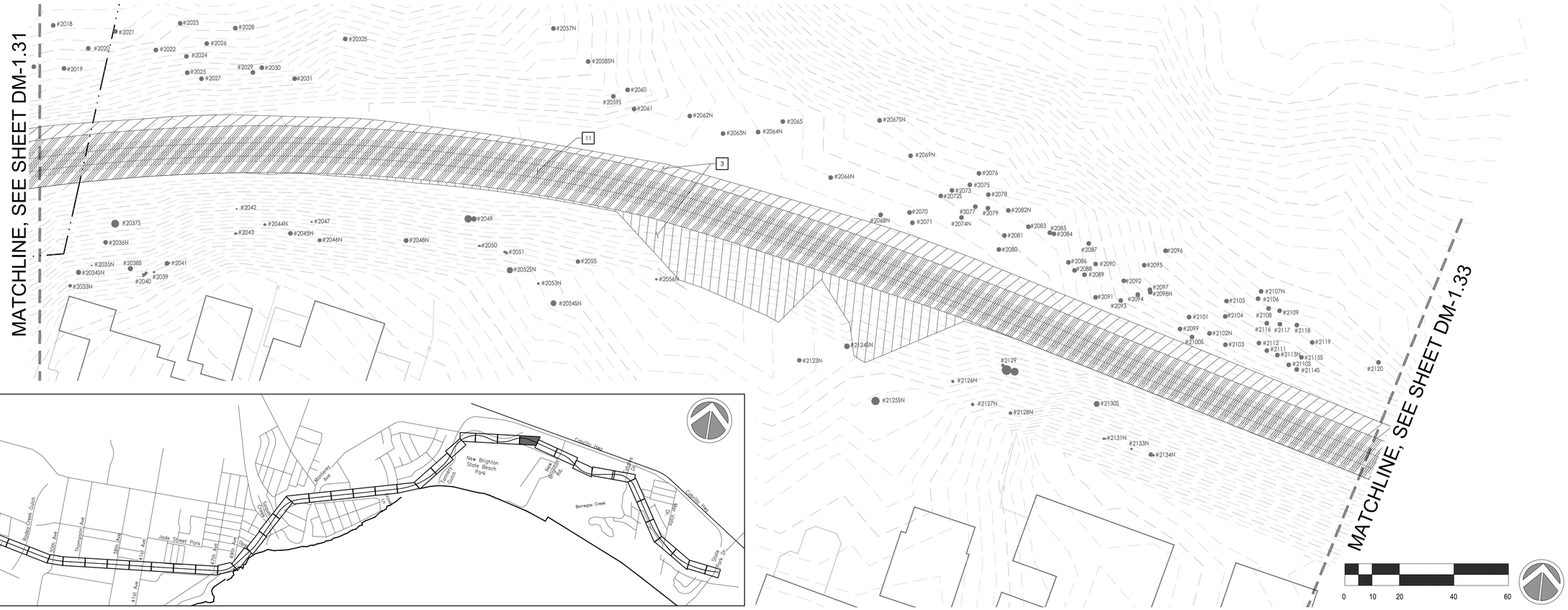
REFERENCES
FIELD BOOK:

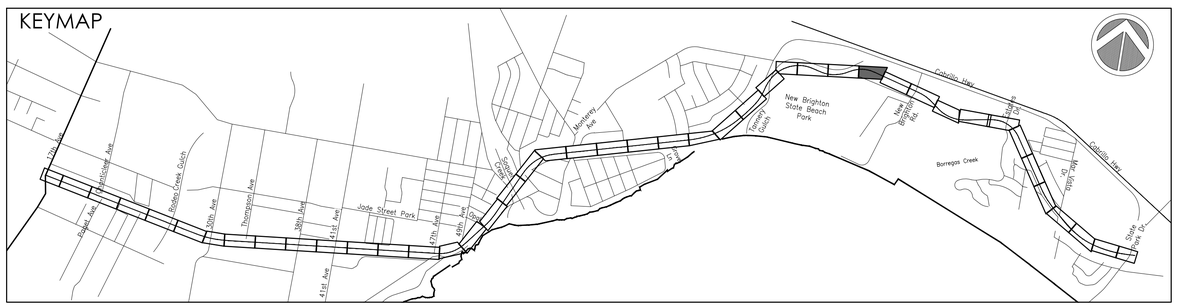
DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.31
VAULT NO.

Layout Tab Name: DM-1.31 Images: county-logo-black-transparent.png Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RCD.dwg, XSB-0193-06-RBT-S11.dwg
\\corp\rmm\san-data\2021\2103-06-RCDS-Santa Cruz Rail Trail-Seg 10-11\Workspace with Trail\Engineering\DwGs\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 13, 2023 — 9:16am





KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

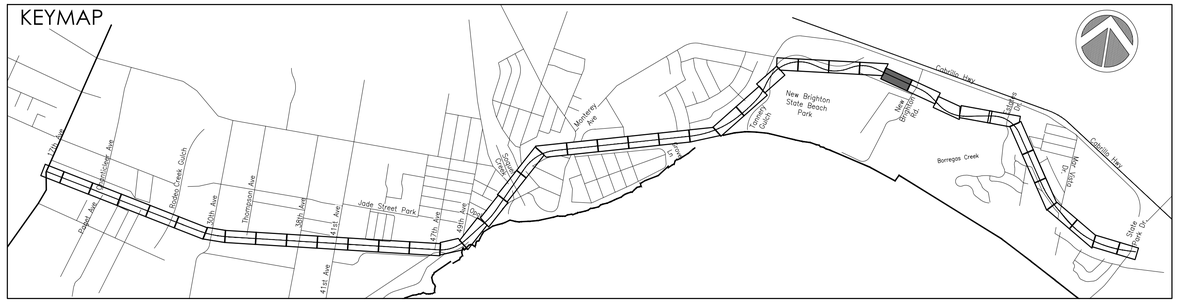
SCALE AS SHOWN
DM-1.32
VAULT NO.

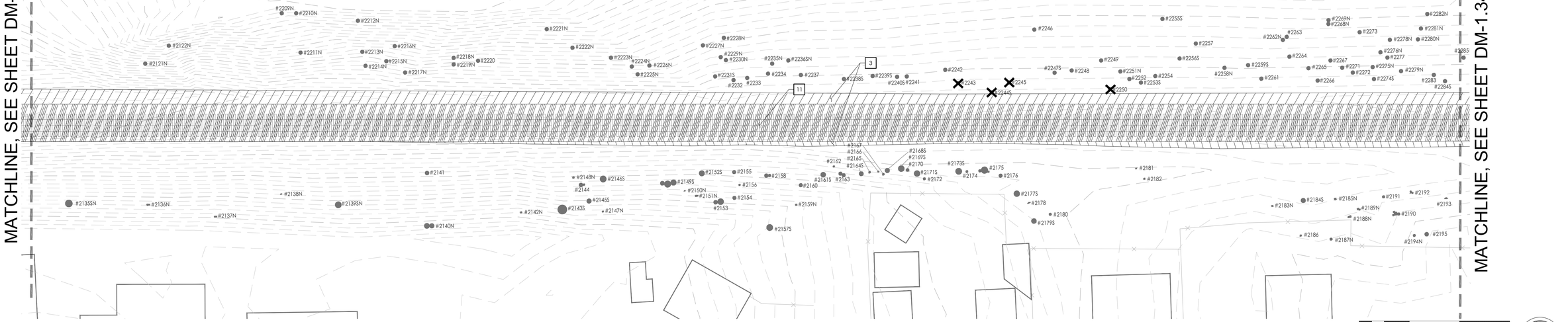
Layout Tab Name: DM-1.32, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RBT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XCMAP-0193-06-RTCD.dwg, XSB-0193-06-RBT-S11.dwg
I:\Corp\rrm\on-work\2021\0193-06-RCZS-Santa Cruz Rail-Trail-Seg-10-11\Wallaces with Trail\Engineering\SheDev\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckoy, Plotted: Feb 13, 2023 - 9:17am

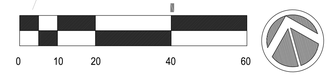
MATCHLINE, SEE SHEET DM-1.32

MATCHLINE, SEE SHEET DM-1.34

KEYMAP







KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.33

VAULT NO.

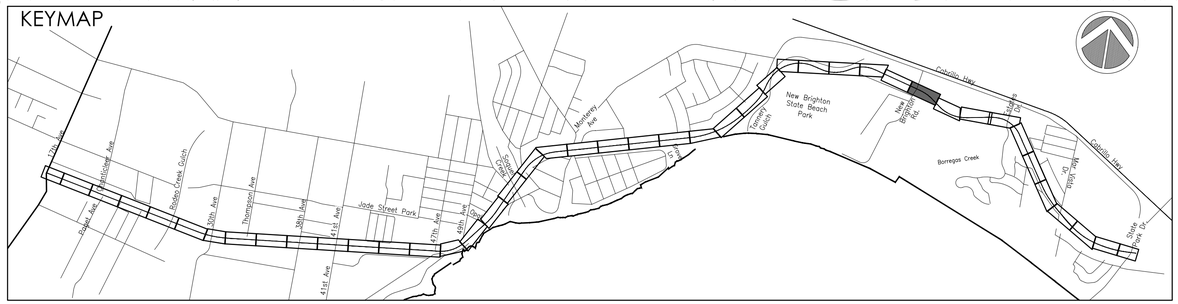
Layout Tab Name: DM-1.33, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBP.dwg, XC-0193-06-RBT-S11.dwg, XKEYMAP-0193-06-RCO0.dwg, XSB-0193-06-RWF-S11.dwg
\\Corp\rmm-data\2021\0193-06-RCO\Santa Cruz Rail-Trail-Seg-10-11\Bidspace with Trail\Engineering\Sheets\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 13, 2023 — 9:19am

MATCHLINE, SEE SHEET DM-1.33

NEW BRIGHTON ROAD

MATCHLINE, SEE SHEET DM-1.35

KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

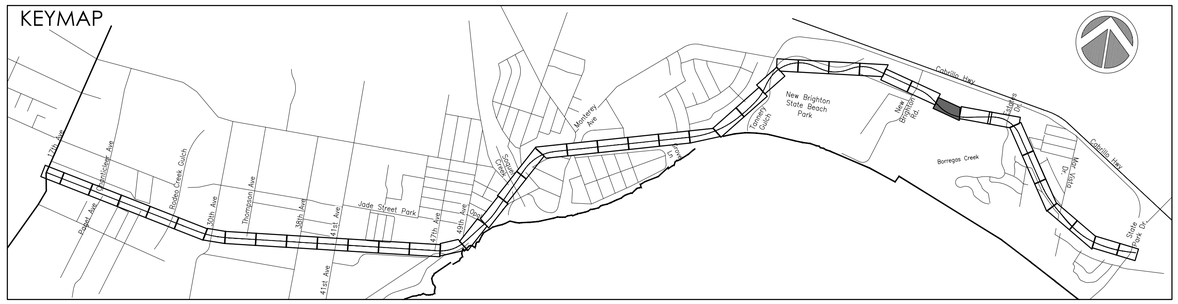
DRAWING #:
DM-0193-06-RBT-S11

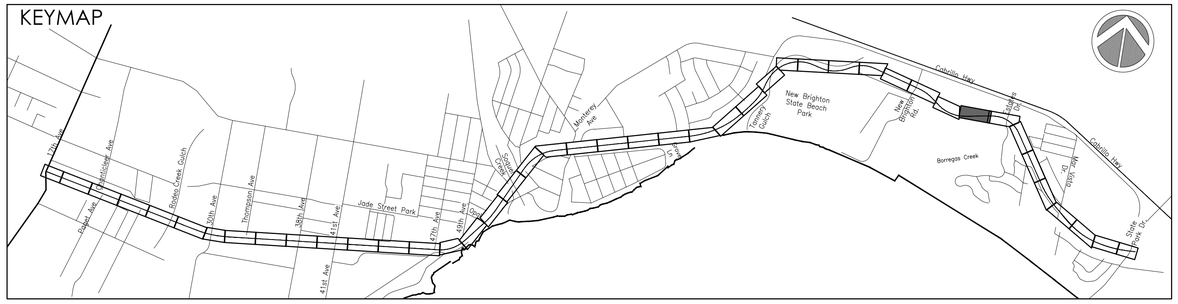
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.34
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.34, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XCNEW-0193-06-RCOS.dwg, XSB-0193-06-RWT-S11.dwg
\\Corp\vm\on-site\2001\0193-06-RCOS-Santa-Cruz-Rail-Trail-Seg-10-11\Working with Trail\Engineering\Sheets\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmoya, Plotted: Feb 12, 2023 - 9:20am


KEYMAP
17th Ave
Capitola Ave
Bridge Creek Gulch
20th Ave
Thompson Ave
38th Ave
41st Ave
Jade Street Park
47th Ave
49th Ave
Opal Cliffs
Capitola
Monterey Ave
Tannery Gulch
New Brighton State Beach Park
New Brighton Rd
Borregas Creek
Capitola Rd
Portola Dr
Cabrillo College
Coastal Trail
Coastal Trail
Coastal Trail


KEYMAP
17th Ave
Bonniebrae Ave
Rodeo Creek Gulch
30th Ave
Thompson Ave
38th Ave
41st Ave
Jade Street Park
47th Ave
49th Ave
Soquel Creek
Monterey Ave
Capitola Ave
Tributary Capitola
New Brighton State Beach Park
New Brighton Rd
Borregas Creek
Coastal Trail
Coastal Trail
Coastal Trail

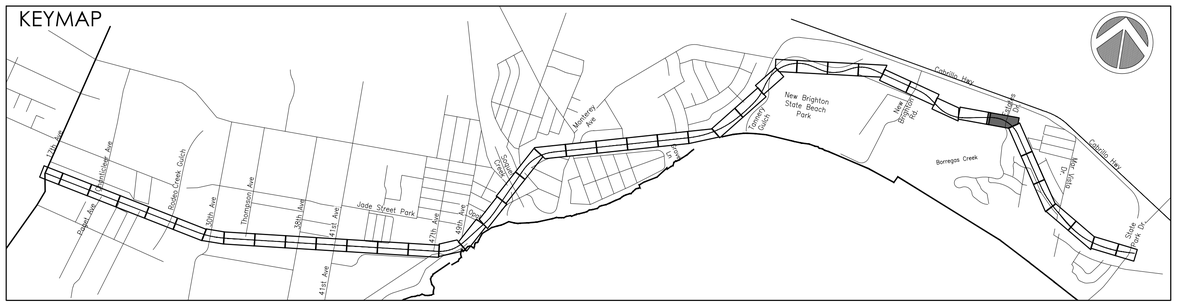
MATCHLINE, SEE SHEET DM-1.36

BORREGAS CREEK

ESTATES DRIVE

MATCHLINE, SEE SHEET DM-1.38

KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

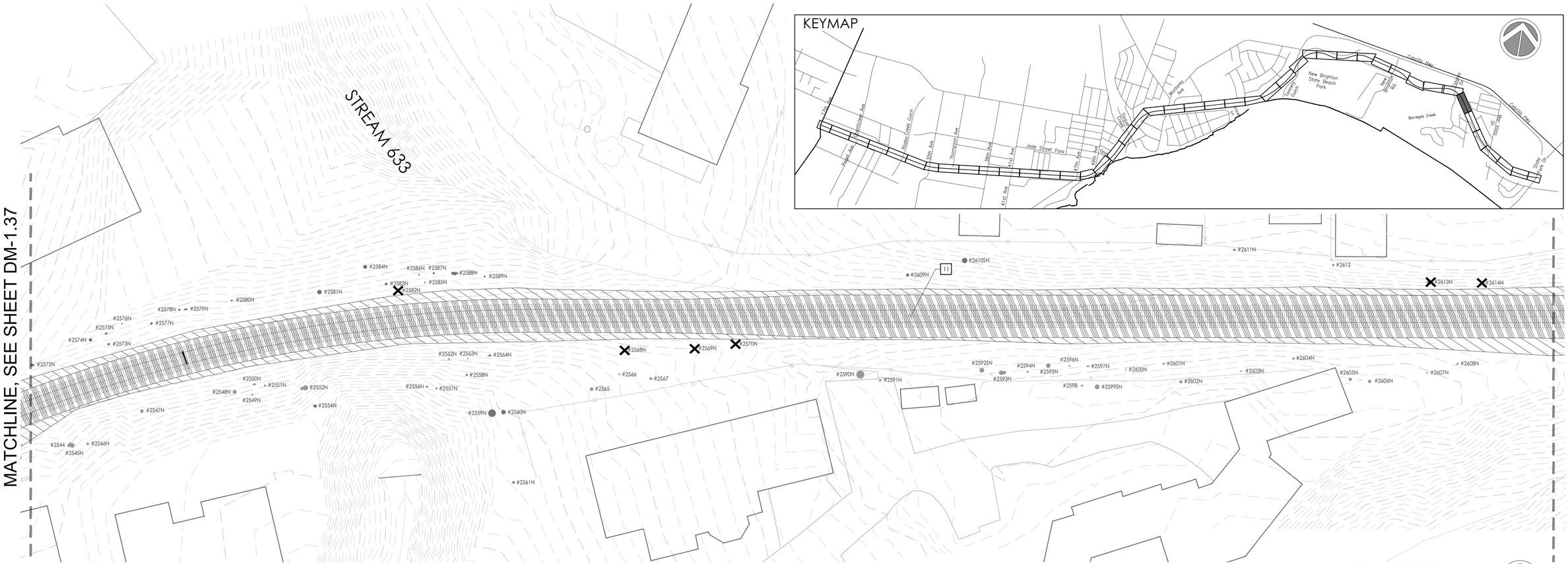
REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.37
VAULT NO.	

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.37, Images: county-logo-black-transparent.png; , Xrefs: X:\0193-06-RBT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XSB-0193-06-RBT-S11.dwg, \\corp\vm\vm-sta\2007\0193-06-RDS-Santa Cruz Rail-Trail-Seg 10-11\Bidbook with Trail\Engineering\DataDev\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 12, 2023 - 9:25am



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.38
VAULT NO.

Layout Tab Name: DM-1.38, Images: county-logo-black-transparent.png , Xrefs: XT-0193-06-RWF-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XSB-0193-06-RBT-S11.dwg
\\corp\rmm\san-data\2021\2193-06-RCDS-Santa Cruz Rail Trail-Seg 10-11\Bidspace with Trail\Engineering\DesDev\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 13, 2023 — 9:27am

MATCHLINE, SEE SHEET DM-1.38

MATCHLINE, SEE SHEET DM-1.40



KEYMAP



0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
30332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

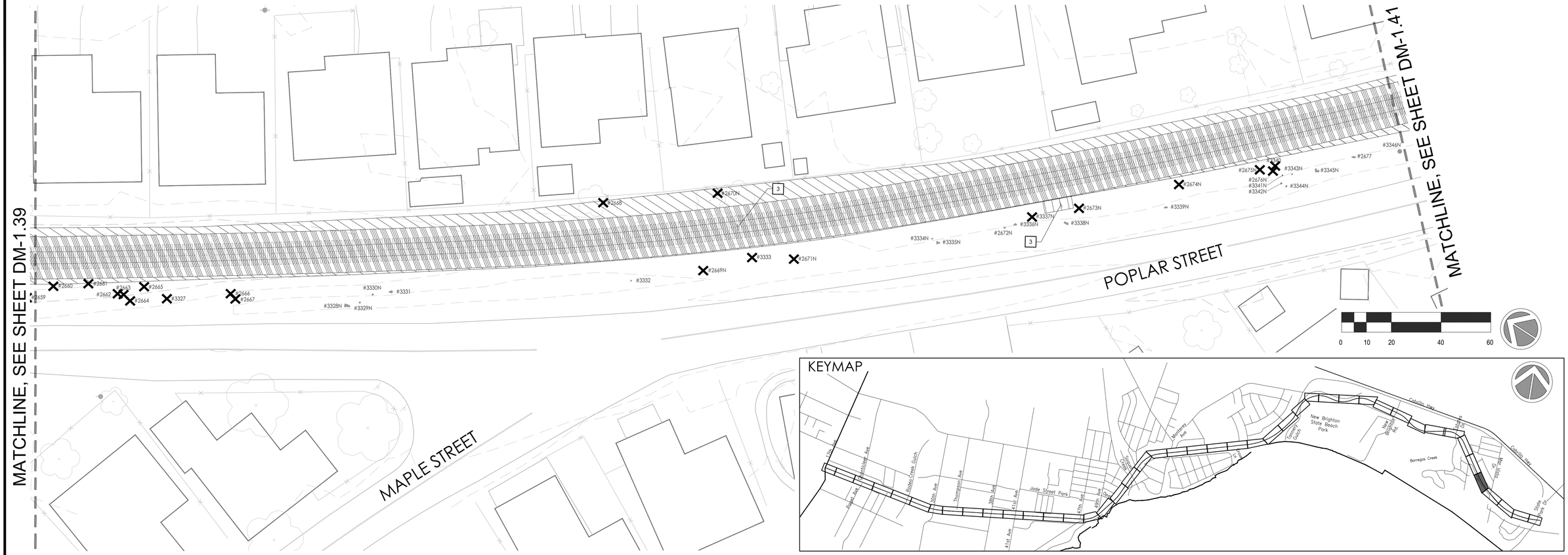
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.39

VAULT NO.

Layout Tab Name: DM-1.39, Images: county-logo-black-transparent.png; , Xref: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT.dwg, XSB-0193-06-RBT.dwg, XSB-0193-06-RBT-S11.dwg
\\Users\rrm\on-site\2001\0193-06-RCSC-Santa-Cruz-Rail-Trail-Seg-10-11\Bidform with Trail\Engineering\Xrefs\Sheet-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmotley, Plotted: Feb 12, 2023 - 9:28am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
×	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.40
VAULT NO.

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.40, Images: county-logo-black-transparent.png, Xrefs: XC-0193-06-RBT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XCMAP-0193-06-RTC01.dwg, XSB-0193-06-RBT-S11.dwg
\\Corp\rmm\on-ark\2021\0193-06-RCZD-Santa-Cruz-Rail-Trail-Seg-10-11\Wallbook with Trail\Engineering\SheDev\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: dmckay, Plotted: Feb 10, 2023 - 9:30am



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
X	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SOIL REMOVAL NOTE:

CONTRACTOR SHALL REMOVE CONTAMINATED SOIL (IN ADDITION TO EXISTING BALLAST MATERIAL, RANGING FROM 2' TO 4' DEEP PER PROJECT GEOTECHNICAL REPORT) UNDER PROPOSED TRAIL PAVEMENT SECTION AS NECESSARY TO CONSTRUCT TRAIL. CONTAMINATED SOIL OUTSIDE OF THE TRAIL SECTION SHALL BE REMOVED TO A DEPTH AS NECESSARY TO PROVIDED 2' MINIMUM CLEAN FILL CAP PER SOIL MANAGEMENT PLAN.

CONTRACTOR SHALL COMPLY WITH THE COUNTY APPROVED SOIL MANAGEMENT PLAN AND PROJECT GEOTECHNICAL REPORT.

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

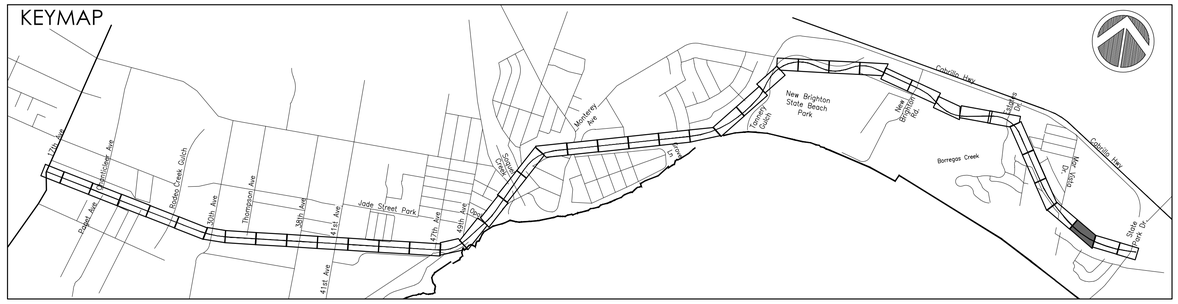
DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN
DM-1.41
VAULT NO.

Layout Tab Name: DM-1.41, Image: county-logo-black-transparent.png, Xrefs: XT-0193-06-RWT-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XTWW-0193-06-RCDS.dwg, XSB-0193-06-RWT-S11.dwg
N:\2001\0193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Workbook with Trail\Engineering\Details\Street-Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: kmsadelek, Plotted: Feb 13, 2023 - 11:16am



KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SC

CON
EXISTI
PROJ
SECT
OUTS
NECE
MAN

CON
MAN

28 TYPICAL SECTION

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

Layout Tab Name: DM-1.42, Images: county-logo-black-transparent.png; Xrefs: PT-0193-06-RWT-S11.dwg, RTB-0193-06-RBT.dwg, XC-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RCSD.dwg, RSB-0193-06-RWT-S11.dwg
N:\DOD\10193-06-RCDS-Santa-Cruz-Rail-Trail-Seg-10-11\Notebook with Trail\Engineering\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: kmsabdeski, Plotted: Feb 15, 2023 - 11:16am

rrm design group
rrmdesign.com | (949) 361-7950
30332 Commerce Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

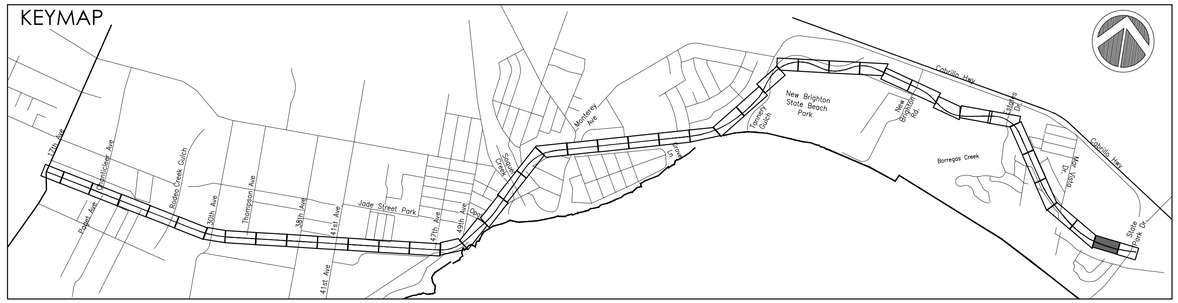
TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS
SCALE	AS SHOWN
	DM-1.42
VAULT NO.	



MATCHLINE, SEE SHEET DM-1.42

MATCHLINE, SEE SHEET DM-1.44

#2734N #2735 #2736N #2737N #2738N #2739N #2740N #2741 #2742 #2743 #2744 #2745N #2746N #2747 #2748 #2749 #2750N #2751N #2752N #2753N #2754N #2755N #2756N #2757 #2758 #2759 #2760 #2761

11

0 10 20 40 60

KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SC

CON
EXISTI
PROJ
SECT
OUTS
NECE
MAN

CON
MAN

29 TYPICAL SECTION

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

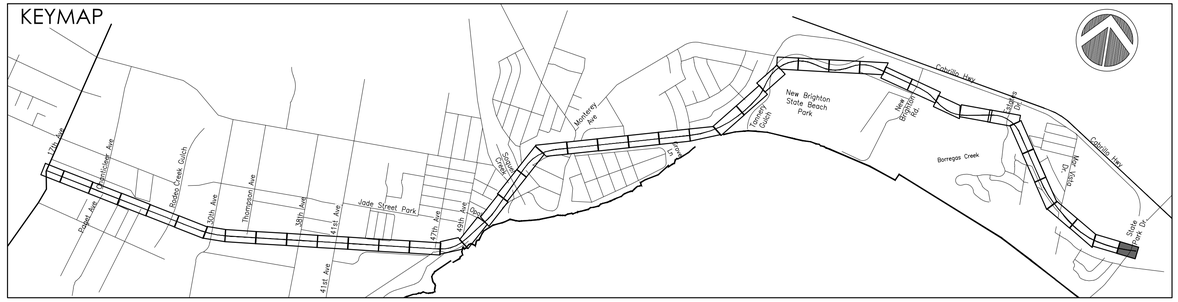
DM-1.43

VAULT NO.

Layout Tab Name: DM-1.43, Images: county-logo-black-transparent.png, Xrefs: ST-0193-06-RWF-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, KEYMAP-0193-06-RBT-S11.dwg, XSB-0193-06-RWF-S11.dwg
N:\2020\10193-06-RCDS-Santa Cruz-Rail Trail-Seg-10-11\Windows with Trail\Engineering\Jweber\Sheet Files\Segment 11\DM-0193-06-RBT-S11.dwg, Plotted By: kmolodecki, Plotted: Feb 13, 2023 - 11:17am



KEYMAP



KEYNOTE LEGEND

KEYNOTE	DESCRIPTION
1	SAWCUT PAVEMENT
2	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER, AND PAVEMENT
3	CLEAR AND GRUB EXISTING GROUND
4	REMOVE EXISTING FENCE
5	REMOVE EXISTING RAIL EQUIPMENT
6	ADJUST UTILITY BOX/VAULT TO GRADE
7	PROTECT IN PLACE
8	REMOVE EX. STRIPING, PAVEMENT MARKINGS AND SIGNAGE
9	REMOVE EXISTING UTILITY
10	REMOVE AND SALVAGE EXISTING UTILITY
11	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
12	REMOVE AND SALVAGE EXISTING SIGNAGE
13	REMOVE CONCRETE TRACK PANELS
14	REMOVE RUBBER TRACK PANELS
15	REMOVE BALLAST ON EXISTING BRIDGE

LEGEND

SYMBOL	DESCRIPTION
	EXISTING RAILROAD TRACKS
	REMOVAL OF UTILITY LINE
	SCCRTC RIGHT OF WAY
	EXISTING FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	SAWCUT PAVEMENT REMOVAL
	REMOVE TREE
	REMOVE AND PROPERLY DISPOSE OF EXISTING CURB, GUTTER AND PAVEMENT
	CLEAR AND GRUB EXISTING GROUND
	REMOVE EXISTING RAIL, TIES AND OTHER TRACK MATERIAL
	REMOVE EXISTING STRIPING AND PAVEMENT MARKINGS BY GRINDING

SC

CON
EXISTI
PROJ
SECT
OUTS
NECE
MAN

CON
MAN

30 TYPICAL SECTION

DIG ALERT
DIAL TOLL FREE
811
AT LEAST 2 DAYS BEFORE YOU DIG

TRAIL ON THE RAIL LINE REFINED SCHEMATIC PLANS - 02/10/23

rrm design group
rrmdesign.com | (949) 361-7950
32332 Camino Capistrano, Ste. 205
San Juan Capistrano, CA 92675

REVISIONS

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RAIL TRAIL SEGMENTS 10 & 11

TRAIL ON THE RAIL LINE (INTERIM TRAIL)

DEMOLITION PLANS

REFERENCES
FIELD BOOK:

DRAWING #:
DM-0193-06-RBT-S11

DATE	02/10/2023
DRAWN	KS
DESIGN	KS/MS
CHECKED	MS

SCALE AS SHOWN

DM-1.44

VAULT NO.

Layout Tab Name: DM-1.44 , Images: county-logo-Mono-transparent.png , Xrefs: XT-0193-06-RWC-S11.dwg, XTB-0193-06-RBT.dwg, XC-0193-06-RBT-S11.dwg, XYLINE-0193-06-RBT-S11.dwg, XYLINE-0193-06-RBT-S11.dwg, XTB-0193-06-RBT-S11.dwg, XC

Rail Trail Segments 10-11 Tree Quantity Summary

Tree Quantity by Species		
Species	**Quantity**	**% of Site**
Acacia dealbata	83	4.4%
Acacia melanoxylon	37	2.0%
Acer macropyllum	25	1.3%
Aesculus californica	1	0.1%
Arbutus "Marina"	1	0.1%
Arbutus menziesii	2	0.1%
Calocedrus decurrens	2	0.1%
Cinnamomum camphora	1	0.1%
Cotoneaster lucidus	1	0.1%
Cupaniopsis anacardioides	1	0.1%
Cupressus leylandii	9	0.5%
Dahlia imperialis	1	0.1%
Dracaena draco	7	0.4%
Eriobotrya deflexa	2	0.1%
Eucalyptus globulus	711	37.8%
Frangula californica	25	1.3%
Hesporocyparis macrocarpa	35	1.9%
Heteromeles arbutifolia	2	0.1%
Ilex aquifolium	2	0.1%
Juglans regia	1	0.1%
Juniperus chinensis	2	0.1%
Ligustrum japonicum	1	0.1%
Ligustrum lucidum	5	0.3%
Myoporum laetum	6	0.3%
Olea europaea	1	0.1%
Persea americana	1	0.1%
Pinus canariensis	1	0.1%
Pinus radiata	19	1.0%
Pinus thunbergii	1	0.1%
Pinus pinea	1	0.1%
Pittosporum crassifolium	1	0.1%
Pittosporum tenuifolium	1	0.1%
Pittosporum tobira	1	0.1%
Pittosporum undulatum	16	0.8%
Populus nigra	1	0.1%
Populus trichocarpa	1	0.1%
Prunus caroliniana	17	0.9%
Prunus cerasifera	8	0.4%
Prunus domestica	4	0.2%
Prunus ilicifolia	19	1.0%
Prunus laurocerasus	1	0.1%
Pseudotsuga menziesii	3	0.2%
Pyrus calleryana	2	0.1%
Quercus agrifolia	692	36.7%

Tree Quantity by Species Continued		
Species	**Quantity**	**% of Site**
Quercus virginiana	8	0.4%
Salix laevigata	10	0.5%
Salix lasiolepis	26	1.4%
Sambucus nigra	9	0.5%
Schinus terebinthifolius	1	0.1%
Sequoia sempervirens	21	1.1%
Syagrus romanzoffiana	8	0.4%
Syzygium paniculatum	26	1.4%
Taxus baccata	1	0.1%
Trachycarpus fortunei	4	0.2%
Ulmus minor	13	0.7%
Washingtonia robusta	2	0.1%
Total Trees	**1883**	**100%**

Tree Quantity by Protection Status	
DBH	**Quantity**
Non-protected (4-19.9")	946
Protected (20"+)	937
Total	**1883**

Tree Quantity by Nativity	
	Quantity
Non-native	1043
Regional Native	840
Total	**1883**

Rail Trail Segments 10-11 Tree Evaluation Summary

Prepared By: Jake Minnick, ISA Certified Arborist #WE-11830A

DBH Measurement Height: 54" - * denotes an estimated measurement

Date of Evaluation: 01/18/21-01/21/21, 03/01/21-03/05/21, 05/10/21, 10/01/2022, 01/11/2023

Health Rating:

Good - Trees with good health and structural stability that have the potential for longevity at the site.

Moderate - Trees in somewhat declining health and/or exhibits structural defects that cannot be abated with treatment. Trees will require more intense management and will have a shorter lifespan than those in the 'Good' category.

Poor - Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to decline, regardless of treatment.

Significant Tree:

Shall include any tree, sprout clump, or group of trees, as follows:
(A) Within the urban services line or rural services line, any tree which is equal to or greater than 20 inches d.b.h. (approximately five feet in circumference); any sprout clump of five or more stems each of which is greater than 12 inches d.b.h. (approximately three feet in circumference); or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches d.b.h. (approximately three feet in circumference).
(B) Outside the urban services line or rural services line, where visible from a scenic road, any beach, or within a designated scenic resource area, any tree which is equal to or greater than 40 inches d.b.h. (approximately 10 feet in circumference); any sprout clump of five or more stems, each of which is greater than 20 inches d.b.h. (approximately five feet in circumference); or, any group consisting of 10 or more trees on one parcel, each greater than 20 inches d.b.h. (approximately five feet in circumference).
(C) Any tree located in a sensitive habitat as defined in Chapter 16.32 SCCC.

Regional Native:

Regional nativity is used to assess the nativity status of trees on a regional scale. A resource provided by the California Native Plant Society, Calscape.org, is utilized to understand the regional boundaries of which California native species are endemic to the area.

Capitola Trees:

All trees (except fruit trees) greater than 6" at DBH are protected and require a tree removal permit per the City of Capitola Community Tree and Management Ordinance.

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Significant Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#1S	*Hesperocyparis macrocarpa*	Monterey cypress	72.0		45'	X		PIP	PIP	PIP	
#2S	*Hesperocyparis macrocarpa*	Monterey cypress	48.5		45'	X		PIP	PIP	PIP	
#3S	*Hesperocyparis macrocarpa*	Monterey cypress	54.0		45'	X		PIP	PIP	PIP	
#4S	*Hesperocyparis macrocarpa*	Monterey cypress	20.0		25'	X		PIP	PIP	PIP	
#5S	*Hesperocyparis macrocarpa*	Monterey cypress	60.0		40'	X		PIP	PIP	PIP	
#6	*Hesperocyparis macrocarpa*	Monterey cypress	19.0		40'			PIP	PIP	PIP	
#7S	*Hesperocyparis macrocarpa*	Monterey cypress	24.0		35'	X		PIP	PIP	PIP	
#8N	*Quercus agrifolia*	coast live oak	13.0		18'		X	D	PIP	D	
#9N	*Quercus agrifolia*	coast live oak	4.0	4	10'		X	D	PIP	D	
#10SN	*Quercus agrifolia*	coast live oak	20.5		30'	X	X	PIP	PIP	PIP	
#11N	*Quercus agrifolia*	coast live oak	7.0		14'		X	D	PIP	D	
#12	*Prunus caroliniana*	Carolina laurelcherry	5.0	3, 2	14'			PIP	PIP	PIP	
#13	NOT USED										
#14S	*Hesperocyparis macrocarpa*	Monterey cypress	24.0 *		30'	X		D	PIP	D	
#15S	*Hesperocyparis macrocarpa*	Monterey cypress	28.0 *		45'	X		D	PIP	D	
#16S	*Hesperocyparis macrocarpa*	Monterey cypress	28.0 *		50'	X		D	PIP	D	
#17S	*Hesperocyparis macrocarpa*	Monterey cypress	38.0 *		45'	X		D	PIP	D	
#18	*Hesperocyparis macrocarpa*	Monterey cypress	16.0 *		40'			D	PIP	D	
#19S	*Hesperocyparis macrocarpa*	Monterey cypress	36.0 *		40'	X		D	PIP	D	
#20S	*Hesperocyparis macrocarpa*	Monterey cypress	30.0 *		40'	X		D	PIP	D	

#21S	*Hesperocyparis macrocarpa*	Monterey cypress	36.0 *		40'	X		D	PIP	D
#22S	*Hesperocyparis macrocarpa*	Monterey cypress	20.0 *		45'	X		D	PIP	D
#23S	*Hesperocyparis macrocarpa*	Monterey cypress	40.0 *		45'	X		D	PIP	D
#24N	*Quercus agrifolia*	coast live oak	17.0	6.5, 5, 5.5	20'		X	D	PIP	D
#25	NOT USED									
#26N	*Quercus agrifolia*	coast live oak	12.0	8.5, 3.5	12'		X	D	PIP	D
#27N	*Quercus agrifolia*	coast live oak	7.5		15'		X	D	PIP	D
#28N	*Quercus agrifolia*	coast live oak	13.5	10.5, 3	20'		X	D	PIP	D
#29N	*Quercus agrifolia*	coast live oak	13.0	10, 3	15'		X	D	PIP	D
#30N	*Quercus agrifolia*	coast live oak	10.0	6, 4	12'		X	D	PIP	D
#31N	*Quercus agrifolia*	coast live oak	7.5		15'		X	D	D	NA
#32N	*Quercus agrifolia*	coast live oak	12.0	6, 6	15'		X	D	D	NA
#33N	*Quercus agrifolia*	coast live oak	21.5	10, 7, 4.5	20'		X	D	D	NA
#34N	*Quercus agrifolia*	coast live oak	13.5	4.5, 3, 3, 2, 1	12'		X	D	D	NA
#35N	*Quercus agrifolia*	coast live oak	17.0	14, 3	25'		X	D	D	NA
#36N	*Quercus agrifolia*	coast live oak	14.0	8, 4, 2	14'		X	D	D	NA
#37N	*Quercus agrifolia*	coast live oak	4.0		12'		X	D	D	NA
#38N	*Quercus agrifolia*	coast live oak	11.0	5, 6	15'		X	D	PIP	D
#39N	*Quercus agrifolia*	coast live oak	11.0	6, 5	18'		X	D	PIP	D
#40N	*Quercus agrifolia*	coast live oak	22.0	15, 7	20'		X	D	D	NA
#41	*Ligustrum lucidum*	glossy privet	10.0		10'			D	D	NA
#42	NOT USED									
#43N	*Quercus agrifolia*	coast live oak	9.0	5.5, 3.5	14'		X	D	D	NA
#44N	*Quercus agrifolia*	coast live oak	39.0	8.5, 5.5, 12, 6, 4, 3	25'		X	D	D	NA
#45N	*Quercus agrifolia*	coast live oak	11.0	8, 3	25'		X	D	PIP	D
#46N	*Quercus agrifolia*	coast live oak	27.0	6, 6, 5, 10	20'		X	D	PIP	D
#47N	*Quercus agrifolia*	coast live oak	4.5		14'		X	D	PIP	D
#48N	*Quercus agrifolia*	coast live oak	4.0		14'		X	D	PIP	D
#49	NOT USED									
#50N	*Quercus agrifolia*	coast live oak	8.0	5, 3	12'		X	D	PIP	D
#51N	*Quercus agrifolia*	coast live oak	7.5	4.5, 3	12'		X	D	PIP	D
#52N	*Quercus agrifolia*	coast live oak	8.5	4, 2, 2.5	12'		X	D	PIP	D
#53N	*Quercus agrifolia*	coast live oak	7.0	3.5, 3.5	12'		X	D	PIP	D
#54	NOT USED									

#55N	*Quercus agrifolia*	coast live oak	16.0	5.5. 4.5, 3, 3	15'		X	D	PIP	D
#56N	*Quercus agrifolia*	coast live oak	4.0		8'		X	D	PIP	D
#57	NOT USED									
#58	NOT USED									
#59N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D
#60	*Quercus virginiana*	southern live oak	4.0		12'			D	PIP	D
#61N	*Quercus agrifolia*	coast live oak	4.5		12'		X	D	D	NA
#62	NOT USED									
#63N	*Quercus agrifolia*	coast live oak	15.0	5, 5, 5	15'		X	D	PIP	D
#64	NOT USED									
#65N	*Quercus agrifolia*	coast live oak	10.5 *		20'		X	D	PIP	D
#66N	*Quercus agrifolia*	coast live oak	8.5	3, 3, 2.5	12'		X	D	PIP	D
#67N	*Quercus agrifolia*	coast live oak	34.0	11.5, 7.5, 6, 5, 4	20'		X	D	PIP	D
#68N	*Quercus agrifolia*	coast live oak	18.5	11.5, 7	20'		X	D	PIP	D
#69N	*Quercus agrifolia*	coast live oak	13.5	5, 5, 3.5	15'		X	D	D	NA
#70N	*Quercus agrifolia*	coast live oak	4.5	3, 1.5	12'		X	D	PIP	D
#71N	*Quercus agrifolia*	coast live oak	4.5		10'		X	D	PIP	D
#72N	*Quercus agrifolia*	coast live oak	4.0		12'		X	D	PIP	D
#73N	*Quercus agrifolia*	coast live oak	43.0	22, 5, 7, 6, 3	25'		X	D	PIP	D
#74N	*Quercus agrifolia*	coast live oak	5.5		12'		X	D	PIP	D
#75N	*Quercus agrifolia*	coast live oak	14.5	5.5, 3, 3, 3	15'		X	D	PIP	D
#76N	*Quercus agrifolia*	coast live oak	12.5	6, 6.5	15'		X	D	PIP	D
#77N	*Quercus agrifolia*	coast live oak	20.0	8, 6, 6	15'		X	D	PIP	D
#78N	*Quercus agrifolia*	coast live oak	5.5		15'		X	D	PIP	D
#79S	*Acacia melanoxylon*	Australian blackwood	27.5		30'	X		D	PIP	D
#80	NOT USED									
#81N	*Quercus agrifolia*	coast live oak	15.5	4, 4, 2, 5.5	15'		X	D	D	NA
#82	*Prunus caroliniana*	Carolina laurelcherry	12.0	6, 2, 2, 2	12'			D	PIP	D
#83N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D
#84N	*Quercus agrifolia*	coast live oak	17.0	9, 8	15'		X	D	PIP	D
#85N	*Quercus agrifolia*	coast live oak	5.5		12'		X	D	PIP	D
#86N	*Quercus agrifolia*	coast live oak	5.0		12'		X	D	PIP	D
#87N	*Quercus agrifolia*	coast live oak	10.0	5.5, 4.5	15'		X	D	PIP	D
#88N	*Quercus agrifolia*	coast live oak	8.0		15'		X	D	PIP	D

#89N	*Quercus agrifolia*	coast live oak	10.5		15'		X	D	PIP	D
#90N	*Quercus agrifolia*	coast live oak	7.0		15'		X	D	PIP	D
#91SN	*Quercus agrifolia*	coast live oak	28.0		25'	X	X	D	PIP	D
#92N	*Quercus agrifolia*	coast live oak	9.0	3.5, 3, 2.5	12'		X	D	PIP	D
#93N	*Quercus agrifolia*	coast live oak	8.0		15'		X	PIP	PIP	PIP
#94N	*Quercus agrifolia*	coast live oak	8.5		12'		X	PIP	PIP	PIP
#95N	*Quercus agrifolia*	coast live oak	7.5		12'		X	PIP	PIP	PIP
#96	*Acacia dealbata*	silver wattle	8.0		20'			PIP	PIP	PIP
#97N	*Quercus agrifolia*	coast live oak	18.5	12, 6.5	25'		X	PIP	PIP	PIP
#98S	*Eucalyptus globulus*	southern blue gum	49.5		75'	X		PIP	PIP	PIP
#99N	*Quercus agrifolia*	coast live oak	15.5	6.5, 6, 3	15'		X	D	PIP	D
#100N	*Quercus agrifolia*	coast live oak	8.0		20'		X	D	PIP	D
#101N	*Quercus agrifolia*	coast live oak	23.0	13, 10	25'		X	D	PIP	D
#102N	*Frangula californica*	coffeeberry	7.5		10'		X	D	PIP	D
#103N	*Quercus agrifolia*	coast live oak	11.0		15'		X	D	PIP	D
#104N	*Quercus agrifolia*	coast live oak	7.5		15'		X	D	PIP	D
#105N	*Quercus agrifolia*	coast live oak	16.0		25'		X	D	PIP	D
#106SN	*Quercus agrifolia*	coast live oak	23.0		35'	X	X	D	PIP	D
#107N	*Quercus agrifolia*	coast live oak	35.0	23, 12	35'		X	D	PIP	D
#108N	*Quercus agrifolia*	coast live oak	6.0 *	3, 3 *	15'		X	D	PIP	D
#109	*Acacia dealbata*	silver wattle	13.0		40'			D	PIP	D
#110	*Acacia dealbata*	silver wattle	13.0		40'			D	PIP	D
#111	*Acacia dealbata*	silver wattle	10.0		30'			PIP	PIP	PIP
#112	*Acacia dealbata*	silver wattle	5.0		30'			PIP	PIP	PIP
#113	*Acacia dealbata*	silver wattle	9.5	5.5, 4	20'			PIP	PIP	PIP
#114	*Acacia dealbata*	silver wattle	10.0	5, 5	25'			PIP	PIP	PIP
#115	*Acacia dealbata*	silver wattle	5.0		25'			PIP	PIP	PIP
#116	*Acacia dealbata*	silver wattle	7.0		30'			PIP	PIP	PIP
#117SN	*Salix laevigata*	red willow	24.0		40'	X	X	PIP	PIP	PIP
#118N	*Quercus agrifolia*	coast live oak	18.0 *	12, 6 *	30'		X	PIP	PIP	PIP
#119	*Acacia dealbata*	silver wattle	10.0		35'			PIP	PIP	PIP
#120	*Acacia dealbata*	silver wattle	7.5		30'			PIP	PIP	PIP
#121	*Acacia dealbata*	silver wattle	7.0	4, 3	20'			PIP	PIP	PIP
#122	*Acacia dealbata*	silver wattle	6.5		15'			PIP	PIP	PIP

#123	*Acacia dealbata*	silver wattle	9.0		30'			PIP	PIP	PIP
#124N	*Quercus agrifolia*	coast live oak	5.0		15'		X	PIP	PIP	PIP
#125	*Acacia dealbata*	silver wattle	10.5 *		30'			PIP	PIP	PIP
#126N	*Salix laevigata*	red willow	18.0 *		35'		X	PIP	PIP	PIP
#127N	*Salix laevigata*	red willow	18.0 *		35'		X	PIP	PIP	PIP
#128N	*Salix laevigata*	red willow	11.0 *		25'		X	PIP	PIP	PIP
#129	*Eucalyptus globulus*	southern blue gum	15.0	8, 7	25'			D	PIP	D
#130	*Eucalyptus globulus*	southern blue gum	7.5		20'			D	PIP	D
#131	*Acacia dealbata*	silver wattle	4.5		20'			PIP	PIP	PIP
#132	*Acacia dealbata*	silver wattle	4.5		15'			PIP	PIP	PIP
#133	*Acacia dealbata*	silver wattle	8.5		25'			PIP	PIP	PIP
#134	*Acacia dealbata*	silver wattle	8.0		20'			PIP	PIP	PIP
#135S	*Eucalyptus globulus*	southern blue gum	44.0		60'	X		PIP	PIP	PIP
#136S	*Eucalyptus globulus*	southern blue gum	59.0		55'	X		PIP	PIP	PIP
#137N	*Quercus agrifolia*	coast live oak	14.5	8.5, 6	15'		X	PIP	PIP	PIP
#138S	*Eucalyptus globulus*	southern blue gum	22.0		60'	X		PIP	PIP	PIP
#139S	*Eucalyptus globulus*	southern blue gum	29.0		60'	X		PIP	PIP	PIP
#140S	*Eucalyptus globulus*	southern blue gum	42.0		70'	X		PIP	PIP	PIP
#141N	*Quercus agrifolia*	coast live oak	9.5 *		20'		X	D	PIP	D
#142N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D
#143N	*Quercus agrifolia*	coast live oak	8.0 *		15'		X	D	PIP	D
#144N	*Quercus agrifolia*	coast live oak	16.0 *	10, 6 *	20'		X	D	PIP	D
#145SN	*Quercus agrifolia*	coast live oak	36.0		25'	X	X	D	PIP	D
#146	*Eucalyptus globulus*	southern blue gum	7.0		20'			D	PIP	D
#147S	*Eucalyptus globulus*	southern blue gum	40.0		75'	X		D	PIP	D
#148S	*Eucalyptus globulus*	southern blue gum	42.0		75'	X		PIP	PIP	PIP
#149	*Eucalyptus globulus*	southern blue gum	118.0	30, 40, 20, 28	75'			PIP	PIP	PIP
#150	*Hesperocyparis macrocarpa*	Monterey cypress	16.0		40'			PIP	PIP	PIP
#151S	*Hesperocyparis macrocarpa*	Monterey cypress	23.0		40'	X		PIP	PIP	PIP
#152S	*Hesperocyparis macrocarpa*	Monterey cypress	25.0		40'	X		PIP	PIP	PIP
#153N	*Quercus agrifolia*	coast live oak	26.0	5, 3, 6.5, 2, 3, 6.5	15'		X	D	PIP	D
#154N	*Quercus agrifolia*	coast live oak	52.5	26, 26.5	25'		X	D	PIP	D
#155N	*Sequoia sempervirens*	coast redwood	12.0		45'		X	D	PIP	D
#156N	*Quercus agrifolia*	coast live oak	6.0	3, 3	12'		X	D	PIP	D

#157	NOT USED										
#158	*Pinus canariensis*	Canary Island pine	4.0	2, 1, 1	10'			D	PIP	D	
#159N	*Quercus agrifolia*	coast live oak	11.0	6, 3, 2	15'		X	D	PIP	D	
#160N	*Quercus agrifolia*	coast live oak	5.5	4, 1.5	15'		X	D	PIP	D	
#161	*Prunus laurocerasus*	cherry laurel	8.0 *		12'			D	PIP	D	
#162	*Prunus caroliniana*	Carolina laurelcherry	8.0 *		12'			D	PIP	D	
#163	*Prunus caroliniana*	Carolina laurelcherry	6.0 *		12'			D	PIP	D	
#164	*Prunus caroliniana*	Carolina laurelcherry	8.0 *		12'			D	PIP	D	
#165	*Prunus caroliniana*	Carolina laurelcherry	8.0 *		12'			D	PIP	D	
#166	*Prunus caroliniana*	Carolina laurelcherry	10.0 *		12'			D	PIP	D	
#167	*Prunus caroliniana*	Carolina laurelcherry	9.0 *		12'			D	PIP	D	
#168	*Prunus caroliniana*	Carolina laurelcherry	12.0 *		12'			D	PIP	D	
#169S	*Eucalyptus globulus*	southern blue gum	144.0 *		55'	X		D	PIP	D	
#170	*Prunus cerasifera 'Atropurpurpea'*	purple-leaf cherry	7.0 *		20'			D	PIP	D	
#171	*Prunus cerasifera 'Atropurpurpea'*	purple-leaf cherry	5.0 *		15'			D	PIP	D	
#172	*Prunus cerasifera 'Atropurpurpea'*	purple-leaf cherry	8.0 *		20'			D	PIP	D	

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Capitola Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#173C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	12.0 *		20'	X		D	PIP	D	
#174C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	8.0 *		20'	X		D	PIP	D	
#175	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	5.0 *		20'			D	PIP	D	
#176C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	11.0 *		20'	X		D	PIP	D	
#177C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	12.0 *		20'	X		D	PIP	D	
#178C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	6.0 *		20'	X		D	PIP	D	
#179C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	18.0 *		25'	X		D	PIP	D	
#180C	*Syagrus romanzoffiana*	queen palm	10.0 *		20'	X		D	PIP	D	
#181C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	7.0 *		15'	X		D	PIP	D	
#182C	*Dracaena draco*	dragon tree	6.0 *		15'	X		D	PIP	D	
#183C	*Syagrus romanzoffiana*	queen palm	9.5 *		20'	X		D	PIP	D	
#184	*Eriobotrya deflexa*	bronze loquat	5.0		15'			D	PIP	D	
#185C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	16.5	4.5, 2, 2, 5, 3	20'	X		D	D	NA	
#186C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	12.0	5.5, 4.5, 2	20'	X		D	D	NA	
#187C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	17.0	5.5, 5, 4.5, 2	20'	X		D	D	NA	
#188C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	9.5	6.5, 3	20'	X		D	D	NA	
#189C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	22.0	6, 6, 2, 2, 2, 2, 2	20'	X		D	D	NA	

#190C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	11.0	7, 2, 2	20'	X		D	D	NA
#191C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	6.0		15'	X		D	D	NA
#192CN	*Quercus agrifolia*	coast live oak	6.0		15'	X	X	D	D	NA
#193	NOT USED									
#194C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	7.5	3, 2.5, 2	15'	X		D	D	NA
#195CN	*Quercus agrifolia*	coast live oak	6.0		15'	X	X	D	D	NA
#196CN	*Quercus agrifolia*	coast live oak	6.0		12'	X	X	D	D	NA
#197C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	26.0	6, 6, 4, 2, 2, 2, 2, 2	20'	X		D	PIP	D
#198C	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	10.0		20'	X		D	PIP	D
#199CN	*Quercus agrifolia*	coast live oak	14.0		20'	X	X	D	PIP	D
#200C	*Juniperus chinensis*	Chinese juniper	17.0	14, 3	25'	X		D	PIP	D
#201C	*Ligustrum lucidum*	glossy privet	17.0 *	5, 5, 7 *	20'	X		D	PIP	D
#202C	*Ligustrum lucidum*	glossy privet	19.0 *	11, 8 *	25'	X		D	PIP	D
#203	*Juglans regia*	English walnut	4.5		12'			D	PIP	D
#204CN	*Quercus agrifolia*	coast live oak	6.5		12'	X	X	D	PIP	D
#205	NOT USED									
#206	NOT USED									
#207CN	*Quercus agrifolia*	coast live oak	8.5		20'	X	X	D	PIP	D
#208C	*Hesperocyparis macrocarpa*	Monterey cypress	38.5		25'	X		D	PIP	D
#209CN	*Quercus agrifolia*	coast live oak	8.5		15'	X	X	D	D	NA
#210CN	*Quercus agrifolia*	coast live oak	16.0	9, 7	15'	X	X	D	PIP	D
#211CN	*Quercus agrifolia*	coast live oak	7.0		15'	X	X	D	PIP	D
#212CN	*Quercus agrifolia*	coast live oak	11.5	4.5, 4, 3	15'	X	X	D	D	NA
#213CN	*Quercus agrifolia*	coast live oak	7.0		15'	X	X	D	PIP	D
#214CN	*Quercus agrifolia*	coast live oak	7.0		15'	X	X	D	PIP	D
#215CN	*Quercus agrifolia*	coast live oak	32.0	16, 16	30'	X	X	D	D	NA
#216C	*Dracaena draco*	dragon tree	10.5		20'	X		D	PIP	D
#217C	*Dracaena draco*	dragon tree	9.5		20'	X		D	PIP	D
#218	*Cotoneaster lucidus*	hedge cotoneaster	4.5		10'			D	PIP	D
#219C	*Dracaena draco*	dragon tree	19.0		25'	X		D	PIP	D
#220C	*Dracaena draco*	dragon tree	10.0		20'	X		D	PIP	D
#221C	*Eriobotrya deflexa*	bronze loquat	8.0	3, 2, 3	20'	X		PIP	PIP	PIP
#222	*Pyrus calleryana*	Callery pear	4.0		18'			PIP	PIP	PIP
#223CN	*Quercus agrifolia*	coast live oak	6.0	6	25'	X	X	D	PIP	D

#224CN	*Quercus agrifolia*	coast live oak	12.0	6, 6	20	X	X	D	D	NA
#225	NOT USED									
#226	NOT USED									
#227	*Ilex aquifolium*	common holly	5.0	3, 2	15'			D	D	NA
#228N	*Quercus agrifolia*	coast live oak	5.0	5	12'		X	D	D	NA
#229N	*Quercus agrifolia*	coast live oak	5.0	5	15'		X	D	D	NA
#230CN	*Quercus agrifolia*	coast live oak	6.5		15'	X	X	D	D	NA
#231	NOT USED									
#232	NOT USED									
#233N	*Quercus agrifolia*	coast live oak	5.0	5	12'		X	D	D	NA
#234CN	*Quercus agrifolia*	coast live oak	7.5	5, 2.5	12'	X	X	D	D	NA
#235N	*Quercus agrifolia*	coast live oak	5.0		12'		X	D	D	NA
#236	NOT USED									
#237CN	*Quercus agrifolia*	coast live oak	44.5	7, 6, 6, 6, 5.5, 2, 2, 2, 2, 2	20'	X	X	D	D	NA
#238CN	*Quercus agrifolia*	coast live oak	32.5	6.5, 5.5, 5, 4.5, 4.5	20'	X	X	D	D	NA
#239N	*Quercus agrifolia*	coast live oak	5.0	5	12'		X	D	D	NA
#240CN	*Quercus agrifolia*	coast live oak	13.0		20'	X	X	D	D	NA
#241	*Syagrus romanzoffiana*	queen palm	5.0		10'			D	PIP	D
#242C	*Syagrus romanzoffiana*	queen palm	6.0		10'	X		D	PIP	D
#243C	*Syagrus romanzoffiana*	queen palm	7.5		10'	X		D	PIP	D
#244CN	*Quercus agrifolia*	coast live oak	22.0	11, 11	25'	X	X	D	D	NA
#245N	*Quercus agrifolia*	coast live oak	4.0		10'		X	D	PIP	D
#246CN	*Quercus agrifolia*	coast live oak	18.0		30'	X	X	D	PIP	D
#247CN	*Quercus agrifolia*	coast live oak	23.5	18.5, 5	30'	X	X	D	PIP	D
#248N	*Quercus agrifolia*	coast live oak	5.0	3, 2	12'		X	D	PIP	D
#249CN	*Quercus agrifolia*	coast live oak	15.5	6.5, 6, 3	15'	X	X	D	PIP	D
#250CN	*Quercus agrifolia*	coast live oak	52.0	12, 13, 16, 11	25'	X	X	D	PIP	D
#251CN	*Quercus agrifolia*	coast live oak	12.0	6, 6	20'	X	X	D	PIP	D
#252C	*Syzygium paniculatum*	brush cherry	10.5	3.5, 3, 2, 2	15'	X		D	D	NA
#253C	*Syzygium paniculatum*	brush cherry	12.5	3.5, 3, 2, 2, 2	15'	X		D	D	NA
#254C	*Syzygium paniculatum*	brush cherry	16.5	2, 2, 2, 2, 2, 2, 2, 2.5	15'	X		PIP	D	NA
#255	*Syzygium paniculatum*	brush cherry	5.5	3, 2.5	15'			PIP	D	NA
#256	*Syzygium paniculatum*	brush cherry	5.0	3.5, 1.5	15'			PIP	D	NA
#257C	*Syzygium paniculatum*	brush cherry	16.0	4.5, 3.5, 2, 2, 2, 2	15'	X		PIP	D	NA

#258C	*Syzygium paniculatum*	brush cherry	14.0	3.5, 3, 3, 1.5, 1.5, 1.5	15'	X		PIP	D	NA
#259C	*Syzygium paniculatum*	brush cherry	9.0	3, 2, 2, 1, 1	15'	X		PIP	D	NA
#260	*Syzygium paniculatum*	brush cherry	4.5	2.5, 2, 2	15'			PIP	D	NA
#261C	*Syzygium paniculatum*	brush cherry	11.0	3, 3, 2, 2, 1	15'	X		PIP	D	NA
#262C	*Syzygium paniculatum*	brush cherry	8.5	2.5, 2, 2, 2	15'	X		PIP	D	NA
#263C	*Syzygium paniculatum*	brush cherry	8.0	2, 1.5, 1.5, 1.5, 1.5	15'	X		PIP	D	NA
#264C	*Syzygium paniculatum*	brush cherry	7.0	3, 2, 1, 1	15'	X		PIP	D	NA
#265C	*Syzygium paniculatum*	brush cherry	6.5	3.5, 1.5, 1.5	15'	X		PIP	D	NA
#266C	*Syzygium paniculatum*	brush cherry	17.0	3, 2.5, 2.5, 2.5, 2.5, 2, 2	15'	X		PIP	D	NA
#267	*Syzygium paniculatum*	brush cherry	4.5	2.5, 2, 2	15'			PIP	D	NA
#268C	*Syzygium paniculatum*	brush cherry	16.5	3, 3, 2.5, 2, 2, 2, 2	15'	X		PIP	D	NA
#269C	*Syzygium paniculatum*	brush cherry	6.5	3.5, 3	15'	X		PIP	D	NA
#270C	*Syzygium paniculatum*	brush cherry	18.5	3, 3, 2.5, 2, 2, 2, 2, 2	15'	X		PIP	D	NA
#271C	*Syzygium paniculatum*	brush cherry	8.0	2, 2, 2, 2	15'	X		PIP	D	NA
#272C	*Syzygium paniculatum*	brush cherry	10.0	3, 3, 2.5, 1.5	15'	X		PIP	D	NA
#273C	*Syzygium paniculatum*	brush cherry	10.5	4.5, 4, 2	15'	X		PIP	D	NA
#274C	*Syzygium paniculatum*	brush cherry	22.5	7.5, 5.5, 4, 4, 1.5	15'	X		PIP	D	NA
#275C	*Ligustrum lucidum*	glossy privet	24.0	8, 6, 6, 4	20'	X		PIP	D	NA
#276CN	*Quercus agrifolia*	coast live oak	31.5	13.5, 11, 7	25'	X	X	PIP	D	NA
#277	*Syagrus romanzoffiana*	queen palm	4.0		12'			PIP	D	NA
#278C	*Syagrus romanzoffiana*	queen palm	6.0		12'	X		PIP	PIP	PIP
#279C	*Syagrus romanzoffiana*	queen palm	6.0		12'	X		PIP	D	NA
#280	*Quercus virginiana*	southern live oak	5.5		15'			D	PIP	D
#281C	*Quercus virginiana*	southern live oak	11.5	6.5, 5	15'	X		D	PIP	D
#282C	*Quercus virginiana*	southern live oak	22.5	4, 4, 4, 4, 4, 2.5	15'	X		D	D	NA
#283CN	*Quercus agrifolia*	coast live oak	15.0	6, 4.5, 4.5	15'	X	X	D	D	NA
#284C	*Quercus virginiana*	southern live oak	22.5	4, 4, 3.5, 3.5, 2.5, 2.5, 2.5	15'	X		D	PIP	D
#285C	*Quercus virginiana*	southern live oak	8.5	4, 2.5, 1, 1	15'	X		D	PIP	D
#286C	*Quercus virginiana*	southern live oak	13.5	5, 4.5, 2, 2	15'	X		D	PIP	D
#287C	*Quercus virginiana*	southern live oak	10.0	3.5, 3, 2, 1.5	15'	X		D	PIP	D
#288CN	*Quercus agrifolia*	coast live oak	13.0	8, 5	20'	X	X	D	PIP	D
#289CN	*Quercus agrifolia*	coast live oak	19.5	10, 9.5	20'	X	X	D	PIP	D
#290C	*Pinus pinea*	Italian stone pine	28.0	20.5, 7.5	15'	X		D	PIP	D
#291C	*Ilex aquifolium*	common holly	11.0	6, 5	15'	X		PIP	PIP	PIP

#292C	*Trachycarpus fortunei*	Chinese windmill palm	12.0		25'	X		PIP	PIP	PIP
#293C	*Taxus baccata 'Fastigiata'*	Irish yew	21.5	9, 6.5, 6	20'	X		PIP	D	NA
#294C	*Trachycarpus fortunei*	Chinese windmill palm	10.5		25'	X		PIP	D	NA
#295C	*Syzygium paniculatum*	brush cherry	40.0	7, 6, 6, 5, 4, 4, 4, 4	20'	X		PIP	PIP	PIP
#296CN	*Quercus agrifolia*	coast live oak	19.5	12, 7.5	20'	X	X	D	PIP	D
#297C	*Hesperocyparis macrocarpa*	Monterey cypress	95.0	26, 24, 17, 15, 7, 6	30'	X		D	PIP	D
#298CN	*Quercus agrifolia*	coast live oak	14.5		25'	X	X	PIP	PIP	PIP
#299CN	*Quercus agrifolia*	coast live oak	55.0	12, 12, 12, 9, 6, 4	25'	X	X	PIP	PIP	PIP
#300C	*Washingtonia robusta*	Mexican fan palm	18.0		15'	X		D	PIP	D
#301C	*Washingtonia robusta*	Mexican fan palm	19.0		15'	X		PIP	PIP	PIP
#302C	*Juniperus chinensis*	Chinese juniper	55.0	14, 12, 9, 4, 4, 4, 4, 4	12'	X		PIP	PIP	PIP
#303CN	*Pinus radiata*	Monterey pine	6.0		10'	X	X	D	PIP	D
#304C	*Hesperocyparis macrocarpa*	Monterey cypress	50.0 *	32, 18 *	35'	X		D	PIP	D
#305C	*Acacia dealbata*	silver wattle	9.0	4, 2.5, 2.5	20'	X		D	D	NA
#306C	*Acacia dealbata*	silver wattle	12.5	7, 5.5	20'	X		D	D	NA
#307C	*Acacia dealbata*	silver wattle	7.0		20'	X		D	D	NA
#308	*Acacia dealbata*	silver wattle	4.0		20'			D	D	NA
#309C	*Acacia dealbata*	silver wattle	6.0		20'	X		D	D	NA
#310	*Acacia dealbata*	silver wattle	5.0		20'			D	D	NA
#311C	*Acacia dealbata*	silver wattle	12.0		25'	X		D	D	NA
#312C	*Acacia dealbata*	silver wattle	6.0		25'	X		D	D	NA
#313C	*Acacia dealbata*	silver wattle	15.0	6, 5, 4	25'	X		D	D	NA
#314C	*Acacia dealbata*	silver wattle	14.0	7, 7	25'	X		PIP	PIP	PIP
#315C	*Acacia dealbata*	silver wattle	7.0		25'	X		PIP	PIP	PIP
#316	*Acacia dealbata*	silver wattle	5.0		25'			PIP	PIP	PIP
#317C	*Acacia dealbata*	silver wattle	7.0		25'	X		PIP	PIP	PIP
#318C	*Acacia dealbata*	silver wattle	9.0		25'	X		PIP	PIP	PIP
#319C	*Acacia dealbata*	silver wattle	11.0		25'	X		PIP	PIP	PIP
#320CN	*Quercus agrifolia*	coast live oak	16.0	11, 5	25'	X	X	D	PIP	D
#321CN	*Quercus agrifolia*	coast live oak	11.0	5, 6	30'	X	X	D	PIP	D
#322CN	*Quercus agrifolia*	coast live oak	22.0		30'	X	X	D	PIP	D
#323CN	*Quercus agrifolia*	coast live oak	24.0		30'	X	X	D	PIP	D
#324CN	*Quercus agrifolia*	coast live oak	18.0		30'	X	X	D	PIP	D
#325CN	*Quercus agrifolia*	coast live oak	8.0		20'	X	X	PIP	PIP	PIP

#326CN	*Sequoia sempervirens*	coast redwood	32.0		50'	X	X	PIP	PIP	PIP
#327C	*Hesperocyparis macrocarpa*	Monterey cypress	28.0		50'	X		PIP	PIP	PIP
#328CN	*Sequoia sempervirens*	coast redwood	14.0		55'	X	X	PIP	PIP	PIP
#329C	*Ligustrum lucidum*	glossy privet	22.0	7, 7, 4, 4	25'	X		PIP	D	NA
#330C	*Acacia dealbata*	silver wattle	8.5		25'	X		PIP	PIP	PIP
#331C	*Acacia dealbata*	silver wattle	12.0	5, 3, 2, 2	25'	X		PIP	PIP	PIP
#332CN	*Quercus agrifolia*	coast live oak	21.0	12, 9	25'	X	X	PIP	PIP	PIP
#333CN	*Quercus agrifolia*	coast live oak	15.0		25'	X	X	PIP	PIP	PIP
#334CN	*Quercus agrifolia*	coast live oak	8.0		12'	X	X	PIP	PIP	PIP
#335CN	*Quercus agrifolia*	coast live oak	21.0	10, 7, 4	20'	X	X	PIP	PIP	PIP
#336C	*Eucalyptus globulus*	southern blue gum	72.0 *		55'	X		PIP	PIP	PIP
#337CN	*Quercus agrifolia*	coast live oak	16.0		20'	X	X	PIP	PIP	PIP
#338CN	*Quercus agrifolia*	coast live oak	8.0		12'	X	X	PIP	PIP	PIP
#339CN	*Quercus agrifolia*	coast live oak	20.0		20'	X	X	PIP	PIP	PIP
#340C	*Acacia dealbata*	silver wattle	37.0	5, 5, 5, 5, 3, 3, 3, 3	25'	X		D	D	NA
#341C	*Acacia dealbata*	silver wattle	16.0 *		30'	X		D	PIP	D
#342CN	*Quercus agrifolia*	coast live oak	24.0 *	12, 12 *	30'	X	X	D	PIP	D
#343C	*Eucalyptus globulus*	southern blue gum	32.0		50'	X		D	D	NA
#344C	*Eucalyptus globulus*	southern blue gum	96.0		60'	X		PIP	PIP	PIP
#345C	*Eucalyptus globulus*	southern blue gum	40.0	16, 12, 12	40'	X		PIP	PIP	PIP
#346C	*Eucalyptus globulus*	southern blue gum	144.0		60'	X		PIP	PIP	PIP
#347C	*Eucalyptus globulus*	southern blue gum	36.0		55'	X		PIP	PIP	PIP
#348C	*Eucalyptus globulus*	southern blue gum	20.0		35'	X		PIP	D	NA
#349C	*Eucalyptus globulus*	southern blue gum	184.0	48, 24, 20, 36, 12, 20, 24	65'	X		PIP	D	NA
#350C	*Eucalyptus globulus*	southern blue gum	7.0		45'	X		PIP	D	NA
#351C	*Eucalyptus globulus*	southern blue gum	36.0		55'	X		PIP	PIP	PIP
#352C	*Eucalyptus globulus*	southern blue gum	74.0	20, 18, 18, 6, 6, 6	45'	X		PIP	D	NA
#353C	*Eucalyptus globulus*	southern blue gum	42.0 *	24, 18 *	60'	X		PIP	D	NA
#354C	*Eucalyptus globulus*	southern blue gum	58.0 *	24, 16, 6, 6, 6 *	60'	X		PIP	D	NA
#355C	*Eucalyptus globulus*	southern blue gum	94.0 *	18, 16, 12, 12, 30, 6 *	60'	X		PIP	D	NA
#356C	*Eucalyptus globulus*	southern blue gum	12.0 *		60'	X		PIP	PIP	PIP
#357C	*Eucalyptus globulus*	southern blue gum	12.0 *		60'	X		PIP	D	NA
#358C	*Eucalyptus globulus*	southern blue gum	18.0		60'	X		PIP	PIP	PIP
#359C	*Eucalyptus globulus*	southern blue gum	42.0		60'	X		PIP	PIP	PIP

#360CN	*Quercus agrifolia*	coast live oak	9.0		15'	X	X	PIP	D	NA
#361CN	*Quercus agrifolia*	coast live oak	6.0		15'	X	X	PIP	PIP	PIP
#362N	*Quercus agrifolia*	coast live oak	4.0		15'		X	PIP	D	NA
#363CN	*Quercus agrifolia*	coast live oak	13.0	5, 8	15'	X	X	PIP	D	NA
#364C	*Eucalyptus globulus*	southern blue gum	96.0		60'	X		D	D	NA
#365C	*Eucalyptus globulus*	southern blue gum	60.0		65'	X		D	PIP	D
#366C	*Prunus caroliniana*	Carolina laurelcherry	10.0 *	6, 2, 2 *	25'	X		D	PIP	D
#367C	*Prunus caroliniana*	Carolina laurelcherry	12.0 *	6, 6 *	25'	X		D	PIP	D
#368C	*Prunus caroliniana*	Carolina laurelcherry	11.0 *	5, 6 *	25'	X		D	PIP	D
#369C	*Prunus caroliniana*	Carolina laurelcherry	16.0 *	8, 8 *	25'	X		D	PIP	D
#370C	*Prunus caroliniana*	Carolina laurelcherry	6.0 *		25'	X		D	PIP	D
#371C	*Prunus caroliniana*	Carolina laurelcherry	6.0 *		25'	X		D	PIP	D
#372C	*Prunus caroliniana*	Carolina laurelcherry	8.0 *		25'	X		D	PIP	D
#373C	*Prunus caroliniana*	Carolina laurelcherry	10.0 *	6, 4 *	25'	X		D	PIP	D
#374CN	*Quercus agrifolia*	coast live oak	8.0		20'	X	X	PIP	D	NA
#375CN	*Quercus agrifolia*	coast live oak	34.0	24, 10	25'	X	X	PIP	D	NA
#376C	*Acacia dealbata*	silver wattle	11.0		20'	X		PIP	PIP	PIP
#377CN	*Quercus agrifolia*	coast live oak	10.0		20'	X	X	D	PIP	D
#378CN	*Quercus agrifolia*	coast live oak	20.0		30'	X	X	PIP	PIP	PIP
#379CN	*Quercus agrifolia*	coast live oak	54.0	20, 20, 28, 6	35'	X	X	PIP	PIP	PIP
#380CN	*Quercus agrifolia*	coast live oak	22.0		40'	X	X	PIP	D	NA
#381CN	*Pinus radiata*	Monterey pine	34.0		55'	X	X	PIP	PIP	PIP
#382CN	*Quercus agrifolia*	coast live oak	26.0 *	12, 14 *	35'	X	X	D	PIP	D
#383CN	*Quercus agrifolia*	coast live oak	27.0 *	15, 12 *	40'	X	X	D	PIP	D
#384CN	*Acer macrophyllum*	bigleaf maple	44.0 *	12, 8, 8, 6, 6, 4 *	35'	X	X	D	PIP	D
#385CN	*Acer macrophyllum*	bigleaf maple	38.0 *	18, 10, 10 *	35'	X	X	D	PIP	D
#386CN	*Acer macrophyllum*	bigleaf maple	14.0		25'	X	X	PIP	D	NA
#387CN	*Acer macrophyllum*	bigleaf maple	28.0	10, 10, 8	25'	X	X	D	PIP	D
#388N	*Quercus agrifolia*	coast live oak	4.5		15'		X	PIP	D	NA
#389CN	*Acer macrophyllum*	bigleaf maple	29.0	11, 6, 6, 6	25'	X	X	PIP	PIP	PIP
#390C	*Acacia dealbata*	silver wattle	9.5	6.5, 3	25'	X		PIP	D	NA
#391C	*Acacia dealbata*	silver wattle	28.0	9, 7, 3, 3, 3, 3	20'	X		PIP	D	NA
#392C	*Acacia dealbata*	silver wattle	14.0	5, 5, 4	20'	X		PIP	D	NA
#393C	*Acacia dealbata*	silver wattle	19.0	9, 4, 3, 3	20'	X		PIP	PIP	PIP

#394C	*Pseudotsuga menziesii*	Douglas fir	10.5 *		25'	X		D	PIP	D
#395C	*Calocedrus decurrens*	incense cedar	8.0 *		25'	X		D	PIP	D
#396CN	*Quercus agrifolia*	coast live oak	32.0 *		35'	X	X	D	PIP	D
#397CN	*Quercus agrifolia*	coast live oak	30.0 *		30'	X	X	D	PIP	D
#398CN	*Acer macrophyllum*	bigleaf maple	10.0 *	7, 3 *	25'	X	X	PIP	PIP	PIP
#399CN	*Acer macrophyllum*	bigleaf maple	6.0 *		30'	X	X	PIP	D	NA
#400CN	*Acer macrophyllum*	bigleaf maple	6.0 *		25'	X	X	PIP	PIP	PIP
#401CN	*Acer macrophyllum*	bigleaf maple	7.0 *		25'	X	X	PIP	PIP	PIP
#402N	*Acer macrophyllum*	bigleaf maple	4.5 *		25'		X	PIP	PIP	PIP
#403CN	*Acer macrophyllum*	bigleaf maple	7.0 *		25'	X	X	PIP	PIP	PIP
#404CN	*Acer macrophyllum*	bigleaf maple	8.0 *	5, 3 *	25'	X	X	PIP	PIP	PIP
#405N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#406N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#407N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#408CN	*Acer macrophyllum*	bigleaf maple	6.0 *		25'	X	X	PIP	PIP	PIP
#409N	*Acer macrophyllum*	bigleaf maple	5.0 *		25'		X	PIP	PIP	PIP
#410N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#411N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#412N	*Acer macrophyllum*	bigleaf maple	4.0 *		25'		X	PIP	PIP	PIP
#413N	*Acer macrophyllum*	bigleaf maple	5.0 *		25'		X	PIP	PIP	PIP
#414C	*Eucalyptus globulus*	southern blue gum	30.0		60'	X		PIP	D	NA
#415CN	*Acer macrophyllum*	bigleaf maple	10.0 *		20'	X	X	D	PIP	D
#416C	*Eucalyptus globulus*	southern blue gum	84.0		75'	X		PIP	D	NA
#417C	*Eucalyptus globulus*	southern blue gum	72.0 *	30, 20, 12, 10 *	75'	X		PIP	PIP	PIP
#418C	*Eucalyptus globulus*	southern blue gum	64.0 *	16, 16, 16, 16 *	75'	X		PIP	D	NA
#419C	*Eucalyptus globulus*	southern blue gum	36.0 *	16, 12, 8 *	65'	X		PIP	D	NA
#420C	*Eucalyptus globulus*	southern blue gum	14.0 *	6, 4, 4 *	75'	X		PIP	D	NA
#421C	*Eucalyptus globulus*	southern blue gum	26.0 *	14, 8, 4 *	55'	X		PIP	PIP	PIP
#422C	*Eucalyptus globulus*	southern blue gum	11.0 *	8, 3 *	65'	X		PIP	D	NA
#423C	*Eucalyptus globulus*	southern blue gum	13.0 *	7, 6 *	65'	X		PIP	D	NA
#424C	*Eucalyptus globulus*	southern blue gum	51.0 *	18, 12, 12, 6, 3 *	65'	X		PIP	D	NA
#425C	*Eucalyptus globulus*	southern blue gum	20.0 *	12, 8 *	65'	X		PIP	D	NA
#426C	*Eucalyptus globulus*	southern blue gum	20.0 *		65'	X		PIP	PIP	PIP
#427C	*Eucalyptus globulus*	southern blue gum	14.0 *		65'	X		PIP	PIP	PIP

#428C	*Eucalyptus globulus*	southern blue gum	80.0 *	18, 18, 14, 14, 6, 6, 4 *	65'	X		PIP	D	NA
#429C	*Eucalyptus globulus*	southern blue gum	35.0 *	8, 8, 8, 7, 4 *	65'	X		PIP	D	NA
#430CN	*Quercus agrifolia*	coast live oak	10.0 *	6, 4 *	15'	X	X	D	PIP	D
#431C	*Eucalyptus globulus*	southern blue gum	60.0	32, 28	80'	X		D	D	NA
#432C	*Eucalyptus globulus*	southern blue gum	78.0	32, 20, 18, 8	80'	X		D	D	NA
#433C	*Eucalyptus globulus*	southern blue gum	36.0 *		70'	X		D	PIP	D
#434C	*Eucalyptus globulus*	southern blue gum	20.0 *		70'	X		D	PIP	D
#435C	*Eucalyptus globulus*	southern blue gum	22.0 *		70'	X		D	PIP	D
#436C	*Eucalyptus globulus*	southern blue gum	20.0 *		65'	X		D	PIP	D
#437CN	*Quercus agrifolia*	coast live oak	12.0 *		25'	X	X	D	PIP	D
#438C	*Eucalyptus globulus*	southern blue gum	132.0 *	42, 30, 24, 24, 12 *	80'	X		D	D	NA
#439C	*Eucalyptus globulus*	southern blue gum	68.0 *	24, 24, 10, 10 *	80'	X		D	D	NA
#440C	*Eucalyptus globulus*	southern blue gum	40.0 *	20, 12, 8 *	65'	X		D	D	NA
#441C	*Eucalyptus globulus*	southern blue gum	20.0 *		75'	X		D	D	NA
#442C	*Eucalyptus globulus*	southern blue gum	20.0 *		75'	X		D	D	NA
#443C	*Pittosporum undulatum*	Victorian box	26.0 *	10, 8, 8 *	20'	X		D	PIP	D
#444C	*Eucalyptus globulus*	southern blue gum	54.0 *	42, 12 *	75'	X		PIP	D	NA
#445C	*Eucalyptus globulus*	southern blue gum	54.0	48, 6	75'	X		PIP	D	NA
#446C	*Eucalyptus globulus*	southern blue gum	56.0	28, 12, 8, 8	60'	X		PIP	D	NA
#447C	*Eucalyptus globulus*	southern blue gum	130.0	30, 24, 20, 20, 18, 18	85'	X		PIP	D	NA
#448C	*Eucalyptus globulus*	southern blue gum	116.0 *	36, 32, 30, 18 *	85'	X		PIP	D	NA
#449C	*Eucalyptus globulus*	southern blue gum	36.0	18, 18	65'	X		PIP	D	NA
#450C	*Eucalyptus globulus*	southern blue gum	60.0 *	18, 18, 12, 12 *	80'	X		PIP	PIP	PIP
#451C	*Eucalyptus globulus*	southern blue gum	55.0 *		85'	X		PIP	PIP	PIP
#452C	*Eucalyptus globulus*	southern blue gum	60.0	48, 12	80'	X		PIP	PIP	PIP
#453C	*Eucalyptus globulus*	southern blue gum	74.0	24, 20, 18, 12	90'	X		PIP	D	NA
#454C	*Eucalyptus globulus*	southern blue gum	28.0		70'	X		PIP	PIP	PIP
#455C	*Eucalyptus globulus*	southern blue gum	21.0	12, 9	85'	X		PIP	PIP	PIP
#456C	*Eucalyptus globulus*	southern blue gum	54.0	24, 22, 8	90'	X		PIP	D	NA
#457C	*Eucalyptus globulus*	southern blue gum	22.0		90'	X		PIP	PIP	PIP
#458C	*Eucalyptus globulus*	southern blue gum	22.0	16, 6	50'	X		PIP	D	NA
#459C	*Eucalyptus globulus*	southern blue gum	19.0	14, 5	70'	X		PIP	PIP	PIP
#460C	*Eucalyptus globulus*	southern blue gum	38.0	20, 18	70'	X		PIP	D	NA
#461C	*Eucalyptus globulus*	southern blue gum	42.0		100'	X		PIP	D	NA

#462C	*Eucalyptus globulus*	southern blue gum	42.0		100'	X		PIP	PIP	PIP
#463C	*Eucalyptus globulus*	southern blue gum	30.0		80'	X		PIP	D	NA
#464C	*Pittosporum undulatum*	Victorian box	7.5	4.5, 1.5, 1.5	20'	X		D	PIP	D
#465C	*Pittosporum undulatum*	Victorian box	11.0	4, 3.5, 2.5, 1	20'	X		D	PIP	D
#466C	*Pittosporum undulatum*	Victorian box	12.0	3.5, 3.5, 2.5, 2.5	20'	X		D	PIP	D
#467C	*Pittosporum undulatum*	Victorian box	6.5	3, 2, 1.5	20'	X		D	PIP	D
#468C	*Pittosporum undulatum*	Victorian box	10.0	3.5, 3.5, 3	20'	X		D	PIP	D
#469C	*Pittosporum undulatum*	Victorian box	8.0	4.5, 3.5	20'	X		D	PIP	D
#470C	*Pittosporum undulatum*	Victorian box	9.0	3, 2, 2, 1, 1	20'	X		D	PIP	D
#471C	*Pittosporum undulatum*	Victorian box	6.0	2, 2, 1, 1	20'	X		D	PIP	D
#472C	*Pittosporum undulatum*	Victorian box	9.0	3, 2, 2, 1, 1	20'	X		D	PIP	D
#473	*Pittosporum undulatum*	Victorian box	4.0	2, 2	20'			D	PIP	D
#474C	*Pittosporum undulatum*	Victorian box	11.0		30'	X		D	PIP	D
#475C	*Ulmus minor*	English elm	18.0 *		40'	X		D	PIP	D
#476C	*Ulmus minor*	English elm	20.0 *	12, 8 *	50'	X		D	PIP	D
#477C	*Eucalyptus globulus*	southern blue gum	28.0 *	18, 6, 4 *	65'	X		D	PIP	D
#478C	*Eucalyptus globulus*	southern blue gum	32.0 *		75'	X		D	PIP	D
#479C	*Eucalyptus globulus*	southern blue gum	26.0 *	18, 8 *	65'	X		D	PIP	D
#480C	*Eucalyptus globulus*	southern blue gum	18.0		60'	X		D	PIP	D
#481C	*Eucalyptus globulus*	southern blue gum	7.0		50'	X		D	PIP	D
#482C	*Eucalyptus globulus*	southern blue gum	80.0		100'	X		PIP	D	NA
#483C	*Eucalyptus globulus*	southern blue gum	14.0		60'	X		PIP	D	NA
#484C	*Eucalyptus globulus*	southern blue gum	48.0	30, 18	70'	X		PIP	D	NA
#485C	*Eucalyptus globulus*	southern blue gum	36.0	28, 8	80'	X		PIP	PIP	PIP
#486C	*Eucalyptus globulus*	southern blue gum	32.0		100'	X		PIP	PIP	PIP
#487C	*Eucalyptus globulus*	southern blue gum	19.0		80'	X		PIP	PIP	PIP
#488C	*Eucalyptus globulus*	southern blue gum	30.0		100'	X		PIP	PIP	PIP
#489C	*Eucalyptus globulus*	southern blue gum	30.0		95'	X		PIP	PIP	PIP
#490C	*Eucalyptus globulus*	southern blue gum	66.0	24, 24, 18	90'	X		PIP	PIP	PIP
#491C	*Eucalyptus globulus*	southern blue gum	68.0	32, 18, 12, 6	100'	X		PIP	PIP	PIP
#492CN	*Pinus radiata*	Monterey pine	16.0		65'	X	X	PIP	PIP	PIP
#493C	*Eucalyptus globulus*	southern blue gum	13.0	10, 3	50'	X		PIP	PIP	PIP
#494C	*Eucalyptus globulus*	southern blue gum	24.0 *		90'	X		PIP	PIP	PIP
#495CN	*Pinus radiata*	Monterey pine	18.0 *		40'	X	X	PIP	PIP	PIP

#496C	*Eucalyptus globulus*	southern blue gum	12.0 *		50'	X		PIP	PIP	PIP
#497C	*Eucalyptus globulus*	southern blue gum	52.0 *		100'	X		PIP	PIP	PIP
#498C	*Eucalyptus globulus*	southern blue gum	92.0	40, 24, 16, 12	100'	X		PIP	PIP	PIP
#499C	*Eucalyptus globulus*	southern blue gum	28.0		100'	X		PIP	PIP	PIP
#500C	*Ulmus minor*	English elm	11.0		30'	X		PIP	PIP	PIP
#501C	*Ulmus minor*	English elm	12.0		30'	X		PIP	PIP	PIP
#502C	*Ulmus minor*	English elm	12.0		30'	X		PIP	PIP	PIP
#503C	*Eucalyptus globulus*	southern blue gum	80.0	48, 32	60'	X		PIP	D	NA
#504C	*Eucalyptus globulus*	southern blue gum	52.0	36, 8, 8	90'	X		PIP	PIP	PIP
#505C	*Eucalyptus globulus*	southern blue gum	42.0		100'	X		PIP	PIP	PIP
#506C	*Eucalyptus globulus*	southern blue gum	27.0		100'	X		PIP	PIP	PIP
#507C	*Eucalyptus globulus*	southern blue gum	35.0		100'	X		PIP	PIP	PIP
#508C	*Eucalyptus globulus*	southern blue gum	26.0		70'	X		PIP	PIP	PIP
#509C	*Eucalyptus globulus*	southern blue gum	58.0 *	40, 18 *	90'	X		PIP	PIP	PIP
#510C	*Eucalyptus globulus*	southern blue gum	38.0 *		100'	X		PIP	PIP	PIP
#511C	*Eucalyptus globulus*	southern blue gum	18.0 *		90'	X		PIP	PIP	PIP
#512C	*Eucalyptus globulus*	southern blue gum	20.0 *		60'	X		PIP	PIP	PIP
#513C	*Eucalyptus globulus*	southern blue gum	24.0 *		60'	X		PIP	PIP	PIP
#514C	*Ulmus minor*	English elm	48.0	20, 28	75'	X		D	PIP	D
#515	*Ulmus minor*	English elm	5.0		20'			D	PIP	D
#516C	*Ulmus minor*	English elm	7.0	4, 3	25'	X		D	PIP	D
#517	*Ulmus minor*	English elm	5.5		35'			D	PIP	D
#518C	*Ulmus minor*	English elm	7.0		35'	X		D	PIP	D
#519C	*Ulmus minor*	English elm	6.0		25'	X		D	PIP	D
#520	*Eucalyptus globulus*	southern blue gum	5.0 *		20'			D	PIP	D
#521C	*Eucalyptus globulus*	southern blue gum	36.0 *		100'	X		PIP	PIP	PIP
#522C	*Eucalyptus globulus*	southern blue gum	18.0 *		100'	X		PIP	PIP	PIP
#523C	*Eucalyptus globulus*	southern blue gum	36.0 *		100'	X		PIP	PIP	PIP
#524C	*Eucalyptus globulus*	southern blue gum	28.0 *		100'	X		PIP	PIP	PIP
#525C	*Eucalyptus globulus*	southern blue gum	32.0 *		100'	X		PIP	PIP	PIP
#526C	*Eucalyptus globulus*	southern blue gum	30.0 *		100'	X		PIP	PIP	PIP
#527C	*Eucalyptus globulus*	southern blue gum	8.0		60'	X		D	PIP	D
#528C	*Eucalyptus globulus*	southern blue gum	24.0 *		100'	X		PIP	PIP	PIP
#529C	*Eucalyptus globulus*	southern blue gum	36.0 *		120'	X		PIP	PIP	PIP

#530C	*Eucalyptus globulus*	southern blue gum	24.0 *		100'	X		PIP	PIP	PIP
#531C	*Eucalyptus globulus*	southern blue gum	12.0 *		60'	X		D	PIP	D
#532C	*Eucalyptus globulus*	southern blue gum	10.0 *		50'	X		PIP	PIP	PIP
#533C	*Eucalyptus globulus*	southern blue gum	36.0 *		120'	X		PIP	PIP	PIP
#534C	*Eucalyptus globulus*	southern blue gum	48.0 *		120'	X		PIP	PIP	PIP
#535C	*Eucalyptus globulus*	southern blue gum	18.0 *		70'	X		PIP	PIP	PIP
#536C	*Eucalyptus globulus*	southern blue gum	22.0 *		75'	X		PIP	PIP	PIP
#537C	*Ulmus minor*	English elm	6.0 *		25'	X		PIP	PIP	PIP
#538C	*Eucalyptus globulus*	southern blue gum	18.0 *		120'	X		PIP	PIP	PIP
#539C	*Eucalyptus globulus*	southern blue gum	18.0 *		110'	X		D	PIP	D
#540C	*Eucalyptus globulus*	southern blue gum	32.0 *		125'	X		PIP	PIP	PIP
#541C	*Eucalyptus globulus*	southern blue gum	18.0 *		90'	X		PIP	PIP	PIP
#542C	*Eucalyptus globulus*	southern blue gum	30.0 *	12, 10, 8 *	85'	X		PIP	PIP	PIP
#543C	*Eucalyptus globulus*	southern blue gum	34.0 *		130'	X		PIP	PIP	PIP
#544C	*Eucalyptus globulus*	southern blue gum	20.0 *		120'	X		PIP	PIP	PIP
#545C	*Eucalyptus globulus*	southern blue gum	20.0 *		80'	X		PIP	PIP	PIP
#546C	*Eucalyptus globulus*	southern blue gum	8.0 *		35'	X		PIP	PIP	PIP
#547C	*Eucalyptus globulus*	southern blue gum	18.0 *	8, 6, 4 *	35'	X		D	PIP	D
#548C	*Eucalyptus globulus*	southern blue gum	12.0 *		60'	X		D	PIP	D
#549C	*Eucalyptus globulus*	southern blue gum	10.0 *		40'	X		D	PIP	D
#550C	*Eucalyptus globulus*	southern blue gum	14.0 *		35'	X		D	PIP	D
#551C	*Eucalyptus globulus*	southern blue gum	15.0 *		30'	X		D	PIP	D
#552C	*Eucalyptus globulus*	southern blue gum	10.0 *		50'	X		PIP	PIP	PIP
#553C	*Eucalyptus globulus*	southern blue gum	20.0 *		100'	X		D	PIP	D
#554C	*Eucalyptus globulus*	southern blue gum	18.0 *		90'	X		PIP	PIP	PIP
#555C	*Eucalyptus globulus*	southern blue gum	9.0 *		55'	X		D	PIP	D
#556C	*Eucalyptus globulus*	southern blue gum	38.0 *	20, 18 *	85'	X		PIP	PIP	PIP
#557C	*Eucalyptus globulus*	southern blue gum	9.0 *		75'	X		PIP	PIP	PIP
#558C	*Eucalyptus globulus*	southern blue gum	24.0 *		120'	X		PIP	PIP	PIP
#559C	*Eucalyptus globulus*	southern blue gum	14.0 *		75'	X		PIP	PIP	PIP
#560C	*Eucalyptus globulus*	southern blue gum	12.0 *		65'	X		PIP	PIP	PIP
#561C	*Eucalyptus globulus*	southern blue gum	36.0 *		130'	X		PIP	PIP	PIP
#562C	*Eucalyptus globulus*	southern blue gum	30.0 *		130'	X		PIP	PIP	PIP
#563C	*Eucalyptus globulus*	southern blue gum	42.0 *		110'	X		PIP	PIP	PIP

#564C	*Eucalyptus globulus*	southern blue gum	6.0 *		30'	X		PIP	PIP	PIP		
#565C	*Eucalyptus globulus*	southern blue gum	12.0 *		30'	X		PIP	PIP	PIP		
#566C	*Eucalyptus globulus*	southern blue gum	30.0 *		70'	X		PIP	PIP	PIP		
#567C	*Eucalyptus globulus*	southern blue gum	12.0 *	6, 6 *	35'	X		PIP	PIP	PIP		
#568C	*Eucalyptus globulus*	southern blue gum	7.0 *		50'	X		PIP	PIP	PIP		
#569C	*Eucalyptus globulus*	southern blue gum	7.0 *		60'	X		PIP	PIP	PIP		
#570C	*Eucalyptus globulus*	southern blue gum	22.0 *		80'	X		PIP	PIP	PIP		
#571C	*Eucalyptus globulus*	southern blue gum	14.0 *	8, 6 *	45'	X		PIP	PIP	PIP		
#572C	*Eucalyptus globulus*	southern blue gum	24.0 *		110'	X		PIP	PIP	PIP		
#573CN	*Pinus radiata*	Monterey pine	8.5		30'	X	X	D	D	NA		D
#574C	*Eucalyptus globulus*	southern blue gum	39.0		120'	X		D	D	NA		D
#575C	*Eucalyptus globulus*	southern blue gum	62.0	46, 16	120'	X		D	D	NA		D
#576C	*Eucalyptus globulus*	southern blue gum	78.5	28, 24, 16, 10.5	100'	X		PIP	PIP	PIP		D
#577C	*Eucalyptus globulus*	southern blue gum	16.5		75'	X		PIP	PIP	PIP		D
#578C	*Eucalyptus globulus*	southern blue gum	46.0	32, 14	75'	X		D	D	NA		D
#579	*Eucalyptus globulus*	southern blue gum	5.0		30'			PIP	PIP	PIP		D
#580C	*Eucalyptus globulus*	southern blue gum	16.0		80'	X		D	D	NA		D
#581C	*Eucalyptus globulus*	southern blue gum	29.0		120'	X		D	D	NA		D
#582	*Eucalyptus globulus*	southern blue gum	5.5		25'			PIP	PIP	PIP		D
#583C	*Eucalyptus globulus*	southern blue gum	20.0		120'	X		PIP	PIP	PIP		D
#584C	*Eucalyptus globulus*	southern blue gum	10.5		65'	X		PIP	PIP	PIP		D
#585C	*Eucalyptus globulus*	southern blue gum	37.0	23, 14	100'	X		PIP	PIP	PIP		D
#586	NOT USED											
#587	NOT USED											
#588	NOT USED											
#589	NOT USED											
#590C	*Eucalyptus globulus*	southern blue gum	22.5	16.5, 6	75'	X		PIP	PIP	PIP		D
#591C	*Eucalyptus globulus*	southern blue gum	22.0		70'	X		PIP	PIP	PIP		D
#592C	*Eucalyptus globulus*	southern blue gum	61.0	32, 29	85'	X		PIP	PIP	PIP		D
#593C	*Eucalyptus globulus*	southern blue gum	13.0		75'	X		PIP	PIP	PIP		D
#594C	*Eucalyptus globulus*	southern blue gum	25.0		75'	X		PIP	PIP	PIP		D
#595C	*Eucalyptus globulus*	southern blue gum	12.0		75'	X		PIP	PIP	PIP		D
#596C	*Eucalyptus globulus*	southern blue gum	17.5	11, 6.5	65'	X		PIP	PIP	PIP		D
#597C	*Eucalyptus globulus*	southern blue gum	30.0	16.5, 13.5	65'	X		PIP	PIP	PIP		D

#598C	*Eucalyptus globulus*	southern blue gum	13.5	10.5, 3	65'	X		PIP	PIP	PIP	D
#599C	*Eucalyptus globulus*	southern blue gum	7.0		40'	X		PIP	PIP	PIP	D
#600C	*Eucalyptus globulus*	southern blue gum	60.0	36, 20, 4	100'	X		PIP	PIP	PIP	D
#601C	*Eucalyptus globulus*	southern blue gum	28.5	19, 9.5	90'	X		PIP	PIP	PIP	D
#602C	*Eucalyptus globulus*	southern blue gum	9.5	6.5, 3	20'	X		PIP	PIP	PIP	D
#603C	*Eucalyptus globulus*	southern blue gum	29.0	22, 7	80'	X		PIP	PIP	PIP	D
#604C	*Eucalyptus globulus*	southern blue gum	10.0		35'	X		PIP	PIP	PIP	D
#605C	*Eucalyptus globulus*	southern blue gum	15.0		75'	X		PIP	PIP	PIP	D
#606C	*Eucalyptus globulus*	southern blue gum	54.0	25, 20, 9	120'	X		PIP	PIP	PIP	D
#607C	*Eucalyptus globulus*	southern blue gum	9.0	5.5, 3.5	20'	X		PIP	PIP	PIP	D
#608C	*Eucalyptus globulus*	southern blue gum	25.0	19, 3, 3	100'	X		PIP	PIP	PIP	D
#609C	*Eucalyptus globulus*	southern blue gum	10.0		45'	X		PIP	PIP	PIP	D
#610C	*Eucalyptus globulus*	southern blue gum	24.0	16, 8	110'	X		PIP	PIP	PIP	D
#611C	*Eucalyptus globulus*	southern blue gum	16.0		120'	X		PIP	PIP	PIP	D
#612C	*Eucalyptus globulus*	southern blue gum	36.0	20, 9, 7	120'	X		PIP	PIP	PIP	D
#613C	*Eucalyptus globulus*	southern blue gum	12.5		70'	X		PIP	PIP	PIP	D
#614C	*Eucalyptus globulus*	southern blue gum	11.0		70'	X		PIP	PIP	PIP	D
#615C	*Eucalyptus globulus*	southern blue gum	50.0	28, 12, 10	100'	X		PIP	PIP	PIP	D
#616C	*Eucalyptus globulus*	southern blue gum	10.5		50'	X		PIP	PIP	PIP	D
#617C	*Eucalyptus globulus*	southern blue gum	18.0		85'	X		PIP	PIP	PIP	D
#618C	*Eucalyptus globulus*	southern blue gum	9.5		40'	X		PIP	PIP	PIP	D
#619C	*Eucalyptus globulus*	southern blue gum	27.0	13, 2, 2, 2, 2, 2, 2, 2	75'	X		PIP	PIP	PIP	D
#620C	*Eucalyptus globulus*	southern blue gum	26.5		100'	X		PIP	PIP	PIP	D
#621C	*Eucalyptus globulus*	southern blue gum	44.0	24, 20	120'	X		PIP	PIP	PIP	D
#622C	*Eucalyptus globulus*	southern blue gum	8.5		60'	X		PIP	PIP	PIP	D
#623C	*Eucalyptus globulus*	southern blue gum	27.0		120'	X		PIP	PIP	PIP	D
#624C	*Eucalyptus globulus*	southern blue gum	8.5		60'	X		PIP	PIP	PIP	D
#625C	*Eucalyptus globulus*	southern blue gum	30.0		100'	X		PIP	PIP	PIP	D
#626C	*Eucalyptus globulus*	southern blue gum	20.0		85'	X		PIP	PIP	PIP	D
#627C	*Eucalyptus globulus*	southern blue gum	15.0		85'	X		PIP	PIP	PIP	D
#628C	*Eucalyptus globulus*	southern blue gum	20.0		100'	X		PIP	PIP	PIP	D
#629C	*Eucalyptus globulus*	southern blue gum	61.0		85'	X		PIP	PIP	PIP	D
#630C	*Eucalyptus globulus*	southern blue gum	73.0	29, 28, 16	90'	X		PIP	PIP	PIP	D
#631C	*Eucalyptus globulus*	southern blue gum	28.0		80'	X		PIP	PIP	PIP	D

#632C	*Eucalyptus globulus*	southern blue gum	36.0		90'	X		PIP	PIP	PIP	D
#633C	*Eucalyptus globulus*	southern blue gum	42.0		90'	X		PIP	PIP	PIP	D
#634C	*Eucalyptus globulus*	southern blue gum	70.0		100'	X		PIP	PIP	PIP	D
#635C	*Eucalyptus globulus*	southern blue gum	34.0		100'	X		PIP	PIP	PIP	D
#636C	*Eucalyptus globulus*	southern blue gum	70.0		110'	X		D	PIP	D	PIP
#637C	*Eucalyptus globulus*	southern blue gum	15.0		55'	X		PIP	PIP	PIP	PIP
#638C	*Eucalyptus globulus*	southern blue gum	6.0		20'	X		PIP	PIP	PIP	PIP
#639C	*Eucalyptus globulus*	southern blue gum	9.0		30'	X		PIP	PIP	PIP	PIP
#640C	*Eucalyptus globulus*	southern blue gum	12.0 *		25'	X		PIP	PIP	PIP	PIP
#641C	*Eucalyptus globulus*	southern blue gum	28.0		85'	X		PIP	PIP	PIP	PIP
#642C	*Eucalyptus globulus*	southern blue gum	16.0 *		60'	X		PIP	PIP	PIP	PIP
#643C	*Eucalyptus globulus*	southern blue gum	62.0	42, 20	90'	X		PIP	PIP	PIP	PIP
#644C	*Eucalyptus globulus*	southern blue gum	9.5		60'	X		D	PIP	D	PIP
#645C	*Eucalyptus globulus*	southern blue gum	12.0		70'	X		D	PIP	D	PIP
#646C	*Eucalyptus globulus*	southern blue gum	60.0		75'	X		PIP	PIP	PIP	PIP
#647C	*Eucalyptus globulus*	southern blue gum	12.5		45'	X		PIP	PIP	PIP	PIP
#648C	*Eucalyptus globulus*	southern blue gum	15.0		50'	X		PIP	PIP	PIP	PIP
#649C	*Eucalyptus globulus*	southern blue gum	21.0	12, 9	70'	X		PIP	PIP	PIP	PIP
#650C	*Eucalyptus globulus*	southern blue gum	22.0		85'	X		PIP	PIP	PIP	PIP
#651C	*Eucalyptus globulus*	southern blue gum	26.0		80'	X		PIP	PIP	PIP	PIP
#652C	*Eucalyptus globulus*	southern blue gum	8.0 *		35'	X		D	PIP	D	PIP
#653C	*Eucalyptus globulus*	southern blue gum	12.0 *		50'	X		PIP	PIP	PIP	PIP
#654C	*Eucalyptus globulus*	southern blue gum	7.0 *		30'	X		D	PIP	D	PIP
#655C	*Eucalyptus globulus*	southern blue gum	16.0 *		55'	X		PIP	PIP	PIP	PIP
#656C	*Eucalyptus globulus*	southern blue gum	8.0 *		30'	X		D	PIP	D	PIP
#657C	*Eucalyptus globulus*	southern blue gum	6.0 *		35'	X		D	PIP	D	PIP
#658C	*Eucalyptus globulus*	southern blue gum	6.0 *		35'	X		D	PIP	D	PIP
#659	*Eucalyptus globulus*	southern blue gum	5.0 *		30'			D	PIP	D	PIP
#660C	*Eucalyptus globulus*	southern blue gum	8.0 *		50'	X		D	PIP	D	PIP
#661C	*Eucalyptus globulus*	southern blue gum	6.0 *		25'	X		D	PIP	D	PIP
#662C	*Eucalyptus globulus*	southern blue gum	18.0 *		65'	X		PIP	PIP	PIP	PIP
#663	*Eucalyptus globulus*	southern blue gum	5.0 *		45'			PIP	PIP	PIP	PIP
#664C	*Eucalyptus globulus*	southern blue gum	20.0 *		50'	X		PIP	PIP	PIP	PIP
#665C	*Eucalyptus globulus*	southern blue gum	9.0 *		35'	X		PIP	PIP	PIP	PIP

#666C	*Eucalyptus globulus*	southern blue gum	8.0		45'	X		PIP	PIP	PIP		PIP
#667C	*Eucalyptus globulus*	southern blue gum	11.0		55'	X		PIP	PIP	PIP		PIP
#668C	*Eucalyptus globulus*	southern blue gum	15.0	9,6	60'	X		D	PIP	D		PIP
#669C	*Eucalyptus globulus*	southern blue gum	26.0	18,8	70'	X		PIP	PIP	PIP		PIP
#670C	*Eucalyptus globulus*	southern blue gum	28.0		90'	X		PIP	PIP	PIP		PIP
#671C	*Eucalyptus globulus*	southern blue gum	16.0 *		70'	X		PIP	PIP	PIP		PIP
#672C	*Eucalyptus globulus*	southern blue gum	12.0 *	8, 4 *	50'	X		PIP	PIP	PIP		PIP
#673C	*Eucalyptus globulus*	southern blue gum	10.0 *		50'	X		PIP	PIP	PIP		PIP
#674C	*Eucalyptus globulus*	southern blue gum	20.0 *	8, 12 *	55'	X		PIP	PIP	PIP		PIP
#675C	*Eucalyptus globulus*	southern blue gum	20.0 *	6, 6, 8 *	50'	X		PIP	PIP	PIP		PIP
#676C	*Eucalyptus globulus*	southern blue gum	10.0 *		50'	X		PIP	PIP	PIP		PIP
#677C	*Eucalyptus globulus*	southern blue gum	7.0		45'	X		D	PIP	D		PIP
#678C	*Eucalyptus globulus*	southern blue gum	8.0		45'	X		D	PIP	D		PIP
#679C	*Eucalyptus globulus*	southern blue gum	8.0		40'	X		D	PIP	D		PIP
#680C	*Eucalyptus globulus*	southern blue gum	11.0 *		60'	X		D	PIP	D		PIP
#681C	*Eucalyptus globulus*	southern blue gum	12.0 *		60'	X		PIP	PIP	PIP		PIP
#682	*Eucalyptus globulus*	southern blue gum	4.5		35'			D	PIP	D		PIP
#683C	*Eucalyptus globulus*	southern blue gum	11.0		75'	X		D	PIP	D		PIP
#684	*Eucalyptus globulus*	southern blue gum	5.5 *		30'			PIP	PIP	PIP		PIP
#685C	*Eucalyptus globulus*	southern blue gum	6.5 *		45'	X		PIP	PIP	PIP		PIP
#686C	*Eucalyptus globulus*	southern blue gum	7.5 *		45'	X		PIP	PIP	PIP		PIP
#687C	*Eucalyptus globulus*	southern blue gum	13.0 *	8, 5 *	50'	X		PIP	PIP	PIP		PIP
#688C	*Eucalyptus globulus*	southern blue gum	30.0	14, 12, 4	60'	X		PIP	PIP	PIP		PIP
#689C	*Eucalyptus globulus*	southern blue gum	19.0	12, 7	60'	X		PIP	PIP	PIP		PIP
#690C	*Eucalyptus globulus*	southern blue gum	19.0	7, 6, 6	30'	X		PIP	PIP	PIP		PIP
#691C	*Eucalyptus globulus*	southern blue gum	6.0		30'	X		PIP	PIP	PIP		PIP
#692C	*Eucalyptus globulus*	southern blue gum	10.5	6.5, 4	40'	X		D	PIP	D		PIP
#693C	*Eucalyptus globulus*	southern blue gum	28.0	9, 6, 5, 4, 4	40'	X		D	PIP	D		PIP
#694	*Eucalyptus globulus*	southern blue gum	4.0		25'			PIP	PIP	PIP		PIP
#695C	*Eucalyptus globulus*	southern blue gum	16.0		75'	X		PIP	PIP	PIP		PIP
#696C	*Eucalyptus globulus*	southern blue gum	19.5	13, 6.5	75'	X		PIP	PIP	PIP		PIP
#697C	*Eucalyptus globulus*	southern blue gum	8.5		45'	X		PIP	PIP	PIP		PIP
#698C	*Eucalyptus globulus*	southern blue gum	12.0	6, 6	35'	X		PIP	PIP	PIP		PIP
#699C	*Eucalyptus globulus*	southern blue gum	20.0		65'	X		PIP	PIP	PIP		PIP

#700C	*Eucalyptus globulus*	southern blue gum	8.0		45'	X		D	PIP	D	PIP
#701C	*Eucalyptus globulus*	southern blue gum	36.0	16, 12, 8	70'	X		D	PIP	D	PIP
#702C	*Eucalyptus globulus*	southern blue gum	6.0		15'	X		D	PIP	D	PIP
#703C	*Eucalyptus globulus*	southern blue gum	28.0		70'	X		D	PIP	D	PIP
#704C	*Eucalyptus globulus*	southern blue gum	7.0		30'	X		D	PIP	D	PIP
#705C	*Eucalyptus globulus*	southern blue gum	9.5		35'	X		D	PIP	D	PIP
#706C	*Eucalyptus globulus*	southern blue gum	15.5		65'	X		D	PIP	D	PIP
#707C	*Eucalyptus globulus*	southern blue gum	14.0		60'	X		D	PIP	D	PIP
#708C	*Eucalyptus globulus*	southern blue gum	8.5		45'	X		D	PIP	D	PIP
#709C	*Eucalyptus globulus*	southern blue gum	28.0		75'	X		PIP	PIP	PIP	PIP
#710C	*Eucalyptus globulus*	southern blue gum	24.0		75'	X		PIP	PIP	PIP	PIP
#711C	*Eucalyptus globulus*	southern blue gum	32.0		80'	X		PIP	PIP	PIP	PIP
#712C	*Eucalyptus globulus*	southern blue gum	45.0	36, 9	85'	X		PIP	PIP	PIP	PIP
#713C	*Eucalyptus globulus*	southern blue gum	13.0	9, 4	40'	X		PIP	PIP	PIP	PIP
#714	*Eucalyptus globulus*	southern blue gum	5.0		25'			PIP	PIP	PIP	PIP
#715C	*Eucalyptus globulus*	southern blue gum	9.0		35'	X		PIP	PIP	PIP	PIP
#716C	*Eucalyptus globulus*	southern blue gum	36.0		90'	X		PIP	PIP	PIP	PIP
#717C	*Eucalyptus globulus*	southern blue gum	35.0		85'	X		PIP	PIP	PIP	PIP
#718C	*Eucalyptus globulus*	southern blue gum	11.5		35'	X		PIP	PIP	PIP	PIP
#719C	*Eucalyptus globulus*	southern blue gum	39.0	27, 12	50'	X		PIP	PIP	PIP	PIP
#720C	*Eucalyptus globulus*	southern blue gum	39.0		95'	X		PIP	PIP	PIP	PIP
#721C	*Eucalyptus globulus*	southern blue gum	22.0		75'	X		PIP	PIP	PIP	PIP
#722C	*Eucalyptus globulus*	southern blue gum	24.0	14, 10	65'	X		PIP	PIP	PIP	PIP
#723C	*Eucalyptus globulus*	southern blue gum	33.0		80'	X		PIP	PIP	PIP	PIP
#724C	*Eucalyptus globulus*	southern blue gum	18.0	12, 6	55'	X		PIP	PIP	PIP	PIP
#725C	*Eucalyptus globulus*	southern blue gum	21.0 *	9, 7, 5 *	55'	X		PIP	PIP	PIP	PIP
#726C	*Eucalyptus globulus*	southern blue gum	14.0 *		55'	X		PIP	PIP	PIP	PIP
#727C	*Eucalyptus globulus*	southern blue gum	11.0 *		55'	X		PIP	PIP	PIP	PIP
#728C	*Eucalyptus globulus*	southern blue gum	58.0	25, 10, 8, 8, 7	70'	X		PIP	PIP	PIP	PIP
#729C	*Eucalyptus globulus*	southern blue gum	6.0		40'	X		PIP	PIP	PIP	PIP
#730C	*Eucalyptus globulus*	southern blue gum	36.0	28, 8	70'	X		PIP	PIP	PIP	PIP
#731C	*Eucalyptus globulus*	southern blue gum	11.0		70'	X		PIP	PIP	PIP	PIP
#732C	*Eucalyptus globulus*	southern blue gum	27.5	18, 9.5	70'	X		PIP	PIP	PIP	PIP
#733C	*Eucalyptus globulus*	southern blue gum	18.0		55'	X		PIP	PIP	PIP	PIP

#734C	*Eucalyptus globulus*	southern blue gum	7.5		30'	X		PIP	PIP	PIP		PIP
#735C	*Eucalyptus globulus*	southern blue gum	9.0		20'	X		PIP	PIP	PIP		PIP
#736C	*Eucalyptus globulus*	southern blue gum	6.0		20'	X		PIP	PIP	PIP		PIP
#737C	*Eucalyptus globulus*	southern blue gum	7.0		20'	X		PIP	PIP	PIP		PIP
#738C	*Eucalyptus globulus*	southern blue gum	11.0		45'	X		PIP	PIP	PIP		PIP
#739C	*Eucalyptus globulus*	southern blue gum	15.5		40'	X		PIP	PIP	PIP		PIP
#740C	*Eucalyptus globulus*	southern blue gum	35.0	19, 16	40'	X		PIP	PIP	PIP		PIP
#741C	*Eucalyptus globulus*	southern blue gum	8.5		40'	X		PIP	PIP	PIP		PIP
#742C	*Eucalyptus globulus*	southern blue gum	44.0	20, 9, 8, 7	50'	X		PIP	PIP	PIP		PIP
#743C	*Eucalyptus globulus*	southern blue gum	17.5		50'	X		PIP	PIP	PIP		PIP
#744C	*Eucalyptus globulus*	southern blue gum	23.0	13, 10	50'	X		PIP	PIP	PIP		PIP
#745C	*Eucalyptus globulus*	southern blue gum	38.0	20, 18	50'	X		PIP	PIP	PIP		PIP
#746C	*Eucalyptus globulus*	southern blue gum	29.0	21, 8	55'	X		PIP	PIP	PIP		PIP
#747C	*Eucalyptus globulus*	southern blue gum	14.0		45'	X		PIP	PIP	PIP		PIP
#748C	*Eucalyptus globulus*	southern blue gum	12.0		35'	X		PIP	PIP	PIP		PIP
#749C	*Eucalyptus globulus*	southern blue gum	26.0	18, 8	55'	X		PIP	PIP	PIP		PIP
#750C	*Eucalyptus globulus*	southern blue gum	16.5		55'	X		PIP	PIP	PIP		PIP
#751C	*Eucalyptus globulus*	southern blue gum	57.0	20, 14, 14, 9	55'	X		PIP	PIP	PIP		PIP
#752C	*Eucalyptus globulus*	southern blue gum	37.0	14, 12, 11	60'	X		PIP	PIP	PIP		PIP
#753C	*Eucalyptus globulus*	southern blue gum	15.0		45'	X		PIP	PIP	PIP		PIP
#754C	*Eucalyptus globulus*	southern blue gum	23.0	13, 10	45'	X		PIP	PIP	PIP		PIP
#755C	*Eucalyptus globulus*	southern blue gum	14.0		45'	X		PIP	PIP	PIP		PIP
#756C	*Eucalyptus globulus*	southern blue gum	9.0	3, 2, 2, 1, 1	12'	X		PIP	PIP	PIP		PIP
#757C	*Eucalyptus globulus*	southern blue gum	88.0	50, 20, 18	70'	X		PIP	PIP	PIP		PIP
#758C	*Eucalyptus globulus*	southern blue gum	60.0		80'	X		D	PIP	D		PIP
#759C	*Eucalyptus globulus*	southern blue gum	15.0		65'	X		PIP	PIP	PIP		PIP
#760C	*Eucalyptus globulus*	southern blue gum	16.0		80'	X		PIP	PIP	PIP		PIP
#761C	*Eucalyptus globulus*	southern blue gum	35.0		80'	X		PIP	PIP	PIP		PIP
#762C	*Eucalyptus globulus*	southern blue gum	10.5		65'	X		D	PIP	D		PIP
#763C	*Eucalyptus globulus*	southern blue gum	60.0		70'	X		PIP	PIP	PIP		PIP
#764C	*Eucalyptus globulus*	southern blue gum	16.5		70'	X		PIP	PIP	PIP		PIP
#765C	*Eucalyptus globulus*	southern blue gum	9.0		55'	X		PIP	PIP	PIP		PIP
#766C	*Eucalyptus globulus*	southern blue gum	9.5		55'	X		PIP	PIP	PIP		PIP
#767C	*Eucalyptus globulus*	southern blue gum	66.0	17, 16, 12, 11, 10	70'	X		PIP	PIP	PIP		PIP

#768C	*Eucalyptus globulus*	southern blue gum	32.0 *	16, 16 *	70'	X		D	PIP	D		PIP
#769C	*Eucalyptus globulus*	southern blue gum	17.0		70'	X		PIP	PIP	PIP		PIP
#770C	*Eucalyptus globulus*	southern blue gum	22.0		65'	X		PIP	PIP	PIP		PIP
#771C	*Eucalyptus globulus*	southern blue gum	9.0		30'	X		PIP	PIP	PIP		PIP
#772C	*Eucalyptus globulus*	southern blue gum	11.0	6, 5	30'	X		D	PIP	D		PIP
#773C	*Eucalyptus globulus*	southern blue gum	7.5 *		30'	X		PIP	PIP	PIP		PIP
#774C	*Eucalyptus globulus*	southern blue gum	29.0 *	20, 9 *	55'	X		PIP	PIP	PIP		PIP
#775C	*Eucalyptus globulus*	southern blue gum	14.0 *	10, 4 *	35'	X		PIP	PIP	PIP		PIP
#776C	*Eucalyptus globulus*	southern blue gum	21.0		50'	X		D	PIP	D		PIP
#777C	*Eucalyptus globulus*	southern blue gum	10.0		50'	X		D	PIP	D		PIP
#778C	*Eucalyptus globulus*	southern blue gum	18.0		80'	X		PIP	PIP	PIP		PIP
#779C	*Eucalyptus globulus*	southern blue gum	23.0		75'	X		PIP	PIP	PIP		PIP
#780C	*Eucalyptus globulus*	southern blue gum	14.0		55'	X		PIP	PIP	PIP		PIP
#781C	*Eucalyptus globulus*	southern blue gum	9.5		40'	X		PIP	PIP	PIP		PIP
#782C	*Eucalyptus globulus*	southern blue gum	38.0	13, 10, 8, 7	45'	X		PIP	PIP	PIP		PIP
#783C	*Eucalyptus globulus*	southern blue gum	22.0	11, 11	55'	X		PIP	PIP	PIP		PIP
#784C	*Eucalyptus globulus*	southern blue gum	34.0	11, 10, 5, 4, 4	55'	X		PIP	PIP	PIP		PIP
#785C	*Eucalyptus globulus*	southern blue gum	8.5		55'	X		PIP	PIP	PIP		PIP
#786C	*Eucalyptus globulus*	southern blue gum	11.0		55'	X		PIP	PIP	PIP		PIP
#787C	*Eucalyptus globulus*	southern blue gum	46.0	24, 22	55'	X		PIP	PIP	PIP		PIP
#788C	*Eucalyptus globulus*	southern blue gum	17.0		60'	X		PIP	PIP	PIP		PIP
#789C	*Eucalyptus globulus*	southern blue gum	23.5	18, 5.5	55'	X		PIP	PIP	PIP		PIP
#790C	*Eucalyptus globulus*	southern blue gum	40.0	14, 10, 8, 8	60'	X		PIP	PIP	PIP		PIP
#791C	*Eucalyptus globulus*	southern blue gum	22.0		70'	X		PIP	PIP	PIP		PIP
#792C	*Eucalyptus globulus*	southern blue gum	15.0		55'	X		PIP	PIP	PIP		PIP
#793C	*Eucalyptus globulus*	southern blue gum	11.0		45'	X		PIP	PIP	PIP		PIP
#794	*Eucalyptus globulus*	southern blue gum	5.0		30'			PIP	PIP	PIP		PIP
#795C	*Eucalyptus globulus*	southern blue gum	24.0	17, 7	55'	X		PIP	PIP	PIP		PIP
#796C	*Eucalyptus globulus*	southern blue gum	9.5		35'	X		PIP	PIP	PIP		PIP
#797C	*Eucalyptus globulus*	southern blue gum	19.0		80'	X		PIP	PIP	PIP		PIP
#798C	*Eucalyptus globulus*	southern blue gum	9.0		70'	X		PIP	PIP	PIP		PIP
#799C	*Eucalyptus globulus*	southern blue gum	7.0		45'	X		PIP	PIP	PIP		PIP
#800C	*Eucalyptus globulus*	southern blue gum	9.5		45'	X		PIP	PIP	PIP		PIP
#801C	*Eucalyptus globulus*	southern blue gum	8.0		60'	X		PIP	PIP	PIP		PIP

#802C	*Eucalyptus globulus*	southern blue gum	10.5		60'	X		PIP	PIP	PIP	PIP
#803C	*Eucalyptus globulus*	southern blue gum	8.0		70'	X		PIP	PIP	PIP	PIP
#804C	*Eucalyptus globulus*	southern blue gum	34.0		60'	X		D	PIP	D	PIP
#805C	*Eucalyptus globulus*	southern blue gum	88.0	55, 33	85'	X		PIP	PIP	PIP	PIP
#806C	*Eucalyptus globulus*	southern blue gum	36.0		75'	X		PIP	PIP	PIP	PIP
#807C	*Eucalyptus globulus*	southern blue gum	22.0		75'	X		PIP	PIP	PIP	PIP
#808C	*Eucalyptus globulus*	southern blue gum	19.0		60'	X		PIP	PIP	PIP	PIP
#809C	*Eucalyptus globulus*	southern blue gum	38.0	30, 8	75'	X		PIP	PIP	PIP	PIP
#810C	*Eucalyptus globulus*	southern blue gum	35.0	19, 16	85'	X		D	PIP	D	PIP
#811C	*Eucalyptus globulus*	southern blue gum	32.0		85'	X		PIP	PIP	PIP	PIP
#812C	*Eucalyptus globulus*	southern blue gum	36.0		75'	X		D	PIP	D	PIP
#813C	*Eucalyptus globulus*	southern blue gum	30.0		75'	X		D	PIP	D	PIP
#814CN	*Quercus agrifolia*	coast live oak	30.5	7, 5, 4.5, 4, 4, 3, 3	12'	X	X	PIP	PIP	PIP	PIP
#815C	*Eucalyptus globulus*	southern blue gum	17.0 *	9, 8 *	20'	X		PIP	PIP	PIP	PIP
#816CN	*Quercus agrifolia*	coast live oak	13.5	5.5, 5, 3	12'	X	X	PIP	PIP	PIP	PIP
#817CN	*Quercus agrifolia*	coast live oak	12.0	3, 3, 3, 3	10'	X	X	PIP	PIP	PIP	PIP
#818CN	*Quercus agrifolia*	coast live oak	6.0	4, 2	12'	X	X	PIP	PIP	PIP	PIP
#819CN	*Quercus agrifolia*	coast live oak	20.0	6.5, 5, 4.5, 4	12'	X	X	PIP	PIP	PIP	PIP
#820CN	*Quercus agrifolia*	coast live oak	14.0	6, 6, 2	12'	X	X	PIP	PIP	PIP	PIP
#821CN	*Quercus agrifolia*	coast live oak	9.0	6, 3	12'	X	X	PIP	PIP	PIP	PIP
#822CN	*Quercus agrifolia*	coast live oak	30.0	10.5, 8.5, 7, 4	12'	X	X	PIP	PIP	PIP	PIP
#823CN	*Quercus agrifolia*	coast live oak	43.5	6.5, 5.5, 5, 5, 5, 4.5, 4, 4, 4	10'	X	X	PIP	PIP	PIP	PIP
#824CN	*Quercus agrifolia*	coast live oak	28.0	8, 8, 7, 5	10'	X	X	PIP	PIP	PIP	PIP
#825CN	*Quercus agrifolia*	coast live oak	10.5	3, 2, 2, 2, 1.5	8'	X	X	PIP	PIP	PIP	PIP
#826C	*Eucalyptus globulus*	southern blue gum	24.0 *		60'	X		PIP	PIP	PIP	PIP
#827C	*Eucalyptus globulus*	southern blue gum	36.0 *		75'	X		PIP	PIP	PIP	PIP
#828CN	*Salix lasiolepis*	arroyo willow	9.5 *	5, 4.5 *	25'	X	X	D	PIP	D	PIP
#829CN	*Quercus agrifolia*	coast live oak	8.5 *		20'	X	X	D	PIP	D	PIP
#830C	*Eucalyptus globulus*	southern blue gum	20.0	12, 8	65'	X		D	PIP	D	PIP
#831C	*Eucalyptus globulus*	southern blue gum	15.5	8.5, 7	65'	X		D	PIP	D	PIP
#832C	*Eucalyptus globulus*	southern blue gum	16.0	8, 5, 3	65'	X		D	PIP	D	PIP
#833C	*Eucalyptus globulus*	southern blue gum	29,5	12, 10.5, 7	65'	X		D	PIP	D	PIP
#834	*Eucalyptus globulus*	southern blue gum	5.0		65'			D	PIP	D	PIP
#835C	*Eucalyptus globulus*	southern blue gum	23.0	12, 11	75'	X		D	PIP	D	PIP

#836C	*Eucalyptus globulus*	southern blue gum	40.0	32, 8	75'	X		D	PIP	D	PIP
#837C	*Eucalyptus globulus*	southern blue gum	16.0		40'	X		PIP	PIP	PIP	D
#838C	*Eucalyptus globulus*	southern blue gum	30.0		45'	X		PIP	PIP	PIP	D
#839C	*Eucalyptus globulus*	southern blue gum	16.0		70'	X		D	PIP	D	PIP
#840C	*Eucalyptus globulus*	southern blue gum	16.5 *	10.5, 6 *	75'	X		D	PIP	D	PIP
#841C	*Eucalyptus globulus*	southern blue gum	11.0 *		70'	X		D	PIP	D	PIP
#842C	*Eucalyptus globulus*	southern blue gum	9.5 *		70'	X		D	PIP	D	PIP
#843C	*Eucalyptus globulus*	southern blue gum	6.0		30'	X		D	D	NA	D
#844C	*Eucalyptus globulus*	southern blue gum	14.0		50'	X		D	D	NA	D
#845C	*Eucalyptus globulus*	southern blue gum	100.0		90'	X		D	D	NA	D
#846C	*Eucalyptus globulus*	southern blue gum	19.5		90'	X		D	D	NA	D
#847C	*Eucalyptus globulus*	southern blue gum	24.0		85'	X		PIP	PIP	PIP	
#848C	*Eucalyptus globulus*	southern blue gum	26.0		90'	X		PIP	D	NA	
#849C	*Eucalyptus globulus*	southern blue gum	15.0		60'	X		PIP	D	NA	
#850CN	*Quercus agrifolia*	coast live oak	6.0		18'	X	X	PIP	PIP	PIP	
#851	*Eucalyptus globulus*	southern blue gum	5.0		30'			PIP	PIP	PIP	
#852C	*Eucalyptus globulus*	southern blue gum	62.0	28, 12, 11, 11	90'	X		PIP	PIP	PIP	
#853C	*Eucalyptus globulus*	southern blue gum	42.0		95'	X		PIP	PIP	PIP	
#854C	*Eucalyptus globulus*	southern blue gum	33.0	22, 11	90'	X		PIP	PIP	PIP	
#855C	*Eucalyptus globulus*	southern blue gum	20.0		90'	X		D	PIP	D	
#856C	*Eucalyptus globulus*	southern blue gum	18.0 *		90'	X		D	PIP	D	
#857C	*Eucalyptus globulus*	southern blue gum	20.0 *		90'	X		D	PIP	D	
#858C	*Eucalyptus globulus*	southern blue gum	16.0		90'	X		D	PIP	D	
#859C	*Eucalyptus globulus*	southern blue gum	7.5		65'	X		D	PIP	D	
#860C	*Eucalyptus globulus*	southern blue gum	7.0 *		40'	X		D	PIP	D	
#861C	*Eucalyptus globulus*	southern blue gum	7.5 *		45'	X		D	PIP	D	
#862C	*Eucalyptus globulus*	southern blue gum	12.0 *		55'	X		D	PIP	D	
#863C	*Eucalyptus globulus*	southern blue gum	6.0 *		35'	X		D	PIP	D	
#864C	*Eucalyptus globulus*	southern blue gum	19.0 *		70'	X		D	PIP	D	
#865C	*Eucalyptus globulus*	southern blue gum	37.0 *	30, 7 *	85'	X		D	PIP	D	
#866C	*Eucalyptus globulus*	southern blue gum	28.0		80'	X		D	PIP	D	
#867N	*Quercus agrifolia*	coast live oak	5.0 *		20'		X	D	PIP	D	
#868N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D	
#869CN	*Quercus agrifolia*	coast live oak	6.0 *		20'	X	X	D	PIP	D	

#870CN	*Quercus agrifolia*	coast live oak	8.5		20'	X	X	D	PIP	D
#871CN	*Quercus agrifolia*	coast live oak	10.0	7.5, 2.5	20'	X	X	D	PIP	D
#872N	*Quercus agrifolia*	coast live oak	5.5		15'		X	D	PIP	D
#873CN	*Quercus agrifolia*	coast live oak	10.5	5, 4, 1.5	20'	X	X	D	PIP	D
#874N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	PIP	D
#875C	*Eucalyptus globulus*	southern blue gum	26.0	18, 8	70'	X		D	PIP	D
#876C	*Eucalyptus globulus*	southern blue gum	41.0 *	9, 8, 8, 7, 5, 4 *	50'	X		D	PIP	D
#877C	*Eucalyptus globulus*	southern blue gum	11.0 *		50'	X		D	PIP	D
#878C	*Eucalyptus globulus*	southern blue gum	9.0 *		50'	X		D	PIP	D
#879C	*Eucalyptus globulus*	southern blue gum	10.5 *	7.5, 3 *	35'	X		D	PIP	D
#880C	*Eucalyptus globulus*	southern blue gum	38.5 *	21, 14, 3.5 *	90'	X		D	PIP	D
#881C	*Eucalyptus globulus*	southern blue gum	16.0		80'	X		D	PIP	D
#882C	*Eucalyptus globulus*	southern blue gum	28.0		90'	X		D	PIP	D
#883CN	*Aesculus californica*	California buckeye	8.0 *	4.5, 3.5 *	25'	X	X	D	PIP	D
#884C	*Eucalyptus globulus*	southern blue gum	14.0 *		70'	X		D	PIP	D
#885C	*Eucalyptus globulus*	southern blue gum	31.0		110'	X		PIP	PIP	PIP
#886C	*Eucalyptus globulus*	southern blue gum	20.0	15, 5	70'	X		D	PIP	D
#887C	*Eucalyptus globulus*	southern blue gum	29.0		100'	X		D	PIP	D
#888C	*Eucalyptus globulus*	southern blue gum	14.0		60'	X		D	PIP	D
#889C	*Eucalyptus globulus*	southern blue gum	28.0		110'	X		D	PIP	D
#890C	*Eucalyptus globulus*	southern blue gum	19.0		80'	X		D	PIP	D
#891C	*Eucalyptus globulus*	southern blue gum	6.0 *		65'	X		D	PIP	D
#892C	*Eucalyptus globulus*	southern blue gum	11.0 *		70'	X		D	PIP	D
#893C	*Eucalyptus globulus*	southern blue gum	17.5 *		90'	X		D	PIP	D
#894C	*Eucalyptus globulus*	southern blue gum	10.0	5, 3, 2	30'	X		PIP	D	NA
#895C	*Eucalyptus globulus*	southern blue gum	22.0 *		80'	X		PIP	PIP	PIP
#896C	*Eucalyptus globulus*	southern blue gum	19.0 *		80'	X		PIP	PIP	PIP
#897CN	*Quercus agrifolia*	coast live oak	10.0		25'	X	X	PIP	PIP	PIP
#898C	*Eucalyptus globulus*	southern blue gum	23.0		80'	X		PIP	PIP	PIP
#899C	*Eucalyptus globulus*	southern blue gum	38.0 *		95'	X		PIP	PIP	PIP
#900N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#901C	*Eucalyptus globulus*	southern blue gum	21.5	17, 4.5	70'	X		PIP	PIP	PIP
#902CN	*Quercus agrifolia*	coast live oak	8.0 *		25'	X	X	PIP	PIP	PIP
#903CN	*Quercus agrifolia*	coast live oak	6.5		20'	X	X	PIP	PIP	PIP

#904C	*Eucalyptus globulus*	southern blue gum	22.0		90'	X		PIP	PIP	PIP
#905C	*Eucalyptus globulus*	southern blue gum	48.0 *	14, 13, 13, 8 *	95'	X		PIP	PIP	PIP
#906CN	*Quercus agrifolia*	coast live oak	34.0	15, 9, 5, 5	25'	X	X	PIP	PIP	PIP
#907C	*Eucalyptus globulus*	southern blue gum	25.0		80'	X		PIP	PIP	PIP
#908C	*Eucalyptus globulus*	southern blue gum	40.0 *	30, 10 *	100'	X		PIP	PIP	PIP
#909	*Ulmus minor*	English elm	5.5 *		25'			PIP	PIP	PIP
#910CN	*Quercus agrifolia*	coast live oak	8.0 *	5, 3 *	20'	X	X	PIP	PIP	PIP
#911C	*Eucalyptus globulus*	southern blue gum	6.0		45'	X		PIP	PIP	PIP
#912C	*Eucalyptus globulus*	southern blue gum	6.0		45'	X		D	PIP	D
#913C	*Eucalyptus globulus*	southern blue gum	8.0		60'	X		D	PIP	D
#914	*Eucalyptus globulus*	southern blue gum	4.0		40'			PIP	D	NA
#915	*Eucalyptus globulus*	southern blue gum	4.0		40'			PIP	D	NA
#916CN	*Salix lasiolepis*	arroyo willow	9.0		30'	X	X	D	PIP	D
#917CN	*Quercus agrifolia*	coast live oak	11.0	4, 4, 3	15'	X	X	D	PIP	D
#918CN	*Salix lasiolepis*	arroyo willow	20.0	7, 7, 6	40'	X	X	D	PIP	D
#919CN	*Salix lasiolepis*	arroyo willow	20.0	12, 8	45'	X	X	D	PIP	D
#920CN	*Salix lasiolepis*	arroyo willow	26.0	16, 10	40'	X	X	D	PIP	D
#921	*Eucalyptus globulus*	southern blue gum	4.5		35'			D	D	NA
#922CN	*Salix lasiolepis*	arroyo willow	10.0		30'	X	X	D	PIP	D
#923CN	*Salix lasiolepis*	arroyo willow	17.5	9.5, 8	45'	X	X	D	PIP	D
#924CN	*Salix lasiolepis*	arroyo willow	27.0	16, 11	45'	X	X	D	PIP	D
#925C	*Prunus cerasifera*	cherry plum	6.0		25'	X		PIP	PIP	PIP
#926CN	*Quercus agrifolia*	coast live oak	36.0		45'	X	X	PIP	PIP	PIP
#927C	*Prunus cerasifera*	cherry plum	10.0	7, 3	15'	X		D	PIP	D
#928CN	*Quercus agrifolia*	coast live oak	20.0 *		35'	X	X	D	PIP	D
#929CN	*Quercus agrifolia*	coast live oak	11.0 *		25'	X	X	PIP	PIP	PIP
#930CN	*Quercus agrifolia*	coast live oak	23.0 *		35'	X	X	PIP	PIP	PIP
#931CN	*Quercus agrifolia*	coast live oak	36.0 *	18, 18 *	35'	X	X	D	PIP	D
#932CN	*Quercus agrifolia*	coast live oak	36.0 *		35'	X	X	D	PIP	D
#933CN	*Quercus agrifolia*	coast live oak	33.0 *		40'	X	X	D	PIP	D
#934CN	*Quercus agrifolia*	coast live oak	22.0 *		25'	X	X	D	PIP	D
#935CN	*Quercus agrifolia*	coast live oak	44.0 *	14, 13, 9, 8 *	35'	X	X	D	PIP	D
#936C	*Prunus cerasifera*	cherry plum	8.0 *	5, 3 *	20'	X		D	PIP	D
#937CN	*Quercus agrifolia*	coast live oak	8.0 *		15'	X	X	D	PIP	D

#938CN	*Quercus agrifolia*	coast live oak	14.0 *		35'	X	X	D	PIP	D
#939C	*Prunus cerasifera*	cherry plum	6.0 *		20'	X		D	PIP	D
#940CN	*Quercus agrifolia*	coast live oak	22.0 *		35'	X	X	D	PIP	D
#941CN	*Quercus agrifolia*	coast live oak	11.0		30'	X	X	D	PIP	D
#942CN	*Quercus agrifolia*	coast live oak	13.0		20'	X	X	D	PIP	D
#943CN	*Quercus agrifolia*	coast live oak	38.0	20, 18	35'	X	X	PIP	PIP	PIP
#944CN	*Salix lasiolepis*	arroyo willow	10.0	7, 3	15'	X	X	D	PIP	D
#945CN	*Salix lasiolepis*	arroyo willow	18.0		20'	X	X	PIP	PIP	PIP
#946CN	*Quercus agrifolia*	coast live oak	7.0	3, 2, 2	15'	X	X	D	PIP	D
#947CN	*Salix lasiolepis*	arroyo willow	9.0	5, 4	20'	X	X	D	PIP	D
#948CN	*Quercus agrifolia*	coast live oak	15.0	5, 4, 3, 3	20'	X	X	PIP	PIP	PIP
#949CN	*Salix lasiolepis*	arroyo willow	19.0		20'	X	X	PIP	PIP	PIP
#950CN	*Salix laevigata*	red willow	10.0	5, 5	25'	X	X	PIP	PIP	PIP
#951CN	*Salix laevigata*	red willow	13.5	5.5, 5, 3	25'	X	X	PIP	PIP	PIP
#952CN	*Salix lasiolepis*	arroyo willow	11.0 *	6, 5 *	25'	X	X	PIP	PIP	PIP
#953CN	*Salix lasiolepis*	arroyo willow	32.0	6, 6, 5, 5, 4, 3, 3	30'	X	X	PIP	PIP	PIP
#954CN	*Salix lasiolepis*	arroyo willow	53.0	10, 10, 10, 5, 5, 5, 5, 3	25'	X	X	PIP	PIP	PIP
#955C	*Eucalyptus globulus*	southern blue gum	65.0	24, 22, 19	70'	X		PIP	PIP	PIP
#956C	*Eucalyptus globulus*	southern blue gum	38.0		80'	X		PIP	PIP	PIP
#957C	*Eucalyptus globulus*	southern blue gum	18.0 *		75'	X		PIP	PIP	PIP
#958C	*Eucalyptus globulus*	southern blue gum	72.0 *	36, 20, 16 *	80'	X		PIP	PIP	PIP
#959CN	*Frangula californica*	coffeeberry	12.0	3, 3, 2, 2, 2	20'	X	X	PIP	PIP	PIP
#960CN	*Quercus agrifolia*	coast live oak	12.0		25'	X	X	PIP	PIP	PIP
#961CN	*Frangula californica*	coffeeberry	12.0	3, 2, 2, 2, 1, 1, 1	20'	X	X	PIP	PIP	PIP
#962CN	*Quercus agrifolia*	coast live oak	14.0		25'	X	X	PIP	PIP	PIP
#963C	*Eucalyptus globulus*	southern blue gum	48.0		90'	X		PIP	PIP	PIP
#964C	*Eucalyptus globulus*	southern blue gum	11.0		60'	X		PIP	PIP	PIP
#965CN	*Sambucus nigra ssp. caerulea*	blue elderberry	8.0 *		20'	X	X	PIP	PIP	PIP
#966CN	*Quercus agrifolia*	coast live oak	14.0		35'	X	X	PIP	PIP	PIP
#967C	*Eucalyptus globulus*	southern blue gum	42.0	29, 13	80'	X		PIP	PIP	PIP
#968C	*Eucalyptus globulus*	southern blue gum	19.0 *		70'	X		PIP	PIP	PIP
#969C	*Eucalyptus globulus*	southern blue gum	26.0	17, 9	65'	X		PIP	PIP	PIP
#970	*Eucalyptus globulus*	southern blue gum	5.0		55'			PIP	D	NA
#971C	*Eucalyptus globulus*	southern blue gum	12.0	7, 5	60'	X		PIP	D	NA

#972CN	*Quercus agrifolia*	coast live oak	10.0	6, 4	15'	X	X	PIP	PIP	PIP
#973CN	*Pinus radiata*	Monterey pine	32.0		65'	X	X	PIP	D	NA
#974N	*Quercus agrifolia*	coast live oak	4.5		15'		X	PIP	PIP	PIP
#975CN	*Quercus agrifolia*	coast live oak	8.5		25'	X	X	PIP	PIP	PIP
#976CN	*Quercus agrifolia*	coast live oak	19.0	10.5, 8.5	25'	X	X	PIP	PIP	PIP
#977CN	*Quercus agrifolia*	coast live oak	13.0		30'	X	X	PIP	PIP	PIP
#978CN	*Quercus agrifolia*	coast live oak	11.5		30'	X	X	PIP	PIP	PIP
#979CN	*Quercus agrifolia*	coast live oak	11.0		25'	X	X	PIP	PIP	PIP
#980CN	*Quercus agrifolia*	coast live oak	13.0		25'	X	X	PIP	PIP	PIP
#981CN	*Quercus agrifolia*	coast live oak	8.0		25'	X	X	PIP	PIP	PIP
#982CN	*Quercus agrifolia*	coast live oak	10.0		25'	X	X	PIP	PIP	PIP
#983CN	*Quercus agrifolia*	coast live oak	9.5		20'	X	X	PIP	PIP	PIP
#984CN	*Quercus agrifolia*	coast live oak	38.0	13, 13, 12	35'	X	X	D	PIP	D
#985CN	*Quercus agrifolia*	coast live oak	11.0		20'	X	X	D	D	NA
#986	*Eucalyptus globulus*	southern blue gum	4.5		30'			D	D	NA
#987C	*Eucalyptus globulus*	southern blue gum	85.0	34, 31, 20	90'	X		D	D	NA
#988C	*Eucalyptus globulus*	southern blue gum	50.0	32, 18	90'	X		D	D	NA
#989C	*Eucalyptus globulus*	southern blue gum	40.0		90'	X		D	PIP	D
#990C	*Eucalyptus globulus*	southern blue gum	41.0		100'	X		D	D	NA
#991C	*Eucalyptus globulus*	southern blue gum	38.0		90'	X		D	D	NA
#992C	*Eucalyptus globulus*	southern blue gum	44.0	25, 19	100'	X		D	D	NA
#993N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	PIP	D
#994C	*Eucalyptus globulus*	southern blue gum	15.5	9.5, 6	45'	X		D	D	NA
#995CN	*Salix lasiolepis*	arroyo willow	9.0		35'	X	X	D	PIP	D
#996C	*Eucalyptus globulus*	southern blue gum	23.0		75'	X		D	D	NA
#997CN	*Quercus agrifolia*	coast live oak	9.0		25'	X	X	D	PIP	D
#998C	*Eucalyptus globulus*	southern blue gum	16.5		75'	X		D	PIP	D
#999CN	*Quercus agrifolia*	coast live oak	21.5	9, 7.5, 5	25'	X	X	D	PIP	D
#1000N	*Salix lasiolepis*	arroyo willow	4.0		20'		X	PIP	PIP	PIP
Tree tags 1001-2000 were intentially omitted from this tree inventory.										
#2001C	*Eucalyptus globulus*	southern blue gum	18.0		75'	X		D	PIP	D
#2002CN	*Quercus agrifolia*	coast live oak	10.0		25'	X	X	D	PIP	D
#2003C	*Eucalyptus globulus*	southern blue gum	42.0	18, 17, 7	90'	X		D	PIP	D
#2004C	*Eucalyptus globulus*	southern blue gum	42.0		90'	X		D	PIP	D

#2005	*Eucalyptus globulus*	southern blue gum	4.5		25'			D	D	NA
#2006	*Eucalyptus globulus*	southern blue gum	4.5		30'			D	PIP	D
#2007C	*Eucalyptus globulus*	southern blue gum	42.0	37, 5	100'	X		D	PIP	D
#2008CN	*Quercus agrifolia*	coast live oak	6.5		25'	X	X	D	PIP	D
#2009C	*Eucalyptus globulus*	southern blue gum	7.0		55'	X		D	PIP	D
#2010C	*Eucalyptus globulus*	southern blue gum	23.0	15, 8	85'	X		D	PIP	D
#2011C	*Eucalyptus globulus*	southern blue gum	22.0	12, 10	75'	X		D	PIP	D
#2012C	*Eucalyptus globulus*	southern blue gum	9.0		60'	X		D	PIP	D
#2013CN	*Quercus agrifolia*	coast live oak	6.5	4.5, 2	15'	X	X	D	PIP	D
#2014C	*Eucalyptus globulus*	southern blue gum	9.0		65'	X		D	PIP	D
#2015C	*Eucalyptus globulus*	southern blue gum	22.0		70'	X		D	PIP	D
#2016C	*Eucalyptus globulus*	southern blue gum	8.5		75'	X		PIP	PIP	PIP
#2017C	*Eucalyptus globulus*	southern blue gum	26.0	15, 11	75'	X		PIP	PIP	PIP
#2018C	*Eucalyptus globulus*	southern blue gum	17.0	10, 7	75'	X		PIP	PIP	PIP
#2019C	*Eucalyptus globulus*	southern blue gum	44.0	23, 21	100'	X		PIP	PIP	PIP
#2020C	*Eucalyptus globulus*	southern blue gum	65.0	49, 8, 8	100'	X		PIP	PIP	PIP
#2021C	*Eucalyptus globulus*	southern blue gum	26.5	16, 10.5	75'	X		PIP	PIP	PIP

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Significant Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#2022	*Eucalyptus globulus*	southern blue gum	14.0	7, 7	65'			PIP	PIP	PIP	
#2023	*Eucalyptus globulus*	southern blue gum	4.0		35'			PIP	PIP	PIP	
#2024	*Eucalyptus globulus*	southern blue gum	4.5		30'			PIP	PIP	PIP	
#2025	*Eucalyptus globulus*	southern blue gum	7.0		45'			PIP	PIP	PIP	
#2026	*Eucalyptus globulus*	southern blue gum	62.0	54, 8	120'			PIP	PIP	PIP	
#2027	*Eucalyptus globulus*	southern blue gum	8.0		50'			PIP	PIP	PIP	
#2028	*Eucalyptus globulus*	southern blue gum	13.0 *		65'			PIP	PIP	PIP	
#2029	*Eucalyptus globulus*	southern blue gum	28.0 *	14, 4 *	65'			PIP	PIP	PIP	
#2030	*Eucalyptus globulus*	southern blue gum	16.0 *		65'			PIP	PIP	PIP	
#2031	*Eucalyptus globulus*	southern blue gum	17.0 *	10, 7 *	65'			PIP	PIP	PIP	
#2032S	*Eucalyptus globulus*	southern blue gum	34.0 *		100'	X		PIP	PIP	PIP	
#2033N	*Acer macrophyllum*	bigleaf maple	13.0 *		35'		X	PIP	PIP	PIP	
#2034SN	*Quercus agrifolia*	coast live oak	20.0 *		40'	X	X	PIP	PIP	PIP	
#2035N	*Quercus agrifolia*	coast live oak	5.0 *		15'		X	PIP	PIP	PIP	
#2036N	*Quercus agrifolia*	coast live oak	18.0 *		40'		X	D	PIP	D	
#2037S	*Eucalyptus globulus*	southern blue gum	32.0 *		100'	X		D	PIP	D	

#2038S	*Eucalyptus globulus*	southern blue gum	20.0 *		75'	X		PIP	PIP	PIP
#2039	*Eucalyptus globulus*	southern blue gum	7.5 *		45'			PIP	PIP	PIP
#2040	*Eucalyptus globulus*	southern blue gum	32.0 *	11, 10, 6, 5 *	50'			PIP	PIP	PIP
#2041	*Eucalyptus globulus*	southern blue gum	25.0 *	18, 4, 3 *	50'			PIP	PIP	PIP
#2042	*Eucalyptus globulus*	southern blue gum	4.5 *		45'			D	PIP	D
#2043	*Eucalyptus globulus*	southern blue gum	12.5 *	8.5, 4 *	50'			D	PIP	D
#2044N	*Quercus agrifolia*	coast live oak	10.0 *		25'		X	D	PIP	D
#2045N	*Quercus agrifolia*	coast live oak	18.0 *		35'		X	D	PIP	D
#2046N	*Quercus agrifolia*	coast live oak	15.0 *		30'		X	D	PIP	D
#2047	*Eucalyptus globulus*	southern blue gum	8.0 *	5, 3 *	35'			D	PIP	D
#2048N	*Quercus agrifolia*	coast live oak	19.0 *		30'		X	D	PIP	D
#2049	*Eucalyptus globulus*	southern blue gum	51.0 *	30, 21 *	80'			D	PIP	D
#2050	*Pittosporum undulatum*	Victorian box	12.0 *	7, 5 *	35'			D	PIP	D
#2051	*Pittosporum undulatum*	Victorian box	20.0 *	9, 9, 2 *	35'			D	PIP	D
#2052SN	*Sequoia sempervirens*	coast redwood	25.0 *		70'	X	X	D	PIP	D
#2053N	*Sequoia sempervirens*	coast redwood	9.0 *		30'		X	PIP	PIP	PIP
#2054SN	*Sequoia sempervirens*	coast redwood	23.0 *		65'	X	X	PIP	PIP	PIP
#2055	*Pittosporum undulatum*	Victorian box	17.0 *		40'			D	PIP	D
#2056N	*Sequoia sempervirens*	coast redwood	8.0		20'		X	D	PIP	D
#2057N	*Quercus agrifolia*	coast live oak	26.0	14, 12	40'		X	PIP	PIP	PIP
#2058SN	*Quercus agrifolia*	coast live oak	22.0		40'	X	X	PIP	PIP	PIP
#2059S	*Eucalyptus globulus*	southern blue gum	29.0		75'	X		PIP	PIP	PIP
#2060	*Eucalyptus globulus*	southern blue gum	66.0	41, 25	75'			PIP	PIP	PIP
#2061	*Eucalyptus globulus*	southern blue gum	80.0	57, 23	80'			PIP	PIP	PIP
#2062N	*Quercus agrifolia*	coast live oak	28.0	15, 13	40'		X	PIP	PIP	PIP
#2063N	*Quercus agrifolia*	coast live oak	15.0		20'		X	PIP	PIP	PIP
#2064N	*Quercus agrifolia*	coast live oak	14.0		25'		X	PIP	PIP	PIP
#2065	*Eucalyptus globulus*	southern blue gum	85.0	31, 28, 26	80'			PIP	PIP	PIP
#2066N	*Quercus agrifolia*	coast live oak	14.5	6, 5.5, 3	20'		X	PIP	PIP	PIP
#2067SN	*Quercus agrifolia*	coast live oak	28.0		30'	X	X	PIP	PIP	PIP
#2068N	*Quercus agrifolia*	coast live oak	13.0		20'		X	PIP	PIP	PIP
#2069N	*Quercus agrifolia*	coast live oak	16.0 *	9, 7 *	30'		X	PIP	PIP	PIP
#2070	*Eucalyptus globulus*	southern blue gum	8.0 *		30'			PIP	PIP	PIP
#2071	*Acacia melanoxylon*	Australian blackwood	4.5		30'			PIP	PIP	PIP

#2072S	*Eucalyptus globulus*	southern blue gum	38.0 *		80'	X		PIP	PIP	PIP
#2073	*Acacia melanoxylon*	Australian blackwood	16.0 *		65'			PIP	PIP	PIP
#2074N	*Quercus agrifolia*	coast live oak	9.0 *		20'		X	PIP	PIP	PIP
#2075	*Eucalyptus globulus*	southern blue gum	6.0 *		30'			PIP	PIP	PIP
#2076	*Eucalyptus globulus*	southern blue gum	11.0 *		50'			PIP	PIP	PIP
#2077	*Eucalyptus globulus*	southern blue gum	15.0 *		60'			PIP	PIP	PIP
#2078	*Eucalyptus globulus*	southern blue gum	7.0 *		30'			PIP	PIP	PIP
#2079	*Eucalyptus globulus*	southern blue gum	12.0 *	6, 6 *	40'			PIP	PIP	PIP
#2080	*Eucalyptus globulus*	southern blue gum	11.0		40'			PIP	PIP	PIP
#2081	*Eucalyptus globulus*	southern blue gum	15.0		65'			PIP	PIP	PIP
#2082N	*Quercus agrifolia*	coast live oak	4.0		20'		X	PIP	PIP	PIP
#2083	*Eucalyptus globulus*	southern blue gum	24.0 *	10, 7, 7 *	75'			PIP	PIP	PIP
#2084	*Eucalyptus globulus*	southern blue gum	29.0 *	18, 11 *	70'			PIP	PIP	PIP
#2085	*Eucalyptus globulus*	southern blue gum	21.0 *	12, 9 *	70'			PIP	PIP	PIP
#2086	*Eucalyptus globulus*	southern blue gum	7.0 *		60'			PIP	PIP	PIP
#2087	*Eucalyptus globulus*	southern blue gum	11.0 *		60'			PIP	PIP	PIP
#2088	*Eucalyptus globulus*	southern blue gum	7.0 *		60'			PIP	PIP	PIP
#2089	*Eucalyptus globulus*	southern blue gum	13.0 *		60'			PIP	PIP	PIP
#2090	*Eucalyptus globulus*	southern blue gum	46.0 *	19, 14, 13 *	75'			PIP	PIP	PIP
#2091	*Eucalyptus globulus*	southern blue gum	13.0	7, 3, 3	20'			PIP	PIP	PIP
#2092	*Eucalyptus globulus*	southern blue gum	8.0 *		45'			PIP	PIP	PIP
#2093	*Eucalyptus globulus*	southern blue gum	7.0 *		45'			PIP	PIP	PIP
#2094	*Eucalyptus globulus*	southern blue gum	16.0 *		70'			PIP	PIP	PIP
#2095	*Eucalyptus globulus*	southern blue gum	7.0 *		45'			PIP	PIP	PIP
#2096	*Eucalyptus globulus*	southern blue gum	11.0 *		60'			PIP	PIP	PIP
#2097	*Eucalyptus globulus*	southern blue gum	23.0 *	10, 7, 6 *	75'			PIP	PIP	PIP
#2098N	*Quercus agrifolia*	coast live oak	4.0 *		20'		X	PIP	PIP	PIP
#2099	*Eucalyptus globulus*	southern blue gum	17.0		60'			PIP	PIP	PIP
#2100S	*Eucalyptus globulus*	southern blue gum	21.0		60'	X		PIP	PIP	PIP
#2101	*Eucalyptus globulus*	southern blue gum	42.0	25, 8, 5, 4	90'			PIP	PIP	PIP
#2102N	*Pinus radiata*	Monterey pine	4.5		30'		X	PIP	PIP	PIP
#2103	*Eucalyptus globulus*	southern blue gum	42.0	34, 4, 4	90'			PIP	PIP	PIP
#2104	*Eucalyptus globulus*	southern blue gum	18.5	13, 5.5	70'			PIP	PIP	PIP
#2105	*Eucalyptus globulus*	southern blue gum	12.0	4, 4, 4	25'			PIP	PIP	PIP

#2106	*Eucalyptus globulus*	southern blue gum	6.0		45'			PIP	PIP	PIP
#2107N	*Pinus radiata*	Monterey pine	7.5		45'		X	PIP	PIP	PIP
#2108	*Eucalyptus globulus*	southern blue gum	9.0		40'			PIP	PIP	PIP
#2109	*Eucalyptus globulus*	southern blue gum	17.0 *	7, 6, 4 *	60'			PIP	PIP	PIP
#2110S	*Eucalyptus globulus*	southern blue gum	21.0		70'	X		PIP	PIP	PIP
#2111	*Eucalyptus globulus*	southern blue gum	19.0		75'			PIP	PIP	PIP
#2112	*Eucalyptus globulus*	southern blue gum	6.0		50'			PIP	PIP	PIP
#2113N	*Quercus agrifolia*	coast live oak	5.5		15'		X	PIP	PIP	PIP
#2114S	*Eucalyptus globulus*	southern blue gum	34.5		80'	X		PIP	PIP	PIP
#2115S	*Eucalyptus globulus*	southern blue gum	23.0		75'	X		PIP	PIP	PIP
#2116	*Eucalyptus globulus*	southern blue gum	9.0 *		55'			PIP	PIP	PIP
#2117	*Eucalyptus globulus*	southern blue gum	9.5 *		55'			PIP	PIP	PIP
#2118	*Eucalyptus globulus*	southern blue gum	9.0 *	6, 3 *	40'			PIP	PIP	PIP
#2119	*Eucalyptus globulus*	southern blue gum	12.0 *	6, 4, 2 *	55'			PIP	PIP	PIP
#2120	*Eucalyptus globulus*	southern blue gum	28.0 *	14, 4 *	55'			PIP	PIP	PIP
#2121N	*Quercus agrifolia*	coast live oak	5.5 *		25'		X	PIP	PIP	PIP
#2122N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2123N	*Sequoia sempervirens*	coast redwood	17.0 *		60'		X	PIP	PIP	PIP
#2124SN	*Sequoia sempervirens*	coast redwood	22.0 *		60'	X	X	D	PIP	D
#2125SN	*Quercus agrifolia*	coast live oak	34.0 *		50'	X	X	PIP	PIP	PIP
#2126N	*Sequoia sempervirens*	coast redwood	11.0 *		45'		X	D	PIP	D
#2127N	*Sequoia sempervirens*	coast redwood	12.0 *		40'		X	D	PIP	D
#2128N	*Sequoia sempervirens*	coast redwood	13.0 *		45'		X	D	PIP	D
#2129	*Eucalyptus globulus*	southern blue gum	84.0 *	40, 32, 12 *	75'			D	PIP	D
#2130S	*Eucalyptus globulus*	southern blue gum	23.0 *		75'	X		D	PIP	D
#2131N	*Quercus agrifolia*	coast live oak	14.0 *	8, 6 *	25'		X	D	PIP	D
#2132	NOT USED									
#2133N	*Quercus agrifolia*	coast live oak	7.5 *		20'		X	D	PIP	D
#2134N	*Quercus agrifolia*	coast live oak	25.0 *	17, 8 *	30'		X	D	PIP	D
#2135SN	*Quercus agrifolia*	coast live oak	34.0 *		40'	X	X	D	PIP	D
#2136N	*Quercus agrifolia*	coast live oak	15.0 *	8, 7 *	25'		X	D	PIP	D
#2137N	*Quercus agrifolia*	coast live oak	13.0 *	7, 6 *	25'		X	D	PIP	D
#2138N	*Salix laevigata*	red willow	5.0 *		20'		X	D	PIP	D
#2139SN	*Quercus agrifolia*	coast live oak	30.0 *		30'	X	X	D	PIP	D

#2140N	*Quercus agrifolia*	coast live oak	47.0 *	25, 22 *	40'		X	D	PIP	D
#2141	*Eucalyptus globulus*	southern blue gum	19.0		75'			D	PIP	D
#2142N	*Quercus agrifolia*	coast live oak	8.0 *		25'		X	D	PIP	D
#2143S	*Eucalyptus globulus*	southern blue gum	44.0 *		80'	X		D	PIP	D
#2144	*Eucalyptus globulus*	southern blue gum	28.0 *	19, 9 *	75'			D	PIP	D
#2145S	*Eucalyptus globulus*	southern blue gum	22.0 *		90'	X		D	PIP	D
#2146S	*Eucalyptus globulus*	southern blue gum	30.0 *		90'	X		D	PIP	D
#2147N	*Quercus agrifolia*	coast live oak	7.0 *		15'		X	D	PIP	D
#2148N	*Pinus radiata*	Monterey pine	9.5		45'		X	D	PIP	D
#2149S	*Eucalyptus globulus*	southern blue gum	78.0 *	31, 27, 20 *	75'	X		D	PIP	D
#2150N	*Pinus radiata*	Monterey pine	5.0 *		35'		X	D	PIP	D
#2151N	*Quercus agrifolia*	coast live oak	14.0 *	8, 6 *	20'		X	D	PIP	D
#2152S	*Eucalyptus globulus*	southern blue gum	26.0		80'	X		D	PIP	D
#2153	*Eucalyptus globulus*	southern blue gum	48.0 *	29, 19 *	80'			D	PIP	D
#2154	*Eucalyptus globulus*	southern blue gum	17.0 *		70'			D	PIP	D
#2155	*Eucalyptus globulus*	southern blue gum	17.0		80'			D	PIP	D
#2156	*Eucalyptus globulus*	southern blue gum	8.0 *		50'			D	PIP	D
#2157S	*Eucalyptus globulus*	southern blue gum	30.0 *		80'	X		PIP	PIP	PIP
#2158	*Eucalyptus globulus*	southern blue gum	31.0 *	18, 13 *	75'			D	PIP	D
#2159N	*Pinus radiata*	Monterey pine	8.0 *		35'		X	D	PIP	D
#2160	*Eucalyptus globulus*	southern blue gum	17.0 *		75'			D	PIP	D
#2161S	*Eucalyptus globulus*	southern blue gum	24.0 *		75'	X		D	PIP	D
#2162	*Eucalyptus globulus*	southern blue gum	8.0		45'			D	PIP	D
#2163	*Eucalyptus globulus*	southern blue gum	34.0 *	17, 17 *	65'			D	PIP	D
#2164S	*Eucalyptus globulus*	southern blue gum	21.0		75'	X		D	PIP	D
#2165	*Eucalyptus globulus*	southern blue gum	17.0		70'			D	PIP	D
#2166	*Eucalyptus globulus*	southern blue gum	7.0 *		25'			D	PIP	D
#2167	*Eucalyptus globulus*	southern blue gum	10.0 *		50'			D	PIP	D
#2168S	*Eucalyptus globulus*	southern blue gum	22.0 *		75'	X		D	PIP	D
#2169S	*Eucalyptus globulus*	southern blue gum	29.0 *		85'	X		D	PIP	D
#2170	*Eucalyptus globulus*	southern blue gum	15.0 *		70'			D	PIP	D
#2171S	*Eucalyptus globulus*	southern blue gum	28.0 *		85'	X		D	PIP	D
#2172	*Eucalyptus globulus*	southern blue gum	12.0 *		55'			D	PIP	D
#2173S	*Eucalyptus globulus*	southern blue gum	30.0		85'	X		D	PIP	D

#2174	*Eucalyptus globulus*	southern blue gum	11.0		35'			D	PIP	D
#2175	*Eucalyptus globulus*	southern blue gum	53.0	32, 13, 8	85'			D	PIP	D
#2176	*Hesperocyparis macrocarpa*	Monterey cypress	17.0		70'			D	PIP	D
#2177S	*Eucalyptus globulus*	southern blue gum	28.0		85'	X		D	PIP	D
#2178	*Eucalyptus globulus*	southern blue gum	12.0	5, 4, 3	45'			D	PIP	D
#2179S	*Eucalyptus globulus*	southern blue gum	24.0		45'	X		D	PIP	D
#2180	*Eucalyptus globulus*	southern blue gum	12.0		60'			D	PIP	D
#2181	*Hesperocyparis macrocarpa*	Monterey cypress	6.0		25'			D	PIP	D
#2182	*Eucalyptus globulus*	southern blue gum	8.0		40'			D	PIP	D
#2183N	*Quercus agrifolia*	coast live oak	7.5		20'		X	PIP	PIP	PIP
#2184S	*Acacia melanoxylon*	Australian blackwood	22.0		45'	X		D	PIP	D
#2185N	*Quercus agrifolia*	coast live oak	10.0		20'		X	D	PIP	D
#2186	*Acacia melanoxylon*	Australian blackwood	8.0 *		20'			PIP	PIP	PIP
#2187N	*Acer macrophyllum*	bigleaf maple	12.0 *		35'		X	PIP	PIP	PIP
#2188N	*Quercus agrifolia*	coast live oak	16.5	9.5, 7	35'		X	PIP	PIP	PIP
#2189N	*Quercus agrifolia*	coast live oak	15.5	8.5, 7	40'		X	PIP	PIP	PIP
#2190	*Acacia melanoxylon*	Australian blackwood	45.0	16.5, 12.5, 9, 7	35'			PIP	PIP	PIP
#2191	*Myoporum laetum*	ngaio	12.5		30'			D	PIP	D
#2192	*Myoporum laetum*	ngaio	20.5	8, 6.5, 4, 2	30'			D	PIP	D
#2193	*Myoporum laetum*	ngaio	12.5	6, 3.5, 3	30'			D	PIP	D
#2194N	*Quercus agrifolia*	coast live oak	11.5		20'		X	PIP	PIP	PIP
#2195	*Acacia melanoxylon*	Australian blackwood	19.0		40'			PIP	PIP	PIP
#2196N	*Quercus agrifolia*	coast live oak	24.5	12.5, 12	35'		X	PIP	PIP	PIP
#2197	*Myoporum laetum*	ngaio	10.5	5.5, 3, 2	20'			D	PIP	D
#2198N	*Quercus agrifolia*	coast live oak	4.0		15'		X	PIP	PIP	PIP
#2199N	*Quercus agrifolia*	coast live oak	26.5	10, 9, 7.5	30'		X	D	PIP	D
#2200N	*Quercus agrifolia*	coast live oak	19.5	10, 9.5	30'		X	PIP	PIP	PIP
#2201N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2202	*Myoporum laetum*	ngaio	11.5	8, 3.5	25'			D	PIP	D
#2203N	*Quercus agrifolia*	coast live oak	25.5	17.5, 8	30'		X	PIP	PIP	PIP
#2204N	*Quercus agrifolia*	coast live oak	7.5		15'		X	PIP	PIP	PIP
#2205N	*Quercus agrifolia*	coast live oak	24.5	15, 9.5	20'		X	PIP	PIP	PIP
#2206	*Prunus ilicifolia ssp. lyonii*	Catalina cherry	8.5	4, 2.5, 2	20'			D	PIP	D
#2207	*Arbutus* 'Marina'	Marina strawberry tree	9.0		25'			PIP	PIP	PIP

#2208N	*Frangula californica*	coffeeberry	12.5	3.5, 3, 2, 2, 2	15'		X	D	PIP	D
#2209N	*Quercus agrifolia*	coast live oak	4.5 *		15'		X	PIP	PIP	PIP
#2210N	*Arbutus menziesii*	Pacific madrone	4.0 *		15'		X	PIP	PIP	PIP
#2211N	*Salix laevigata*	red willow	10.0		15'		X	PIP	PIP	PIP
#2212N	*Quercus agrifolia*	coast live oak	11.5 *		25'		X	PIP	PIP	PIP
#2213N	*Quercus agrifolia*	coast live oak	7.5 *		25'		X	PIP	PIP	PIP
#2214N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2215N	*Quercus agrifolia*	coast live oak	6.0 *		25'		X	PIP	PIP	PIP
#2216N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2217N	*Quercus agrifolia*	coast live oak	5.5 *		20'		X	PIP	PIP	PIP
#2218N	*Quercus agrifolia*	coast live oak	11.0 *		35'		X	PIP	PIP	PIP
#2219N	*Quercus agrifolia*	coast live oak	6.0 *		25'		X	PIP	PIP	PIP
#2220	*Eucalyptus globulus*	southern blue gum	8.0 *		50'			PIP	PIP	PIP
#2221N	*Quercus agrifolia*	coast live oak	7.0 *		25'		X	PIP	PIP	PIP
#2222N	*Quercus agrifolia*	coast live oak	7.5 *		25'		X	PIP	PIP	PIP
#2223N	*Quercus agrifolia*	coast live oak	10.0 *		40'		X	PIP	PIP	PIP
#2224N	*Quercus agrifolia*	coast live oak	8.0		40'		X	PIP	PIP	PIP
#2225N	*Quercus agrifolia*	coast live oak	7.0		40'		X	PIP	PIP	PIP
#2226N	*Quercus agrifolia*	coast live oak	7.5		40'		X	PIP	PIP	PIP
#2227N	*Pinus radiata*	Monterey pine	14.0 *		55'		X	PIP	PIP	PIP
#2228N	*Pinus radiata*	Monterey pine	9.5 *		55'		X	PIP	PIP	PIP
#2229N	*Pinus radiata*	Monterey pine	6.0 *		45'		X	PIP	PIP	PIP
#2230N	*Quercus agrifolia*	coast live oak	7.0 *		45'		X	PIP	PIP	PIP
#2231S	*Eucalyptus globulus*	southern blue gum	23.0		90'	X		PIP	PIP	PIP
#2232	*Eucalyptus globulus*	southern blue gum	43.0	24, 19	90'			PIP	PIP	PIP
#2233	*Eucalyptus globulus*	southern blue gum	16.5 *		70'			PIP	PIP	PIP
#2234	*Eucalyptus globulus*	southern blue gum	8.0		70'			PIP	PIP	PIP
#2235N	*Quercus agrifolia*	coast live oak	5.0 *		30'		X	PIP	PIP	PIP
#2236SN	*Pinus radiata*	Monterey pine	29.0		70'	X	X	PIP	PIP	PIP
#2237	*Eucalyptus globulus*	southern blue gum	52.0	33, 10, 9	90'			PIP	PIP	PIP
#2238S	*Eucalyptus globulus*	southern blue gum	59.0		100'	X		PIP	PIP	PIP
#2239S	*Eucalyptus globulus*	southern blue gum	35.0		90'	X		PIP	PIP	PIP
#2240S	*Eucalyptus globulus*	southern blue gum	30.0		90'	X		PIP	PIP	PIP
#2241	*Eucalyptus globulus*	southern blue gum	9.0		70'			PIP	PIP	PIP

#2242	*Eucalyptus globulus*	southern blue gum	7.0 *		55'			PIP	PIP	PIP
#2243	*Eucalyptus globulus*	southern blue gum	17.0		75'			PIP	D	NA
#2244S	*Eucalyptus globulus*	southern blue gum	21.0		95'	X		PIP	D	NA
#2245	*Eucalyptus globulus*	southern blue gum	39.5	31, 8.5	95'			PIP	D	NA
#2246	*Eucalyptus globulus*	southern blue gum	31.0	24, 7	90'			PIP	PIP	PIP
#2247S	*Eucalyptus globulus*	southern blue gum	37.5		110'	X		PIP	PIP	PIP
#2248	*Eucalyptus globulus*	southern blue gum	95.5	27, 25.5, 18, 8, 6, 6, 5	120'			PIP	PIP	PIP
#2249	*Eucalyptus globulus*	southern blue gum	6.0		35'			PIP	PIP	PIP
#2250	*Eucalyptus globulus*	southern blue gum	60.0	51, 9	100'			PIP	D	NA
#2251N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2252	*Eucalyptus globulus*	southern blue gum	18.5	10.5, 8	75'			PIP	PIP	PIP
#2253S	*Eucalyptus globulus*	southern blue gum	26.0		90'	X		PIP	PIP	PIP
#2254	*Eucalyptus globulus*	southern blue gum	20.0	11, 9	70'			PIP	PIP	PIP
#2255S	*Eucalyptus globulus*	southern blue gum	29.0 *		75'	X		PIP	PIP	PIP
#2256S	*Eucalyptus globulus*	southern blue gum	23.0 *		90'	X		PIP	PIP	PIP
#2257	*Eucalyptus globulus*	southern blue gum	16.0 *	11, 5 *	55'			PIP	PIP	PIP
#2258N	*Quercus agrifolia*	coast live oak	10.0 *		25'		X	PIP	PIP	PIP
#2259S	*Eucalyptus globulus*	southern blue gum	25.0 *		100'	X		PIP	PIP	PIP
#2260	NOT USED									
#2261	*Eucalyptus globulus*	southern blue gum	22.0 *	6, 4, 4, 3, 3, 2 *	30'			PIP	PIP	PIP
#2262N	*Quercus agrifolia*	coast live oak	4.0 *		20'		X	PIP	PIP	PIP
#2263	*Eucalyptus globulus*	southern blue gum	8.0 *		50'			PIP	PIP	PIP
#2264	*Eucalyptus globulus*	southern blue gum	15.0 *		70'			PIP	PIP	PIP
#2265	*Eucalyptus globulus*	southern blue gum	47.0 *	28, 8, 5, 4, 2 *	100'			PIP	PIP	PIP
#2266	*Eucalyptus globulus*	southern blue gum	34.0	21, 13	90'			PIP	PIP	PIP
#2267	*Eucalyptus globulus*	southern blue gum	44.0 *	17, 8, 8, 6, 5 *	75'			PIP	PIP	PIP
#2268N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#2269N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#2270N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#2271	*Eucalyptus globulus*	southern blue gum	25.0 *	19, 6 *	80'			PIP	PIP	PIP
#2272	*Eucalyptus globulus*	southern blue gum	38.0 *	14, 8, 7, 6, 3 *	70'			PIP	PIP	PIP
#2273	*Eucalyptus globulus*	southern blue gum	8.0 *		35'			PIP	PIP	PIP
#2274S	*Eucalyptus globulus*	southern blue gum	23.5		90'	X		PIP	PIP	PIP
#2275N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP

#2276N	*Pinus radiata*	Monterey pine	4.0 *		25'		X	PIP	PIP	PIP
#2277	*Eucalyptus globulus*	southern blue gum	32.0 *	20, 12 *	85'			PIP	PIP	PIP
#2278N	*Quercus agrifolia*	coast live oak	5.0 *		20'		X	PIP	PIP	PIP
#2279N	*Quercus agrifolia*	coast live oak	12.0 *	7, 5 *	25'		X	PIP	PIP	PIP
#2280N	*Quercus agrifolia*	coast live oak	6.0 *	4, 2 *	20'		X	PIP	PIP	PIP
#2281N	*Pinus radiata*	Monterey pine	9.0 *		40'		X	PIP	PIP	PIP
#2282N	*Quercus agrifolia*	coast live oak	11.0 *	6, 5 *	40'		X	PIP	PIP	PIP
#2283	*Eucalyptus globulus*	southern blue gum	52.0 *	23, 21, 5, 3 *	95'			PIP	PIP	PIP
#2284S	*Eucalyptus globulus*	southern blue gum	21.0 *		75'	X		PIP	PIP	PIP
#2285N	*Quercus agrifolia*	coast live oak	5.5	3.5, 2	15'		X	PIP	PIP	PIP
#2286N	*Quercus agrifolia*	coast live oak	5.0 *		25'		X	PIP	PIP	PIP
#2287N	*Quercus agrifolia*	coast live oak	6.0 *		25'		X	PIP	PIP	PIP
#2288S	*Eucalyptus globulus*	southern blue gum	33.0 *		100'	X		PIP	PIP	PIP
#2289N	*Quercus agrifolia*	coast live oak	9.5	4, 3, 2.5	15'		X	PIP	PIP	PIP
#2290N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2291N	*Quercus agrifolia*	coast live oak	6.0 *	3, 3 *	20'		X	PIP	PIP	PIP
#2292N	*Quercus agrifolia*	coast live oak	4.0 *		20'		X	PIP	PIP	PIP
#2293N	*Quercus agrifolia*	coast live oak	4.0 *		20'		X	PIP	PIP	PIP
#2294S	*Eucalyptus globulus*	southern blue gum	34.0 *		100'	X		PIP	PIP	PIP
#2295N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2296N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2297N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2298N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#2299N	*Quercus agrifolia*	coast live oak	4.0 *		15'		X	PIP	PIP	PIP
#2300N	*Quercus agrifolia*	coast live oak	5.0 *		20'		X	PIP	PIP	PIP
#2301N	*Quercus agrifolia*	coast live oak	6.5 *		15'		X	PIP	PIP	PIP
#2302S	*Eucalyptus globulus*	southern blue gum	30.0 *		100'	X		PIP	PIP	PIP
#2303N	*Quercus agrifolia*	coast live oak	11.0 *	6, 5 *	25'		X	PIP	PIP	PIP
#2304N	*Quercus agrifolia*	coast live oak	9.0 *		25'		X	PIP	PIP	PIP
#2305N	*Quercus agrifolia*	coast live oak	7.0 *		25'		X	PIP	PIP	PIP
#2306N	*Quercus agrifolia*	coast live oak	7.0 *		25'		X	PIP	PIP	PIP
#2307N	*Quercus agrifolia*	coast live oak	20.0 *	11, 9 *	25'		X	PIP	PIP	PIP
#2308	*Eucalyptus globulus*	southern blue gum	16.0 *		65'			PIP	PIP	PIP
#2309	*Eucalyptus globulus*	southern blue gum	18.5		65'			PIP	PIP	PIP

#2310N	*Quercus agrifolia*	coast live oak	7.0 *		25'		X	PIP	PIP	PIP
#2311	*Eucalyptus globulus*	southern blue gum	52.0 *	19, 16, 10, 7 *	90'			PIP	PIP	PIP
#2312N	*Quercus agrifolia*	coast live oak	9.0 *		25'		X	PIP	PIP	PIP
#2313S	*Eucalyptus globulus*	southern blue gum	21.0 *		80'	X		PIP	PIP	PIP
#2314N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2315N	*Quercus agrifolia*	coast live oak	7.0 *		20'		X	PIP	PIP	PIP
#2316	*Eucalyptus globulus*	southern blue gum	17.0 *		75'			PIP	PIP	PIP
#2317	*Eucalyptus globulus*	southern blue gum	19.0 *		90'			PIP	PIP	PIP
#2318N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2319N	*Quercus agrifolia*	coast live oak	6.0 *		20'		X	PIP	PIP	PIP
#2320	*Eucalyptus globulus*	southern blue gum	30.0 *	21, 9 *	90'			PIP	PIP	PIP
#2321N	*Quercus agrifolia*	coast live oak	15.0	8, 7	25'		X	PIP	PIP	PIP
#2322N	*Quercus agrifolia*	coast live oak	6.5		20'		X	PIP	PIP	PIP
#2323N	*Quercus agrifolia*	coast live oak	16.5 *	5, 5, 4.5, 2 *	25'		X	PIP	PIP	PIP
#2324N	*Frangula californica*	coffeeberry	5.5 *		20'		X	PIP	PIP	PIP
#2325	*Acacia melanoxylon*	Australian blackwood	9.0 *	5, 4 *	25'			PIP	PIP	PIP
#2326	*Eucalyptus globulus*	southern blue gum	61.0 *	36, 19, 6 *	80'			PIP	PIP	PIP
#2327N	*Frangula californica*	coffeeberry	6.5 *		20'		X	PIP	PIP	PIP
#2328	*Eucalyptus globulus*	southern blue gum	47.0	17.5, 11, 10, 8.5	75'			PIP	PIP	PIP
#2329S	*Eucalyptus globulus*	southern blue gum	43.0		90'	X		PIP	PIP	PIP
#2330N	*Quercus agrifolia*	coast live oak	13.0	7, 6	25'		X	PIP	PIP	PIP
#2331N	*Quercus agrifolia*	coast live oak	6.5		20'		X	PIP	PIP	PIP
#2332S	*Eucalyptus globulus*	southern blue gum	31.0		75'	X		PIP	PIP	PIP
#2333N	*Frangula californica*	coffeeberry	8.0	6, 2	25'		X	PIP	PIP	PIP
#2334N	*Frangula californica*	coffeeberry	4.0		25'		X	PIP	PIP	PIP
#2335N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2336N	*Quercus agrifolia*	coast live oak	13.5	7, 6.5	20'		X	PIP	PIP	PIP
#2337N	*Frangula californica*	coffeeberry	9.5 *	5, 4.5 *	25'		X	PIP	PIP	PIP
#2338N	*Quercus agrifolia*	coast live oak	7.0 *		25'		X	PIP	PIP	PIP
#2339N	*Quercus agrifolia*	coast live oak	6.5	3.5, 1.5, 1.5	20'		X	PIP	PIP	PIP
#2340N	*Frangula californica*	coffeeberry	7.0 *	4.5, 2.5 *	25'		X	PIP	PIP	PIP
#2341N	*Quercus agrifolia*	coast live oak	22.0 *	8, 7, 7 *	25'		X	PIP	PIP	PIP
#2342N	*Quercus agrifolia*	coast live oak	5.0 *		20'		X	PIP	PIP	PIP
#2343	*Eucalyptus globulus*	southern blue gum	5.0 *		30'			PIP	PIP	PIP

#2344N	*Quercus agrifolia*	coast live oak	9.0 *	6, 3 *	20'		X	PIP	PIP	PIP
#2345N	*Quercus agrifolia*	coast live oak	5.0 *	3, 2 *	15'		X	PIP	PIP	PIP
#2346N	*Quercus agrifolia*	coast live oak	30.0	18, 12	35'		X	D	PIP	D
#2347N	*Quercus agrifolia*	coast live oak	4.0		15'		X	D	PIP	D
#2348S	*Eucalyptus globulus*	southern blue gum	34.0		70'	X		D	PIP	D
#2349	*Eucalyptus globulus*	southern blue gum	116.0	35, 31, 30, 20	90'			D	PIP	D
#2350	*Prunus cerasifera*	cherry plum	4.0		15'			D	PIP	D
#2351N	*Quercus agrifolia*	coast live oak	10.5		25'		X	D	PIP	D
#2352S	*Eucalyptus globulus*	southern blue gum	54.0		100'	X		D	PIP	D
#2353	*Eucalyptus globulus*	southern blue gum	71.5	37, 23, 11.5	85'			D	PIP	D
#2354S	*Eucalyptus globulus*	southern blue gum	34.0		80'	X		D	PIP	D
#2355S	*Eucalyptus globulus*	southern blue gum	49.0		100'	X		D	PIP	D
#2356S	*Eucalyptus globulus*	southern blue gum	21.0 *		75'	X		PIP	PIP	PIP
#2357S	*Eucalyptus globulus*	southern blue gum	38.0 *		100'	X		PIP	PIP	PIP
#2358S	*Eucalyptus globulus*	southern blue gum	30.0 *		100'	X		PIP	PIP	PIP
#2359N	*Frangula californica*	coffeeberry	5.5 *		20'		X	PIP	PIP	PIP
#2360N	*Quercus agrifolia*	coast live oak	13.0 *		20'		X	PIP	PIP	PIP
#2361	NOT USED									
#2362	*Eucalyptus globulus*	southern blue gum	11.0 *		20'			D	PIP	D
#2363	*Eucalyptus globulus*	southern blue gum	19.0 *		45'			PIP	PIP	PIP
#2364S	*Eucalyptus globulus*	southern blue gum	34.0		100'	X		PIP	PIP	PIP
#2365S	*Eucalyptus globulus*	southern blue gum	34.0		100'	X		PIP	PIP	PIP
#2366S	*Eucalyptus globulus*	southern blue gum	20.0		75'	X		PIP	PIP	PIP
#2367S	*Eucalyptus globulus*	southern blue gum	38.0		80'	X		PIP	PIP	PIP
#2368S	*Eucalyptus globulus*	southern blue gum	48.0		150'	X		PIP	PIP	PIP
#2369	*Eucalyptus globulus*	southern blue gum	16.0		75'			PIP	PIP	PIP
#2370S	*Eucalyptus globulus*	southern blue gum	44.0		120'	X		PIP	PIP	PIP
#2371N	*Frangula californica*	coffeeberry	13.5	5, 4.5, 2, 2	25'		X	D	PIP	D
#2372	*Eucalyptus globulus*	southern blue gum	19.0		50'			D	PIP	D
#2373N	*Frangula californica*	coffeeberry	10.0 *	2, 2, 2, 2, 2 *	15'		X	D	PIP	D
#2374N	*Frangula californica*	coffeeberry	11.0 *	4, 3, 2, 2 *	25'		X	D	PIP	D
#2375N	*Frangula californica*	coffeeberry	8.0	2, 2, 2, 2	20'		X	D	PIP	D
#2376N	*Quercus agrifolia*	coast live oak	8.5		25'		X	D	D	NA
#2377N	*Quercus agrifolia*	coast live oak	11.0	6.5, 4.5	25'		X	D	PIP	D

#2378N	*Quercus agrifolia*	coast live oak	13.0		25'		X	D	PIP	D
#2379N	*Quercus agrifolia*	coast live oak	7.0	5.5, 1.5	20'		X	D	PIP	D
#2380N	*Quercus agrifolia*	coast live oak	7.5		25'		X	D	PIP	D
#2381N	*Quercus agrifolia*	coast live oak	10.5	7, 3.5	25'		X	D	PIP	D
#2382N	*Quercus agrifolia*	coast live oak	17.0	4, 3, 3, 3, 2, 2	20'		X	D	PIP	D
#2383N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2384N	*Quercus agrifolia*	coast live oak	5.0	3.5, 1.5	20'		X	PIP	PIP	PIP
#2385N	*Quercus agrifolia*	coast live oak	8.0	3, 3, 2	20'		X	PIP	PIP	PIP
#2386N	*Quercus agrifolia*	coast live oak	6.5		25'		X	PIP	PIP	PIP
#2387N	*Quercus agrifolia*	coast live oak	8.0	4.5, 3.5	20'		X	PIP	PIP	PIP
#2388N	*Quercus agrifolia*	coast live oak	10.0		25'		X	PIP	PIP	PIP
#2389N	*Quercus agrifolia*	coast live oak	5.5		25'		X	PIP	PIP	PIP
#2390N	*Quercus agrifolia*	coast live oak	12.0	8, 4	30'		X	PIP	PIP	PIP
#2391N	*Quercus agrifolia*	coast live oak	14.5	10.5, 4	30'		X	PIP	PIP	PIP
#2392N	*Quercus agrifolia*	coast live oak	15.5	9, 6.5	25'		X	PIP	PIP	PIP
#2393N	*Quercus agrifolia*	coast live oak	8.5	4.5, 4	15'		X	PIP	PIP	PIP
#2394N	*Quercus agrifolia*	coast live oak	6.0		25'		X	PIP	PIP	PIP
#2395N	*Quercus agrifolia*	coast live oak	31.0	11, 10, 10	25'		X	PIP	PIP	PIP
#2396N	*Quercus agrifolia*	coast live oak	7.5		25'		X	PIP	PIP	PIP
#2397N	*Quercus agrifolia*	coast live oak	18.5	10.5, 8	25'		X	PIP	PIP	PIP
#2398N	*Quercus agrifolia*	coast live oak	11.5	4, 3.5, 2, 2	20'		X	PIP	PIP	PIP
#2399N	*Quercus agrifolia*	coast live oak	4.5		15'		X	PIP	D	NA
#2400N	*Quercus agrifolia*	coast live oak	7.0		20'		X	PIP	PIP	PIP
#2401N	*Quercus agrifolia*	coast live oak	6.5		25'		X	PIP	D	NA
#2402N	*Quercus agrifolia*	coast live oak	10.0	7, 3	25'		X	PIP	D	NA
#2403N	*Quercus agrifolia*	coast live oak	8.5	5.5, 3	20'		X	PIP	PIP	PIP
#2404N	*Quercus agrifolia*	coast live oak	28.5	7.5, 6, 5, 4, 3, 3	20'		X	PIP	D	NA
#2405N	*Quercus agrifolia*	coast live oak	15.0	7.5, 7.5	20'		X	PIP	D	NA
#2406N	*Quercus agrifolia*	coast live oak	12.0		25'		X	PIP	PIP	PIP
#2407N	*Quercus agrifolia*	coast live oak	9.5	5, 2.5, 2	20'		X	PIP	PIP	PIP
#2408N	*Quercus agrifolia*	coast live oak	6.0	4, 2	20'		X	PIP	PIP	PIP
#2409N	*Quercus agrifolia*	coast live oak	7.0		20'		X	PIP	PIP	PIP
#2410N	*Quercus agrifolia*	coast live oak	6.5		20'		X	PIP	PIP	PIP
#2411N	*Quercus agrifolia*	coast live oak	21.0	13, 8	25'		X	PIP	D	NA

#2412N	*Quercus agrifolia*	coast live oak	39.5	17, 11.5, 11	25'		X	PIP	PIP	PIP
#2413N	*Quercus agrifolia*	coast live oak	9.5		25'		X	PIP	PIP	PIP
#2414N	*Quercus agrifolia*	coast live oak	11.0		25'		X	PIP	PIP	PIP
#2415N	*Quercus agrifolia*	coast live oak	7.0		20'		X	PIP	PIP	PIP
#2416N	*Quercus agrifolia*	coast live oak	4.0		20'		X	PIP	PIP	PIP
#2417N	*Quercus agrifolia*	coast live oak	9.0		25'		X	PIP	PIP	PIP
#2418N	*Quercus agrifolia*	coast live oak	35.0	14, 11, 10	25'		X	PIP	PIP	PIP
#2419N	*Quercus agrifolia*	coast live oak	9.0		20'		X	PIP	PIP	PIP
#2420N	*Quercus agrifolia*	coast live oak	15.0		25'		X	PIP	PIP	PIP
#2421SN	*Quercus agrifolia*	coast live oak	20.0		25'	X	X	PIP	PIP	PIP
#2422N	*Quercus agrifolia*	coast live oak	8.0		25'		X	PIP	PIP	PIP
#2423N	*Quercus agrifolia*	coast live oak	9.0		25'		X	PIP	PIP	PIP
#2424N	*Quercus agrifolia*	coast live oak	13.0		25'		X	PIP	D	NA
#2425N	*Quercus agrifolia*	coast live oak	38.0	22, 16	25'		X	PIP	PIP	PIP
#2426N	*Quercus agrifolia*	coast live oak	5.5	2.5, 1.5, 1.5	15'		X	PIP	PIP	PIP
#2427N	*Quercus agrifolia*	coast live oak	8.0	3, 3, 2	15'		X	PIP	PIP	PIP
#2428N	*Quercus agrifolia*	coast live oak	21.5	4.5, 4, 4, 3, 3, 3	15'		X	PIP	D	NA
#2429SN	*Quercus agrifolia*	coast live oak	29.0		25'	X	X	PIP	PIP	PIP
#2430	NOT USED									
#2431N	*Sambucus nigra ssp. caerulea*	blue elderberry	12.0		25'		X	PIP	PIP	PIP
#2432	NOT USED									
#2433N	*Quercus agrifolia*	coast live oak	5.0	3, 2	15'		X	PIP	PIP	PIP
#2434	NOT USED									
#2435N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2436N	*Quercus agrifolia*	coast live oak	7.0	4.5, 2.5	20'		X	PIP	PIP	PIP
#2437N	*Quercus agrifolia*	coast live oak	6.5 *		20'		X	PIP	PIP	PIP
#2438SN	*Quercus agrifolia*	coast live oak	21.0		30'	X	X	PIP	PIP	PIP
#2439N	*Quercus agrifolia*	coast live oak	5.0		15'		X	PIP	PIP	PIP
#2440N	*Quercus agrifolia*	coast live oak	6.0		15'		X	PIP	PIP	PIP
#2441N	*Arbutus menziesii*	Pacific madrone	7.5		25'		X	PIP	PIP	PIP
#2442N	*Quercus agrifolia*	coast live oak	25.0	15, 10	30'		X	PIP	PIP	PIP
#2443N	*Quercus agrifolia*	coast live oak	9.0		25'		X	PIP	PIP	PIP
#2444N	*Quercus agrifolia*	coast live oak	7.0		25'		X	PIP	PIP	PIP
#2445N	*Quercus agrifolia*	coast live oak	8.0		25'		X	PIP	PIP	PIP

#2446N	*Quercus agrifolia*	coast live oak	15.0		30'		X	PIP	PIP	PIP
#2447N	*Quercus agrifolia*	coast live oak	7.0		25'		X	PIP	PIP	PIP
#2448SN	*Quercus agrifolia*	coast live oak	20.0		30'	X	X	PIP	PIP	PIP
#2449N	*Quercus agrifolia*	coast live oak	33.5	22, 11.5	30'		X	PIP	PIP	PIP
#2450N	*Quercus agrifolia*	coast live oak	16.0		30'		X	PIP	PIP	PIP
#2451N	*Frangula californica*	coffeeberry	7.0	2.5, 2, 1.5, 1	15'		X	PIP	PIP	PIP
#2452N	*Frangula californica*	coffeeberry	8.0	3, 2.5, 2.5	20'		X	PIP	PIP	PIP
#2453N	*Quercus agrifolia*	coast live oak	15.0		25'		X	PIP	PIP	PIP
#2454N	*Quercus agrifolia*	coast live oak	7.0		25'		X	PIP	PIP	PIP
#2455N	*Quercus agrifolia*	coast live oak	33.0	14, 12, 7	35'		X	PIP	PIP	PIP
#2456N	*Quercus agrifolia*	coast live oak	19.0		30'		X	PIP	PIP	PIP
#2457N	*Quercus agrifolia*	coast live oak	13.0		25'		X	PIP	PIP	PIP
#2458N	*Frangula californica*	coffeeberry	4.5		15'		X	PIP	PIP	PIP
#2459N	*Quercus agrifolia*	coast live oak	19.0	12, 7	25'		X	PIP	PIP	PIP
#2460N	*Quercus agrifolia*	coast live oak	22.0	12, 10	25'		X	PIP	PIP	PIP
#2461N	*Quercus agrifolia*	coast live oak	22.0	13, 9	25'		X	PIP	D	NA
#2462N	*Quercus agrifolia*	coast live oak	6.5		20'		X	PIP	PIP	PIP
#2463N	*Quercus agrifolia*	coast live oak	10.0		25'		X	PIP	PIP	PIP
#2464N	*Quercus agrifolia*	coast live oak	28.0	10, 9, 9	25'		X	PIP	PIP	PIP
#2465N	*Quercus agrifolia*	coast live oak	13.0 *		25'		X	PIP	PIP	PIP
#2466N	*Quercus agrifolia*	coast live oak	12.5 *		25'		X	PIP	PIP	PIP
#2467N	*Quercus agrifolia*	coast live oak	6.0 *		25'		X	PIP	PIP	PIP
#2468N	*Quercus agrifolia*	coast live oak	8.0 *		25'		X	PIP	PIP	PIP
#2469N	*Quercus agrifolia*	coast live oak	21.0	7, 7, 7	25'		X	PIP	PIP	PIP
#2470N	*Quercus agrifolia*	coast live oak	9.5		25'		X	PIP	PIP	PIP
#2471N	*Quercus agrifolia*	coast live oak	17.5	9, 8.5	25'		X	PIP	PIP	PIP
#2472N	*Quercus agrifolia*	coast live oak	6.0		15'		X	PIP	PIP	PIP
#2473N	*Quercus agrifolia*	coast live oak	14.5		25'		X	PIP	D	NA
#2474N	*Quercus agrifolia*	coast live oak	17.0 *		25'		X	PIP	PIP	PIP
#2475	*Acacia melanoxylon*	Australian blackwood	5.5		20'			PIP	D	NA
#2476N	*Quercus agrifolia*	coast live oak	5.0		15'		X	PIP	PIP	PIP
#2477N	*Quercus agrifolia*	coast live oak	8.0		20'		X	PIP	PIP	PIP
#2478N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2479N	*Quercus agrifolia*	coast live oak	8.5		25'		X	PIP	PIP	PIP

#2480N	*Quercus agrifolia*	coast live oak	13.0		25'		X	PIP	D	NA
#2481N	*Quercus agrifolia*	coast live oak	16.0	9, 7	25'		X	PIP	D	NA
#2482N	*Quercus agrifolia*	coast live oak	9.0		25'		X	PIP	D	NA
#2483N	*Populus trichocarpa*	black cottonwood	18.0 *		75'		X	PIP	PIP	PIP
#2484	*Acacia melanoxylon*	Australian blackwood	6.5		25'			PIP	PIP	PIP
#2485	*Acacia dealbata*	silver wattle	4.0		25'			PIP	PIP	PIP
#2486	*Acacia dealbata*	silver wattle	8.0		25'			PIP	PIP	PIP
#2487	*Acacia dealbata*	silver wattle	8.0		25'			PIP	PIP	PIP
#2488	*Acacia dealbata*	silver wattle	6.0		25'			PIP	PIP	PIP
#2489	*Acacia dealbata*	silver wattle	5.0		25'			PIP	PIP	PIP
#2490	*Acacia dealbata*	silver wattle	15.0	10, 5	25'			PIP	PIP	PIP
#2491	*Acacia dealbata*	silver wattle	9.5	4, 3.5, 2	25'			PIP	PIP	PIP
#2492	*Acacia dealbata*	silver wattle	5.5		25'			PIP	PIP	PIP
#2493	*Acacia dealbata*	silver wattle	4.5		25'			PIP	PIP	PIP
#2494	*Acacia dealbata*	silver wattle	7.0		25'			PIP	PIP	PIP
#2495	*Acacia dealbata*	silver wattle	4.5		25'			PIP	PIP	PIP
#2496	*Acacia dealbata*	silver wattle	6.5		25'			PIP	PIP	PIP
#2497	*Acacia dealbata*	silver wattle	10.0		25'			PIP	PIP	PIP
#2498	*Acacia dealbata*	silver wattle	5.0		25'			PIP	PIP	PIP
#2499	*Acacia dealbata*	silver wattle	4.5		25'			PIP	PIP	PIP
#2500	*Acacia dealbata*	silver wattle	9.0		25'			PIP	PIP	PIP
#2501	*Acacia dealbata*	silver wattle	5.5		25'			PIP	PIP	PIP
#2502	*Acacia melanoxylon*	Australian blackwood	4.5		25'			PIP	PIP	PIP
#2503	*Acacia dealbata*	silver wattle	6.0		20'			PIP	PIP	PIP
#2504	*Hesperocyparis macrocarpa*	Monterey cypress	4.5		15'			PIP	PIP	PIP
#2505S	*Hesperocyparis macrocarpa*	Monterey cypress	39.0		45'	X		PIP	PIP	PIP
#2506N	*Quercus agrifolia*	coast live oak	29.0 *	19, 10 *	25'		X	PIP	PIP	PIP
#2507N	*Quercus agrifolia*	coast live oak	52.0	22, 18, 12	30'		X	PIP	PIP	PIP
#2508	*Acacia melanoxylon*	Australian blackwood	20.0	9, 7, 4	30'			PIP	PIP	PIP
#2509N	*Quercus agrifolia*	coast live oak	9.5		25'		X	PIP	PIP	PIP
#2510	*Syzygium paniculatum*	brush cherry	8.0		25'			PIP	PIP	PIP
#2511	*Syzygium paniculatum*	brush cherry	5.0		25'			PIP	PIP	PIP
#2512N	*Quercus agrifolia*	coast live oak	8.0		20'		X	PIP	PIP	PIP
#2513N	*Quercus agrifolia*	coast live oak	26.0	19, 7	40'		X	PIP	PIP	PIP

#2514	*Acacia melanoxylon*	Australian blackwood	8.0	5, 3	20'			PIP	D	NA
#2515	*Acacia melanoxylon*	Australian blackwood	5.5		20'			PIP	D	NA
#2516	*Acacia melanoxylon*	Australian blackwood	10.0		30'			PIP	PIP	PIP
#2517	*Acacia melanoxylon*	Australian blackwood	6.5	4, 2.5	20'			PIP	PIP	PIP
#2518	*Acacia melanoxylon*	Australian blackwood	4.5		20'			PIP	D	NA
#2519	*Pyrus calleryana*	Callery pear	11.0	2.5, 2.5, 2.5, 2, 1.5	20'			PIP	PIP	PIP
#2520	*Acacia melanoxylon*	Australian blackwood	4.5		20'			PIP	PIP	PIP
#2521	*Acacia melanoxylon*	Australian blackwood	23.0	4.5, 4.5, 3.5, 3.5, 2.5, 2.5, 2	25'			PIP	PIP	PIP
#2522N	*Quercus agrifolia*	coast live oak	14.0		30'		X	PIP	PIP	PIP
#2523	*Acacia melanoxylon*	Australian blackwood	4.0		20'			D	PIP	D
#2524	*Acacia melanoxylon*	Australian blackwood	5.0	2.5, 2.5	20'			D	PIP	D
#2525N	*Frangula californica*	coffeeberry	19.5	5, 4.5, 4.5, 3, 2.5	20'		X	D	PIP	D
#2526N	*Quercus agrifolia*	coast live oak	28.0	13, 10, 5	30'		X	D	PIP	D
#2527	*Acacia melanoxylon*	Australian blackwood	4.5 *		25'			PIP	PIP	PIP
#2528	*Acacia melanoxylon*	Australian blackwood	5.0 *		25'			D	PIP	D
#2529SN	*Quercus agrifolia*	coast live oak	28.0		25'	X	X	D	PIP	D
#2530N	*Quercus agrifolia*	coast live oak	11.0		25'		X	D	D	NA
#2531	*Acacia melanoxylon*	Australian blackwood	7.0		25'			D	PIP	D
#2532	*Acacia melanoxylon*	Australian blackwood	5.0		25'			D	PIP	D
#2533	*Acacia melanoxylon*	Australian blackwood	6.0		25'			D	PIP	D
#2534N	*Quercus agrifolia*	coast live oak	18.0 *		30'		X	D	PIP	D
#2535N	*Heteromeles arbutifolia*	Toyon	21.0 *	8, 6, 3, 2, 2 *	20'		X	D	PIP	D
#2536N	*Quercus agrifolia*	coast live oak	10.0 *		30'		X	D	PIP	D
#2537N	*Quercus agrifolia*	coast live oak	54.0	20, 18, 16	30'		X	D	PIP	D
#2538N	*Heteromeles arbutifolia*	Toyon	9.0	4, 2, 2, 1	15'		X	D	PIP	D
#2539	*Prunus domestica*	European plum	9.5	5, 4.5	15'			D	PIP	D
#2540	*Populus nigra 'Italica'*	Lombardy poplar	25.5	13, 12.5	50'			D	PIP	D
#2541N	*Sequoia sempervirens*	coast redwood	51.0	39, 12	60'		X	D	PIP	D
#2542N	*Quercus agrifolia*	coast live oak	40.0	22, 18	35'		X	D	PIP	D
#2543N	*Quercus agrifolia*	coast live oak	28.0	17, 11	30'		X	D	PIP	D
#2544	*Persea americana*	Avocado	8.0		20'			D	PIP	D
#2545N	*Quercus agrifolia*	coast live oak	40.0	20, 12, 8	30'		X	D	PIP	D
#2546N	*Quercus agrifolia*	coast live oak	9.5		25'		X	D	PIP	D
#2547N	*Quercus agrifolia*	coast live oak	14.0		25'		X	D	PIP	D

#2548N	*Quercus agrifolia*	coast live oak	16.0		25'		X	D	PIP	D
#2549N	*Quercus agrifolia*	coast live oak	6.0		20'		X	D	PIP	D
#2550N	*Quercus agrifolia*	coast live oak	12.0	7, 5	20'		X	D	PIP	D
#2551N	*Quercus agrifolia*	coast live oak	8.0		20'		X	D	PIP	D
#2552N	*Quercus agrifolia*	coast live oak	35.0	22, 13	30'		X	D	PIP	D
#2553	NOT USED									
#2554N	*Salix laevigata*	red willow	24.5	7, 7, 6.5, 4	20'		X	PIP	PIP	PIP
#2555	NOT USED									
#2556N	*Frangula californica*	coffeeberry	11.0	2.5, 2.5, 2, 2, 2	20'		X	D	PIP	D
#2557N	*Frangula californica*	coffeeberry	10.0	6, 2, 2	20'		X	D	PIP	D
#2558N	*Frangula californica*	coffeeberry	11.5	4, 2.5, 2.5, 2.5	20'		X	D	PIP	D
#2559SN	*Quercus agrifolia*	coast live oak	34.0		40'	X	X	PIP	PIP	PIP
#2560N	*Quercus agrifolia*	coast live oak	19.0		35'		X	PIP	PIP	PIP
#2561N	*Quercus agrifolia*	coast live oak	9.5		25'		X	PIP	PIP	PIP
#2562N	*Quercus agrifolia*	coast live oak	6.0		20'		X	D	PIP	D
#2563N	*Quercus agrifolia*	coast live oak	4.5		20'		X	D	PIP	D
#2564N	*Quercus agrifolia*	coast live oak	15.0	10, 5	25'		X	D	PIP	D
#2565	*Myoporum laetum*	ngaio	14.0		30'			D	PIP	D
#2566	*Ligustrum japonicum*	Japanese privet	9.5	4, 2.5, 2, 1	25'			D	PIP	D
#2567	*Pittosporum tenuifolium*	Kohuhu	23.5	6, 5, 3, 2.5, 2.5, 2.5, 2	30'			D	PIP	D
#2568N	*Quercus agrifolia*	coast live oak	6.0		25'		X	D	D	NA
#2569N	*Quercus agrifolia*	coast live oak	10.5		25'		X	D	D	NA
#2570N	*Quercus agrifolia*	coast live oak	14.0		25'		X	D	D	NA
#2571	*Acacia dealbata*	silver wattle	36.0	20, 9.5, 6.5	25'			PIP	PIP	PIP
#2572N	*Quercus agrifolia*	coast live oak	20.0	9.5, 5.5, 5	25'		X	PIP	PIP	PIP
#2573N	*Quercus agrifolia*	coast live oak	4.5		10'		X	PIP	PIP	PIP
#2574N	*Quercus agrifolia*	coast live oak	13.0		25'		X	PIP	PIP	PIP
#2575N	*Quercus agrifolia*	coast live oak	11.5	6, 5.5	20'		X	PIP	PIP	PIP
#2576N	*Quercus agrifolia*	coast live oak	4.0		15'		X	PIP	PIP	PIP
#2577N	*Quercus agrifolia*	coast live oak	9.5		20'		X	PIP	PIP	PIP
#2578N	*Quercus agrifolia*	coast live oak	7.0		15'		X	PIP	PIP	PIP
#2579N	*Quercus agrifolia*	coast live oak	13.0	7, 6	20'		X	PIP	PIP	PIP
#2580N	*Quercus agrifolia*	coast live oak	8.5	5, 3.5	15'		X	PIP	PIP	PIP
#2581N	*Quercus agrifolia*	coast live oak	19.0		30'		X	PIP	PIP	PIP

#2582N	*Sambucus nigra ssp. caerulea*	blue elderberry	11.0	5, 3, 2, 1	25'		X	PIP	D	NA
#2583N	*Quercus agrifolia*	coast live oak	10.0		25'		X	PIP	PIP	PIP
#2584N	*Quercus agrifolia*	coast live oak	16.0		25'		X	PIP	PIP	PIP
#2585N	*Quercus agrifolia*	coast live oak	4.5		15'		X	PIP	PIP	PIP
#2586N	*Quercus agrifolia*	coast live oak	5.0		15'		X	PIP	PIP	PIP
#2587N	*Quercus agrifolia*	coast live oak	7.0		20'		X	PIP	PIP	PIP
#2588N	*Quercus agrifolia*	coast live oak	34.5	13, 10.5, 7, 4	25'		X	PIP	PIP	PIP
#2589N	*Sambucus nigra ssp. caerulea*	blue elderberry	6.0		15'		X	PIP	PIP	PIP
#2590SN	*Quercus agrifolia*	coast live oak	36.0 *		45'	X	X	D	PIP	D
#2591N	*Quercus agrifolia*	coast live oak	8.0 *		20'		X	D	PIP	D
#2592N	*Quercus agrifolia*	coast live oak	20.0		45'		X	D	PIP	D
#2593N	*Quercus agrifolia*	coast live oak	36.0	4, 13, 19	45'		X	D	PIP	D
#2594N	*Quercus agrifolia*	coast live oak	10.0	4, 3, 3	20'		X	D	PIP	D
#2595N	*Quercus agrifolia*	coast live oak	19.0		45'		X	D	PIP	D
#2596N	*Quercus agrifolia*	coast live oak	5.5		20'		X	D	PIP	D
#2597N	*Quercus agrifolia*	coast live oak	10.0	4, 6	20'		X	D	PIP	D
#2598	*Dracaena draco*	dragon tree	11.0 *	5, 3, 3 *	20'			D	PIP	D
#2599SN	*Quercus agrifolia*	coast live oak	20.0 *		40'	X	X	D	PIP	D
#2600N	*Quercus agrifolia*	coast live oak	5.0	3, 2	12'		X	D	PIP	D
#2601N	*Quercus agrifolia*	coast live oak	9.0	5, 4	20'		X	D	PIP	D
#2602N	*Quercus agrifolia*	coast live oak	12.0 *		40'		X	D	PIP	D
#2603N	*Quercus agrifolia*	coast live oak	5.0 *		20'		X	D	PIP	D
#2604N	*Quercus agrifolia*	coast live oak	13.0	7, 3, 3	25'		X	D	PIP	D
#2605N	*Quercus agrifolia*	coast live oak	13.0 *		35'		X	D	PIP	D
#2606N	*Quercus agrifolia*	coast live oak	13.0 *		35'		X	D	PIP	D
#2607N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D
#2608N	*Quercus agrifolia*	coast live oak	10.5	6, 4.5	25'		X	D	PIP	D
#2609N	*Quercus agrifolia*	coast live oak	12.0		25'		X	PIP	PIP	PIP
#2610SN	*Quercus agrifolia*	coast live oak	23.0		35'	X	X	PIP	PIP	PIP
#2611N	*Sambucus nigra ssp. caerulea*	blue elderberry	14.0	3, 2, 4, 5	20'		X	PIP	PIP	PIP
#2612	*Dahlia imperialis*	tree dahlia	13.0	3, 3, 2, 2, 2, 1	15'			PIP	PIP	PIP
#2613N	*Quercus agrifolia*	coast live oak	26.0	12, 14	30'		X	PIP	D	NA
#2614N	*Quercus agrifolia*	coast live oak	16.0		35'		X	PIP	D	NA
#2615N	*Quercus agrifolia*	coast live oak	8.0		25'		X	PIP	D	NA

#2616N	*Quercus agrifolia*	coast live oak	13.0		35'		X	PIP	D	NA
#2617N	*Quercus agrifolia*	coast live oak	15.0		35'		X	PIP	D	NA
#2618SN	*Quercus agrifolia*	coast live oak	26.0		35'	X	X	PIP	D	NA
#2619N	*Quercus agrifolia*	coast live oak	16.5	9.5, 7	20'		X	PIP	D	NA
#2620N	*Quercus agrifolia*	coast live oak	39.0	8.5, 15.5, 7, 8	20'		X	PIP	D	NA
#2621N	*Quercus agrifolia*	coast live oak	45.0	23, 22	50'		X	PIP	D	NA
#2622SN	*Quercus agrifolia*	coast live oak	28.0		50'	X	X	PIP	D	NA
#2623S	*Eucalyptus globulus*	southern blue gum	27.0 *		60'	X		D	PIP	D
#2624N	*Frangula californica*	coffeeberry	15.0	3, 3, 2, 2, 5	20'		X	D	PIP	D
#2625S	*Eucalyptus globulus*	southern blue gum	22.0		55'	X		D	PIP	D
#2626N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D
#2627S	*Eucalyptus globulus*	southern blue gum	38.0		90'	X		D	PIP	D
#2628S	*Eucalyptus globulus*	southern blue gum	40.0		90'	X		D	PIP	D
#2629N	*Quercus agrifolia*	coast live oak	11.5		25'		X	D	PIP	D
#2630N	*Quercus agrifolia*	coast live oak	62.0	15, 18, 20, 9	35'		X	PIP	D	NA
#2631N	*Quercus agrifolia*	coast live oak	32.0	9, 7, 10, 6	20'		X	PIP	D	NA
#2632N	*Quercus agrifolia*	coast live oak	11.0		20'		X	PIP	D	NA
#2633N	*Quercus agrifolia*	coast live oak	22.0	11, 11	20'		X	PIP	D	NA
#2634N	*Quercus agrifolia*	coast live oak	7.0		15'		X	PIP	PIP	PIP
#2635	*Pittosporum tobira*	mock orange	5.5	3, 2.5	15'			PIP	PIP	PIP
#2636N	*Quercus agrifolia*	coast live oak	7.5		20'		X	PIP	PIP	PIP
#2637N	*Quercus agrifolia*	coast live oak	14.0		40'		X	PIP	PIP	PIP
#2638SN	*Quercus agrifolia*	coast live oak	24.0		45'	X	X	PIP	D	NA
#2639N	*Quercus agrifolia*	coast live oak	41.0	15, 26	50'		X	PIP	D	NA
#2640N	*Quercus agrifolia*	coast live oak	5.5	3, 2.5	15'		X	PIP	D	NA
#2641N	*Quercus agrifolia*	coast live oak	13.5	3, 2.5, 2, 2, 2, 2	1		X	PIP	D	NA
#2642N	*Quercus agrifolia*	coast live oak	12.0	12	10'		X	PIP	D	NA
#2643N	*Quercus agrifolia*	coast live oak	28.0	13, 11, 4	40'		X	PIP	D	NA
#2644N	*Quercus agrifolia*	coast live oak	32.0		50'		X	PIP	D	NA
#2645N	*Quercus agrifolia*	coast live oak	13.5		25'		X	D	D	NA
#2646	*Eucalyptus globulus*	southern blue gum	65.0	33, 32	100'			D	D	NA
#2647N	*Quercus agrifolia*	coast live oak	13.0	6, 7	25'		X	D	D	NA
#2648	*Eucalyptus globulus*	southern blue gum	149.0	48, 40, 31, 30	100'			D	D	NA
#2649S	*Eucalyptus globulus*	southern blue gum	23.5		50'	X		D	D	NA

#2650S	*Eucalyptus globulus*	southern blue gum	35.0		90'	X		D	D	NA
#2651S	*Eucalyptus globulus*	southern blue gum	40.0		90'	X		D	D	NA
#2652S	*Eucalyptus globulus*	southern blue gum	47.0		75	X		D	D	NA
#2653	NOT USED									
#2654	NOT USED									
#2655	*Acacia dealbata*	silver wattle	5.0		25'			D	D	NA
#2656	*Acacia dealbata*	silver wattle	8.0		25'			D	D	NA
#2657	*Acacia dealbata*	silver wattle	14.0	7, 7	25'			D	D	NA
#2658	*Acacia dealbata*	silver wattle	10.0	7, 3	25'			D	D	NA
#2659	*Acacia dealbata*	silver wattle	10.0		20'			D	D	NA
#2660	*Acacia dealbata*	silver wattle	19.0	3, 3, 3, 2, 2, 2, 2, 2	20'			D	D	NA
#2661	*Acacia dealbata*	silver wattle	7.0		20'			D	D	NA
#2662	*Acacia dealbata*	silver wattle	9.0		20'			D	D	NA
#2663	*Acacia dealbata*	silver wattle	6.0		20'			D	D	NA
#2664	*Acacia dealbata*	silver wattle	12.0		20'			D	D	NA
#2665	*Acacia dealbata*	silver wattle	4.0		20'			D	D	NA
#2666	*Acacia dealbata*	silver wattle	29.0	6, 5, 4, 4, 4, 3, 3	20'			D	D	NA
#2667	*Acacia dealbata*	silver wattle	6.0		20'			D	D	NA
#2668	*Prunus domestica*	European plum	29.0	7, 7, 5, 4, 3, 3	20'			PIP	D	NA
#2669N	*Quercus agrifolia*	coast live oak	16.0	8, 5, 3	20'		X	D	D	NA
#2670N	*Quercus agrifolia*	coast live oak	27.5	8.5, 5.5, 5.5, 5, 3	20'		X	PIP	D	NA
#2671N	*Quercus agrifolia*	coast live oak	10.5	4.5, 3, 3	10'		X	D	D	NA
#2672N	*Quercus agrifolia*	coast live oak	12.0	5, 4, 3	15'		X	D	PIP	D
#2673N	*Quercus agrifolia*	coast live oak	9.5	4.5, 2.5, 2.5	15'		X	D	D	NA
#2674N	*Quercus agrifolia*	coast live oak	11.5	5.5, 3, 3	15'		X	D	PIP	D
#2675N	*Quercus agrifolia*	coast live oak	4.0		15'		X	D	D	NA
#2676N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	D	NA
#2677	*Calocedrus decurrens*	incense cedar	16.5	7, 6.5, 3	15'			D	PIP	D
#2678N	*Quercus agrifolia*	coast live oak	11.4	6.4, 5	15'		X	D	PIP	D
#2679	*Dracaena draco*	dragon tree	12.5	3.5, 3.5, 3.5, 2	10'			D	PIP	D
#2680N	*Quercus agrifolia*	coast live oak	16.0	6, 4, 4, 2	20'		X	PIP	PIP	PIP
#2681N	*Quercus agrifolia*	coast live oak	19.0	3.5, 3.5, 3.5, 2.5, 2, 2, 2	20'		X	PIP	PIP	PIP
#2682N	*Quercus agrifolia*	coast live oak	6.0		20'		X	PIP	PIP	PIP
#2683N	*Quercus agrifolia*	coast live oak	11.0	5, 3, 3	20'		X	PIP	PIP	PIP

#2684N	*Quercus agrifolia*	coast live oak	8.0	5, 3	20'		X	PIP	D	NA
#2685N	*Quercus agrifolia*	coast live oak	9.5	4.5, 2.5, 2.5	20'		X	PIP	D	NA
#2686N	*Quercus agrifolia*	coast live oak	8.5	4.5, 4	20'		X	PIP	D	NA
#2687N	*Quercus agrifolia*	coast live oak	54.0	34, 20	45'		X	PIP	PIP	PIP
#2688N	*Quercus agrifolia*	coast live oak	19.5	10.5, 9	30'		X	PIP	PIP	PIP
#2689N	*Quercus agrifolia*	coast live oak	32.5	10.5, 9, 6, 7	30'		X	PIP	D	NA
#2690N	*Quercus agrifolia*	coast live oak	8.0		20'		X	PIP	D	NA
#2691N	*Quercus agrifolia*	coast live oak	9.0		20'		X	PIP	PIP	PIP
#2692N	*Quercus agrifolia*	coast live oak	9.5	5, 4.5	20'		X	PIP	D	NA
#2693N	*Quercus agrifolia*	coast live oak	10.0	7, 3	20'		X	PIP	D	NA
#2694N	*Quercus agrifolia*	coast live oak	16.0	6, 4, 3, 3	20'		X	PIP	D	NA
#2695N	*Sequoia sempervirens*	coast redwood	41.0	33, 8	50'		X	PIP	PIP	PIP
#2696N	*Sequoia sempervirens*	coast redwood	16.0	6, 4, 3, 3	15'		X	PIP	D	NA
#2697S	*Hesperocyparis macrocarpa*	Monterey cypress	30.5		50'	X		PIP	D	NA
#2698	*Schinus terebinthifolius*	Brazilian pepper	15.5	3.5, 3.5, 4.5, 4	20'			PIP	D	NA
#2699S	*Hesperocyparis macrocarpa*	Monterey cypress	40.0		90'	X		D	D	NA
#2700N	*Quercus agrifolia*	coast live oak	11.0		25'		X	PIP	PIP	PIP
#2701N	*Quercus agrifolia*	coast live oak	22.0	10, 12	25'		X	PIP	PIP	PIP
#2702N	*Quercus agrifolia*	coast live oak	36.0	7, 6, 6, 5, 4, 4, 4	20'		X	D	PIP	D
#2703N	*Quercus agrifolia*	coast live oak	23.5	9.5, 6, 5, 3	20'		X	D	PIP	D
#2704	*Cupressus leylandii*	Leyland cypress	5.5		15'			PIP	PIP	PIP
#2705	*Cupressus leylandii*	Leyland cypress	4.0		15'			PIP	PIP	PIP
#2706	*Cupressus leylandii*	Leyland cypress	5.0		15'			PIP	PIP	PIP
#2707	*Cupressus leylandii*	Leyland cypress	4.0		15'			PIP	PIP	PIP
#2708	*Cupressus leylandii*	Leyland cypress	5.0		15'			PIP	PIP	PIP
#2709	*Cupressus leylandii*	Leyland cypress	4.0		15'			PIP	PIP	PIP
#2710	*Cupressus leylandii*	Leyland cypress	5.0		15'			PIP	PIP	PIP
#2711	*Cupressus leylandii*	Leyland cypress	5.0		15'			PIP	PIP	PIP
#2712	*Cupressus leylandii*	Leyland cypress	5.0		15'			PIP	PIP	PIP
#2713	*Cupaniopsis anacardioides*	carrot wood	14.0		25'			PIP	PIP	PIP
#2714	*Cinnamomum camphora*	camphor tree	8.0		25'			PIP	PIP	PIP
#2715N	*Quercus agrifolia*	coast live oak	16.5	10, 6.5	20'		X	D	PIP	D
#2716N	*Quercus agrifolia*	coast live oak	33.5	6.5, 6, 6, 4, 5, 6	15'		X	D	PIP	D
#2717N	*Quercus agrifolia*	coast live oak	10.0		20'		X	PIP	PIP	PIP

#2718N	*Quercus agrifolia*	coast live oak	8.0		20"		X	PIP	PIP	PIP
#2719N	*Quercus agrifolia*	coast live oak	11.0		30'		X	PIP	PIP	PIP
#2720N	*Quercus agrifolia*	coast live oak	29.0	10, 11, 8	25'		X	PIP	PIP	PIP
#2721N	*Quercus agrifolia*	coast live oak	16.5		20'		X	D	PIP	PIP
#2722N	*Quercus agrifolia*	coast live oak	15.5		25'		X	PIP	D	NA
#2723N	*Quercus agrifolia*	coast live oak	14.0		25'		X	PIP	D	NA
#2724N	*Quercus agrifolia*	coast live oak	10.0		25'		X	PIP	D	NA
#2725N	*Salix laevigata*	red willow	11.0		20'		X	PIP	PIP	PIP
#2726	*Hesperocyparis macrocarpa*	Monterey cypress	10.5		30'			PIP	PIP	PIP
#2727	*Prunus domestica*	European plum	14.0	3, 2, 4, 3, 2	15'			PIP	PIP	PIP
#2728N	*Quercus agrifolia*	coast live oak	8.0		25'		X	PIP	D	NA
#2729N	*Quercus agrifolia*	coast live oak	12.0		25'		X	PIP	D	NA
#2730N	*Quercus agrifolia*	coast live oak	10.5		25'		X	PIP	D	NA
#2731	*Acacia dealbata*	silver wattle	9.0		30'			PIP	PIP	PIP
#2732	*Acacia dealbata*	silver wattle	10.0		30'			PIP	PIP	PIP
#2733	*Acacia dealbata*	silver wattle	9.5	5.5, 4	25'			PIP	PIP	PIP
#2734N	*Quercus agrifolia*	coast live oak	10.0		20'		X	PIP	D	NA
#2735N	*Quercus agrifolia*	coast live oak	30.5	21.5, 9	30'		X	PIP	D	NA
#2736N	*Quercus agrifolia*	coast live oak	12.5		20'		X	PIP	D	NA
#2737N	*Sequoia sempervirens*	coast redwood	17.0		20'		X	PIP	PIP	PIP
#2738N	*Sequoia sempervirens*	coast redwood	19.0		20'		X	PIP	PIP	PIP
#2739N	*Sequoia sempervirens*	coast redwood	18.0		20'		X	PIP	PIP	PIP
#2740N	*Sequoia sempervirens*	coast redwood	20.0		20'		X	PIP	PIP	PIP
#2741	*Acacia melanoxylon*	Australian blackwood	8.0	2, 2, 2, 2				D	PIP	D
#2742	*Acacia melanoxylon*	Australian blackwood	10.0	3, 3, 2, 2	15'			D	PIP	D
#2743S	*Hesperocyparis macrocarpa*	Monterey cypress	34.0		20'	X		PIP	PIP	PIP
#2744	*Acacia melanoxylon*	Australian blackwood	5.0	3, 2	15'			D	PIP	D
#2745N	*Quercus agrifolia*	coast live oak	43.5	15, 16, 12.5	30'		X	D	PIP	D
#2746N	*Quercus agrifolia*	coast live oak	34.0	25, 9	30'		X	PIP	PIP	PIP
#2747	*Acacia melanoxylon*	Australian blackwood	10.0		20'			PIP	D	NA
#2748	*Acacia melanoxylon*	Australian blackwood	16.0	8.5, 7.5	20'			PIP	D	NA
#2749	*Acacia melanoxylon*	Australian blackwood	26.0	8, 7, 6, 5	20'			PIP	D	NA
#2750N	*Quercus agrifolia*	coast live oak	9.0	5, 4	15'		X	PIP	PIP	PIP
#2751N	*Quercus agrifolia*	coast live oak	15.5	7, 6, 2.5	15'		X	D	D	NA

#2752N	*Quercus agrifolia*	coast live oak	7.0	2.5, 2, 2.5	10'		X	D	D	NA	
#2753N	*Quercus agrifolia*	coast live oak	38.5	10.5, 10, 8, 5, 5	20'		X	D	D	NA	
#2754N	*Quercus agrifolia*	coast live oak	10.5		20'		X	D	D	NA	
#2755N	*Quercus agrifolia*	coast live oak	9.0	6, 3	15'		X	D	D	NA	
#2756N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	D	NA	
#2757	*Acacia melanoxylon*	Australian blackwood	10.0	4, 3, 3	15'			PIP	D	NA	
#2758	*Acacia melanoxylon*	Australian blackwood	15.0	4, 3, 2, 2, 2, 2	15'			PIP	PIP	PIP	
#2759	*Acacia melanoxylon*	Australian blackwood	8.0	5, 3	15'			PIP	D	NA	
#2760	*Acacia melanoxylon*	Australian blackwood	8.5	5.5, 3	15'			PIP	D	NA	
#2761	*Pseudotsuga menziesii*	Douglas-fir	15.0		25'			PIP	PIP	PIP	
#2762	*Pseudotsuga menziesii*	Douglas-fir	14.0		25'			PIP	PIP	PIP	
#2763N	*Quercus agrifolia*	coast live oak	6.0		12'		X	PIP	D	NA	
#2764N	*Quercus agrifolia*	coast live oak	4.5		12'		X	PIP	PIP	PIP	
#2765	*Hesperocyparis macrocarpa*	Monterey cypress	4.5		15'			PIP	PIP	PIP	
#2766	*Pinus thunbergii*	Japanese black pine	4.5		10'			D	D	NA	
#2767	*Trachycarpus fortunei*	windmill palm	11.5		15'			D	PIP	D	
#2768	*Trachycarpus fortunei*	windmill palm	11.0		15'			D	PIP	D	

SUPPLEMENTAL INVENTORY

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Significant Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#3315N	*Quercus agrifolia*	coast live oak	23.0	13, 10	30'		X	D	PIP	D	
#3316N	*Quercus agrifolia*	coast live oak	4.5		25'		X	D	PIP	D	
#3317N	*Quercus agrifolia*	coast live oak	7.5		20'		X	D	PIP	D	
#3318N	*Quercus agrifolia*	coast live oak	13.5		30'		X	D	PIP	D	
#3319N	*Quercus agrifolia*	coast live oak	45.0	20, 13, 12	30'		X	D	PIP	D	
#3320S	*Eucalyptus globulus*	southern blue gum	48.0		95'	X		D	PIP	D	
#3321N	*Quercus agrifolia*	coast live oak	6.0		20'		X	D	PIP	D	
#3322N	*Quercus agrifolia*	coast live oak	6.0		30'		X	D	PIP	D	
#3323	*Acacia dealbata*	silver wattle	11.0	5.5, 3.5, 2	25'			D	PIP	D	
#3324	NOT USED										
#3325	*Pittosporum undulatum*	Victorian box	9.0 *	5, 4 *	15'			D	PIP	D	
#3326	*Acacia dealbata*	silver wattle	28.0	10, 6, 6, 3, 3	25'			D	D	NA	
#3327	*Acacia dealbata*	silver wattle	16.0	7, 5, 4	20'			D	D	NA	
#3328N	*Quercus agrifolia*	coast live oak	35.0	12, 8, 8, 7	30'		X	D	PIP	D	
#3329N	*Quercus agrifolia*	coast live oak	7.0 *		30'		X	D	PIP	D	

#3330N	*Quercus agrifolia*	coast live oak	7.0 *		30'		X	D	PIP	D
#3331	*Acacia melanoxylon*	Australian blackwood	17.0	11, 6	35'			D	PIP	D
#3332	*Hesperocyparis macrocarpa*	Monterey Cypress	5.0		15'			D	PIP	D
#3333	*Pittosporum crassifolium*	Karo	5.5	3, 2.5	15'			D	D	NA
#3334N	*Quercus agrifolia*	coast live oak	7.5	4, 3.5	15'		X	D	PIP	D
#3335N	*Quercus agrifolia*	coast live oak	23.0	7, 6, 5, 5	15'		X	D	PIP	D
#3336N	*Quercus agrifolia*	coast live oak	15.0	8, 4, 3	20'		X	D	PIP	D
#3337N	*Quercus agrifolia*	coast live oak	18.0	3, 3, 3, 3, 2, 2, 2	15'		X	D	D	NA
#3338N	*Quercus agrifolia*	coast live oak	25.5	8, 7.5, 6, 4	20'		X	D	PIP	D
#3339N	*Quercus agrifolia*	coast live oak	16.0	7, 5, 4	15'		X	D	PIP	D
#3340	*Olea europaea*	common olive	11.5	3, 2.5, 2, 2, 2	15'			D	D	NA
#3341N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	PIP	D
#3342N	*Quercus agrifolia*	coast live oak	8.0	4, 4	15'		X	D	PIP	D
#3343N	*Quercus agrifolia*	coast live oak	4.0		15'		X	D	PIP	D
#3344N	*Quercus agrifolia*	coast live oak	6.5	4.5, 2	15'		X	D	PIP	D
#3345N	*Quercus agrifolia*	coast live oak	26.0	10, 9, 7	20'		X	D	PIP	D
#3346N	*Sequoia sempervirens*	coast redwood	19.5		40'		X	D	PIP	D
#3347SN	*Pinus radiata*	Monterey pine	50.0		45'	X	X	D	PIP	D
#3348S	*Hesperocyparis macrocarpa*	Monterey Cypress	40.0		40'	X		D	PIP	D
#3349N	*Quercus agrifolia*	coast live oak	12.5	7, 3, 2.5	15'		X	D	PIP	D
#3350N	*Quercus agrifolia*	coast live oak	12.5	6.5, 6	20'		X	D	PIP	D
#3351N	*Quercus agrifolia*	coast live oak	16.0	8.5, 7.5	25'		X	D	PIP	D
#3352N	*Sequoia sempervirens*	coast redwood	33.0	17, 16	30'		X	D	PIP	D
#3353	*Acacia dealbata*	silver wattle	9.0 *		40'			D	PIP	D
#3354	*Acacia dealbata*	silver wattle	6.5 *		40'			D	PIP	D
#3355N	*Quercus agrifolia*	coast live oak	44.0	22, 12, 10	50'		X	D	PIP	D
#3356N	*Quercus agrifolia*	coast live oak	17.0		40'		X	D	PIP	D
#3357SN	*Quercus agrifolia*	coast live oak	22.0		40'	X	X	D	PIP	D
#3358N	*Quercus agrifolia*	coast live oak	18.0		45'		X	PIP	PIP	PIP
#3359N	*Quercus agrifolia*	coast live oak	45.0	19, 16, 10	45'		X	PIP	PIP	PIP
#3360N	*Quercus agrifolia*	coast live oak	9.0		40'		X	PIP	PIP	PIP
#3361N	*Quercus agrifolia*	coast live oak	12.0		35'		X	PIP	PIP	PIP
#3362N	*Quercus agrifolia*	coast live oak	15.5		40'		X	D	PIP	D
#3363N	*Quercus agrifolia*	coast live oak	44.5	18.5, 18, 8	45'		X	D	PIP	D

Mar Vista

#3364N	*Quercus agrifolia*	coast live oak	37.5	18, 14.5, 5	45'		X	PIP	PIP	PIP
#3365N	*Quercus agrifolia*	coast live oak	5.5		20'		X	D	PIP	D
#3366N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D
#3367N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	PIP	D
#3368N	*Quercus agrifolia*	coast live oak	18.0		25'		X	D	PIP	D
#3369SN	*Quercus agrifolia*	coast live oak	34.0		35'	X	X	D	PIP	D
#3370N	*Quercus agrifolia*	coast live oak	18.0		35'		X	D	PIP	D
#3371N	*Quercus agrifolia*	coast live oak	17.5	10.5, 7	30'		X	D	PIP	D
#3372N	*Quercus agrifolia*	coast live oak	11.0		25'		X	D	PIP	D
#3373N	*Quercus agrifolia*	coast live oak	7.0		25'		X	D	PIP	D
#3374N	*Quercus agrifolia*	coast live oak	7.0		25'		X	D	PIP	D
#3375N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D
#3376N	*Sambucus nigra ssp. caerulea*	blue elderberry	38.0	12, 10, 10, 6	20'		X	D	PIP	D
#3377N	*Quercus agrifolia*	coast live oak	9.0	7, 2	25'		X	D	PIP	D
#3378N	*Quercus agrifolia*	coast live oak	6.0		20'		X	D	PIP	D
#3379N	*Quercus agrifolia*	coast live oak	7.0		20'		X	D	PIP	D
#3380N	*Quercus agrifolia*	coast live oak	4.0	2, 2	15'		X	D	PIP	D
#3381N	*Frangula californica*	coffeeberry	6.5	2.5, 2, 2	15'		X	D	PIP	D
#3382SN	*Quercus agrifolia*	coast live oak	32.0		40'	X	X	D	PIP	D
#3383N	*Quercus agrifolia*	coast live oak	6.0		20'		X	D	PIP	D
#3384N	*Quercus agrifolia*	coast live oak	9.5	6, 3.5	20'		X	D	PIP	D
#3385N	*Quercus agrifolia*	coast live oak	7.0		20'		X	D	PIP	D
#3386N	*Quercus agrifolia*	coast live oak	9.5	3, 2.5, 2, 2	15'		X	D	PIP	D
#3387N	*Quercus agrifolia*	coast live oak	7.0		15'		X	D	PIP	D
#3388N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D
#3389N	*Quercus agrifolia*	coast live oak	7.0	3.5, 3.5	15'		X	D	PIP	D
#3390N	*Sambucus nigra ssp. caerulea*	blue elderberry	4.5		12'		X	D	PIP	D
#3391N	*Sambucus nigra ssp. caerulea*	blue elderberry	4.5		12'		X	D	PIP	D
#3392N	*Quercus agrifolia*	coast live oak	4.0		12'		X	D	PIP	D
#3393N	*Quercus agrifolia*	coast live oak	4.5		15'		X	D	PIP	D
#3394N	*Quercus agrifolia*	coast live oak	8.0	2.5, 2, 2, 1.5	15'		X	D	D	NA
#3395N	*Quercus agrifolia*	coast live oak	6.0	3, 3	15'		X	D	D	NA
#3396N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	D	NA
#3397N	*Quercus agrifolia*	coast live oak	6.0	4, 2	15'		X	D	PIP	D

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Capitola Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#3398N	*Quercus agrifolia*	coast live oak	7.0	5, 2	15'		X	D	PIP	D	
#3399N	*Quercus agrifolia*	coast live oak	4.5 *		15'		X	D	PIP	D	
#3400N	*Pinus radiata*	Monterey pine	16.0		30'		X	D	PIP	D	
#3401N	*Quercus agrifolia*	coast live oak	25.0	7, 5, 5, 5, 3	20'		X	D	PIP	D	
#3402N	*Quercus agrifolia*	coast live oak	19.0	6.5, 5.5, 4, 3	20'		X	D	PIP	D	
#3403N	*Sambucus nigra ssp. caerulea*	blue elderberry	11.0	5, 3, 3	15'		X	D	PIP	D	
#3404N	*Quercus agrifolia*	coast live oak	17.5	6, 3, 2.5, 2, 2, 2	20'		X	D	PIP	D	
#3405N	*Quercus agrifolia*	coast live oak	5.5		20'		X	D	PIP	D	
#3406N	*Quercus agrifolia*	coast live oak	8.0	5, 3	20'		X	D	PIP	D	
#3407N	*Quercus agrifolia*	coast live oak	6.0	3, 3	15'		X	D	PIP	D	
#3408N	*Quercus agrifolia*	coast live oak	10.5	6, 4.5	15'		X	D	PIP	D	
#3409N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D	
#3410N	*Quercus agrifolia*	coast live oak	6.0		15'		X	D	PIP	D	
#3411N	*Quercus agrifolia*	coast live oak	14.5	5, 4, 3, 2.5	15'		X	D	PIP	D	
#3412N	*Quercus agrifolia*	coast live oak	5.0		15'		X	D	PIP	D	
#3413N	*Quercus agrifolia*	coast live oak	53.0	23, 16, 14	35'		X	D	PIP	D	
#3414N	*Quercus agrifolia*	coast live oak	19.0 *		30'		X	D	PIP	D	
#3415N	*Quercus agrifolia*	coast live oak	6.5		12'		X	D	PIP	D	
#3416SN	*Quercus agrifolia*	coast live oak	20.0 *		35'	X	X	D	PIP	D	
#3417N	*Quercus agrifolia*	coast live oak	14.0 *		35'		X	D	PIP	D	
#3418N	*Quercus agrifolia*	coast live oak	9.0 *		35'		X	D	PIP	D	
#3419N	*Quercus agrifolia*	coast live oak	10.0 *		25'		X	D	PIP	D	
#3420N	*Quercus agrifolia*	coast live oak	8.0		25'		X	D	PIP	D	
#3421N	*Quercus agrifolia*	coast live oak	7.5 *		25'		X	D	PIP	D	
#3422N	*Quercus agrifolia*	coast live oak	6.5		20'		X	D	PIP	D	
#3423N	*Quercus agrifolia*	coast live oak	9.0		20'		X	D	PIP	D	
#3424N	*Quercus agrifolia*	coast live oak	5.5		20'		X	D	PIP	D	
#3425N	*Quercus agrifolia*	coast live oak	18.0		30'		X	D	PIP	D	
#3426N	*Quercus agrifolia*	coast live oak	7.0 *	4, 3 *	20'		X	D	PIP	D	
#3427S	*Eucalyptus globulus*	southern blue gum	67.0		150'	X		D	PIP	D	
#3428S	*Eucalyptus globulus*	southern blue gum	29.0		120'	X		D	PIP	D	
#3429	*Eucalyptus globulus*	southern blue gum	9.0	7, 2	70'			D	PIP	D	
#3430N	*Frangula californica*	coffeeberry	11.0 *	6, 5 *	25'		X	D	PIP	D	

#3431N	*Salix lasiolepis*	arroyo willow	4.0		20'		X	D	PIP	D	
#3432CN	*Salix lasiolepis*	arroyo willow	10.0	6, 4	20'	X	X	D	PIP	D	
#3433CN	*Salix lasiolepis*	arroyo willow	8.0		25'	X	X	D	PIP	D	
#3434CN	*Salix lasiolepis*	arroyo willow	9.0 *	5, 4 *	20'	X	X	D	PIP	D	
#3435CN	*Salix lasiolepis*	arroyo willow	16.0		35'	X	X	D	PIP	D	
#3436C	*Eucalyptus globulus*	southern blue gum	96.0	54, 32, 10	150'	X		PIP	PIP	PIP	
#3437N	*Quercus agrifolia*	coast live oak	5.0 *		15'		X	D	PIP	D	
#3438CN	*Salix lasiolepis*	arroyo willow	12.0 *	7, 5 *	25'	X	X	D	PIP	D	
#3439CN	*Salix lasiolepis*	arroyo willow	6.0 *	4, 2 *	25'	X	X	D	PIP	D	
#3440CN	*Salix lasiolepis*	arroyo willow	22.0	6, 5, 4, 4, 3	25'	X	X	D	PIP	D	
#3441CN	*Salix lasiolepis*	arroyo willow	10.0		20'	X	X	D	PIP	D	
#3442C	*Prunus domestica*	European plum	8.0 *		25'	X		D	PIP	D	
#3443CN	*Quercus agrifolia*	coast live oak	9.0		25'	X	X	D	PIP	D	
#3444C	*Eucalyptus globulus*	southern blue gum	47.0	24, 16, 7	120'	X		D	PIP	D	
#3445C	*Eucalyptus globulus*	southern blue gum	19.0		100'	X		D	PIP	D	
#3446C	*Eucalyptus globulus*	southern blue gum	18.0 *	10, 8 *	75'	X		D	PIP	D	
#3447CN	*Quercus agrifolia*	coast live oak	9.0 *		30'	X	X	D	PIP	D	
#3448C	*Eucalyptus globulus*	southern blue gum	60.0 *		120'	X		D	PIP	D	
#3449CN	*Quercus agrifolia*	coast live oak	34.0 *	22, 12 *	30'	X	X	D	PIP	D	
#3450C	*Eucalyptus globulus*	southern blue gum	13.0 *		70'	X		D	PIP	D	
#3451C	*Eucalyptus globulus*	southern blue gum	6.0 *		25'	X		D	PIP	D	

SUPPLEMENTAL INVENTORY

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Significant Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#3563N	*Quercus agrifolia*	coast live oak	5.5	3, 2.5	15'		X	D	D	NA	
#3565N	*Quercus agrifolia*	coast live oak	9.0	2, 2, 1.5, 1.5, 1, 1	10'		X	D	PIP	D	
#3566N	*Quercus agrifolia*	coast live oak	4.5	2.5, 2	15'		X	D	PIP	D	
#3567N	*Quercus agrifolia*	coast live oak	5.0	3, 2	15'		X	D	PIP	D	

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Capitola Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#3564CN	*Quercus agrifolia*	coast live oak	19.0	5, 5, 4, 3, 2	15'	X	X	PIP	PIP	PIP	D

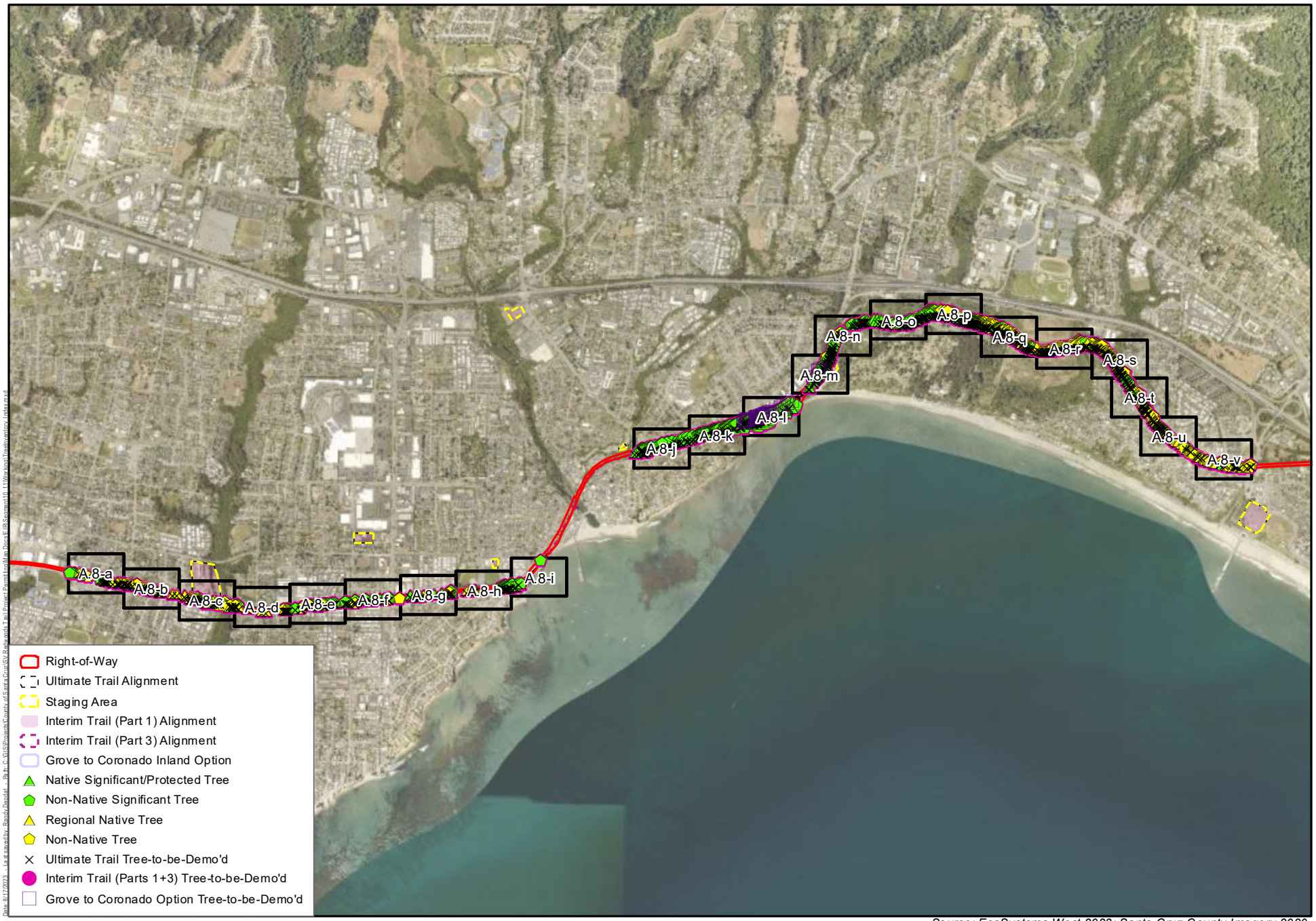
SUPPLEMENTAL INVENTORY

Tree Tag	Botanical Name	Common Name	Diameter at Breast Height (in.)	Multi-leader Individual DBH (in.)	Tree Height	Capitola Tree (X=YES)	Regional Native (X=YES)	Ultimate (No phase)	Interim (Phase 1)	Ultimate (Phase 3)	Ultimate Option B (No phase)
#3595C	*Eucalyptus globulus*	southern blue gum	56.0		120'	X		PIP	PIP	PIP	
#3596C	*Eucalyptus globulus*	southern blue gum	63.0	9, 23, 31	100'	X		PIP	PIP	PIP	

#3597CN	*Quercus agrifolia*	coast live oak	61.0	9, 23, 29	40'	X	X	PIP	PIP	PIP	
#3598CN	*Quercus agrifolia*	coast live oak	7.0		15'	X	X	PIP	PIP	PIP	
#3599C	*Acer macrophyllum*	big leaf maple	7.0		35'	X		PIP	PIP	PIP	
#3600C	*Eucalyptus globulus*	southern blue gum	22.0	7, 8, 7	60'	X		PIP	PIP	PIP	
Tree Tag	**Botanical Name**	**Common Name**	**Diameter at Breast Height (in.)**	**Multi-leader Individual DBH (in.)**	**Tree Height**	**Significant Tree (X=YES)**	**Regional Native (X=YES)**	**Ultimate (No phase)**	**Interim (Phase 1)**	**Ultimate (Phase 3)**	**Ultimate Option B (No phase)**
#3601N	*Quercus agrifolia*	coast live oak	16.0		25'		X	D	PIP	D	

DEMO	803	288	669	66
PIP	1080	1595	926	205

TOTAL TREE COUNT	1883	1883	



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 1,000 2,000

Feet

Figure A.8

Tree Inventory - Index

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-a

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-b

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-c

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-d

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

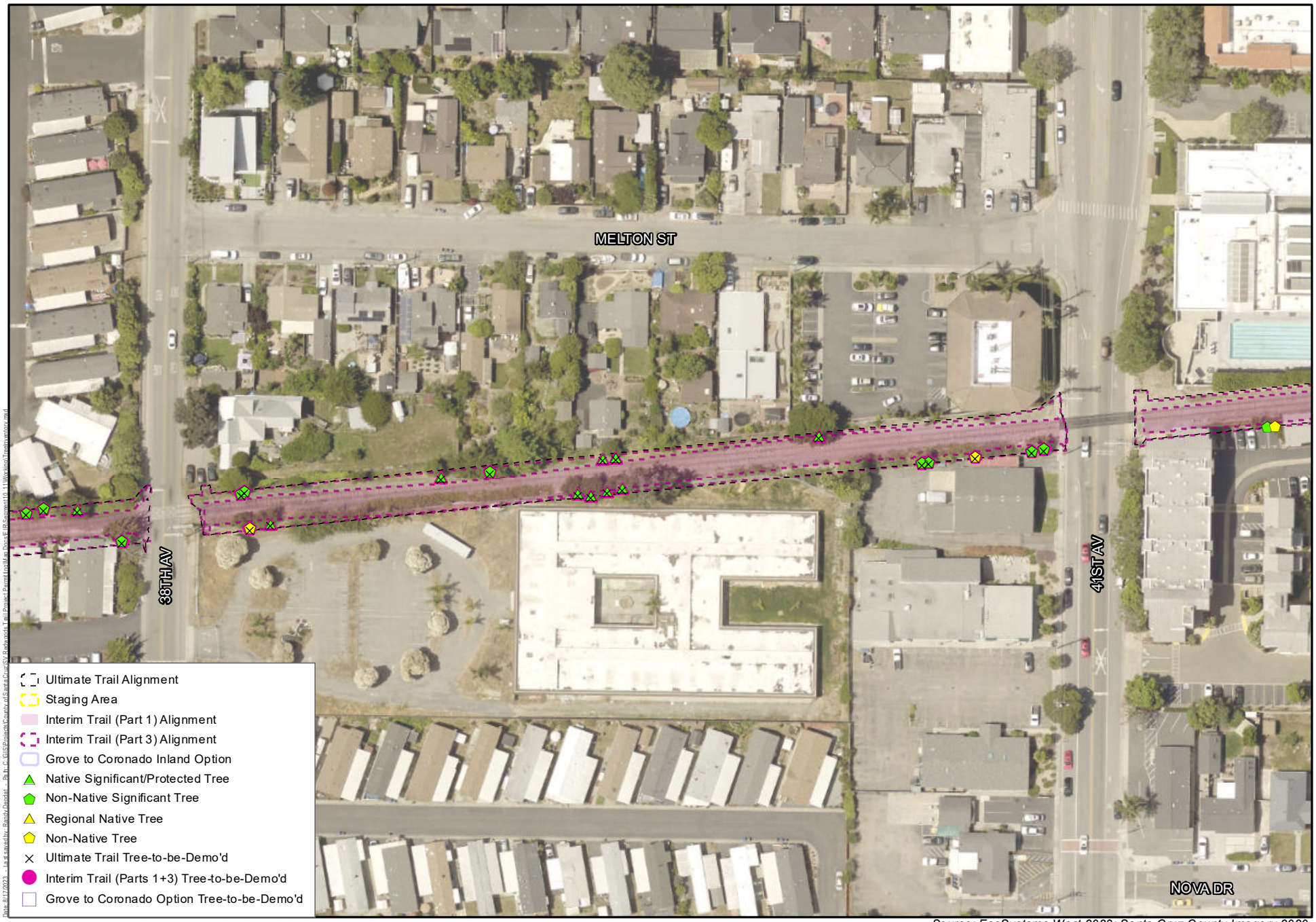
0 50 100

Feet

Figure A.8-e

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-f

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-g

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-h

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-i

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-j

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-k

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

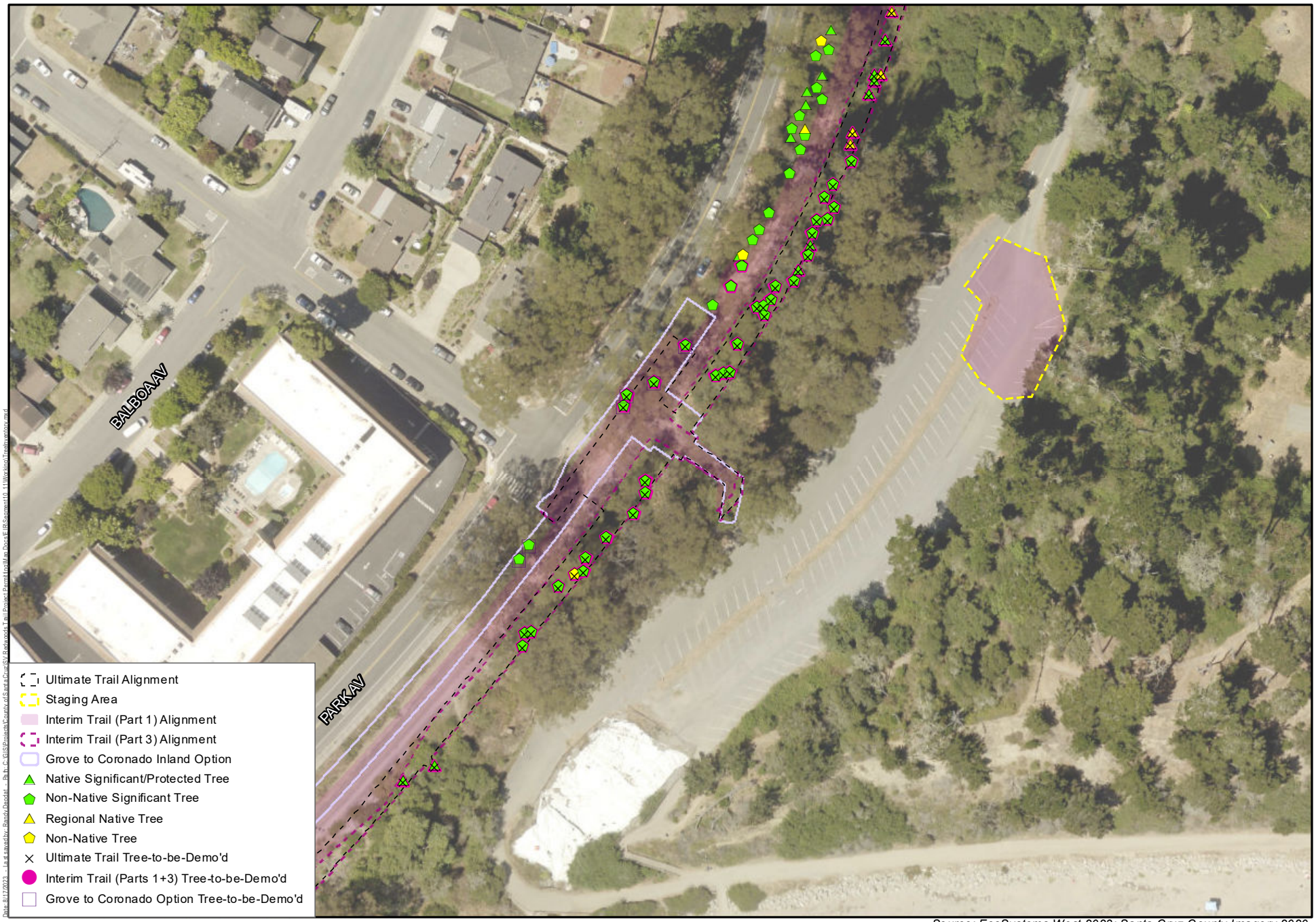
0 50 100

Feet

Figure A.8-I

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

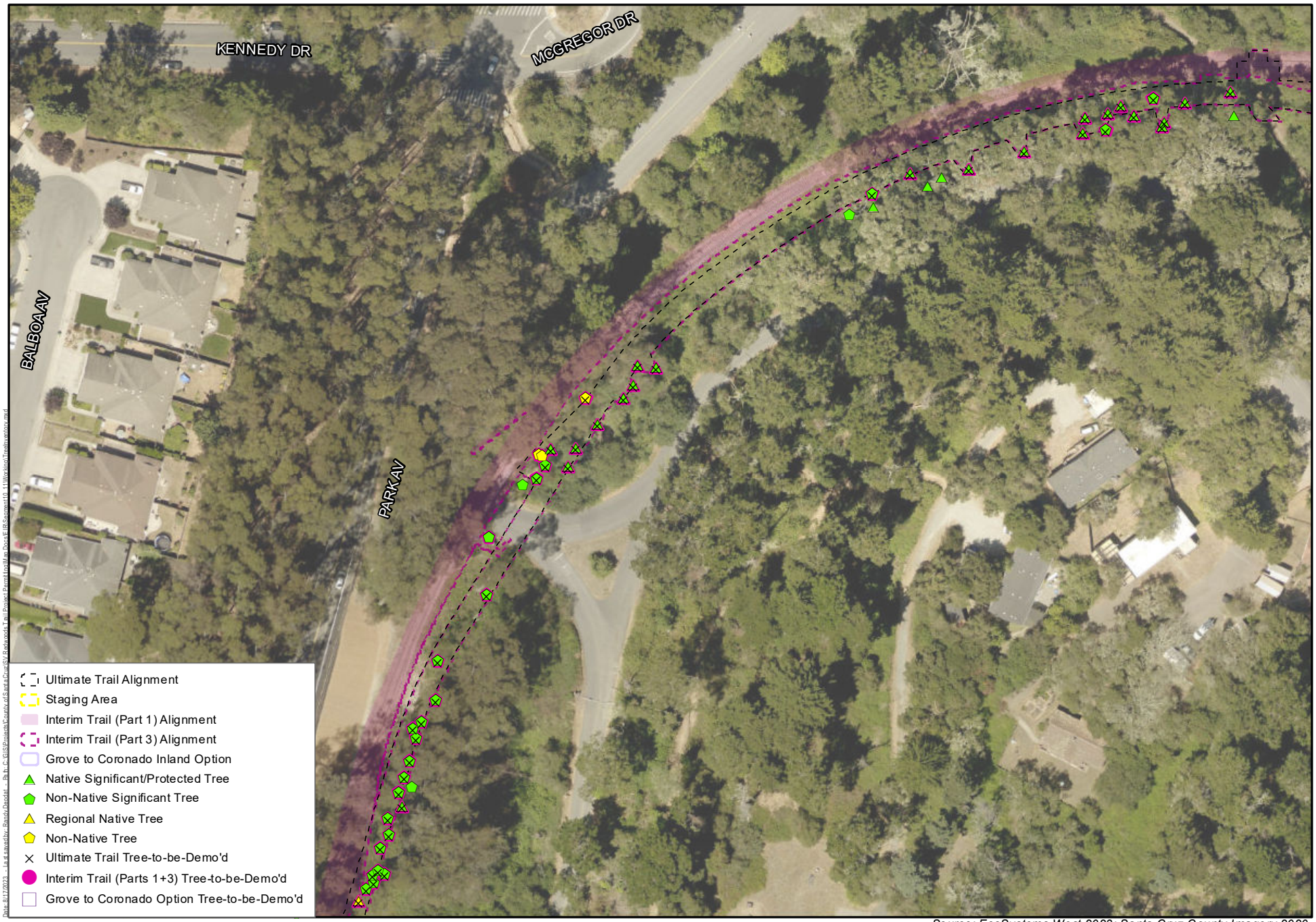
0 50 100

Feet

Figure A.8-m

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

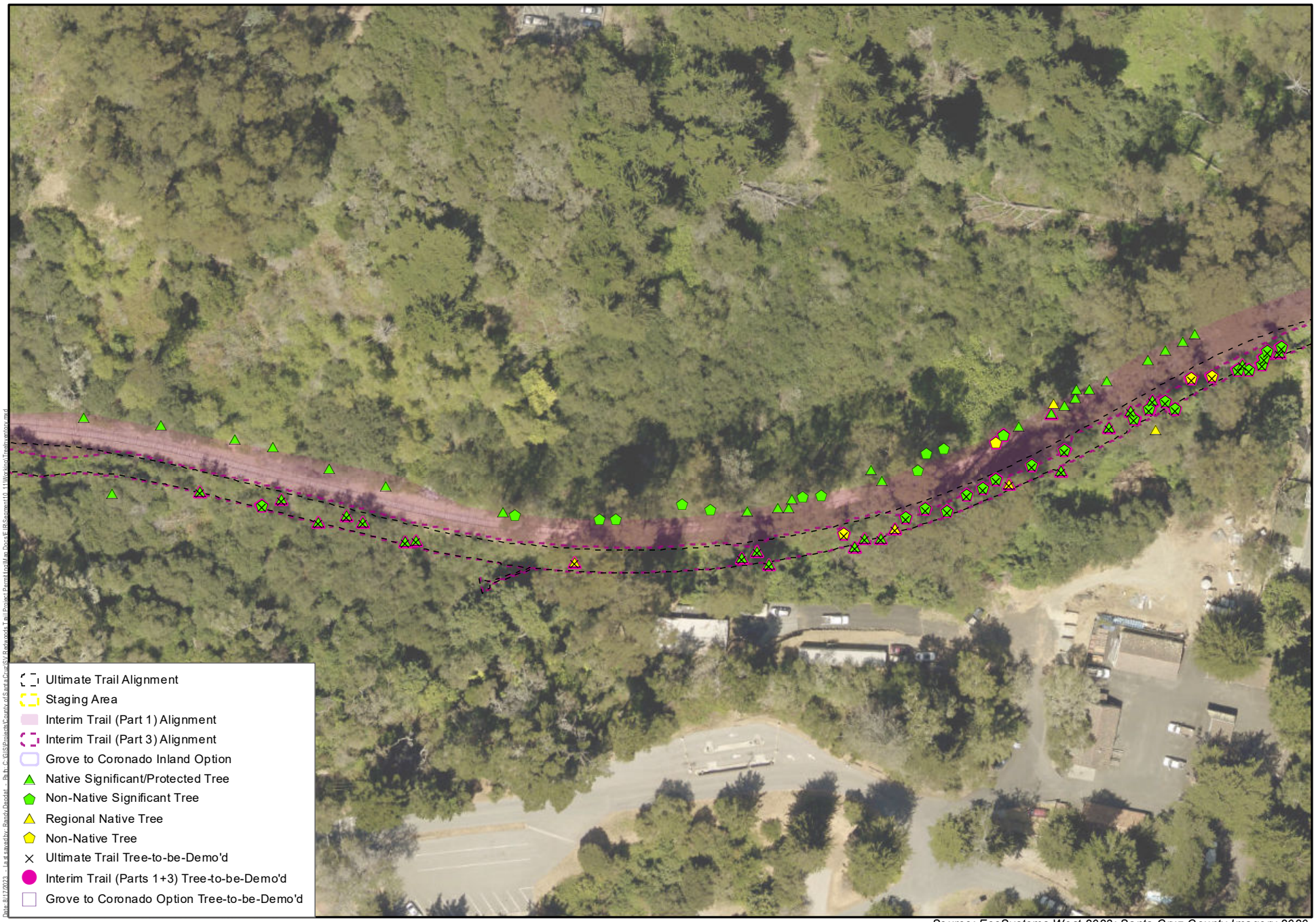
0 50 100

Feet

Figure A.8-n

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-o

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

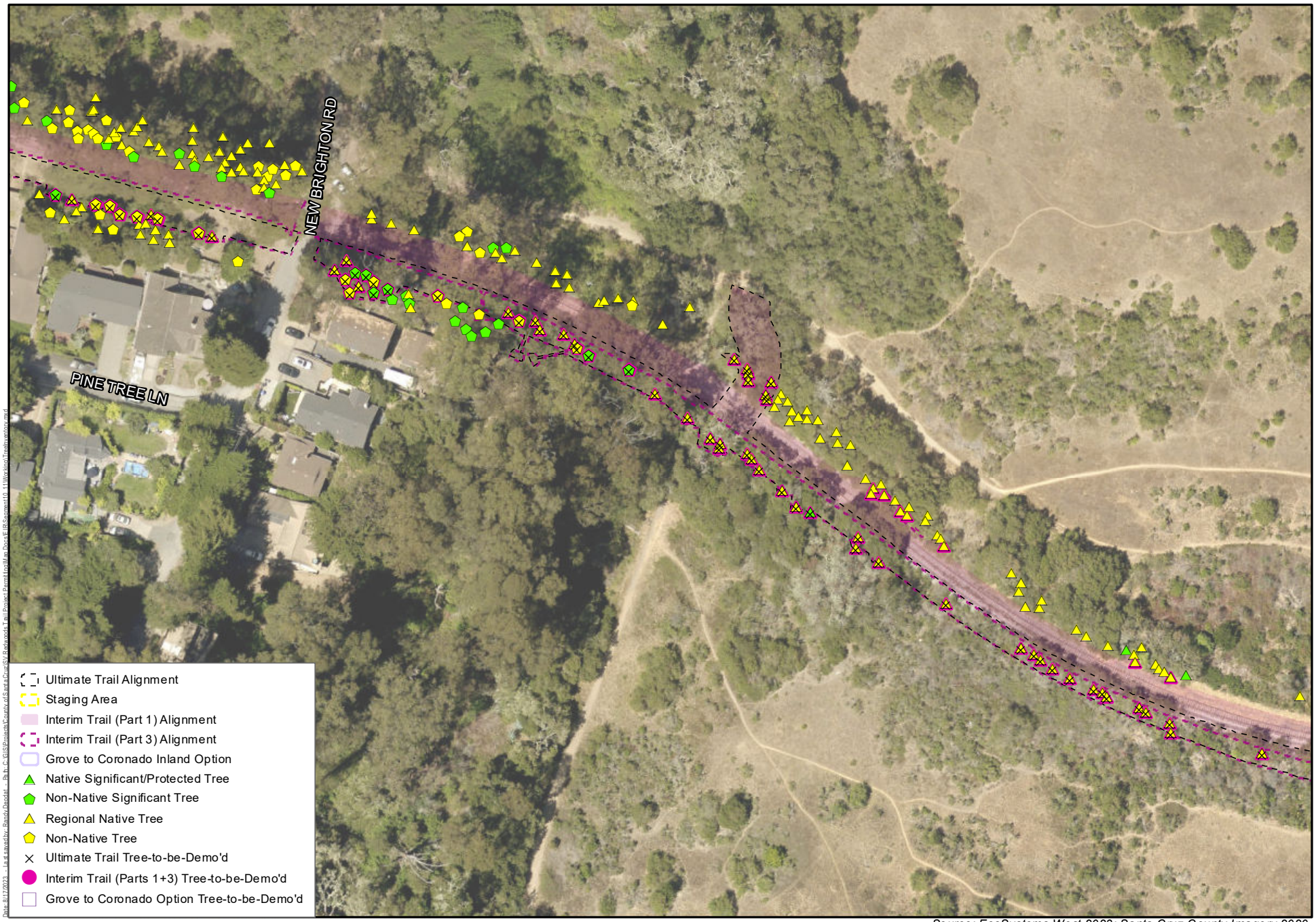
0 50 100

Feet

Figure A.8-p

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

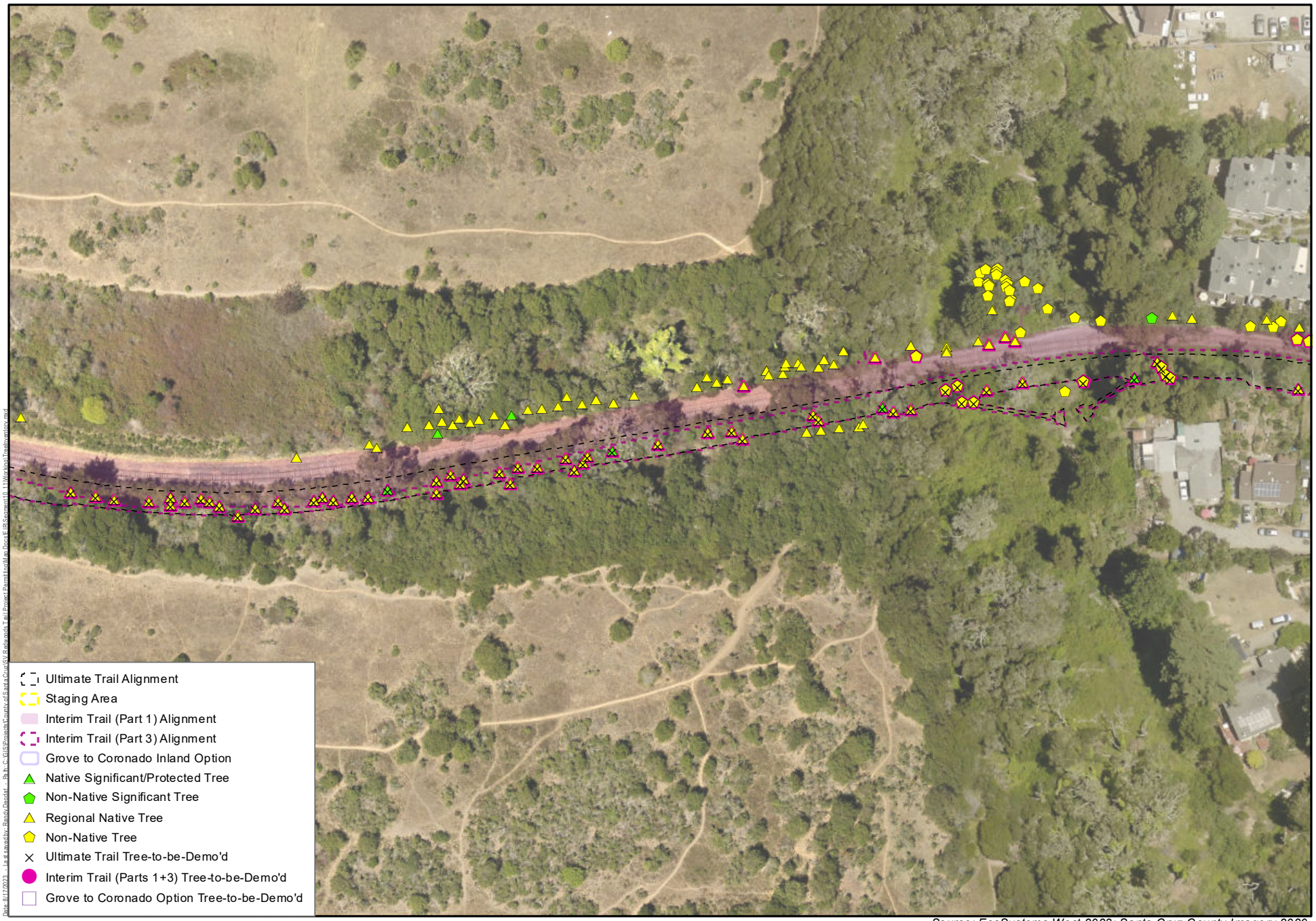
0 50 100

Feet

Figure A.8-q

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-r

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-s

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-t

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-u

Tree Inventory

Coastal Rail Trail Segments 10 and 11



Source: EcoSystems West 2023; Santa Cruz County Imagery 2020.

Harris & Associates

N

0 50 100

Feet

Figure A.8-v

Tree Inventory

Coastal Rail Trail Segments 10 and 11

Appendix B. NOP and Scoping Comments

This page intentionally left blank.

County of Santa Cruz

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR , SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: 711
PAIA LEVINE, ACTING PLANNING DIRECTOR
www.sccoplanning.com

NOTICE

Date:	November 5, 2021
To:	Interested Parties All Recipients on the Distribution List
Lead Agency:	County of Santa Cruz
Contact:	Rob Tidmore, Project Manager 701 Ocean Street, Room 410, Santa Cruz, CA 95060 (831) 454-2340, Robert.Tidmore@santacruzcounty.us
Subject:	Notice of Preparation of an EIR and Scoping Meeting
Project Title:	Rail Trail Segments 10 and 11 Project

NOTICE IS HEREBY GIVEN THAT the County of Santa Cruz (County) will be the Lead Agency and will host a scoping meeting and prepare an Environmental Impact Report (EIR) to assess the potential project impacts of the project described below on the environment, pursuant to the requirements of the California Environmental Quality Act (CEQA).

THE PURPOSE OF THIS NOTICE IS to solicit public input on environmental concerns and alternatives to be evaluated in the EIR for the Rail Trail Segments 10 and 11 Project. Responsible agencies may need to use the EIR when considering permits or other approvals for the project, and trustee agencies should plan to review and comment on the EIR with respect to trust resources within their jurisdiction.

The focus of this notice and the scoping meeting is specifically to gather input on potential environmental issues and project alternatives to be evaluated in the environmental review process, not the merits of the project itself or the project design. There will be future opportunities for community input on the schematic plans.

THE PURPOSE OF THIS PROJECT IS to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the existing Santa Cruz Branch Rail Line (SCBRL) rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

PUBLIC INPUT DUE DATE: Written comments should be submitted or postmarked within 30 days of the receipt of this Notice, as provided by State law, and thus should be received no later than **5:00 p.m. on TUESDAY, DECEMBER 7, 2021**. Please submit your comments in writing to the contact person's name and address below. Please include the commenter's name, agency or organization (if applicable), phone number, and email (typed or written legibly) in your response. The focus of the NOP and your comments is specifically to gather input on potential environmental issues and project alternatives to be evaluated in the EIR, not the merits of the project itself or the project design. There will be future opportunities for community input on the design.

County of Santa Cruz Project website
https://www.dpw.santacruzcounty.us/RailTrail

or

Rob Tidmore, Project Manager
County of Santa Cruz, Department of Public Works
701 Ocean Street, Room 410
Santa Cruz, California 95060
RailTrail@santacruzcounty.us

PROJECT LOCATION AND DESCRIPTION:

The **Rail Trail Segments 10 and 11 Project** is an approximately 4.5-mile bicycle and pedestrian system that generally extends along the SCBRL corridor, from the eastern side of 17th Avenue to the western side of State Park Drive in unincorporated Santa Cruz County (**Figure 1**).

The project is part of the larger MBSST Network, for which a Master Plan was adopted and a programmatic EIR was certified in 2013 by the Santa Cruz County Regional Transportation Commission (SCCRTC). In 2014, the SCCRTC made minor revisions to the Master Plan and prepared an EIR addendum. The Master Plan was prepared to establish a continuous alignment, including a bicycle and pedestrian trail, along the SCCRTC-owned SCBRL extending the length of Santa Cruz County. Information from the Master Plan EIR will be used as appropriate in the EIR for Segments 10 and 11.

The EIR for Segments 10 and 11 will evaluate the proposed project, called *Rail with Trail*, as well as a *Railbank with Trail* alternative, at an equal level of detail. When an alternative is evaluated at an equal level of detail, CEQA requires that the lead agency identify a preferred alternative. The County considers the proposed project, *Rail with Trail*, the preferred alternative for purposes of environmental review.

- **Proposed Project: Rail with Trail**. The multi-use trail would be located alongside the railroad tracks. The trail would be 10-12 feet wide (but may be reduced to 8 feet in areas with existing constrained conditions). The Project may include shifting of the tracks within the right-of-way as necessary to accommodate the trail.
- **Alternative 1: Railbank with Trail**. The multi-use trail would be located generally along the rail centerline, and the existing tracks and ties would be removed to enable construction of

the trail. The trail width would be determined during preliminary design, with the goal of reducing significant project effects in accordance with CEQA Guidelines (Sec 15126.6). This railbanking alternative allows for future installation of tracks and relocation of the trail alongside the tracks.

As required by CEQA, the County will also consider other project alternatives, which must meet most of the project objectives while substantially lessening or avoiding any of the significant impacts of the proposed project. As part of this scoping process, the County is soliciting input from agencies and the public on additional alternatives that should be considered for evaluation within the alternatives section of the EIR. Comments regarding suggested alternatives should include a clear description in narrative and graphic formats to the extent possible. Comments on this subject will be most helpful if they include the author's thoughts regarding how well they might meet the requirements of CEQA.

PROBABLE ENVIRONMENTAL EFFECTS:

Although, at this very early stage of the environmental review process, it is impossible to know with certainty the precise nature and extent of the environmental effects that will be identified as preparation of the Draft EIR gets underway, it is possible to identify key categories of environmental effects that the proposed project may affect. These include Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Greenhouse Gas Emissions/Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Recreation, Transportation/Circulation, and Tribal Cultural Resources.

SCOPING MEETING:

Pursuant to the public participation goals of CEQA, as set forth in particular in Public Resources Code section 21083.9, subdivision (a), the County will host an EIR Scoping Meeting at the date, time and location indicated below to gather additional input on the scope of the EIR analysis. The meeting will be held virtually due to public health concerns.

Wednesday, November 17, 2021 5:00-6:30 PM

Click the link below to join the webinar:
https://rrmdesign.zoom.us/j/83193208360
Webinar ID: 831 9320 8360
Call-in Options via Telephone: +1 408 638 0968 or +1 669 900 6833

ACCOMMODATIONS FOR PERSONS WITH DISABILITIES

The County of Santa Cruz does not discriminate on the basis of disability, and no person shall, by reason of a disability, be denied the benefits of its services, programs, or activities. If you are a person with a disability, specifically a communication disability, and you would like to request a reasonable modification or accommodation to fully participate in the meeting via videoconference or telephone, please contact the Department of Public Works at (831) 454-2160 or robert.tidmore@santacruzcounty.us at least 24 hours in advance of the meeting to discuss your accessibility needs. Persons with disabilities may request a copy of the agenda and presentation in an alternative format.

Figure 1. Rail Trail Segments 10 and 11 Project Location Map

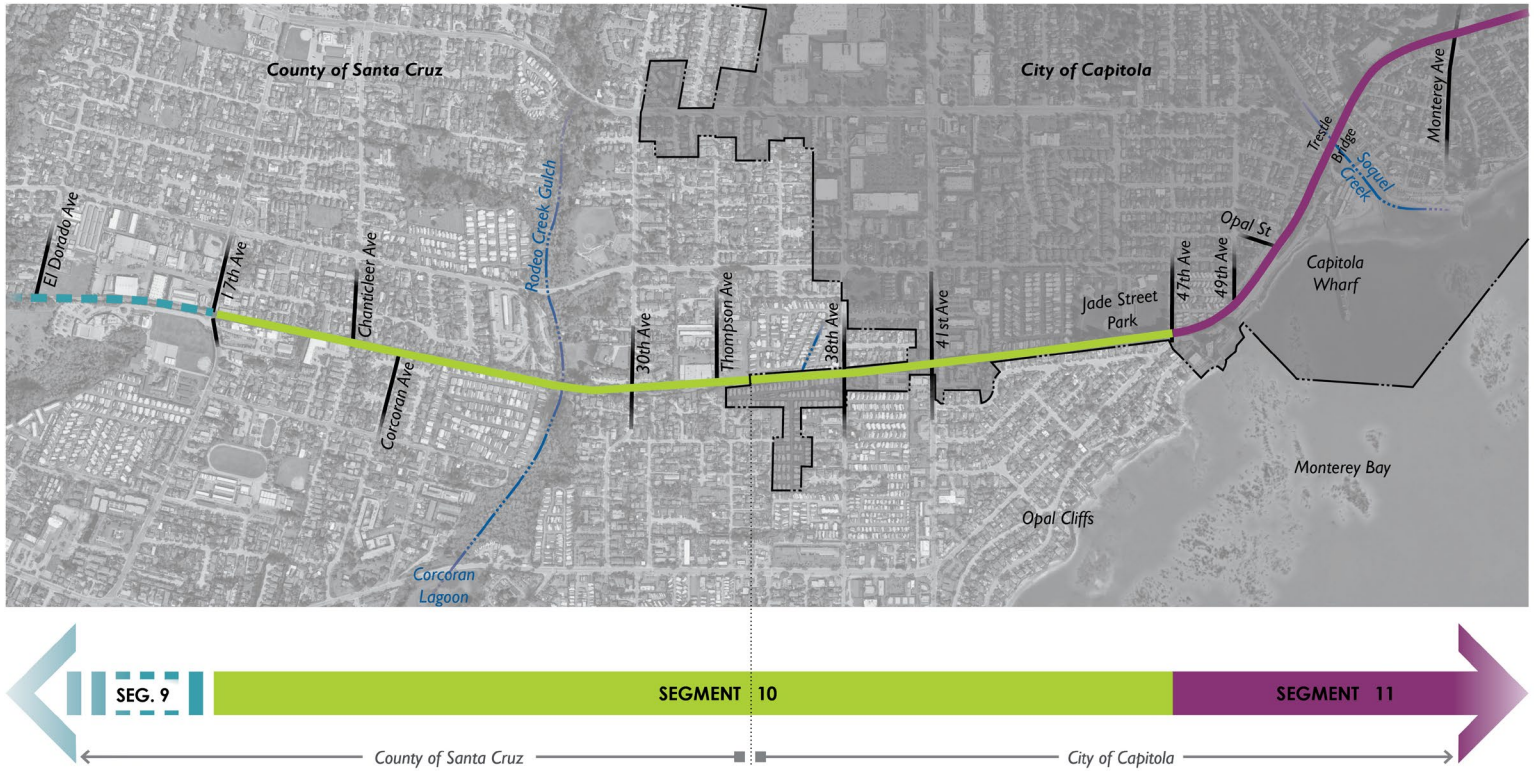
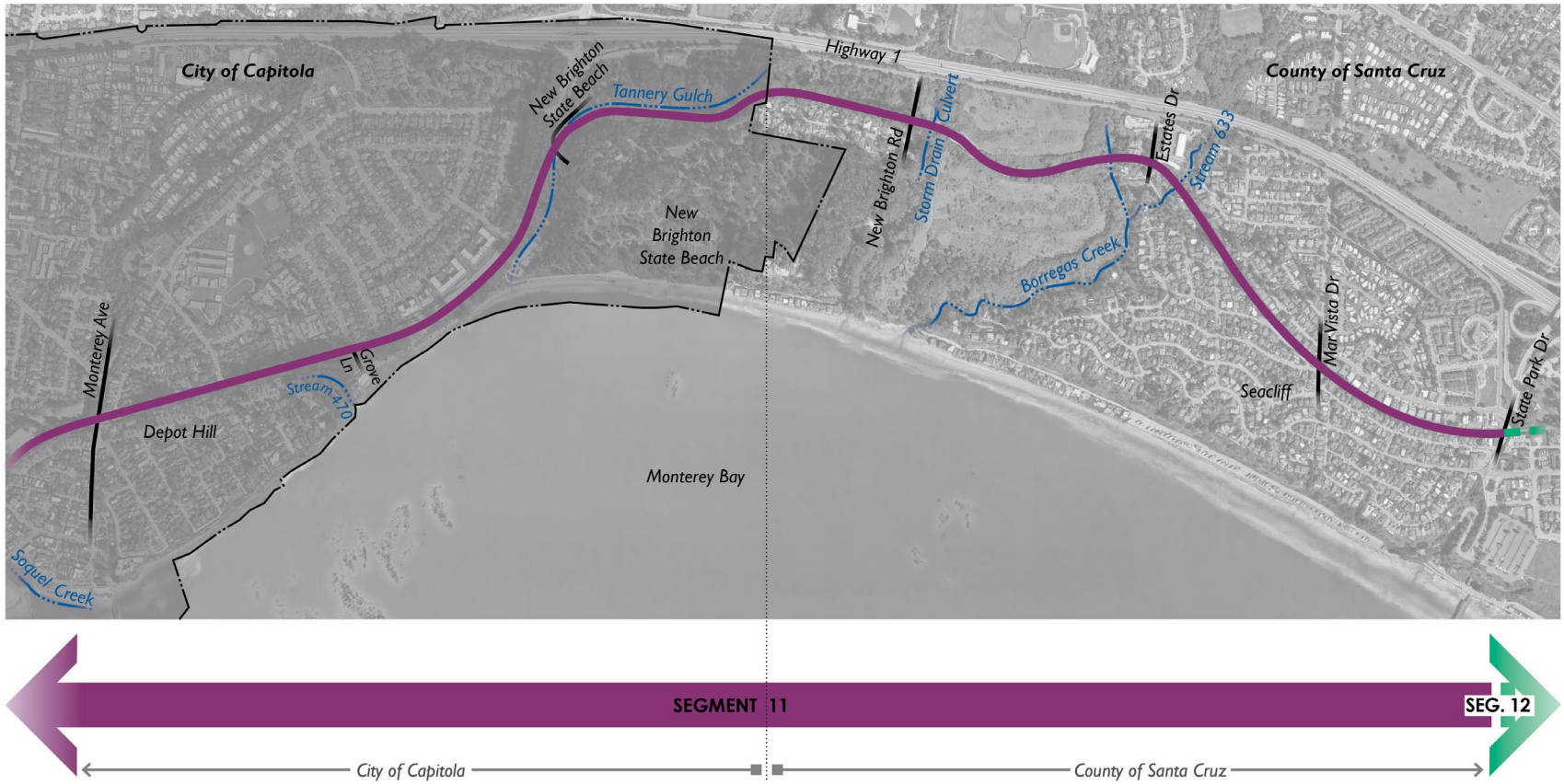


Figure 2. Rail Trail Segments 10 and 11 Project Location Map (continued)



Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
Agencies and Organizations			
California Coastal Commission (Rainey Graeven)	12/7/2021 Letter	Supports Monterey Bay Sanctuary Scenic Trail (MBSST) as a critical component of the California Coastal Trail (CCT).	Comment noted
		Analyzing alternatives and opportunities should be approached within the larger context of alternative transportation opportunities along the Santa Cruz Branch Line (SCBL) corridor. A "no project" alternative is not a viable alternative because the MBSST is a critical component of the CCT.	Alternatives
		Segments 10 and 11 and the broader MBSST can help advance state and local sustainability measures of improved coastal access, recreation, mobility, environmental conditions, safety, and economic vitality and health.	Comment noted Land Use Recreation Transportation
		The corridor should be used to its full sustainable transportation potential. Accordingly, the evaluation of railbanking or similar alternatives should document potential impacts to the long-term development of complete multi-modal transit options.	Land Use Transportation
		The DEIR will need to evaluate in detail how the "Railbank with Trail" alternative will affect the feasibility of reintroducing rail along this corridor at a future date, so that reviewers can better understand the implications of the decisions being made now.	Land Use Transportation
		Clearly describe "railbanking" including scenarios that may trigger future trail relocation to accommodate rail/transit use and the various steps required, and including an explanation of the legal requirements from the Surface Transportation Board.	Introduction Project Description
		DEIR should clearly explain the implications of Capitola's Measure L, including whether signage, striping, or other improvements through Capitola Village would be included as part of the preferred alternative.	Introduction Project Description
		A formal boundary determination will inform whether any project components extend into the Commission's CDP permitting. Any portions of the Project located within the Coastal Zone boundary should be identified and noticed as such in all supporting materials, including the DEIR.	Biological Resources Land Use

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		The DEIR should explain why a secondary or expanded/cantilevered path off the trestle is not a financially viable alternative.	Alternatives
		DEIR should evaluate alternatives for on-street improvements through Capitola Village.	Alternatives
		DEIR alternatives analysis should allow for easy comparisons in trail utility, opportunities, local transportation dynamics and trail user experience.	Transportation Alternatives
		The DEIR should identify the preferred alternative that is most protective of coastal resources, complies with other Coastal Act policies such as minimizing VMT, and provides for a continuous, safe, and scenic trail system.	Alternatives
		Any overwater crossing should also make use of appropriate bridge coloration and railing design to minimize impacts to public views and the character of the area; employ appropriate best management practices during construction including to protect water quality and sensitive marine and terrestrial/avian species; and consider potential tsunami events.	Project Description Aesthetics Biological Resources Hydrology/WQ
		The DEIR should identify: 1) the corridor's width throughout Segments 10 and 11 including the ROW or other public lands width on either side of the existing tracks; 2) the estimated width of the trail and the width on either side of the trail in all alternatives considered; and 3) what will happen at pinch points, whether man-made (e.g., trestles), natural (e.g., slopes and habitat areas), or rail/transit-related.	Project Description Land Use Alternatives
		The DEIR should clearly identify the locations where the proposed trail would cross pedestrian/vehicular intersections. The DEIR should also evaluate the various alternatives to maximize pedestrian and bicycle connectivity to coastal destinations throughout Segments 10 and 11, including beaches.	Project Description Alternatives
		The DEIR needs to evaluate the project against the applicable LCP and Coastal Act standards. CDP applications that span the commission CDP jurisdiction and that of local government can be consolidated (see footnote 8 on page 3)	Biological Resources Land Use
		The proposed project would have the potential to result in habitat impacts, primarily because the project would be adjacent to and would cross over a number of creeks, lagoons, and tidally-influenced waters. The DEIR should	Biological Resources Hydrology/WQ

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		identify these resources and avoid impacts to them. Where impacts are unavoidable, the DEIR should identify adequate mitigation for the impacts. The DEIR should pay special attention to wetlands and environmentally sensitive habitat areas (ESHA).	
California Department of Fish and Wildlife (Stephanie Fong)	12/6/2021 Letter	DEIR should include reasonably foreseeable future phases of the Project, and that contains sufficient information to evaluate and review the Project's environmental impact, including: - Footprint of permanent project features - Type of trail base (asphalt, concrete, gravel, or dirt) - New light sources along trail - Location, type, length, and height of fencing - Habitat encroachment caused by widening trail into riparian habitat or other sensitive area Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB).	Project Description Aesthetics Biological Resources
		DEIR should discuss all direct and indirect impacts (temporary and permanent) including 'take' of special species, loss of habitat, permanent and temporary habitat disturbances, and obstruction of wildlife corridor use. Early consultation with CDFW is encouraged.	Biological Resources
		Because the project has potential to impact water resources, notification is required through CDFW's Lake and Streambed Alteration (LSA) program.	Biological Resources Hydrology/WQ
		Prior to Project implementation, surveys should be conducted for special-status species and plants that have the potential to occur within the Project area.	Biological Resources
		The DEIR should specify proposed fencing plans and identify current wildlife trails throughout the Project Area. The Project should install wildlife-friendly fencing at these locations to make it easier for wildlife species to traverse, thereby decreasing wildlife entanglement and mortality. (See A Landowner's Guide to Wildlife Friendly Fences: How to Build Fence with Wildlife in Mind, link on page 5).	Project Description Biological Resources
		Map areas with creeks, drainages, culverts, and where there is potential for concentrated runoff to occur. Incorporate permeable surfaces throughout the Project to allow stormwater to percolate in the ground and prevent stream hydromodification (see link on page 5).	Hydrology/WQ

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		Eliminate non-essential artificial lighting. Avoid or limit the use of artificial lights during the hours of dawn and dusk, when many wildlife species are most active. CDFW also recommends that outdoor lighting be shielded, cast downward, and not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards).	Project Description Aesthetics Biological Resources
California State Parks (Linda Hitchcock)	11/22/2021 Email	Notes riparian willow habit on both sides of trail through New Brighton State Beach and Porter Senson property.	Biological Resources
		If trail goes outside right-of-way onto State Parks property, operating agreement will be necessary. Prefers project stay within the right-of-way or moves to public streets, if necessary.	Land Use Section 4f
		Trail crossing needed in New Brighton State Beach from entrance kiosk to campground.	Comment noted Project Description
		Trail crossing needed at Porter Senson area to accommodate people accessing the beach.	Comment noted Project Description
Santa Cruz County Regional Transportation Commission (Guy Preston)	11/30/2021 Letter	Supports Rail with Trail design as well as analysis of alternative alignments. Urges County to develop Project.	Comment noted
City of Santa Cruz Water Department (Heidi Luckenbach)	12/7/2021 Letter	Plan, design and construct the Project to appropriately avoid any impacts to the existing raw and treated water pipelines within the project vicinity that cross the trail alignment.	Hydrology/WQ Utilities
Native American Heritage Commission (Katy Sanchez)	11/12/2021 Letter	Consult with Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, according to requirements of AB 52 and SB 18.	Cultural Resources Tribal Resources
		Contact the regional California Historical Research Information Center for an archaeological records search. Complete a Cultural Resources Assessment for the proposed project alignment.	Cultural Resources Tribal Resources
		Lead Agencies (County of Santa Cruz) should include provisions for proper treatment and disposition of inadvertently discovered archaeological resources and human remains. In identified sensitive areas, a qualified archaeologist and a culturally affiliated Native American should monitor all ground-disturbing activities.	Cultural Resources Tribal Resources

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
Manu Koenig (First District Supervisor, County of Santa Cruz)	11/10/2021 Email	Sections of Segments 10 and 11 appear to require railbanking in any scenario in order to avoid lawsuits. Suggesting that Alternative 1 is dependent on railbanking but that the proposed project could happen either way is therefore not accurate.	Comment noted
	11/18/2021 Email	Planning studies done in the past have not adequately reflected all potential environmental impacts. The DEIR should be an objective study that considers all sources of information. Santa Cruz County Coastal Climate Change Vulnerability Report is one example of a resource that should be considered.	Comment noted GHG
Equity Transit (Organization - Lani Faulkner)	11/21/2021 Letter	Supports Rail with Trail project because it will preserve the ability to provide robust public transportation benefits to the community.	Comment noted
		Does not support Railbank with Trail alternative because it would require greater investment of time, money, human resources, material use and waste, and a concomitant increase in GHGs and toxins.	Comment noted GHG
		Proposed trail would minimize disturbance to rail beds and soils, while alternative plan would release toxic chemicals from rail bed into the air.	Air Quality Hazardous Materials
		A trail only scenario will increase auto traffic, vehicle collisions, and GHG emissions and decrease use of public transit. The alternative plan puts ability to implement rail quickly and efficiently at risk.	Comment noted Air Quality GHG Transportation
		Tearing up the rails is inconsistent with the County General Plan. Preserving the rail line for light rail use is of critical importance. There are no examples of railbanking working to restore rail service after replacement with a paved trail.	Comment noted
		Removing the rail line, building a temporary trail, and later removing the trail to rebuild the rail line would create greater noise impacts than preserving the rail line alongside the trail.	Noise
		Preserving the rail maximizes access and recreation opportunities.	Recreation Transportation
Friends of Rail and Trail (Faina Segal)	12/7/2021 Letter	"Railbank with Trail" alternative should be renamed as "Railbank with INTERIM Trail" in DEIR.	Project Description

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		DEIR should include the full environmental impact of an Interim trail, including demolition of the existing rail line, handling and disposal of hazardous waste, increased GHG emissions and VMT, implementation of an interim trail, discontinuing the interim trail use, restoring the rail line, and constructing a permanent trail alongside the rail so that this alternative can be fully evaluated and understood by the community and decision makers.	All sections
		DEIR should include the full environmental benefits of the project as documented in the RTC's Unified Corridor Investment Study (UCIS) and the *Transit Corridor Alternatives Analysis / Rail Network Integraton Study* (TCAA/RNIS), including reduction in VMT and GHG emissions, increased access, and a reduction in the release of hazardous materials.	Air Quality GHG Hazardous Materials Land Use Transportation
		The DEIR should analyze timelines for the proposed project and all alternatives. What would be the impact of delaying implementation of passenger rail transit?	All Sections Passenger rail transit is not being analyzed
		Ensure that Alternative 1: "Railbank with Interim Trail" conforms with the "Trail Only" use as described in *Appendix B, Table B-13: Trail Only of the UCIS* in terms of width, length and other specified characteristics.	Comment noted
Anchor West Homeowners Association (Alexis Pursley)	12/6/2021 Email	Board expresses need to ensure ongoing maintenance to Eucalyptus grove on ocean side of Park Avenue. Overgrowth would create fire and safety hazards.	Hazardous Materials Public Safety Wildfire
Individuals			
Sara Allshouse	12/12/2021 Email	Opposed to trail because of noise, trash, dumping, weed control materials, fire hazard, crime, aesthetics, and cost.	Comment noted Aesthetics Noise Public Safety Wildfire
Marianne Cohn	12/3/2021 Email	HOA performs semiannual tree trimming along portion of trail near Park and Balboa Avenues. Access must be preserved to ensure trimming takes place and overgrowth does not create fire and safety hazards.	Comment noted Hazardous Materials Public Safety
Bud Colligan	11/17/2021 Email	List of topics to be studied in DEIR appears comprehensive.	Comment noted

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		Rail and trail are not possible on the same corridor and would result in extensive environmental damage, including extensive cutting of heritage oaks and other mature trees, movement of tons of earth to excavate for retaining walls, tons of new concrete for bridges and walls, displacement of sensitive wildlife and plants, and emission of GHGs.	Comment noted All sections
		Rail trail option would force users onto streets in Capitola Village, dramatically lowering usage of the trail for active transportation and recreation purposes.	Comment noted
		The practical width of the trail is more important than the so-called right-of-way. Hillsides, trees, low income housing, and steep embankments and gulches prevent a reasonable-cost trail from being built.	Comment noted
		For context, review studies performed by Alta Planning and Design and Nelson Nygaard, linked within the email.	Comment noted
		Analyze traffic estimates for actual ridership versus light rail ridership forecasts against actual experience in other communities like Sonoma/Marin and San Jose.	Comment noted Not analyzing rail use
		Consistent with the Santa Cruz County Coastal Climate Change Vulnerability Report, heavy infrastructure such as trains should be moved inland to preserve coastal bluffs, marshes, and estuaries. The rail trail option is inconsistent with this recommendation.	GHG Land Use
		Consider social equity concerns. Light rail would benefit mostly high income individuals, while the associated costs (tax burden, health impacts, displacement) would be borne primarily by low income individuals and marginalized communities.	Comment noted Not analyzing socioeconomic impacts
		Graphics in the DEIR should be true to corridor measurements and topography so as not to mislead the public.	Comment noted
Pete Haworth	12/22/2021 Email	DEIR should include environmental impacts of bringing the Capitola Trestle Bridge into condition where it can support both rail and trail so that a fair comparison can be made between the proposed project and the alternative project.	Comment noted Alternatives
		DEIR should make clear that it is unlikely rail would need to be replaced if the railbank-and-trail alternative is selected.	Comment noted

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
Dan Holdren	11/24/2021 Email	Requested to be on information distribution list	Comment noted
Rick Hyman	12/1/2021 Email	DEIR should include one or more additional alternatives, in the event that RTC decides against pursuing railbanking before the EIR is complete.	Alternatives
		One possible alternative could be to analyze a trail on the opposing side of the tracks from the preferred alternative.	Alternatives
		Another possible alternative could be a wider or narrower pathway along all or part of the route.	Alternatives
Kim (BKG)	11/25/2021 Email	DEIR should address impacts to monarch butterflies and other sensitive and endangered species along the proposed project alignment.	Biological Resources
Jean Mahoney	11/6/2021 Email	Requested physical copy of EIR. Requested to be added to ongoing announcements list.	Comment noted
Ken Maus	12/7/2021 Email	Passenger rail was shown to be possible between Santa Cruz and Capitola in November 2021. Extension of transit to Watsonville would be possible with completion of Segments 10 and 11.	Comment noted
		Periodic “car stop” signs should be placed near the track.	Project Description Public Safety Transportation
Deborah Secrest and Dean Price	11/12/2021 Email	Concerned with noise and other impacts associated with reduced distance between home at Tradewinds Mobile Home Park and rail right-of-way.	Noise
		Proposed a detour around this stretch of right-of-way so that the trail is not so close to homes.	Comment noted
Barry Scott	11/17/2021 Email	Supports proposed project Rail with Trail.	Comment noted
		Concerned with long-term environmental and collective impacts of Alternative project	Comment noted

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		Alternative schematic would interfere with plans to reduce GHG and lower VMT via rail.	GHG Transportation
		Alternative schematic would be inconsistent with County General Plan, local general plans, and County Regional Transit Plan, which all support preservation of existing rail infrastructure for passenger rail transit.	Land Use
		Alternative schematic would be inconsistent with Local Coastal Plan, which calls for preservation of rail infrastructure to protect and expand public access.	Land Use
		Alternative schematic introduces potential to generate toxic and hazardous materials if rail line is replaced and trail is rebuilt.	Hazardous Materials
		Alternative schematic removes capacity to provide public transit to the County.	Comment noted
Rob Stuart	11/27/2021 Email	Supports Railbanking with Trail alternative. Opposed to Rail Trail because of expense.	Comment noted
		Concerns about noise impacts in neighborhoods.	Noise
		Project should include more parking lots at stops.	Transportation
Richard & Kim Underwood	Not dated Letter	Opposed to any train running through the corridor, including light rail or trolley.	Comment noted
		Support Alternative 1 (Railbank with Trail).	Comment noted
		Major concerns that must be addressed in the EIR include aesthetics, biological resources, noise, and land use and planning.	Aesthetics Biological Resources Noise Land Use
		Proximity of trail to homes creates concerns about trash, illegal dumping and camping, and security.	Public Safety Utilities

Rail Trail Segments 10/11 – Summary of Notice of Preparation (Scoping) Comments Received

Commenter	Date	Comment	EIR Section, Topic, General Response
		Trail segments should be complementary to the Monterey Bay Sanctuary and provide a way for humans, flora, and fauna to coexist within a unique ecosystem.	Comment noted Biological Resources
Gillian Worsey	11/18/2021	Requested video recording of scoping meeting.	Comment noted

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

December 7, 2021

Rob Tidmore, Project Manager
Santa Cruz County, Department of Public Works
701 Ocean Street, Room 410
Santa Cruz CA 95060
RailTrail@santacruzcounty.us

Subject: Notice of Preparation (NOP) *o*f a Draft Environmental Impact Report (DEIR) for Rail Trail Segments 10 and 11

Dear Mr. Tidmore:

Thank you for the opportunity to provide comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Rail Trail Segments 10 and 11 Project. As a preliminary matter, we would like to emphasize that we continue to be very supportive of the development of the Monterey Bay Sanctuary Scenic Trail (MBSST) as a critical component and central "spine" of the California Coastal Trail (CCT) network and for expanding multi-modal transportation opportunities in the region. We see this upcoming DEIR as another step in the process of ensuring that the MBSST/CCT are appropriately integrated into the preservation and implementation of a full suite of short- and long-term multi-modal opportunities for Santa Cruz County and the greater Monterey Bay area. The MBSST/CCT are envisioned as key ingredients of a sustainable and interlinked transportation system in the coastal zone, a goal echoed in federal, state, and local policies and programs alike, including the California Coastal Act and the respective Local Coastal Programs (LCPs) that the proposed system crosses. As we have stated in the past, we see the CEQA process, including the forthcoming DEIR, as an important opportunity to thoroughly evaluate the pros, cons, and environmental impacts of all the alternatives, and, particularly, to address questions that will invariably arise as the permitting process proceeds for any selected projects.

We believe that analyzing the alternatives and opportunities of this trail system should be approached within the larger context of alternative transportation opportunities along Santa Cruz Branch Line (SCBL) corridor and other interconnections throughout Santa Cruz County. Improving transportation in Santa Cruz County by offering safer, greener, and healthier options for bicycling, walking, and public transit in ways that connect residential areas with employment areas, schools, parks, beaches, and community centers along the coast would provide many benefits. Designed with these factors in mind, the MBSST/CCT can also help advance the state and local sustainability measures of improved coastal access and recreation, mobility, environmental conditions, safety, economic vitality and health, as well as to reduce vehicle miles traveled (VMTs) and greenhouse gas (GHG) emissions.

At the same time, we also recognize that a project of this nature invariably raises some questions and issues, and we appreciate that the CEQA process can help identify and address such questions and issues, provide a forum for public discussion, and develop materials to help facilitate the forthcoming coastal development permit (CDP) processes. With that in mind, we offer the following comments to consider in the development of the DEIR.

Project Description

Per the NOP, the purpose of the project is to provide an accessible bicycle and pedestrian path for active transportation, recreation, and environmental and cultural education along the existing SCBL corridor. Specifically, the Rail Trail Segments 10 and 11 Project (Project) is a 4.5-mile bicycle and pedestrian path that would extend along the SCBL corridor from the eastern side of 17th Avenue near Shoreline Middle School and the Simpkins Swim Center to the western side of State Park Drive near Seacliff State Beach in unincorporated Santa Cruz County. In addition to unincorporated County areas, Segments 10 and 11 would also traverse through the City of Capitola. Specifically, Segment 10 between 17th Avenue and roughly the midpoint between Thompson Avenue and 38th Avenue is located within Santa Cruz County, and City of Capitola jurisdiction begins roughly at that midpoint and continues to the downcoast property line of New Brighton State Beach, with Segment 11 beginning in the City of Capitola at the corner of Jade Street Park and 47th Avenue. County jurisdiction resumes from New Brighton State Beach to the end of Segment 11 at the intersection of State Park Drive in Aptos near Seacliff State Beach.

The proposed Project would comprise 10-to-12-foot wide[1] multi-use bicycle and pedestrian trail, and it would be aligned on the inland side of the tracks between 17th Avenue and 47th Avenue; on the seaward side of the tracks between 47th Avenue and Mar Vista; and on the inland side of the tracks between Mar Vista and State Park Drive. Between Opal Street and Monterey Avenue in the City of Capitola, no improvements are proposed at this time due to perceived challenges with funding a new or expanded trestle over Soquel Creek,[2] and the City's passage of Measure L, which prohibited the City from allocating any funds to re-route bicyclists, pedestrians, and other human-powered transportation from the rail corridor to Capitola streets and sidewalks.[3] Trail users would be directed onto Cliff Drive, through Capitola Village, and up Monterey Avenue where the trail would resume adjacent to the tracks adjacent to Monterey

[1] Per the NOP and under the preferred alternative, the trail would be 10 to 12 feet wide, but it could be reduced to 8 feet in width where the width of the trail area is constrained. Per the NOP, the preferred alternative may require the tracks to be shifted within the right-of-way as necessary to accommodate the trail. The estimated trail width for the "Railbank with Trail" alternative has not yet been determined.

[2] The DEIR should explain why a secondary or expanded/cantilevered path off the trestle are not financially viable alternatives.

[3] At this time, it is not clear that Measure L would affect this project, particularly if funding is available for this project through the RTC or elsewhere. Accordingly, we recommend the DEIR evaluate alternatives for on-street improvements through Capitola Village (in addition to trestle improvements as described in Footnote 2).

Avenue's intersection with Park Avenue.[4] Overall, the proposed project alternative preserves existing railroad infrastructure and space for potential future development.

CDP Jurisdictions and Permitting

In terms of coastal permitting, the proposed project would extend across the County of Santa Cruz and the City of Capitola's CDP jurisdictions.[5] Portions of Segment 10 appear to be located landward of the Coastal Zone boundary. Any portions landward of the Coastal Zone boundary would not be subject to coastal permitting requirements. At this time, the proposed project does not appear to include any components located within the Commission's retained CDP jurisdiction[6]; however, as the project develops and the proposed alignment and associated project plans are finalized, a formal boundary determination will inform whether any project components extend into the Commission's CDP permitting jurisdiction. In the event that CDPs are issued by the respective local governments, we note that LCPs derive their regulatory authority from the Coastal Act, and thus the City's and County's LCPs share many similarities to the Coastal Act related to development requirements and coastal resource protection. There are, however, standards unique to the Coastal Act and the respective LCPs, and thus it will be important that the DEIR evaluates each of the project components against the respective applicable LCP and Coastal Act standards. In addition, if there are project components located within the Commission's retained jurisdiction[7], it is possible that the project proponents may decide to pursue a consolidated CDP application,[8] for

[4] For the "Railbank with Trail" alternative, the trail alignment would remain along the rail line through Capitola including by way of the Capitola Trestle, which crosses over Soquel Creek.

[5] The Project would likely qualify as a "Major Public Works Project," and thus in the event a consolidated CDP is not pursued for this project, any portions of the Project located within the Coastal Zone boundary would be appealable to the Commission for this and other reasons (e.g., portions of the trail are located within geographically appealable areas) and should be identified and noticed as such in all supporting materials, including the DEIR.

[6] We would note that the Commission retains jurisdiction over portions of Soquel Creek, and thus if improvements to the Capitola Trestle or the Stockton Avenue Bridge in Capitola are proposed as a part of this project (i.e., safety/stability improvements to the trestle or new striping, widening, or reconfigured pedestrian/bicycle travel lanes over/on the Stockton Avenue Bridge in Capitola), the portions of the Project located within the Coastal Zone may be eligible for a consolidated CDP subject to the parameters identified in Footnote 8 below.

[7] For example, if improvements to the Capitola Trestle are proposed as a part of the Project or if the Project is combined with the Segment 8 & 9 Project under a consolidated CDP (i.e., a single consolidated CDP is pursued for Segments 8, 9, 10, and 11), etc.

[8] Pursuant to Coastal Act Section 30601.3, CDP applications that span the Commission's CDP jurisdiction and that of local governments can be consolidated if the project applicant, the Coastal Commission's Executive Director, and the affected local governments (here the City and the County) agree to such a consolidated process. Consolidation is only allowed if doing so (i.e., assigning all discretionary CDP decisions to the Commission and the Commission's once monthly agenda cycle at various venues up and down the state (or virtual hearings during the current pandemic crisis)) would not substantially impair public participation. If not so consolidated, then three separate CDP processes and three separate CDP decisions (where the City and County CDP decisions could be appealed to the Commission) will be required.

which the standard of review would be the Coastal Act, and thus, in anticipation of that case, all of the project components should be evaluated against Coastal Act provisions to help facilitate potential permit consolidation decisions.

SCBL Corridor Alternative Options

The NOP indicates that the DEIR will evaluate the proposed project alternative (which would generally align the trail adjacent to the tracks and maintain existing rail infrastructure in place) as well as a "Railbank with Trail" (i.e., "transit banking") alternative. The proposed project alternative would reduce the size of the trail in a few segments to preserve existing rail infrastructure. The "Railbank with Trail" alternative would entail removal of the entire existing railroad tracks and related development to allow trail construction as desired anywhere within the corridor, with the notion that a future rail-reliant system could be built in the corridor in the future.

We recommend that the DEIR clearly describe the term "railbanking" as it is used here, including the various scenarios that may trigger future trail relocation/rebuilding to accommodate future rail/transit use,[9] and that the DEIR outline the various required steps (including decision-making agencies and permitting processes) that would be part of any such future process. This discussion would also benefit from an explanation of railbanking's legal requirements from the Surface Transportation Board and how they apply to the SCBL situation. The DEIR should also explain, to the extent feasible, how under that alternative existing rail-related development would be removed now in the banking alternative, how the area would be treated to prepare it for a trail, and how rail/transit subsequently could be accommodated in the future. The DEIR should evaluate the various ramifications of this approach in detail, including how the "Railbank with Trail" alternative will affect the feasibility of reintroducing rail (and/or some other form of public transit) along this corridor at a future date, so that reviewers can better understand the implications of the decisions being made now. The NOP also indicates that other project alternatives may also be considered, and those alternatives may be appropriate for further information gathering.[10] Of course, all alternatives considered should include an evaluation of potential impacts to environmental resource factors and project feasibility as well as consistency with LCPs and other relevant documents (e.g., the California State Rail Plan, etc.).

From our perspective, the SCBL is an incredibly important public resource that connects the various cities and the County in a way that would be next to impossible to create today through the relatively built out communities. It therefore is extremely important that it is utilized to its full sustainable transportation potential. In that evaluation, it is

[9] As we understand it, the term is better understood in terms of banking the possibility that there could be a future transit option in the corridor, whether that were to be rail, buses, or other forms of transit. The DEIR would benefit from better clarity on this point, but our comments here are written with that understanding.

[10] Alternatives that should be evaluated include both a rail-and-trail option or a trail along with another type of transit option (e.g., a dedicated trolley or bus lanes), or a trail-alone option. As above, these alternatives should consider their trail benefits along with any impacts to the feasibility of reintroducing rail and/or adding transit-related options along this corridor.

important to discuss various alternatives and the CEQA process provides an important tool towards providing decision-makers and the community with the information needed to make informed decisions about how best to proceed. In that regard, evaluation of railbanking as an alternative in the DEIR seems appropriate, though as discussed below railbanking or similar alternatives should document the array of potential impacts to the long-term development of complete multi-modal transit options.

However, at the very least, we do not see how a viable alternative would be one without a trail component (i.e., the no project scenario). In fact, and importantly, when the MBSST network is fully developed, it will offer one of the most significant and valuable pedestrian and bicycle transportation networks in the country. The MBSST will also be an important link in the statewide CCT system, a high priority trail system along the shoreline and more inland coastal areas extending from Oregon to Mexico that is currently about 60 percent complete.[11] Thus, it will constitute a continuous critical spine of the CCT through this region, a vision shared by the Commission, the State Coastal Conservancy, Caltrans, and the California Department of Parks and Recreation, with various private and public (including federal and state) partners. This trail system is one part of a potential larger multi-modal system and will provide both locals and the many visitors to the Santa Cruz area a sustainable transportation option for accessing some of the most stunning beaches, shorelines, coastal terraces, hills, redwood forests, and other resource areas in the state, and connect the more densely urbanized stretches of the County with the North Coast and South County areas, including the City of Watsonville.

SCBL Corridor Alternatives' Specific Needs

In working through the various analyses, the DEIR should be structured to allow for easy comparisons in trail utility and transit opportunities across all studied alternatives, both now and in the future (e.g., where a trail segment may need to be modified to accommodate rail/transit at a current or future date or how a trail segment may facilitate or inhibit potential rail/transit opportunities down the road). This analysis should extend to each alternative's respective effects on local transportation dynamics, trail user experience, costs/funding, legal requirements and environmental/coastal resource impacts to ensure that the public and decisionmakers understand the full picture. More specifically, it is important that the DEIR identify: 1) the corridor's width throughout Segments 10 and 11 including the ROW or other public lands width on either side of the existing tracks; 2) the estimated width of the trail and the width on either side of the trail in all alternatives considered; and 3) what will happen at pinch points, whether man-made (e.g., trestles), natural (e.g., slopes and habitat areas), or rail/transit-related. To the extent possible, the benefits and negatives for the timing and configuration of trail and potential future rail/transit should be clearly analyzed for each alternative. Trail

[11] A continuous trail along California's shoreline has long been a collective objective for California's coastal zone, including as articulated in 1972's Proposition 20 (the "Coastal Initiative") and 1976's Coastal Act. Further details on CCT alignment principles, including continuity and proximity to the sea, may be found in the document "Completing the California Coastal Trail" prepared by the State Coastal Conservancy in 2001 and on the Commission's Coastal Access Program webpage at https://www.coastal.ca.gov/ access/ctrail-access.html.

alignment options should also be thoroughly evaluated for each alternative. For example, with rail/transit banking, there may be more options for how to site and design a trail now (e.g., centered on the corridor, directly over the existing tracks, etc.); however, it is also likely that future alignment changes might become necessary to accommodate rail/transit or that it may preemptively inhibit this corridor from being used in other transportation capacities in the future. Such considerations will, of course, need to include the legal requirements and their consequences that must be met by the RTC.

Further, the DEIR should detail and compare the alternatives' applicable project-related details, including: how the trail will be distinguished/separated from current rail and/or future rail/transit; whether any of the narrow/constrained areas may trigger additional planning/funding needs in order to safely/legally allow for rail/transit; whether/how any adjacent road right-of-way is planned to be used; reasons for the trail being on one or the other side of the tracks/transit options, and necessary crossovers, etc. And, to the extent feasible, the DEIR should also explain the types of improvements that would be expected and/or anticipated to provide rail/transit options in the future (e.g., track/trestle upgrades, grading, filling, etc.) for all evaluated alternatives.

Possible Environmental Impacts

The NOP indicates that the proposed project will require DEIR evaluation of impacts in the following key environmental categories: aesthetics, air quality, biological resources, cultural resources, geology/soils, VMTs, GHG emissions and climate change related impacts, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, recreation, transportation/circulation, and tribal cultural resources. The list identified appears encompassing enough to frame project related impacts and appropriate mitigations, including in terms of potential alternatives to avoid identified impacts. We offer the following additional comments for DEIR consideration on these points.

Although Segments 10 and 11 would span relatively urbanized areas of Santa Cruz County and the City of Capitola, the proposed project will nevertheless have the potential to result in habitat impacts, primarily because the project would be adjacent to and would cross through/over a number of creeks, lagoons, gulches and tidally-influenced waters (including Rodeo Creek Gulch (which leads into Corcoran Lagoon), potential improvements in/over Soquel Creek, as well as Escalona Gulch, Tannery Gulch, and Borregas Creek). We note that there also may be habitat resources within the SCBL corridor itself that need to be addressed.[12] In all cases, it is incumbent on the DEIR to appropriately identify such resources, and consistent with the Coastal Act and the LCPs, to avoid impacts to them and, where impacts are unavoidable, to provide adequate mitigation for those impacts. Certain resources may also qualify as

[12] Past trail alignments thorough relatively urbanized segments of the MBSST (e.g., in the City of Santa Cruz) have encountered such resources within the actual corridor including in and/or directly adjacent to the proposed trail alignment, causing siting and design difficulties.

environmentally sensitive habitat areas (ESHA)[13] or wetlands,[14] and such resources are governed by very specific allowed uses and allowed impact requirements. As a general rule, impacts are required to be avoided in such areas (if uses are allowed in the first place) and their required buffers, and the DEIR should evaluate options to do so.

Other Specific Locational and Multi-Modal Public Access Issues
Broadly, the DEIR should clearly identify the locations where the proposed trail would cross pedestrian/vehicular intersections. The DEIR should evaluate alternatives at those locations to facilitate safe use/crossings including because these crossings have raised significant community concerns to date. In particular, the proposed crossings at 38th Avenue and 41st Avenue in Segment 10 are very busy commercial corridors with direct beach access, and thus would likely warrant additional site-specific improvements to facilitate safe crossings for bicyclists, pedestrians, and vehicles alike both along the trail corridor and traveling along 38th and 41st avenues and to facilitate beach access consistent with Coastal Act and LCP requirements.

The DEIR should also evaluate the various alternatives to maximize pedestrian and bicycle connectivity to coastal destinations throughout Segments 10 and 11 including the Live Oak beaches (Sunny Cove, Santa Maria's, 26th Avenue, Pleasure Point) as well as Privates Beach/Opal Cliff Park, Hooper Beach, Capitola Beach/Village, New Brighton State Beach, and Seacliff State Beach), while maintaining/improving visual access and protecting habitat/water quality, consistent with the Coastal Act and LCP directives. Relatedly, the DEIR should identify the preferred alternative that is most protective of coastal resources overall, complies with other Coastal Act policies such as minimizing VMT, and provides for a continuous, safe, and scenic trail system.

The DEIR should also clearly explain the implications of Capitola's Measure L, including whether signage, striping, or other improvements through Capitola Village would be included as part of the preferred alternative or if signs would be limited to areas where corridor improvements are proposed (i.e., at the trail's intersection with Cliff Drive and where it would resume at Park/Monterey avenues) and whether the City of Capitola intends to pursue any bike/pedestrian improvements or mechanisms to reduce vehicular traffic through Capitola Village in the foreseeable future as a separate effort to meet General Plan/LCP objectives and/or to reduce congestion, GHG emissions, etc.

In closing, we look forward to working with you on this important public infrastructure project, and we thank you for your consideration of these comments. If there are any questions, we are available for discussion should the County, the RTC and/or the DEIR team need clarification from us. Please do not hesitate to contact me about these comments or to discuss the project further.

[13] Defined by the Coastal Act and the LCPs to include "any 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."

[14] Pursuant to the Coastal Act and LCP's one-parameter definition, as opposed to the U.S. Army Corps of Engineers' three-parameter definition.

Sincerely,

DocuSigned by:
Rainey Graeven
AFE4284CFEB54EA...

Rainey Graeven
Senior Coastal Transportation Planner
Central Coast District
California Coastal Commission

cc (sent electronically):
Katie Herlihy, City of Capitola Planning Department
Paia Levine, Santa Cruz County Planning Department
Matt Machado, Santa Cruz County Public Works Department
Jeff Gaffney, Santa Cruz County Parks Department
Guy Preston, Regional Transportation Commission
Chris Spohrer, California Department of Parks and Recreation

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 6, 2021

Rob Tidmore
County of Santa Cruz
701 Ocean Street, Room 410
Santa Cruz, CA 95060
Robert.Tidmore@santacruzcounty.us

Subject: Rail Trail Segments 10 and 11, Notice of Preparation of a Draft Environmental Impact Report, SCH No. 2021110080, Santa Cruz County

Dear Mr. Tidmore:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a draft Environmental Impact Report (EIR) prepared by the County of Santa Cruz (County) for the Rail Trail Segments 10 and 11 (Project), located in Santa Cruz County. CDFW is submitting comments on the NOP regarding potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines §15386 for commenting on projects that could impact fish, plant, and wildlife resources (e.g., biological resources). CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA), the Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

California Endangered Species Act

Please be advised that a CESA Permit must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA §§ 21001(c), 21083, and CEQA Guidelines §§ 15380, 15064, 15065). Impacts must be avoided or mitigated to less-

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code § 2080.

Lake and Streambed Alteration Program

The Project has the potential to impact resources including but not limited to Rodeo Gulch Creek, Soquel Creek, Tannery Gulch, and Borregas Creek. Notification is required, pursuant to CDFW's LSA Program (Fish and Game Code, § 1600 et. seq.) for any Project-related activities that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. CDFW considers work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are generally subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute a final LSA Agreement until it has complied with CEQA (Public Resources Code § 21000 et seq.) as the responsible agency.

PROJECT DESCRIPTION

The proposed Project consists of an approximately 4.5-mile bicycle and pedestrian system, that generally extends along the Santa Cruz Branch Rail Line (SCBRL) corridor. The two segments, Segment 10 and Segment 11, extend from the eastern side of 17th Avenue to the western side of State Park Drive in unincorporated Santa Cruz County. The proposed Project, Rail with Trail, includes a multi-use trail, approximately 10-12 feet wide, located alongside the railroad tracks. The Project may include shifting of the tracks within the right-of-way as necessary to accommodate the trail. The proposed Alternative 1: Railbank with Trail, would locate the multi-use trail along the rail centerline, and the existing tracks and ties would be removed to enable construction.

The CEQA Guidelines (§§15124 &15378) require that the draft EIR incorporate a full project description, including reasonably foreseeable future phases of the Project, and that contains sufficient information to evaluate and review the Project's environmental impact. The draft EIR should include a complete description, with maps and figures as appropriate, of the following Project components:

- Footprints of permanent project features with the length and width of the proposed trail and temporarily impacted areas such as staging areas;
- The type of trail base such as asphalt, concrete, gravel, or dirt;
- Introduction of new light sources along the trail;

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

- Location, type, length, and height of all fencing, including whether it will be permanent or temporary;

- Encroachment by widening the trail into riparian habitat or other sensitive area.

ENVIRONMENTAL SETTING AND LOCATION

Sufficient information regarding the environmental setting is necessary to understand the Project's, and its alternative's (if applicable), significant impacts on the environment (CEQA Guidelines, §§15125 & 15360). CDFW recommends that the CEQA document prepared for the Project provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands, including all rare, threatened, or endangered species (CEQA Guidelines, §15380). Fully protected, threatened or endangered, candidate, and other special-status species that are known to occur, or have the potential to occur in or near the Project site, include, but are not limited to:

Common Name	**Scientific Name**	**Status**
Santa Cruz black salamander	*Aneides niger*	SSC
Santa Cruz long-toed salamander	*Ambystoma macrodactylum croceum*	FP
Steelhead - central California coast DPS	*Oncorhynchus mykiss irideus* pop. 8	FT
Tidewater Goby	*Eucyclogobius newberryi*	FE
Western pond turtle	*Emys marmorata*	SSC
Monarch butterfly	*Danaus plexippus* pop. 1	FC
Townsend's big-eared bat	*Corynorhinus townsendii*	SSC
Pallid bat	*Antrozous pallidus*	SSC
Santa Cruz tarplant	*Holocarpha macradenia*	FT, SE
Perennial goldfields	*Lasthenia californica* ssp. *macrantha*	CNPS 1B.2
Nesting Birds		
Notes: FE = Federally Endangered; FT = Federally Threatened; FC = Federal Candidate for listing; FP = State Fully Protected; SE = State Endangered; SSC = State Species of Special Concern; DPS = Distinct Population Segment; CNPS = California Native Plant Society Rare Plant Rank		

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDB). Based on the data and information from the habitat assessment, the CEQA document can then adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocol.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (http://www.cnps.org/cnps/rareplants/inventory/), must be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and require the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: https://www.wildlife.ca.gov/Conservation/Plants.

COMMENTS AND RECOMMENDATIONS

The CEQA Guidelines (§15126.2) necessitate that the draft EIR discuss all direct and indirect impacts (temporary and permanent) that may occur with implementation of the Project. This includes evaluating and describing impacts from any of the following :

- Potential for "take" of special-status species;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal and alternation of soils;
- Permanent and temporary habitat disturbances associated with ground disturbance, noise, lighting, reflection, air pollution, traffic or human presence; and;
- Obstruction of movement corridors or access to water sources and other core habitat features.

CDFW offers the following comments and recommendations to assist the County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on biological resources.

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

COMMENT 1: Fencing

Issue: The Project has the potential to disrupt wildlife movement if safety fencing is installed between the trail and tracks to prevent pedestrians form entering the railroad tracks with the Proposed Project, Rail with Trail.

Evidence the impact would be significant: Fencing can be a hazard to wildlife resulting in entanglement and mortality (van der Ree 1999, Stuart et al. 2001, Harrington and Conover 2006). Fencing can also cause a connectivity barrier by preventing movement resulting in habitat loss and fragmentation (Jakes et al, 2018, Harrington and Conover, 2006).

Recommendations for Fencing to minimize significant impacts: CDFW recommends that the Project specify proposed fencing plans and identify current wildlife trails throughout the Project Area to install wildlife friendly fencing at these locations that make it easier for wildlife species to traverse. To decrease wildlife entanglement and mortality, CDFW recommends that the top wire of fences are no more than 40-inches above the ground, the space between the top two wires are at least 12-inches apart, the bottom wire of fences are 18-inches above the ground, the fences does not include vertical wires, fence posts are installed at 16.5-foot intervals, and fence wires are visible to animals and birds (see A Landowner's Guide to Wildlife Friendly Fences: How to Build Fence with Wildlife in Mind found online at https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download/?cid=nrcseprd1080608&ext=pdf).

COMMENT 2: Impervious Surfaces

Issue: The Project has the potential to create impervious surfaces at the Project site with the widening or creation of a paved trail. Impervious surfaces have the potential to significantly affect fish and wildlife resources by altering runoff hydrograph and natural streamflow patterns.

Evidence the impact would be significant: Adding impervious surfaces, through the installation of hardscape materials, can modify natural streamflow patterns by increasing the magnitude and frequency of high flow events and storm flows (Hollis 1975, Konrad and Booth 2005).

Recommendations to minimize significant impacts: CDFW recommends mapping areas with creeks, drainages, culverts or the potential for runoff to occur and incorporating permeable surfaces throughout the Project to allow stormwater to percolate in the ground and prevent stream hydromodification (see https://www.usgs.gov/science/evaluating-potential-benefits-permeable-pavement-quantity-and-quality-stormwater-runoff?qt-science_center_objects=0#qt-science_center_objects).

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

COMMENT 3: Artificial Lighting

Issue: The Project has the potential to increase artificial lighting if new sources of light are installed along the trail. Artificial lighting often results in light pollution, which has the potential to significantly and adversely affect fish and wildlife.

Evidence the impact would be significant: Night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication such as bird song (Miller, 2006), determining when to begin foraging (Stone et al., 2009), behavior thermoregulation (Beiswenger, 1977), and migration (Longcore and Rich, 2004).

Recommendations to minimize significant impacts: CDFW recommends eliminating all non-essential artificial lighting. If artificial lighting is necessary, CDFW recommends avoiding or limiting the use of artificial lights during the hours of dawn and dusk, when many wildlife species are most active. CDFW also recommends that outdoor lighting be shielded, cast downward, and does not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards at http://darksky.org/) and limited to warm light colors with an output temperature of 2700 kelvin or less.

FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code, section 711.4; Pub. Resources Code, §21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

Thank you for the opportunity to comment on the Project's NOP. If you have any questions regarding this letter or for further coordination with CDFW, please contact Ms. Serena Stumpf, Environmental Scientist, at (707) 337-1364 or Serena.Stumpf@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Stephanie Fong
CF047D7F8D234E1...

Stephanie Fong
Acting Regional Manager
Bay Delta Region

ec: State Clearinghouse # 2021110080

DocuSign Envelope ID: 0D8BFE70-25C1-4BA9-BB60-17EAF965C531

REFERENCES

Beiswenger, R. E. 1977. Diet patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. Ecology 58:98–108.

Harrington, J. L., and M. R. Conover. 2006. Characteristics of ungulate behabior and mortality associated with fences. Wildlife Society Bulletin 34:1295–1305.

Hollis, G. 1975. The effect of urbanization on floods of different recurrence interval. Water Resources Research 11:431-435.

Jakes, A. F., Jones, P. F., Paige, C., Sidler, R. G., and M. P. Huijser. 2018. A fence runs through it: A call for greater attention to the influence of fences on wildlife and ecosystems. Biological Conservation 227: 310-318.

Konrad, C.P. and D.B. Booth. 2005. Hydrologic changes in urban streams and their ecological significance, paper presented at American Fisheries Society Symposium, American Fisheries Society

Longcore, T., and C. Rich. 2004. Ecological light pollution - Review. Frontiers in Ecology and the Environment 2:191–198.

Miller, M. W. 2006. Apparent effects of light pollution on singing behavior of American robins. The Condor 108:130–139.

Stone, E. L., G. Jones, and S. Harris. 2009. Street lighting disturbs commuting bats. Current Biology 19:1123–1127. Elsevier Ltd.

Stuart, J. N., M. L. Watson, T. L. Brown, and C. Eustice. 2001. Plastic netting: An entanglement hazard to snakes and other wildlife. Herpetological Review 32:162–164.

Van der Ree, R. 1999. Barbed wire fencing as a hazard for wildlife. The Victorian Naturalist 116:210–217.

From: Hitchcock, Linda@Parks
To: RailTrail
Subject: Ca State Park Comments Section 11 - New Brighton State Beach
Date: Monday, November 22, 2021 10:03:33 AM
Attachments: image001.png

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hello – We wanted to submit the following comments for section 11 thru New Brighton State Beach and Porter Sesnon property

1. There is riparian willow habitat on both sides of the trail as it goes thru the park
2. If the trail goes outside of the Right of Way and on to state parks property we will need an operating agreement that takes at least a year if at all possible it is best to stay on the right of way or even route outside the park on city roads in the creek area
3. The trail will need a crossing inside New Brighton state beach as there is a trail from the campground to the entrance kiosk that crosses the rail line area this needs to be kept open
4. We would need a crossing at the Porter Sesnon area as people access the beach and park in this area

Thx Linda

Linda Hitchcock
Senior Park and Recreation Specialist
California State Parks
Santa Cruz District

SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION
1523 Pacific Ave., Santa Cruz, CA 95060-3911 • (831) 460-3200 FAX (831) 460-3215 EMAIL info@sccrtc.org

Rob Tidmore
County of Santa Cruz
809 Center Street, Room 201
Santa Cruz, California, 95060

November 30, 2021

RE: Notice of Preparation of an EIR for Rail Trail Segments 10 & 11

Dear Mr. Tidmore,

RTC is owner of the Santa Cruz Branch Rail Line and is the Regional Transportation Planning Agency for Santa Cruz County. In these capacities, RTC is coordinating with the County of Santa Cruz to construct the Coastal Rail Trail Project from 17th Avenue to State Park Drive.

RTC supports the County of Santa Cruz's environmental review of a rail and trail alignment on the Santa Cruz Branch Rail Line from 17th Avenue to State Park Drive, referred to as Rail with Trail.

RTC also supports an analysis of alternative alignments as required under the California Environmental Quality Act. Although the alternative, referred to as Railbank with Trail, is contingent upon railbanking the Santa Cruz Branch Rail Line, it should be noted that railbanking would allow either alternative to proceed to construction.

RTC encourages the County of Santa Cruz to continue to develop the Coastal Rail Trail Project from 17th Avenue to State Park Drive and to complete the environmental analysis of the Proposed Project and other project alternatives.

Sincerely,

Guy Preston
Executive Director

CITY OF SANTA CRUZ

WATER DEPARTMENT
212 Locust Street, Suite C, Santa Cruz, CA 95060 • Ph: 831-420-5210

December 7, 2021

Rob Tidmore
Project Manager
County of Santa Cruz, Department of Public Works
RailTrail@santacruzcounty.us

RE: Notice of Preparation for the Rail Trail Segments 10 and 11

Dear Ms. Tidmore:

The City of Santa Cruz Water Department has received and reviewed your Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Rail Trail Segments 10 and 11. We understand that the County of Santa Cruz is the lead agency in the preparation of an EIR for this project which includes a 4.5- bicycle and pedestrian system that generally extends along the Santa Cruz Branch Rail Line corridor, from the eastern side of 17th Avenue to the western side of State Park Drive in unincorporated Santa Cruz County. The project is part of the Monterey Bay Sanctuary Scenic Trail (MBSST) and is consistent with MBSST Network Master Plan.

The City of Santa Cruz Water Department owns and operates existing raw and treated water pipelines in the project vicinity that cross the proposed project alignment. These pipelines and associated appurtenances are part of a municipal drinking water system which serves approximately 100,000 customers in the City of Santa Cruz and adjacent communities. While we believe that the operation and maintenance of drinking water infrastructure can be compatible with a multi-use bicycle and pedestrian system, we urge you to plan, design and construct your project appropriately to avoid any impacts to our water supply system. If any temporary or permanent impacts to our facilities are anticipated, we request your early coordination with the Water Department.

If you require any additional information about our facilities, please do not hesitate to contact Ms. Sarah Easley Perez of my staff at 831-420-5327 or seasleyperez@cityofsantacruz.com. We appreciate the opportunity to comment on this Notice of Preparation.

Sincerely,

Heidi R Luckenbach

Heidi Luckenbach
Interim Water Director
City of Santa Cruz Water Department

cc: Sarah Easley Perez

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Sara Dutschke
Miwok

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

NATIVE AMERICAN HERITAGE COMMISSION

November 12, 2021

Rob Tidmore, Project Manager
County of Santa Cruz
701 Ocean Street, Room 410
Santa Cruz, CA 95060

Re: 2021110080, Rail Trail Segments 10 and 11 Project, Santa Cruz County

Dear Mr. Tidmore:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Environmental Planner

cc: State Clearinghouse

From: Manu Koenig
To: Robert Tidmore
Cc: Matt Machado
Subject: Segments 10 & 11 EIR "Railbank with Trail"
Date: Wednesday, November 10, 2021 12:06:08 PM

Hi Rob,

In reviewing the NOP for Segments 10 & 11 of the Rail Trail, the alternative name "Railbank with Trail" jumped out at me. The RTC has been calling it the "Interim Trail" option in our documentation.

There are segments where it looks increasingly likely that rail banking will be necessary for *any* trail to be constructed in order to avoid lawsuits. So suggesting that Alternative 1 is dependent on rail banking but the Proposed Project is can happen either way, is not really accurate. I'm sure that RTC Executive Director Preston could help clarify this.

In fact, it looks like the same day this NOP came out, the RTC approved a letter from Director Preston to the City taking a first step at clarifying the language: https://sccrtc.org/wp-content/uploads/2021/10/11-04-2021-agenda-packet.pdf

Let me know if you have questions or if this would be better suited as an official comment via the railtrail@ email address.

Manu

Manu Koenig
Supervisor, First District
County of Santa Cruz
701 Ocean St, Room 500
Santa Cruz, CA 95060
(831) 454-2200
manu.koenig@santacruzcounty.us

From:	Matt Machado
To:	Robert Tidmore
Subject:	FW: input on EIR for Segments 10 & 11
Date:	Thursday, November 18, 2021 4:49:12 PM
Attachments:	SC County Coastal Climate Change Vulnerability Report Final (2).pdf

fyi

Matt Machado, PE, LS
Deputy County Administrative Officer
Public Works Director
701 Ocean Street, Room 410
Santa Cruz, CA 95060
Phone: 831-454-2368

From: Manu Koenig <Manu.Koenig@santacruzcounty.us>
Sent: Thursday, November 18, 2021 11:41 AM
To: Matt Machado <Matt.Machado@santacruzcounty.us>
Subject: Fw: input on EIR for Segments 10 & 11

Hi Matt,

I got bcced on the email below. I think it's worth noting that the planning studies done in the past have not adequately reflected all the potential environmental impacts. It's important that we get this one right and do an objective study that considers all sources of information available to us. The attached Santa Cruz County Coastal Climate Change Vulnerability Report is an example of such a resource.

Best,
Manu

Manu Koenig

Supervisor, First District

County of Santa Cruz

701 Ocean St, Room 500

Santa Cruz, CA 95060

(831) 454-2200

manu.koenig@santacruzcounty.us

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

November 21, 2021

Rob Tidmore, Project Manager County of Santa Cruz
Department of Public Works
701 Ocean Street, Room 401
Santa Cruz, California 95060

Dear Mr. Tidmore:

Thank you for your work towards implementing our future Rail-Trail while considering the important environmental impacts in alignment with CEQA as you prepare an Environmental Impact Report (EIR) for segments 10 and 11 of the Rail-Trail Project. I attended the EIR and scoping meeting on November 11, 2021.

I am a local mom, woman of color, and medical professional. I served 7 years as a middle school and high school mountain biking coach for a local Santa Cruz school. I was a competitive triathlete for many years and I am an active NOLS Wilderness First Responder (since 2007) and have led youth wilderness hikes and mountain biking trips. The trail will be a great asset for the health and well-being of our community and our youth as we create safe passage for our kids to bike, walk, and run.

I write in support of the Proposed Project: Rail with trail.

I strongly advocate for environmentally wise robust equitable public transportation systems and electric light rail is an important component of such a system, at a time when we are recognizing our long battle with transit justice and our environmental crisis. Robust public transportation benefits our entire community and electric light rail is the most energy efficient and least environmentally destructive form of transportation to move larger numbers of people distances ever invested.

I do not advocate for the Alternative: Railbank with trail, which is a proposed interim trail, for the reasons indicated below.

I support both rail and trail in our community, not just because the decision to bring rail to this community was initiated and sustained with a majority vote, but also because it is the environmentally wise and equitable thing to do. Although I made mention of some of a few considerations during the November 5, 2021 EIR Scoping Meeting, I understand that official considerations must be made in writing. I appreciate the opportunity to participate in our democratic public process. I have provided a list of considerations I feel are important regarding CEQA for formal submission.

Considerations for Proposed Project: Rail with Trail are discussed with respect to the following source: https://resources.ca.gov/CNRALegacyFiles/ceqa/docs/2016_CEQA_Statutes_and_Guidelines_Appendix_G.pdf

Regarding the 20 CEQA categories, it is important to keep in mind that the alternate, railbank with interim trail, would require significantly greater investment of time, money, human resources, material

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

use and waste along with a concomitant increase in GHGs and toxins released into the environment as well as tons of materials and asphalt that would need to be added to our landfills.

CEQA item Air Quality:
The impact of implementing the proposed project will be far less harmful on the air quality versus the alternative plan (interim trail) for a number of reasons.

1. Constructing the proposed trail as planned and then implementing rail as funds are made available ensures a stepwise process that minimizes disturbances to the rail beds and soils. The alternative plan would disrupt the rail bed releasing toxic chemicals from the rail bed into the air. An interim trail that then is later removed for a future implementation of rail would once again create huge amounts of release of noxious substances into the air.

2. According to the 2019 Unified Corridor Investment Study, using the rail corridor for a trail only will increase auto traffic, increase vehicle collisions, increase GHG emissions, and decrease use of public transit all which will increase our impact on our air quality. Building the trail as initially planned leaves our rails open to implement light rail service as soon as funding can be secured. We know that rail could be implemented in stages and segments along the rail line in fewer than 5-10 years. Not only would the alternate proposal require excessive additional labor and waste production but an 'interim' trail would need to be re-engineered to accommodate our train in the future, the overall production of GHGs will not be mitigated if light rail in not implemented as quickly as possible. The alternate interim trail will ensure more vehicles remain on the roads longer, preventing people from using an all-electric light rail system as an alternative to getting to work, school, shopping and restaurants. As a mountain biker, I look forward to being able to hop on the train in Live Oak where I live and take my bike to Wilder or Nicene-Marks without having to drive across town to hit the trail heads.

Biological Resources CEQA Guidelines
Please consider the adverse effects the alternate plan will have on the forested and wetland areas especially in Live Oak. The alternate plan, Alternative 1, requires extensive removal of valuable infrastructure and toxic materials for grading for an 'interim' trail. Once rail is deemed ready to implement, which could be sooner rather than later, the interim trail Alternative would then need to be destroyed and extensive regrading done to return the usability of the tracks back to light rail ready. The alternate plan would then result in a second release of toxins into the surrounding areas such as the Schwann Lake area that would be dramatically and negatively impacted as implementing an interim trail that would later be replaced by rail in the future would require a doubling of the impact on the surrounding environment. Rail must be preserved to preserve our environment and reduce impact on the surrounding highly sensitive biological systems.

Green House Gas Emissions/Climate Change CEQA Guidelines

According to the 2019 Unified Corridor Investment Study, using the rail corridor for trail only will increase auto traffic, increase vehicle collisions, increase GHG emissions, and decrease use of public transit all which will increase our impact on our air quality. The alternate plan puts at risk the implementation of our future rail system not only with greater financial and labor costs involved to 1- destroy the rails, 2- build a temporary trail, 3- destroy the temporary trail, 4- rebuild the tracks, 5-build the intended trail per the MBSST as intended, but the emissions that will be produced to do the extra

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

work. Specifically, the proposed alternative, railbanking with trail puts at risk our ability to implement rail quickly and efficiently once funding is available resulting in further increases in greenhouse gas emissions due to continuing excess automobile use that will be offset by the implementation of electric light rail.

Hazardous Materials CEQA Guidelines (and potentially Mandatory Findings of Significance)
To what extent has analyses been done to determine the level of hazardous materials and toxins that would be released from the rail beds as a results of removal of rails and ties and regrading and disruption of the rail beds to implement a temporary trail and then later regarding and reestablishing the rail bed to return segments 10 and 11 back to rail ready use? The alternate plan ensures there will be excessive amounts of hazardous and other toxic materials disrupted from the rail bed requiring disposal if the rails are pulled up and grading is done to build an interim trail followed later by a regrading of the rail line back for rail use.

The extensive use of raw materials and waste produced for an alternative 'interim trail' option is extravagant and extremely negatively impactful on the environment. From my understanding, the degree to which toxins would be disrupted from the rail beds and enter the watershed and delicate riparian system leading into our Monterey Bay would be substantially higher for the alternate plan. The alternate plan ensures a much higher introduction of toxins into the air, soils, water, impacting human and animal life in the densely populated and forested areas surrounding segments 10 and 11 of the tracks.

In addition to the toxins that are emitted from the exhaust of road vehicles, the degree of toxins released into the air, water, and soils from rubber tires alone is shocking. My graduate degree specialized in biochemical endocrinology and the implications the toxic load of billions of tires have on our physiological systems are astounding, including contributing to increases in Alzheimers, autism, cancers, hormone dysruption, gut dysbiosis, and many serious diseases we've seen rise with the advent of the automobile and tire industries. We need to do whatever we can to remove single use vehicles, and their tires, from the roads. Here are just a few articles to consider:

> Pollution from tire wear 1,000 times worse than exhaust emissions
> https://www.tiretechnologyinternational.com/news/regulations/pollution-from-tire-wear-1000-times-worse-than-exhaust-emissions.html

> EPA rubber TIRES Rubber Tire Manufacturing: National Emission Standards for Hazardous Air Pollutants (NESHAP)
> https://www.epa.gov/stationary-sources-air-pollution/rubber-tire-manufacturing-national-emission-standards-hazardous-air#:~:text=The%20EPA%20has%20identified%20rubber,air%20pollutants%20(HAP)%20emissions.&text=The%20final%20NESHAP%20reduces%20air,by%20approximately%201%2C100%20tons%20annually

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

Car Tire Crumb Rubber: Does Leaching Produce a Toxic Chemical Cocktail in Coastal Marine Systems?
https://www.frontiersin.org/articles/10.3389/fenvs.2020.00125/full

E-CARS: California's electric car revolution, designed to save the planet, also unleashes a toll on it
https://www.latimes.com/politics/story/2021-07-21/californias-electric-car-revolution-designed-to-save-the-planet-inflicts-a-big-toll-on-it?fbclid=IwAR1bauVLTjyY0j_zH4rfWVxsIPiMrpseUNtBBKchBei5n-zSFao5HtWNNGk

Rubber tires are toxic,
Why TRAINS are best
The Climate Emergency: Trains-An Effective Response
https://www.youtube.com/watch?v=_hTzf2L2Pzo

DISCOVERY OF TOXIC CHEMICAL IN TIRES SPURS SCIENTIFIC AND REGULATORY INTEREST
https://www.pugetsoundinstitute.org/2020/12/discovery-of-toxic-chemical-in-tires-spurs-scientific-and-regulatory-interest/#:~:text=Discovery%20of%20toxic%20chemical%20in%20tires%20spurs%20scientific%20and%20regulatory%20interest,-by%20Christopher%20Dunagan&text=The%20chemical%20reaction%20produces%206,parent%20compound%2C%206%2DPPD

Land use and Planning CEQA Guidelines

In recent SCCRTC meetings, several commissioners indicated the highly risky nature of railbanking and tearing up tracks for the purpose of replacing with a temporary 'interim' trail as the alternate plan proposes. Tearing up the rails is inconsistent with the county's General Plan as well as the considerable work done prior to our purchase of the rail in 2012 through February of 2021 when electric light rail was voted as the **preferred choice** for our rail system.

Given the worsening environmental crisis and our goals to remove more vehicles from our roads, destroying portions of our rails for a temporary trail proposed in the alternative plan would most certainly hinder and stall our timeline to remediate and activate our rail system for electric light rail use as soon as possible. Electric light rail is the most energy efficient and least environmentally damaging form of transportation that moves people distances **ever invented** and we are fortunate to have infrastructure for rail already in place.

Alternative1 in not in alignment with our General Plan, our extensive planning and processes completed over the past decades through the RTC and in good faith per the voter's majority of Proposition 116 which allowed us to purchase the SC Branchline in 2012 for the purpose of implementing passenger rail and a trail. The alternative plan is not in alignment with the RTC approved TCAA Plan which clearly shows that Rail with Trail, not trail alone, is the best use of the Santa Cruz rail corridor and meet the goals set forth by our voting majority to implement passenger rail as per our plans.

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

Noise CEQA Guidelines
There will be far more noise required for the alternate plan versus the current Rail with Trai plan, both immediately and over the duration of the project. The construction activity required over time to remove the rail line, build a temporary trail, and later remove the trail to rebuild the rail line and to rebuild the trail represent far more disruption and noise than the Proposed Project: Rail with Trail" and these impacts cannot be mitigated.

Public Services CEQA Guidelines
The current Rail with Trail plan ensures that a trail will be implemented relatively quickly and allows for the rails to be activated as soon as possible in service to public benefit, including safe access to schools, work, parks, shopping and more. The alternative plan, railbanking the trail, definitively adds more time to, if not precludes, our ability to bring back our active rail service and implement passenger light rail in our community, a vital public service. The current plan ensures more services will be available to the public, Trail and Rail, more quickly. We have a great public need for green all electric public transit along the densely populated rail line. The proposed alternative plan definitively removes the capacity for us to use the Rail line for passenger service in the near future, thus potentially stalling or preventing a vital public service, and adds more time to our timeline in ensuring the public service could be rebuilt. The alternate plan would also result in added delays and additional expenses to our public interests that would then further impact our community negatively. Since a large percentage of our workers commute into Santa Cruz from Watsonville and outside of Santa Cruz, provide the valuable service of public rail transit will meet the needs of so many who currently do not drive. Ensuring that rail can be implemented as quickly as possible will serve the important goal of building a robust public transit system. Currently, for example, for a person who does not drive, it takes 2.5 hours one way to take the bus from the West side to Capitola, whereas it would take 20 minutes or less by light rail trolley. Many of our residents experience excessively long waits to board a bus and then sit in traffic to get to work, school, medical appointments, and leisure.

There are no examples of railbanking working to restore rail service after replacement with a paved trail. RTC FAQ page, 2018:
"The RTC is unaware of any paved trails that have been converted back to rail once it has been railbanked."

https://sccrtc.org/wp-content/uploads/2018/11/01_FAQs_for-20181128.pdf

Recreation CEQA Guidelines
The current Rail with Trail Plan ensures maximum recreation possibilities, sooner, for a much greater percentage of our community compared to the alternative plan. As a mountain biker, I can choose to ride my bike along the trail to access our amazing parks such as Wilder Ranch and Nicene-Marks, or I can, in the future, take rail to the trail heads. For our elderly and disabled population and for people who do not feel safe riding bikes or hiking long distances from their homes to a park, light rail will provide portions of our population with access to our many parks along the route that they would not have access to if there was only a trail. For example, many of our blind members of our community take public transit and seek independence. For them, a trail would be far less value to them than rail. This is also the case for many people in wheel chairs who would extensively use rail to access our recreation centers, such as Simpkins Swim Center, as well as our parks, but would not have easy independent access to those places by the alternative ‘interim’ trail. The alternative proposed ‘interim’ trail would

1840 41st Ave, Ste 102 #227
Capitola, CA 95010

exclude a great percentage of our population who cannot use the trail given the distances they would need to travel, to access recreation. The alternative plan is far less equitable that the current Rail with Trail plan which ensures that people of all abilities will be able to access resources and recreation once light rail is implemented.

Transportation/Traffic CEQA Guidelines

The current Rail with Trail plan was developed with the TCAA study which indicates this plan will result in a substantial reduction in cars and traffic as people will have greater more consistent and dependable access to public rail transit once the rail is implemented. Given the density of the population in the areas along the rail line, the future light rail would serve far more people than a trail alone and serve to reduce traffic as people can use rail to access their local schools, parks, shopping, recreation, and more. Our ability to mitigate our environmental crisis includes our ability to ensure people can walk or bike to nearby public rail transit and metro and take public transit regularly, similar to how people can access BART in the North and East Bay areas.

Even more exciting, once Monterey has built their rail system to Watsonville which is in the early stages now, our county residents will be able to take the rails all the way to Monterey from Santa Cruz, thus alleviating a substantial load of vehicles on Highway 1 southbound to enjoy work and recreation in Monterey. For many of us who are environmentally progressive, we are willing to commit to driving less and taking rail over other forms of transportation. Having a rail option in our county which will soon connect to other segments of the California Rail Network will demonstrably decrease traffic while mitigating climate change locally.

Thank you for your time and efforts in reviewing our public input regarding the environmental impact of the two plants. The Alternative 1, railbank with trail would have unmitigable impacts across multiple criteria. The impacts related to the Proposed Project: Rail with Trail are not significant and we recommend preparation of a Mitigated Negative Declaration on behalf of the Proposed Porject: Rail with Trail.

Best regards,

Lani Faulkner, Director, Equity Transit

December 7, 2021

Rob Tidmore, Project Manager
County of Santa Cruz, Department of Public Works
701 Ocean Street, Room 401
Santa Cruz, California 95060

Re: Rail Trail Segments 10 & 11 Project - EIR Scoping Scoping

Santa Cruz County Friends of the Rail and Trail (FORT) has the following comments regarding the scope of environmental issues and project alternatives to be evaluated in the EIR for the Rail Trail Segments 10 & 11 Project.

1. **The Alternative 1 "Railbank with Trail" project should be renamed and analyzed as a "Railbank with INTERIM Trail"**. As of today, neither the City of Santa Cruz, the Regional Transportation Commission (RTC) nor the County of Santa Cruz has adopted a policy which supports railbanking the Santa Cruz Branch Rail Line (SCBRL), nor a "Railbank with Trail" use of the rail corridor. In fact, the RTC and the City Councils of Santa Cruz and Watsonville have recently adopted resolutions confirming their support for implementing passenger rail transit on the SCBRL. Accordingly, a "Railbank with Trail" alternative for this section of the trail would necessarily be an INTERIM TRAIL use.

   The "Railbank with INTERIM Trail" alternative should include all environmental impacts of this changing use over time, so it is fully understood by the community and decision makers. These should include: demolition of the existing rail line, handling and disposal of hazardous waste associated with demolishing the existing rail line, implementation of an interim trail, discontinuing the interim trail use, restoring the rail line, and constructing a permanent trail alongside the rail.

2. **The Alternate 1 "Railbank with Interim Trail" Project should include the negative environmental impacts of significantly delaying implementation of the Proposed Rail with Trail Project and permanent loss of its environmental benefits**.

   Since "railbanking" was created by an Act of Congress in 1983, there has not been ONE case of railroad tracks being removed, a paved interim trail being constructed where the tracks were, the paved interim trail being removed, the railroad tracks reinstalled, and rail transit service resuming operation (as noted in the RTC's *Unified Corridor Investment Study FAQ's*). Given this fact, an interim trail will effectively preclude the SCBRL from being used for rail transit, or any other type of high-capacity public transit, in the reasonably foreseeable future.

   The Alternative 1 "Railbank with Interim Trail" Project should, therefore, account for the loss of the environmental benefits that would otherwise have accrued had passenger rail transit, as described in the RTC's *Transit Corridor Alternatives Analysis / Rail Network Integration Study* (TCAA/RNIS), been implemented including, but not limited to:
   a. A substantial increase in county-wide public transit use from about 5 million to about 12.5 million rides every year

b. A substantial decrease in Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions and criteria pollutants
c. A more robust and equitable public transit system serving the people of Santa Cruz County and the State of CA
d. A more complete statewide rail network as delineated in the State Rail Plan (SRP) of which the SCBRL is an integral part
e. A more complete Monterey Bay Area Regional Passenger Rail Network as described in the Transit Agency of Monterey County's *Rail Network Integration Study* including but not limited to "Around-the-Bay" passenger rail service linking Santa Cruz with Monterey and all points between and beyond
f. All the other benefits summarized in Chapter 6 of the TCAA/RNIS

3. **The Proposed "Rail with Trail" Project should include the environmental benefits of the project as documented in the RTC's *Unified Corridor Investment Study* (UCIS)** including, but not limited to:
   a. A substantial decrease in Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) Emissions and criteria pollutants
   b. A substantial decrease in the number of crashes with annual savings of millions of dollars and immeasurable reduction of human pain and suffering
   c. A substantial increase in the mode share of people using public transit county-wide

4. **The Proposed "Rail with Trail" Project should account for all the benefits that will be realized when passenger rail transit as described in the RTC's *Transit Corridor Alternatives Analysis / Rail Network Integration Study* (TCAA/RNIS) is implemented** including, but not limited to:
   a. A substantial increase in county-wide public transit use from about 5 million to about 12.5 million rides every year,
   b. A more robust and equitable public transit system serving the people of Santa Cruz County and the State of CA,
   c. A more complete statewide rail network as delineated in the SRP of which the SCBRL is an integral part,
   d. A seamless rail-to-rail connection to the state rail network as delineated in the SRP at the Watsonville Junction including, but not limited to, the reduction in automobile trips and VMT by people traveling to and from Santa Cruz County from the rest of California,
   e. A more complete Monterey Bay Area Regional Passenger Rail Network as described in the Transit Agency of Monterey County's *Rail Network Integration Study* including but not limited to "Around-the-Bay" passenger rail service linking Santa Cruz with Monterey and all points in between and beyond,
   f. All the other benefits summarized in Chapter 6 of the TCAA/RNIS.

5. **The proposed project and all alternatives should consider the following categories of environmental effects**: impacts on greenhouse gas emissions and climate change impacts, reduction of VMT, Transportation/Circulation impacts, and the impact of the release or creation of environmental hazards and hazardous materials.

6. **The proposed project and all alternatives should consider the environmental impacts of the implementation timelines involved for each project**, including the fact that the Regional Transportation Commission (RTC) has chosen electric light rail passenger transit on the Branch Line ROW as the locally preferred alternative. Questions to be considered should include, but are not limited to the following. How would the speed at which our county could implement rail service and affect our collective VMT and GHG emissions be impacted? What would be the environmental impact of delaying implementation of passenger rail transit for 20 years, 30 years, or 40 years? What would be the positive environmental benefits if the Proposed Rail with Trail Project encourages more people to take transit?

7. **Please ensure that Alternative 1: "Railbank with Interim Trail" conforms with the "Trail Only" use as described in *Appendix B, Table B-13: Trail Only of the UCIS* in terms of width, length and other specified characteristics.** If it does not conform with same, then an additional alternative should be considered which does substantially conform with the "Trail-Only" use of the corridor as described in the UCIS.

8. **Cumulative Project Impacts: Given the incremental nature of the proposed "Rail with Trail" project and the alternative "Railbank with Interim Trail" project, the environmental impacts of realizing the total and full implementation of these projects within the SCBRL corridor must be considered.** In the case of the alternative "Railbank with Interim Trail", the impacts of incrementally converting a substantial portion of the SCBRL to a "Railbank with Interim Trail" project should be compared to the proposed "Rail with Trail" project.

Thank you for your consideration of our comments and all your work to bring the Rail Trail to life in Santa Cruz County.

Respectfully submitted,

Faina Segal, Board Chair
Santa Cruz County Friends of the Rail & Trail
Email: executive@railandtrail.org

From: Alexis Pursley
To: RailTrail
Subject: Rail Trail Segments 10 and 11
Date: Monday, December 6, 2021 10:51:03 AM
Attachments: image001.png
Importance: High

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Dear Rob,

As Association Manager for Anchor West Homeowners Association located at 815 Balboa Avenue, I am reaching out to you regarding the above segments of the Rail Trail project. Each year the association trims the trees in the Eucalyptus grove on the ocean side of Park Avenue. The Board wants to express their need to ensure ongoing maintenance and access to this area. It is a fire and safety concern if this area becomes overgrown. Please confirm that access to this area to complete this maintenance will be continued to be available.

Regards,

Alexis Pursley

ALEXIS PURSLEY
ALEXIS@ACOMGT.COM || 831.688.1090 EXT.106
783 RIO DEL MAR BLVD #59 APTOS, CA. 95003 ACOMGT.COM

ANDERSON & COMPANY

From: sara allshouse
To: RailTrail
Subject: Rail Trail input
Date: Friday, November 12, 2021 6:14:36 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

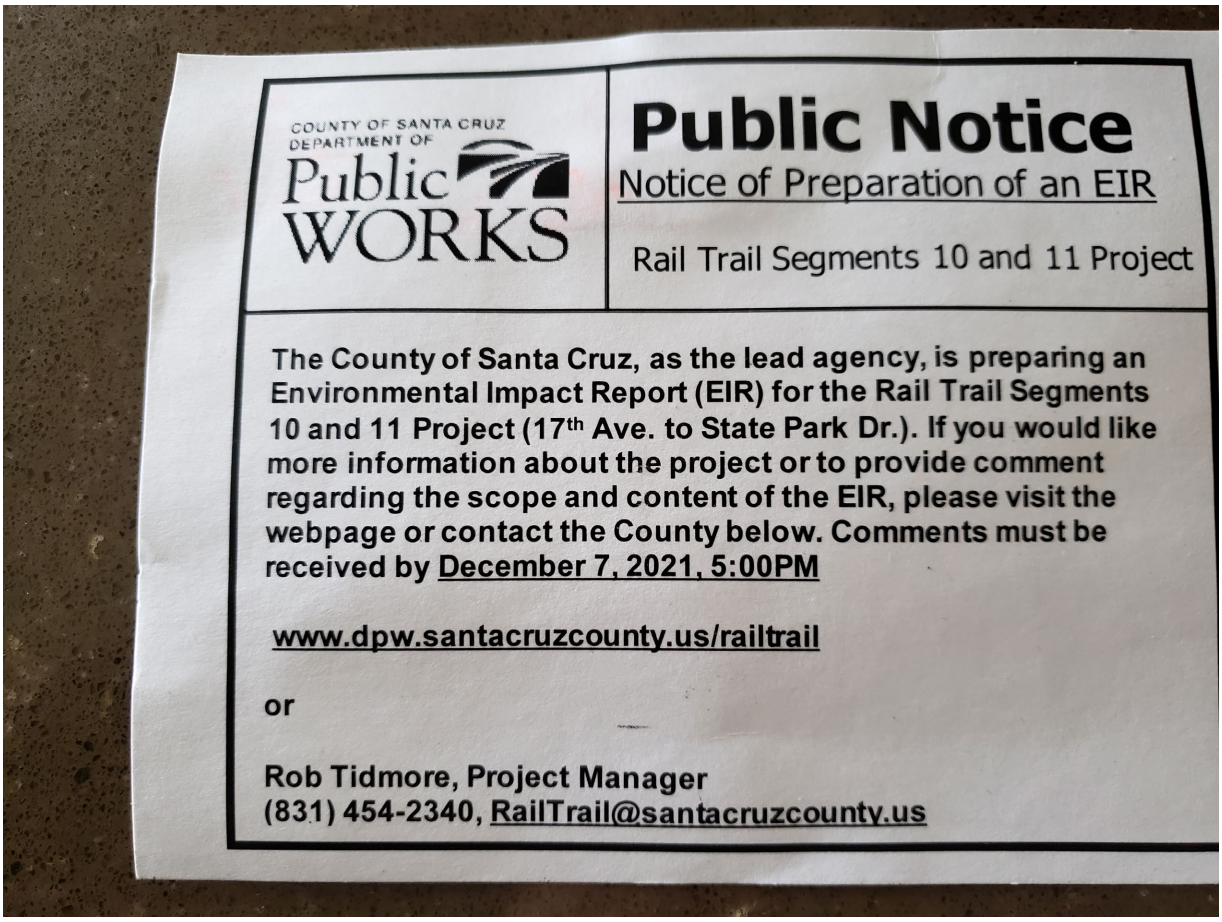
Hello Rob Tidmore, The property that I own backs up to the Corridor. I pay Ungodly Taxes on my property and I hope you all will care about us Tax payers opinion. I hate the idea of a bike trail for these reasons; 1) Noise pollution from people that have no concern for the people that live along the corridor, 2)Trash, 3)Continued spraying by the county of poisons(which they've done for years and never notified anybody. Even though now they say they're using "good" poison) 4)Fire hazard(smokers etc)…. 5) Crime/Drug Use 6)There has been so little concern for the aesthetics of the corridor by the rail transit. -7)They come and cut some of the trees/shrubs and leave the debris all along the fencing.(Fire Hazard). —I've called numerous times with no results! They've sprayed Poison (Round Up?) for at least 18 years and never let anybody know. Now they say they're using a poison that doesn't really hurt anything. That is a joke! So I have no trust for the county or the Rail Transit or anybody that's running the show. I would think the train would be much more desirable solution to deal with the Corridor. I think this last year with the pandemic has shown how selfish and rude and careless people really are. So the thought of large groups of people coming over to Santa Cruz and dump whatever they want along the corridor is a very strong possibility & feels irresponsible.
There are plenty of places for people to ride their bikes now that aren't putting people next to trains on bikes. Ps: $100's of millions of dollars? Really? Sara Allshouse 831-464-6711 — 4413 Nova Drive SC 95062 saraallshouse@sbcglobal.net
Sent from my iPhone

From: Marianne Cohn
To: Alexis Pursley; FIGEIRA STEPHANIE
Cc: RailTrail
Subject: EIR Input for railtrail segments 10/11
Date: Friday, December 3, 2021 11:42:38 AM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hi Alexis, here is the request for comments on the Environmental Impact Report Due by December 7.

Please inform the project manager of our semiannual tree trimming funded by our HOA, and the need to ensure ongoing maintenance and access to this area. It is a fire and safety concern if this area becomes overgrown. I understand our HOA shares the expense with the other condos on Park/Balboa Avenues. Please send details to the project manager.



Best Regards,
Marianne Cohn

Sent from Yahoo Mail on Android

---------- Forwarded message ---------
From: **Bud Colligan** <bud@colligans.com>
Date: Wed, Nov 17, 2021 at 7:42 PM
Subject: input on EIR
To: <railtrail@santacruzcounty.us>

Dear Rod,

Thank you for conducting the EIR on Segments 10 and 11 of the rail corridor. The list of areas to be studied in the EIR seems to be comprehensive.

I'm writing to provide commentary to what is often missed in EIR studies. It's clear that the concept of rail and trail, first articulated in the Monterey Bay Sanctuary Scenic Trail Study (MBSST), grossly misled the public that both rail and trail were possible on the same corridor. We now know that extensive environmental damage will occur with rail and trail which was not documented in the MBSST. We also know that many of the graphics depicting rail and trail were misleading and did not follow the topography, width or geography of the corridor. I would hope that any graphics in the EIR are true to the actual measurements and topography of the corridor.

Areas that were not considered in the MBSST or subsequent

studies for any rail and trail implementation include:

- Extensive tree cutting of heritage oaks and other mature trees

- Movement of tons of earth to excavate for huge retaining walls, concrete supports and other construction to make the corridor wide enough to support both rail and trail.

- Tons of concrete poured for new bridges, walls and other supports.

- Displacement of many different types of wildlife and plants in the corridor, potentially forever.

- Greenhouse gases emitted as the result of manufacturing and construction processes for steel, cement and other manufactured building materials.

- Dramatically lower usage for active transportation and recreation from a discontinuous trail (e.g. detour into Capitola Village and onto San Andreas Rd/West Beach St). Alta Planning and Design, the preeminent trail designer in the U.S., has done extensive research on this topic: https://sccgreenway.org/greenway-capacity.

- Greenhouse gases emitted as a result of no train being

implemented. Several studies have measured greenhouse gases as if plans considered are concurrent, but the savings from a continuous interim trail built in 3 - 5 years vs. an industrialized corridor with a narrow trail not suitable for active transportation commuting and a train that never arrives due to no funding/no local tax passed cannot be compared apples to apples with something that is funded and doable in a short period of time. How does time get considered in the EIR analysis?

- The practical width of the trail is more important than the so-called "right of way" when hillsides, trees, low income housing and steep embankments/gulches prevent a reasonable cost trail from being built. Please look at the practical engineering reality. https://sccgreenway.org/trail-width-matters

- There is much important information in the Nelson Nygaard study done in 2016 regarding many of the issues to be studied in the EIR, particularly relating to impediments to rail and trail. Nelson Nygaard is also a highly regarded transportation consulting organization used by the RTC in the past. https://files.sccgreenway.org/2016-The-Great-Santa-Cruz-Trail-Study-Web.pdf

- Traffic estimates or displacements for a train need to be thoroughly analyzed against actual experience in other

communities like Sonoma/Marin (SMART train) or the VTA in San Jose. Both are running dramatically below any ridership forecasts done by transportation consultants. How will past historical examples of actual ridership vs. forecast on light rail systems be considered?

- The Santa Cruz County Coastal Climate Change Vulnerability Report (attached) makes it clear that any heavy infrastructure like a train should be moved inland to preserve our coastal bluffs, marshes, and estuaries threatened by erosion and flooding. The bluff is already collapsing at Manresa Beach and there are other low lying areas along the corridor. In San Diego, Metrolink and Amtrak (43 trains per day) have been suspended for two weeks recently due to the tracks being vulnerable to active coastal bluff erosion (https://apnews.com/article/business-california-amtrak-841610d08d153f2e4086642914acbf40?fbclid=IwAR2usBdfl5IcT_yd3ikw9wvbRJo1kTpDIQsWAmq1VU18qLYYphNE3UquMCM). This is real. Why would we put more heavy infrastructure along the coast in areas that are clearly unsuitable?

- Social equity in public transit is covered extensively in the literature in areas around access, who bears the tax burden, health, displacement in marginalized communities and other factors. Train systems nationwide also carry mostly high income individuals while buses serve the lower income

communities. Again, lots of articles documenting this phenomena can be found with a simple Google search.

Rod, thank you for your attention to a truly holistic approach to the Segment 10 & 11 EIR.

Regards,

Bud Colligan

From: Pete Haworth
To: RailTrail
Subject: Comments on Trail Segments 10 & 11 Preparation Of EIR
Date: Monday, November 22, 2021 5:38:44 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

I attended the preliminary Zoom meeting regarding this project on November 17th 2021 and would like to submit the following comments

- I understand that the rail-with-trail option will not use the Capitola trestle but the railbank-and-trail option will, presumably because the trestle in its current form is not capable of handling rail locomotives and a trail for both load and width issues

  I would like to see the EIR include the environmental impacts of bringing the trestle into a condition where it can carry both rail and trail so that a fair comparison can be made between the two alternatives being studied.

- During the Zoom meeting, there were requests that the EIR include the impact of replacing the rails if the railbank-and-trail option is selected and the right of way be returned to rail service at some future date.

  It's my understanding from statements made by RTC commissioners and staff, and by Friends Of The Rail Trail that, to date, none of the hundreds of railbanked rights-of-way have ever been returned to rail service.

  With that in mind, I hope the EIR will make it clear that it is extremely unlikely that the rails would ever need to be replaced should the railbank-and-trail alternative be selected.

  Thank you for your time.

--
Pete

From: dan holdren
To: RailTrail
Subject: Rail Trail
Date: Wednesday, November 24, 2021 3:01:31 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Please let me know by sending me information.
danrholdren@sbcglobal.net

Sent from my iPhone

From: bikerick@att.net
To: RailTrail
Cc: ttravers
Subject: NOP for EIR for the Rail Trail Segments 10 and 11 Project
Date: Wednesday, December 1, 2021 9:00:17 AM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hi: Regarding the alternatives that the EIR will review, one or more additional alternatives need to be reviewed. The reason is that if the RTC decides against pursuing railbanking before the EIR is completed, then it would no longer be considered a feasible alternative. Since CEQA requires at least one feasible alternative be evaluated in the EIR, it would thus be likely that the EIR process would have to open up again and delay the project. The NOP thus states, "the County will also consider other project alternatives, which must meet most of the project objectives while substantially lessening or avoiding any of the significant impacts of the proposed project." The scoping document is not detailed enough for me to suggest a specific additional alternative but it could be to analyze a trail on the opposing side of the tracks from the preferred alternative along all or part of the route. Another possible alternative, depending on the preferred planned width, is a wider or narrower pathway, again along all or part of the route.

Similarly, a study is underway to determine the feasibility of using the Trestle bridges in Capitola for the trail. Again, if they are not found feasible, or feasible for only a limited period of time (due to either future use for a railroad or eventual deterioration or taking an extra amount of time to become usable), then an alternative route(s) through or around Capitola needs to be evaluated.

Rick Hyman

From: B K G
To: RailTrail
Subject: Monarch Butterfly / Rail Trail impacts
Date: Thursday, November 25, 2021 10:01:21 AM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

The many tree's (eucalyptus, cypress, etc) along the proposed rail trail are the home of Monarch butterfly's and other identified sensitive & endangered species. How will the project impact the natural flora and fauna? How will any negative impacts be addressed? As you are aware the number of Monarchs in general has diminished, don't we have a responsibility in the Monterey Bay Sanctuary not to contribute to the extinction of any species?

These concerns have been contributed before, but I have not been personally notified as to how they are being addressed.

Thank you for your response.

Sent from Kim's iPhone

From: Jean Mahoney
To: RailTrail
Subject: Copy of EIR report in mail
Date: Saturday, November 6, 2021 7:31:54 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hello Rob,

Please mail me a physical copy of the current EIR report for rail segments 10 and 11 Project (17th Ave to State Park Drive). Add me to your ongoing announcements list.

Thank you,

Jean Mahoney
3035 Buckingham Lane
Santa Cruz, CA 95062

From: Ken Maus
To: RailTrail
Date: Tuesday, December 7, 2021 2:10:55 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

My Comments: Passenger Rail transit was shown to be possible between Santa Cruz and Capitola last month.
Tickets were gone quickly for rides using lightweight battery powered cars on rails accommodating 32 passengers.
These cars stopped only when passengers wanted on or off.
Transportation trials between Watsonville and Santa Cruz would be possible using these cars.
Placing a few signs announcing 'Car Stop" next to the track. Trail built near the right of way.
Please reply with your thoughts.
Thank you.
Ken Maus
kenrrjo@gmail.com

From: Deborah Secrest
To: RailTrail
Subject: Comments regarding proposed EIR due before 12-7-21
Date: Friday, November 12, 2021 4:47:29 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Dear Mr. Tidmore,

We live in the Jade Street corridor (at the Tradewinds Mobile Home Park). Our bedroom is separated from the tracks by approximately 13 feet or so. If there's a trail there, the distance would be even less, approximately 5 feet. We're really concerned about the proposed usage of this rail corridor for a trail.

Specifically we're very concerned with the **noise of the trail** so close to the houses on either side. Recently, the Coast Futura train went by, and it was fairly quiet, and came and went. I can see that the neighbors affected would soon get used to that noise. However, with a trail, the people who live along that stretch of railroad tracks would have to endure **possible 24 hour, 7 day a week random noise from travelers biking, walking, talking and traveling through.**

The value of our property, and the quality of our life will be reduced if we have to endure a few thousand people a day traveling by our window barely 10 feet away. We read that there was an approximate estimation of 6,000 people per day using the trail.

We hope that if there is a trail built that it would be **detoured around this particular stretch** and picked up on the part of the tracks where it isn't so close to people's homes.

Right now, there is peace and quiet in the back of our home. With a trail, that peace will be gone. We like the idea of the trail, but we hope that there can be places where a **detour will exist to create space between so many proposed users of a trail,** and neighbors who have no choice but to listen to whatever goes by.

Sincerely,
Deborah Secrest & Dean Price
4160 Jade Street #17, Capitola, CA 95010
(831) 476-5438

NOP_Segs10-11_County_v4_FINAL

- **Proposed Project: Rail with Trail**. The multi-use trail would be located alongside the railroad tracks. The trail would be 10-12 feet wide (but may be reduced to 8 feet in areas with existing constrained conditions). The Project may include shifting of the tracks within the right-of-way as necessary to accommodate the trail.

From: Barry Scott
To: RailTrail
Cc: Robert Tidmore
Subject: Comments: NOP Rail Trail Segments 10 + 11
Date: Wednesday, November 17, 2021 1:22:45 PM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Dear planners,

I write in support of the "Proposed Project: Rail with Trail".
I wish to express the following concerns with "Alternative 1: Railbank with Trail":

Evaluation of the Alternative 1: Railbank with Trail must take into account the full long-term scope of the project and related impacts.
As an "Interim Trail" with railbanking, the assumption must be that at some future time the rail would or could be rebuilt.
Failure, therefore, to consider the collective impacts over the long term would constitute a failure to faithfully assess this "temporary" trail project.

GHG Emissions:
The recent TCAA and USIC studies provide evidence of significant GHG reductions and lowered VMT for the Proposed Project which would be lost if Alternative 1: Railbank with Trail is pursued. The effects of the Alternative on our ability to lower GHG emissions are unmitigable.

Land Use/Planning:
The County General Plan, City plans, and the County Regional Transit Plans as well as other County Regional Transit Plans all include language supporting the preservation of existing rail infrastructure and expanded use thereof, especially for future passenger rail transit.
Alternative 1: Railbank with Trail removes or impedes these options and this constitutes unmitigable impacts.

Removal of the rail line as required by Alternative 1: Railbank with Trail is inconsistent with the Local Coastal Plan and in direct conflict with statements made by the California Coastal Commission, which calls for preservation and expanded use of our region's rail infrastructure in order to protect and expand public access to coastal features, and to reduce congestion and the resultant harm to the environment by reducing miles driven by trucks and automobiles.
Coastal Commission letter here: http://tiny.cc/CCCMMM

Transportation/Traffic:
Our County, Region, and State governments all have Transportation Plans which include strategies for expanding public transit while reducing VMT, Vehicle Miles Traveled. The Santa Cruz Branch Rail Line is a critical part of the regional network

and the removal of even a part of threatens our capacity to meet well-defined goals and constitute unmitigable impacts.

Hazards and Hazardous Materials:
Removal of the tracks and ties and regrading the land in the rail corridor to create a trail, only to have to later replace the rail line and rebuild the trail, would generate the release of toxic and hazardous materials to a far greater degree than simply building the trail adjacent to the tracks and improving the rail line for public transit and occasional freight. We should build the project correctly and in a way that reduces impacts over time, looking at the whole of work to be done in the rail corridor and not just a temporary project.

Public Services:
By removing the rail line, we remove the capacity to provide public transit to the entire county independent of the highway and surface streets. Removal for a temporary trail serves a few small neighborhoods while ignoring others, especially those south of Aptos who badly need an alternative to congestion on the highway. There are no examples of railbanking working to restore rail service after replacement with a paved trail.
RTC FAQ page, 2018:
"The RTC is unaware of any paved trails that have been converted back to rail once it has been railbanked."
https://sccrtc.org/wp-content/uploads/2018/11/01_FAQs_for-20181128.pdf

Noise:
The additional construction activity required over time to remove the rail line, build a temporary trail, and later remove the trail to rebuild the rail line and to rebuild the trail represent far more disruption and noise than the Proposed Project: Rail with Trail" and these impacts can not be mitigated.

Recreation:
Removal of the rail transit option effectively restricts access to recreational features by people from outside the immediate neighborhoods where Alternative 1: Railbank with Trail is proposed to be implemented. There are no ways to mitigate excluding or restricting access to recreational features alone our rail line and coastline.

Please follow the science and CEQA guidelines and find Alternative 1: Railbank with Trail to have unmitigable impacts across multiple criteria.
Please also find that impacts related to the Proposed Project: Rail with Trail to not be significant and prepare a Mitigated Negative Declaration

Many thanks,

Barry Scott

--
Barry Scott
Office: 831.612.6574

Mobile: 209.482.5663

From: Rob Stuart
To: RailTrail
Subject: Rail trail
Date: Saturday, November 27, 2021 8:33:18 AM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Hi

I am dead set against the rail trail and all for the greenway path only for numerous reasons:

Too expensive to up grade all of the bridges

Not enough users to justify the expense

Would not work with rail and trail in many locations

With E bike technology to have a pedestrian and bike bath would serve the purpose of getting people out of their cars

No enough parking lots at all of the stops so people can transition to their desired destination

Negative noise impact in neighborhoods

Look how few people use the buses it would be similar to the tourist train

Just the one bridge over Capitola has a huge price tag to rebuild

Rob Stuart

As long-time property owners directly adjacent to what is termed Segment 11, we would like to comment briefly on what needs to be included in the E.I.R. as pertains to segments 10 and 11 of the Rail Trail.

We are against a train of any kind running through the corridor, especially what is considered a light rail or a trolley system.

We are in support of Alternative 1, known as the “Railbank with Trail.”

Aesthetics and Biological Resources top our list of concerns along with noise and land use and planning. Since our home is so close to the trail, public safety and security measures as a way to ensure the proper uses of this resource are important to us as well, and should be included in any E.I.R. Another issue could well be trash and illegal dumping, so please do address these in the report. Finally, illegal camping is on the rise in the area and a hard trail will make this even easier, so let me emphasize security, trash, and dumping once again.

This corridor as a greenway needs to mirror the notion of The Monterey Bay Sanctuary as a way for humans and the flora and fauna to coexist to mutual benefit—there are at least three known groups of mule deer, monarch butterflies, bobcats, raptors of all kinds, and quail, among several others, that frequent the space directly behind our home.

Transportation and recreation needs notwithstanding, the wildlife and habitat to our minds—and the tranquility that is part of this unique ecosystem—weigh in as our prime concerns along with safety, security, trash, and dumping.

Thank you for allowing us to comment .

Sincerely,

Richard and Kim Underwood

From: Gillian Worsey
To: RailTrail
Subject: Scoping meeting
Date: Thursday, November 18, 2021 9:04:58 AM

****CAUTION:This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.****

Rob,
Something came up and I was unable to attend the scoping meeting. Is it possible to view a recording of the meeting?
Thank you,
GillianWorsey

Appendix C. Initial Study

This page intentionally left blank.

Initial Study

Coastal Rail Trail Segments 10 and 11

June 2023

Prepared for:

County of Santa Cruz
701 Ocean Street, Room 410
Santa Cruz, California 95060

Prepared by:

Harris & Associates

450 Lincoln Avenue, Suite 103
Salinas, California 93901

Document Overview

This Initial Study has been prepared in accordance with California Environmental Quality Act (CEQA) and the CEQA Guidelines for the proposed Coastal Rail Trail Segments 10 and 11 Project (Project).

In accordance with CEQA, projects that have the potential to result in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment must undergo analysis to disclose potential significant effects. The provisions of CEQA apply to California governmental agencies at all levels, including local agencies, regional agencies, state agencies, boards, commissions, and special districts. CEQA requires preparation of an Initial Study for a discretionary project to determine the range of potential environmental impacts of that project and to define the scope of the environment review document.

Therefore, the primary intent of an Initial Study is to determine if the project may have a significant effect on the environment. However, if the lead agency can determine that an Environmental Impact Report (EIR) will clearly be required for the project, an Initial Study is not required but may still be desirable.

As the CEQA lead agency for the Project, the County of Santa Cruz (County) decided to prepare an EIR because of potentially significant impacts to aesthetics and biological resources, and to provide a more robust analysis and public involvement process. Therefore, the purpose of this Initial Study is to identify the potential environmental effects of the Project that clearly would not be significant, and to focus the EIR analysis on the effects determined to be potentially significant and to provide additional information. Because the County is preparing an EIR for the Project, this Initial Study has not been circulated for public review and will not be certified by the County.

This Initial Study is organized as follows:

- **Section 1: Project Description.** This section introduces the document and discusses the project description including location, setting, and specifics of the lead agency and contacts.
- **Section 2: Initial Study Checklist.** This section identifies the environmental topics, checklist questions from Appendix G of the CEQA Guidelines, and identifies the potential for significant impacts based on identified thresholds.
- **Section 3: List of Preparers.** This section lists the organizations and individuals who were consulted and/or prepared this Initial Study.
- **Section 4: References.** This section presents a list of reference materials consulted during preparation of this Initial Study.

Section 1 Project Description

1.1 Overview

The County of Santa Cruz (County), in coordination with the City of Capitola (City) and the Santa Cruz County Regional Transportation Commission (RTC), is proposing the **Coastal Rail Trail Segments 10 and 11 Project** (Project) to be developed along the RTC-owned rail corridor that generally parallels the coastline in central Santa Cruz County (**Figure 1**, Regional Location). The County is serving as the CEQA lead agency.

The Project is an approximately 4.5-mile new multi-use bicycle and pedestrian trail proposed to extend along the RTC-owned railroad corridor from the east side of 17th Avenue on the west to the west side of State Park Drive on the east, extending through unincorporated County and the City of Capitola (**Figures 2a** and **2b**, Project Location). Segment 10 extends from 17th Avenue to 47th Avenue, and Segment 11 extends from 47th Avenue to State Park Drive.

The project purpose is to provide an accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail (MBSST) Network Master Plan.

The County's *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration)* includes an *Optional First Phase: Trail on the Rail line (Interim Trail)*, as described below.

Proposed Project: Trail next to Rail line (Ultimate Trail Configuration). The trail would be 4.2 miles long. In Segment 10 (1.5 miles), the trail would be constructed on the inland side of the railroad tracks. In Segment 11 (2.7 miles), the trail would be constructed on the coastal side of the railroad tracks from 47th Avenue to Mar Vista Drive and on the inland side of the tracks from Mar Vista Drive to State Park Drive. Fencing would be installed between the trail and tracks as necessary in accordance with the MBSST Network Master Plan. In Segment 11, the trail would not include an approximately 0.5-mile section of the rail corridor, from Opal Street to Monterey Avenue (which encompasses the Capitola Trestle Bridge), in the City of Capitola. Instead, trail users would be directed to use the existing on-street bicycle lanes and pedestrian sidewalks extending through Capitola Village.

Optional First Phase: Trail on the Rail line (Interim Trail). The trail would be 4.7 miles long. The trail in Segments 10 (1.5 miles) and 11 (3.2 miles) would be constructed in approximately the same location of the railroad tracks by removal of the rails and ties. The Interim Trail includes the additional 0.5-mile section between Opal Street and Monterey Avenue (across the Capitola Trestle Bridge) in Segment 11. Upon completion of this first phase, the Interim Trail would be removed,

the rail would be reinstated, and the Ultimate Trail Configuration would be constructed as described above.

1.2 Project Location

The 4.7-mile-long Project area limits extend along the RTC-owned Santa Cruz Branch Rail Line (SCBRL) corridor in central Santa Cruz County, within the California Coastal Zone (**Figure 1**).

The Project alignment generally runs in the east–west direction and extends from the eastern side of 17th Avenue on the west to the western side of State Park Drive on the east (**Figures 2a** and **2b**), between State Route 1 (SR-1 or Highway 1) and the Monterey Bay coastline. For the Ultimate Trail Configuration (4.2 miles long), there would be a 0.5-mile section or gap from Opal Street to Monterey Avenue in the City of Capitola, and trail users would be directed to the existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village. For the Interim Trail (4.7 miles long), trail users would continue along the rail corridor and Capitola Trestle Bridge. Therefore, the trail alignment is approximately 4.5 miles long, and the area limits for analysis are 4.7 miles along the rail corridor from 17th Avenue on the west to State Park Drive on the east.

The Project alignment extends through developed portions of the County and City, including residential, commercial, industrial, and recreational land uses, as well as New Brighton State Beach open space.



Source: SCCRTC 2019; ESRI Basemap 2022

Harris & Associates

N

0 2 4

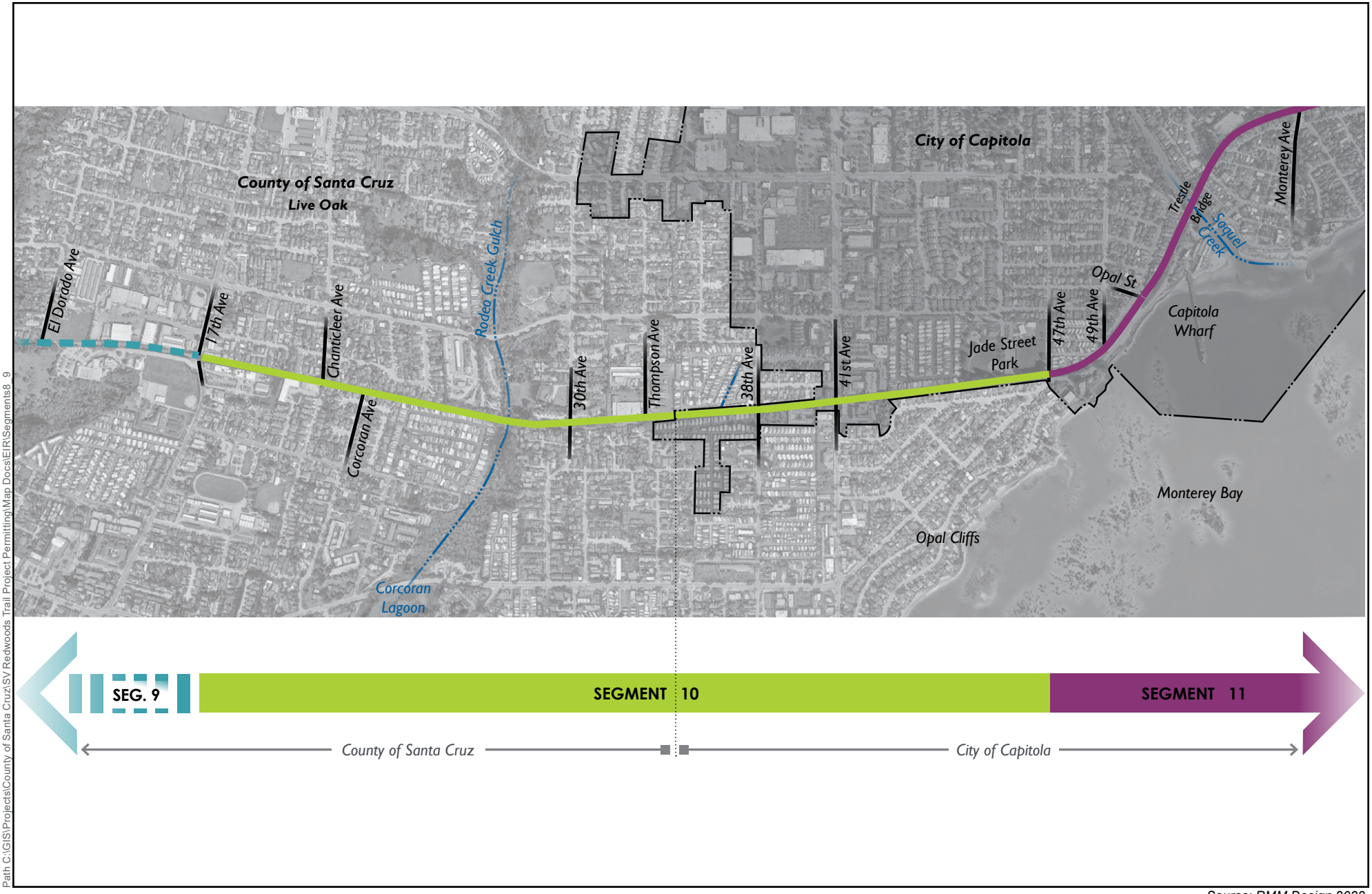
Miles

Figure 1

Regional Location

Coastal Rail Trail Segments 10 and 11

This page intentionally left blank



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segments8_9

Source: RMM Design 2022.

Harris & Associates

N

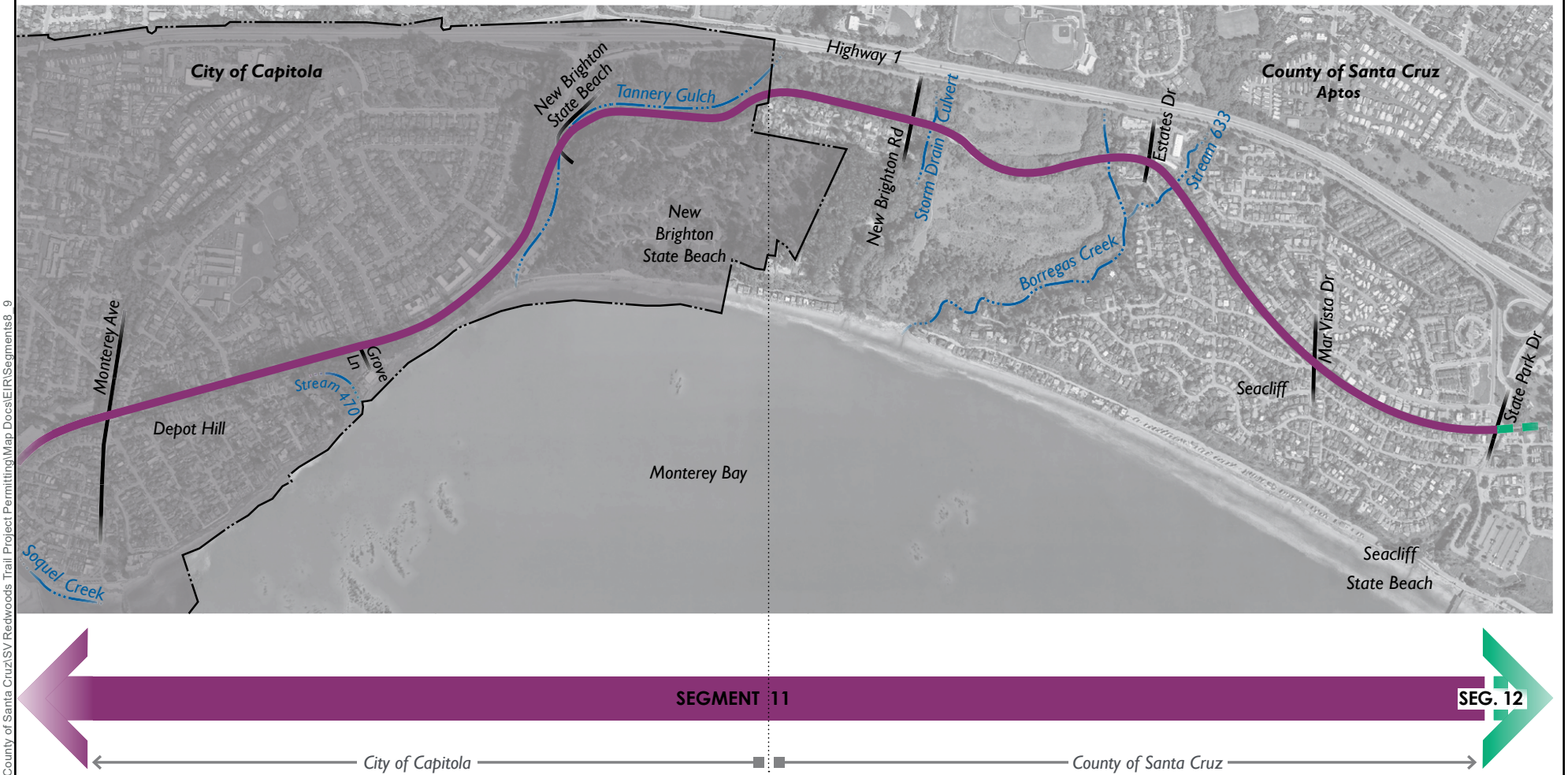
0 800 1600
Feet

Figure 2a

Project Location

Coastal Rail Trail Segments 10 and 11

This page intentionally left blank



Path C:\GIS\Projects\County of Santa Cruz\SV Redwoods Trail Project Permitting\Map Docs\EIR\Segments8_9

Source: RMM Design 2022.

Harris & Associates

N

0 800 1600

Feet

Figure 2b

Project Location

Coastal Rail Trail Segments 10 and 11

This page intentionally left blank

Section 2 Initial Study Checklist

The following discussion of potential environmental effects was completed in accordance with Section 15063 of the CEQA Guidelines to determine if the Project may have a significant effect on the environment.

2.1 Project Information

1. Project title:	Coastal Rail Trail Segments 10 and 11
2. Lead agency name and address:	County of Santa Cruz 701 Ocean Street, Room 410 Santa Cruz, California 95060
3. Contact person name, address, and phone number:	Rob Tidmore, Project Manager County of Santa Cruz 701 Ocean Street, Room 410 Santa Cruz, California 95060 Robert.Tidmore@santacruzcounty.us
4. Project location:	The approximately 4.5-mile-long linear Project is located along the existing rail corridor in central Santa Cruz County. The Project alignment extends from the eastern side of 17th Avenue on the west to the western side of State Park Drive (**Figures 2a** and **2b**).
5 Project sponsor's name and address:	County of Santa Cruz 701 Ocean Street, Room 401 Santa Cruz, California 95060
6. General plan designation:	County General Plan (1994): The Project corridor has a County land use designation of Public Facilities. Capitola General Plan (2019): The Project corridor has a City land use designation of Public/Quasi-Public.

7. Zoning:	County Municipal Code: The Project corridor is zoned as Public and Community Facilities. Capitola Municipal Code: The Project corridor is zoned as Community Facility.
8. Description of Project:	Refer to Section 1 of this Initial Study.
9. Surrounding land uses and setting:	Refer to Section 1 of this Initial Study.
10. Other public agencies whose approval is required:	City of Capitola, RTC, California Department of Transportation (Caltrans), California Public Utilities Commission, State Water Resources Control Board, Regional Water Quality Control Board, California Department of Fish and Wildlife.
11. Have California Native American tribes traditionally and culturally affiliated with the Project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	No consultation has been requested. Refer to Section 2.4.18, Tribal Cultural Resources, of this Initial Study for details.

2.2 Environmental Factors Potentially Affected

The environmental factors checked below could be potentially affected by the Project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology and Soils	☒ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☒ Noise	☐ Population and Housing	☒ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☒ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

2.3 Lead Agency Determination

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent, including implementation of the mitigation measures identified herein. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

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

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

Signature
Robert Tidmore, Project Manager
County of Santa Cruz

Date

2.4 Evaluation of Environmental Impacts

This section documents the screening process used to identify and focus on environmental impacts that could result from the Project. The checklist portion of the Initial Study begins below and includes explanations of each CEQA issue topic. CEQA requires that an explanation of all answers be provided along with this checklist, including a discussion of ways to mitigate any significant effects identified.

The following terminology is used to describe the potential level of significance of impacts:

- **No Impact.** The analysis concludes that the Project would not affect the particular resource in any way.
- **Less than Significant.** The analysis concludes that the Project would not cause substantial adverse change to the environment without the incorporation of mitigation.
- **Less than Significant with Mitigation Incorporated**. The analysis concludes that it would not cause substantial adverse change to the environment with the inclusion of mitigation agreed upon by the applicant.
- **Potentially Significant.** The analysis concludes that the Project could result a substantial adverse effect or significant effect on the environment, even if mitigation is incorporated. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Because the County has decided to prepare an EIR, the detailed analyses providing substantial evidence and identifying required mitigation will be included in the EIR. Accordingly, the discussions may indicate that mitigation is likely required to reduce an impact to a less than significant level, without identifying the specific mitigation measure. Further, impact determinations of "potentially significant" and "less than significant with mitigation incorporated" are preliminary pending further analysis in the EIR.

The terms "Project," "trail alignment," and "Project impacts" are used when talking about the Coastal Rail Trail Segments 10 and 11 Project in general, regardless of the Ultimate Trail Configuration or the optional Interim Trail alignment.

The discussions apply to both of the following trail alignments and distinguish between the two alignments as necessary to describe notable differences in the potential impacts.

- *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration),* whereby the trail would be adjacent to the existing tracks
- *Optional First Phase: Trail on the Rail line (Interim Trail),* whereby the existing tracks would be removed and replaced by the trail, and the Ultimate Trail Configuration would be constructed at a future point in time

2.4.1 Aesthetics

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

Environmental Setting

The Project is part of the central reach portion of the MBSST Network. The central reach portion is visually characterized by densely populated coastal urban areas with views of the coast, waterways, residential, and commercial areas. As the trail alignments run adjacent to existing roadways, adjacent urban lighting from roadways and crossings illuminates portions of the trail alignments.

There are no designated state scenic highways near either trail alignment. The nearest eligible state scenic highway is State Route 1 (SR-1 or Highway 1), approximately 0.1 mile north of Segment 11 from the closest point, where Segment 11 crosses through open space land east of New Brighton State Beach (Caltrans 2023). No local roadways within the vicinity of the trail alignment are designated as scenic by the County of Santa Cruz or the City of Capitola. The County of Santa Cruz identifies ocean vistas, open beaches, wooded forests, open meadows, and mountain hillside views as visual resources to be protected (County of Santa Cruz 1994). The City of Capitola identifies the Capitola Village, Capitola Wharf, Capitola Beach, historic structures, and natural features as scenic resources (City of Capitola 2019).

The trail alignment would provide views of multiple scenic resources. Along Segment 10, trail users would experience views of the Santa Cruz Mountains and wooded forest along Rodeo Gulch. Along Segment 11, trail users would experience views of the Capitola Village, Capitola Beach, Capitola Wharf, Monterey Bay, and New Brighton State Beach.

Impact Analysis

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is a view that possesses visual and aesthetic qualities of high value to the community. In this context, prominent scenic views are those oriented toward Monterey Bay, the Santa Cruz Mountains, or other scenic resources identified by the County of Santa Cruz or City of Capitola (City of Capitola 2019; County of Santa Cruz 1994). The trail alignment would run adjacent to several features identified as significant contributors to the aesthetic and visual character of the Project area including the Capitola Village, Capitola Wharf, Monterey Bay, and Capitola Beach. The Project would install a multi-use trail at-grade with the existing railroad alignment. However, Project components would involve retaining wall construction, bridge/viaduct construction, and tree removal, which could degrade scenic vistas experienced from roadways or other publicly accessible vantage points along the trail alignment, particularly substantial tree removal. Therefore, the Project could have a substantial adverse effect on a scenic vista and thus a **potentially significant impact**. This issue will be analyzed further in the EIR.

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The trail alignment would be located 0.1 mile from SR 1, the nearest eligible state scenic highway; and views of the trail would not be visible from SR 1. Therefore, the Project would not damage scenic resources within a state scenic highway, and there would be **no impact**.

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The trail would be located in an urbanized area. Trail alignment would not conflict with applicable zoning; as discussed in Chapter 13.11 of the County Municipal Code and Chapter 17.120 of the Capitola Municipal Code, the trail alignments would be required to undergo design review to ensure the visual character of the area would not be degraded. However, considering the Project would have a potentially significant impact to scenic vistas, the Project could conflict with applicable policies pertaining to tree removal and preservation of scenic vistas from the County General Plan and Capitola General Plan. Therefore, potential Project impacts due to conflict with applicable zoning and other regulations governing scenic quality would be **potentially significant**. This issue will be analyzed further in the EIR.

d. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Project construction would occur between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Construction could also start at 7:00 a.m., Monday through Friday, or occur on Saturdays or Sundays with written approval from the City or County. There would be no construction on national holidays. Although the windows and metal on construction equipment during construction could increase glare, this effect would be minimal relative to existing glare from vehicles traveling on roadways along the Project corridor. In the portions of the corridor away from roadways, such as through New Brighton State Beach, there are fewer adjacent land uses that could be adversely affected by construction-related glare. However, because construction activities would occur during the daytime, construction would not necessitate lighting. Construction lighting impacts would be **less than significant**.

Segments 10 and 11 would be built in a predominately urbanized area that has existing street lighting and light emitted from existing buildings. The Project would include new lighting sources for the safety of trail users. The potential impact of increased light adversely affecting adjacent land uses could be reduced if the new lighting is "dark sky compliant," minimizes light pollution and offensive glare by directing light downward to reduce spillage. Therefore, the operational lighting impact would be **less than significant with mitigation incorporated**. This issue will be analyzed further in the EIR.

2.4.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided. Would the project:	Preliminary Determination			
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental Setting

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) has mapped the Project area as Urban and Build-Up Land. The Urban and Build-Up Land classification is defined as "land that is occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel" (DOC 2023a). The Project area does not contain any parcels that are under a Williamson Act contract (DOC 2023b). Additionally, the Project area is not zoned for agricultural use or timberland use, and no forest land or resources have been identified within the County General Plan.

Impact Analysis

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The Project area is classified as Urban and Build-Up Land, pursuant to the California Department of Conservation FMMP Map. Therefore, there would be **no impact** to any Farmland resources.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Project is not zoned for agricultural use and does not conflict with any Williamson Act contracts. Therefore, there would be **no impact**.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The Project corridor limits are within a developed urban, commercial, and residential environment under the jurisdiction of the Santa Cruz County. Therefore, the Project would not conflict with existing zoning for forest land, timberland, or timberland production, nor result in the loss or conversion of forest land, and there is **no impact**.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The Project would not involve any changes to the existing environment that would impact the conversion of Farmland or forest land to non-agriculture or non-forest use. The Project includes minimal ground disturbance to the existing environment to install the trail, which is already heavily urban. Additionally, the Project would not induce population growth; thus, no impact would occur by converting land to non-agricultural or non-forest use. Therefore, there is **no impact**.

2.4.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Preliminary Determination			
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard)?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

The Project area is located within the North Central Coast Air Basin (NCCAB), which includes the City and County, and within the jurisdiction of the Monterey Bay Air Resources District (MBARD). Air quality standards have been set by the State of California and the federal government, and within the NCCAB include ambient air quality standards for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb). As of January 2013, the NCCAB is under non-attainment status for ozone and PM_{10} and under attainment for PM 2.5, NO_2, SO_2, and Pb for state standards.

The primary sources of ozone (reactive organic gases [ROGs]) within the air basin are on- and off-road motor vehicles and prescribed burning. The primary sources of nitrogen oxides (NO_x) are on- and off-road motor vehicles and stationary source fuel combustion. In addition, the region is "NO_x sensitive," meaning that ozone formation due to local emissions is more limited by the availability of NO_x as opposed to the availability of ROGs (MBARD 2017). PM_{10} is the other major pollutant of concern for the NCCAB. In the NCCAB, the highest particulate levels and most frequent violations occur in the coastal corridor. In this area, fugitive dust from various geological and human-made sources combines to exceed the standard. The majority of NCCAB exceedances occur at coastal sites, where sea salt is often the main factor causing exceedance.

Impact Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

In compliance with the California Clean Air Act, MBARD prepared an Air Quality Management Plan (AQMP) in 1991, with subsequent updates every 3 years to show how the state ambient air

quality standards would be met in the NCCAB. The NCCAB does not meet state standards for ozone (ROGs and NO_x) and fine particulate matter (PM_{10}).

The MBARD AQMP includes an emission inventory with general estimated basin-wide construction-related emissions, which are not expected to prevent long-term attainment or maintenance of the ozone and particulate matter standards within the NCCAB. The construction activities required for constructing Segments 10 and 11 would result in short-term emissions generated by activities and equipment and would not require unusual construction practices or intensities. After the completion of construction, the Project would not generate any new pollution or result in an increase in emissions. Therefore, temporary construction impacts related to air quality plans for these pollutants from the Project would be less than significant.

The Project does not propose any new development or growth that would conflict with vehicle miles traveled (VMT) and emissions assumptions of the MBARD AQMP. Rather, the Project would support increased sustainability in modes of transportation and would not impact planned growth. The goal of the rail would be to reduce VMT and expand use of alternative modes of transportation (i.e., bicycle) and, in turn, reduce regional criteria pollutant emissions.

The Project is anticipated to be a net benefit to air quality in the NCCAB and is consistent with the MBARD AQMP. Therefore, impacts to regional air quality due to construction associated with implementing the Project would not result in obstructing the MBARD AQMP; therefore, impacts would be **less than significant**.

b. 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)?

The U.S. Environmental Protection Agency has classified air basins as being in "attainment," "non-attainment," or "unclassified" for each criteria air pollutant. As stated above, the Project is located within the NCCAB, which is currently in "non-attainment status" for not meeting state standards for ozone (ROGs and NO_x) and PM_{10}. Therefore, the regional pollutants of concern that would be emitted by the Project are ozone precursors and PM_{10}.

Implementation of the Project requires construction activities and equipment, which would result in temporary air quality impacts. Short-term emissions associated with construction activities and operation of equipment are finite and include fugitive dust, grading and equipment exhaust, and hauling materials to and from the site.

Construction of the trail would use typical construction equipment, such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders.

This equipment would temporarily emit precursors of ozone (i.e., ROG or NO_x) during Project construction. Construction activities and equipment would result in localized exhaust emissions. However, these emissions would be temporary in nature, and would be reduced to a less than significant with mitigation incorporated, such as implementing MBARD's recommended construction best management practices (BMPs) would reduce the potential impact to less than significant. MBARD's recommended BMPs include prohibit all grading activities during periods of high wind (over 15 mph), water all active construction areas as needed based on the activity, soil and wind exposure, apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area, cover all trucks hauling dirt, sand, or loose materials, cover inactive storage piles, sweep streets if visible soil material is carried out from the construction site, plant vegetative ground cover in disturbed areas as soon as possible, and post a publicly visible sign with the telephone number and person to contact regarding dust complaints. Therefore, the impact would be **less than significant with mitigation incorporated**, and this issue will be analyzed in the EIR.

Implementation of the Project would reduce use of fossil fuels and natural gas through providing an alternative mode of transportation within the City and the County and is expected to result a net benefit to regional criteria pollutant emissions.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Portions of the proposed trail are located adjacent to the residential properties. Project construction could result in temporary increases in air pollutants (e.g., fugitive dust and exhaust from equipment), exposing the surrounding land uses to airborne particles and a small quantity of emissions. The amount of emissions would be estimated as part of the EIR analysis, but it is anticipated that the impact would be less than significant or **less than significant with mitigation incorporated**, based on similar projects. Once constructed, trail operation (bicyclists and pedestrians using the trail) would not expose sensitive receptors to emissions.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The emissions from the operation of diesel-powered construction equipment and asphalt paving would create odors during the trail construction period. However, these odors would be limited to the specific area under construction and would be short term. Therefore, these odors would not adversely affect a substantial number of people, and the impact is considered **less than significant**.

2.4.4 Biological Resources

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

Environmental Setting

EcoSystems West Consulting Group prepared a list of sensitive species that could occur in the Project area, based on the biological resources identified from the following databases, and conducted field surveys for special-status species, vegetation communities, sensitive habitats, and any potential jurisdictional waters of the U.S. along the Project alignment of Segment 10 and 11:

- California Department of Fish and Wildlife's California Natural Diversity Database (CDFW 2021)
- U.S. Fish and Wildlife Service Listed Species Quad Search (USFWS 2021)
- California Native Plant Society Inventory of Rare and Endangered Plants (2022)
- Information for Planning and Consultation (IPaC)

There are no critical habitats within the Project area. However, there are sensitive habitats that exist within the Project area that have the potential to support sensitive species including aquatic and riparian habitat along creeks and drainages and the eucalyptus grove in Escalona Gulch along Park Avenue.

Wildlife Species. Common wildlife species that could be found within the Project area include the following: monarch butterfly (*Danaus plexippus*), tidewater goby (*Eucyclogobius newberryi*), Central California Coast coho salmon (*Oncorhynchus kisutch*), Central California Coast steelhead (*Oncorhynchus mykiss irideus*), American peregrine falcon (*Falco peregrinus anatum*), western snowy plover (*Charadrius nivosus nivosus*), olive-sided flycatcher (Contopus cooperi), oak titmouse (Baeolophus inornatus), western red bat (Lasiurus blossevillii), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and southern sea otter (*Enhydra lutris nereis*).

Vegetation Species. There is no known occurrence of the endangered plant species, such as the Santa Cruz Tarplant (*Holocarpha macradenia*), that would be impacted by Project activities.

Additional field surveys and analysis will be conducted as part of the EIR analysis. The following discussion and potential impacts are based on preliminary analysis and similar projects.

Impact Analysis

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 Game or U.S. Fish and Wildlife Service?

There were no special-status species documented along the Project alignments. However, there is habitat that could support special-status species, as well as the monarch butterfly which is eligible for listing under the Federal Endangered Species Act, along the trail alignment. Most Project activities along the trail alignment would occur in areas that are already highly disturbed and located within the built urban environment. The Segment 11 trail alignment extends through a eucalyptus grove along Park Avenue, which could support monarch butterflies. Potential direct or indirect impacts to special-status species would be minimized by requiring pre-construction wildlife and bird surveys throughout the Project area before the start of construction, environmental awareness training for construction workers, and implement BMPs. However, substantial tree removal could result in impacts that may not be mitigated to a less than significant level. This will be further analyzed in the EIR. Therefore, impacts to any sensitive wildlife species that would potentially occur within the Project area would be **potentially significant**.

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?

The Project would require construction of retaining walls that could occur in riparian habitat or other sensitive natural communities. It is anticipated that potential impacts could be reduced to a less than significant level with implementation of mitigation or BMPs to protect sensitive wildlife and habitat. These include an environmental awareness program given to construction workers, preparation of an erosion and sediment control plan and implementation of a Storm Water Pollution Prevention Plan as part of the National Pollutant Discharge Elimination System Permit and a General Construction Activity Storm Water Permit to minimize the potential for sediments or contaminants to be discharged into adjacent creeks and drainages. This will be further analyzed in the EIR. Therefore, impacts to riparian habitat or sensitive natural communities within the Project area are anticipated to be **less than significant with mitigation**.

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 trail alignments along Segment 10 and Segment 11 would not have a significant adverse effect on protected wetlands within the Project area. However, there are sensitive habitats that are within the vicinity of the Project area that include aquatic, riparian, and a potential seep wetland. The sensitive wildlife species and habitats would be subject to the mitigation or BMPs discussed above and would not include any direct removal filling or hydrological interruption. Therefore, impacts resulting from the Project activities would be **less than significant with mitigation**.

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?

The Project would not interfere substantially with the movement of native resident or migratory fish species because there would be no work in waterways that support such species. However, substantial tree removal could interfere with the movement of wildlife species that use the corridor for foraging and cover provided by the trees, as wildlife movement travels between open space. This will be further analyzed in the EIR. Because substantial tree removal may not be mitigated to a less than significant level, impacts to wildlife species that use the rail corridor for wildlife movement would be **potentially significant**.

e. Would the project conflict with any applicable policies protecting biological resources?

The Project would be subject to applicable policies protecting biological resources in the Project area. These include but are not limited to the County's riparian and tree ordinances. Compliance with the policies protecting biological resources may require implementation of mitigation

measures or BMPs to ensure the Project would not conflict with local policies protecting biological resources. This will be further evaluated in the EIR analysis. However, because there could be substantial tree removal that would conflict with applicable tree protection policies, the impact would be **potentially significant**.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?

The trail alignment is not located in an area that is managed by a Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable Habitat Conservation Plan. Therefore, the Project activities would not conflict with any of these plans, and there would be **no impact**.

2.4.5 Cultural Resources

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Historical resources are features that are associated with the lives of historically important persons and/or historically significant events, that embody the distinctive characteristics of a type, period, region or method of construction, or that have yielded, or may be likely to yield, information important to the prehistory or history of the local area, California, or the nation. Examples of typical historical resources include, but are not limited to, buildings, farmsteads, rail lines, bridges, and trash scatters containing objects such as colored glass and ceramics.

The approximately 4.5-mile linear Project area is along the SCBRL, which extends along the County coastline near areas with identified resources. Archaeological sites dating to the Paleoindian and Millingstone periods (3500 B.C. or earlier) in the Monterey Bay Area are rare, and archaeological evidence from the Late and Protohistoric periods (A.D. 1200–1769) is poorly represented, although sites dating to these periods have been identified. Much of Santa Cruz County is located in potentially archaeological sensitive areas, especially undeveloped coastal areas, slopes, and drainages that may occur on the trail alignments (RTC 2014).

Impact Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Project construction could potentially damage unidentified existing archaeological resources and historical resources along the trail alignment including, but not limited, to areas near waterways and Capitola Village. Additional field surveys based on the records search will be conducted as part of the EIR analysis. It is anticipated that potential impacts to known or unknown archaeological and historical resources from construction and excavation activities could be

reduced with construction monitoring and implementation of required measures if resources are discovered. Therefore, the impact would be **less than significant with mitigation incorporated**.

c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Cultural resources, and related human remains, are likely to occur along water courses, near rock outcroppings, oak strands, and along historic slough margins. Construction of the project would involve ground disturbance and would thus have the potential to disturb human remains. If human remains are found, the California Health and Safety Code, Section 7050.5, states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to California Public Resources Code, Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the Coroner would notify the Native American Heritage Commission, which would determine and notify a most likely descendant. The most likely descendant has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the most likely descendant does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. Because there are specific procedures and requirements to follow in the event that human remains are discovered, impacts to human remains would be **less than significant with mitigation incorporated**.

2.4.6 Energy

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

Environmental Setting

Impact Analysis

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Project construction would use fossil fuels. The California Airborne Toxics Control Measure (Title 13, Section 2485, of the California Code of Regulations) limits construction equipment operators idle time to 5 minutes (BAAQMD 2017), which would minimize inefficient fossil fuel use. Following construction, operation of the Project would be an active transportation and recreation corridor for bicycles and pedestrians. It would increase the feasibility of non-motorized transportation and would contribute to a regional net decrease in fuel consumption from vehicle trips. Minimal new lighting would be required and would be solar-powered where feasible. Lighting connected to the electrical grid would be energy-efficient light-emitting diodes (LEDs). Therefore, neither construction nor operation of the trail would result in wasteful or inefficient use of energy, and the impact would be **less than significant**.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The RTC prepares a County-specific Regional Transportation Plan (RTP) in conformance with the latest Association of Monterey Bay Area Governments Metropolitan Transportation Plan/Sustainable Communities Strategy. The 2040 RTP establishes targets to implement statewide policies at the local level, such as reducing VMT and improving speed consistency to reduce fuel consumption. In 2013, Santa Cruz County adopted a Climate Action Strategy focused on reducing the emission of greenhouse gases (GHGs), which is dependent on increasing energy efficiency and the use of renewable energy. The strategy intends to reduce energy consumption and GHG emissions by implementing a number of measures such as reducing VMT through County and

regional long-range planning efforts, increasing energy efficiency in new and existing buildings and facilities, increasing local renewable energy generation, improving the Green Building Program by exceeding minimum state standards, reducing energy use for water supply through water conservation strategies, and providing infrastructure to support zero and low emission vehicles that reduce gasoline and diesel consumption, such as plug in electric and hybrid plug in vehicles. In addition, the County General Plan has historically placed a priority on "smart growth" by focusing growth in the urban areas through the creation and maintenance of an urban services line. Objective 2.1 (Urban/Rural Distinction) directs most residential development to the urban areas, limits growth, supports compact development, and helps reduce sprawl. The Circulation Element of the General Plan further establishes a more efficient transportation system through goals that promote the wise use of energy resources, reducing VMT, and transit and active transportation options. The Project would be an active transportation and recreation corridor for bicycles and pedestrians. It would increase the feasibility of non-motorized transportation and would contribute to a regional net decrease in vehicle trips. Therefore, implementation of the Project would have **no impact** on goals set forth by the RTC RTP, Climate Action Strategy, General Plan, or any local renewable energy plan.

2.4.7 Geology and Soils

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☒	☐	☐
iv. Landslides?	☐	☒	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental Setting

The Project area is located southwest of the Santa Cruz Mountains, a tectonically active region that was formed through thrust-faulting of the San Andreas Fault. The Project region is dominated by marine terraces, which incrementally increase in elevation from sea level at the Pacific Ocean up toward the Santa Cruz Mountains (approximately 2,000 feet in elevation). Segments 10 and 11 traverse four distinctive geologic units: basin deposits, lowest emergent coastal terrace deposits, alluvial deposits, and Purisima Formation bedrock (Brabb 1997).

Basin deposits are mapped within the base of the drainage at Rodeo Gulch, with Purisima Formation underlying the sides of the Gulch. Basin deposits typically consist of unconsolidated, plastic clay and silty clay that is rich in organic materials and can locally contain thin interbedded layers of silt and silty sand (Brabb 1997). The basin deposits were deposited in a variety of environments, including estuaries, lagoons, marsh filled sloughs, flood basins and lakes, and are mapped as having a very high potential for liquefaction (Pacific Crest 2021).

Impact Analysis

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii. Strong seismic ground shaking?

The Project area is located outside the limits of the State Alquist-Priolo Special Studies Zone (County of Santa Cruz 2020; California Division of Mines and Geology 1997). However, the Project area is located approximately 5 miles east of the Ben Lomond Fault, 5.5 miles west of the Zayante Fault Zone, and 8.5 miles west of the San Andreas Fault Zone. In addition to these major fault zones, the Monterey Bay-Tularcitos and Sargent Faults are located approximately 6.5 miles and 10.5 miles from the Project area, respectively (Pacific Crest 2021). Although the Ben Lomond Fault is proximal to the Project area, there is little evidence of earthquakes, and no evidence of geologically recent (within the past 100,000 years) offset along this fault (Pacific Crest 2021). Due to the proximity of the trail alignment to active and potentially active faults, the trail would be subject to high intensity ground shaking during the lifetime of the Project.

The trail and other Project features, such as retaining walls and viaducts, would be subject to the California Building Code seismic design force standards, as well as applicable City and County building codes, which would reduce potential damage from seismic groundshaking to the extent practicable and feasible. Therefore, the impact would be **less than significant**.

iii. Seismic-related ground failure, including liquefaction?

Portions of the trail alignment are mapped as an area with very high susceptibility for liquefaction, as shown on the Santa Cruz County GIS Hazard Map (County of Santa Cruz 2020). Portions of Segments 10 and 11 are underlain by saturated alluvial or basin deposit materials could be subject to liquefaction during a seismic event. Portions of the trail could therefore be subject to seismically induced settlement and may need to be repaired or replaced following a seismic event.

In order to offset potential impacts to Project structures through the presence of geologic features that are susceptible to liquefaction, the Project would be subject to Chapter 15.28 of the Capitola Municipal Code and Chapter 12.10.215, Section 14.1.4, in the Building Code of the County of Santa Cruz. Bridges and other structures in these areas should be supported by pile foundations designed in accordance with the recommendations of the Geotechnical Investigation Report.

These requirements would ensure the stability of all Project structures based on the geologic features present within the Project area. This issue will be analyzed further in the EIR Therefore, the impact could be **less than significant with mitigation incorporated**.

iv. Landslides?

The majority of the proposed trail alignment would be situated within areas of relatively level to gently sloping topography, and there are no mapped landslide hazards within the proposed trail route. However, portions of the trail would cross infilled drainages, especially in the area of New Brighton State Beach, as well as the infilled drainages at Borregas Creek and Stream 633 east and west of Estates Drive where as much as 35 feet of fill was noted. The outer slopes of these fills are moderately steep and do not appear to be composed of compacted engineered fill. Therefore, these slopes are subject to a landslide hazard that could potentially undermine the trail. Surface water runoff along infilled drainage areas would be controlled by the installation of catch basins, sidewalk underdrains, V ditches, French drains, and/or swales to reduce the potential for undermining of the trail once constructed. Design features or mitigation measures would be required to reduce potential impacts. This issue will be analyzed further in the EIR. Therefore, the impact could be **less than significant with mitigation incorporated**.

b. Would the project result in substantial soil erosion or the loss of topsoil?

The majority of the trail alignment is located within topographically low and flat to gently sloping areas. There is some potential for surface soil erosion to occur during Project construction activities due to the presence of terrace deposits that have a moderate potential for erosion (Brabb 1997). However, the flat nature of the Project area would minimize the potential for erosion related impacts.

In general, construction activities for Segments 10 and 11 would include excavation of material sources, clearing and grubbing, and tree removal; grading, rail realignment, retaining wall and abutment construction, viaduct and bridge construction, drainage improvements, and placement of crushed aggregate base and paved surface; and revegetation, installation of fencing, signs, lighting, and other trail and safety-related features.

Potential impacts associated with soil erosion and loss of topsoil could be reduced by implementing mitigation measures or BMPs during construction. These could include but would not be limited to the following: surplus asphalt and rubble would be removed from the Project area

and transported to the local landfill, all disturbed areas within the area would be stabilized, and erosion control measures would be implemented, modified, and replaced.

In addition, a portion of the trail runs within 100 feet of the top of a coastal bluff located on the Pacific Coast in Capitola, adjacent to Park Avenue and just west of New Brighton. This portion of the trail would be susceptible to erosion. The proposed trail alignment could result in substantial erosion or loss of topsoil. This issue will be analyzed further in the EIR, as well as a coastal bluff erosion study being commissioned by the RTC. Therefore, the impact could be **less than significant with mitigation incorporated**.

c. Would the project 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?

The Project area is located on stiff clays, loose to medium dense sand, and very dense Purisima Bedrock. Human-made fill was encountered in several of the borings. The Project corridor is underlain by varying areas of low to moderately expansive clay soils resulting in the area being sensitive to lateral spreading, liquefaction and landslides.

In order to offset the potential impacts that may occur to the trail facilities through the presence of geologic features that are susceptible to potential collapse, lateral spreading, subsidence, liquefaction and landslides, bridges and other required structures should be supported by pile foundations. This issue will be further analyzed in the EIR. Therefore, this impact could be **potentially less than significant with mitigation incorporated**.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

The trail alignment route is underlain by varying areas of low to moderately expansive clay soils. Expansive soils are composed of expanding clays, which are consistent with the marine terrace deposits found in the Project area. When expansive clay soils become saturated with water, they expand and then contract when conditions are dry. Thus, the Project area is susceptible to shrink/swell potential throughout the year, particularly during the rainy season from October through May. The Geotechnical Report recommends that pavements and structural foundations bear upon non-expansive engineered fill. This issue will be analyzed further in the EIR. Therefore, this impact would be **less than significant with mitigation incorporated.**

e. Would the project 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?

The Project does not include the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be **no impact**.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are five mapped geologic units underlying the Project corridor: Quaternary basin deposits, Quaternary alluvium, Quaternary alluvial fan deposits, Quaternary marine terrace deposits, and the Purisima Formation (Brabb 1997; Wagner et al. 2002). Holocene-aged Quaternary basin deposits and Holocene-aged Quaternary alluvium are generally considered too young (i.e., less than 5,000 years old) to preserve paleontological resources and therefore have low paleontological sensitivity. However, Quaternary marine terrace deposits, Quaternary alluvial fan deposits, and the Purisima Formation that underlie the Project alignment have high paleontological sensitivity. Due to the high sensitivity of deposits underlying the Project alignment, ground disturbance during construction could have the potential to encounter paleontological resources. This issue will be analyzed further in the EIR, but it is anticipated that this impact could be mitigated by implementing paleontological protection measures during construction in high sensitivity areas. Therefore, the Project would have a **less than significant impact with mitigation incorporated**.

2.4.8 Greenhouse Gas Emissions

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

Environmental Setting

GHG emissions are primarily caused by carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) emitted from both natural and anthropogenic activities. The increase in GHG emissions is correlated with causing the observed increase in the average temperature of the Earth's surface and atmosphere caused by which can contribute to changes in global climate patterns resulting in global climate change.

The State of California passed the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32), which requires reductions of GHG emissions generated within California. The Governor's Executive Order (S-3-05) and AB 32 (California Health and Safety Code, Section 38501 et seq.) seek to achieve 1990 emissions levels by the year 2020. The California Air Resources Board is the lead agency for implementing AB 32. In accordance with requirements of AB 32, a scoping plan was adopted by the California Air Resources Board in December 2008 and updated in 2017. This most recent scoping plan lays out the framework for achieving the 2030 reductions as established in Senate Bill 32, described below.

The City adopted a Climate Action Plan (CAP) in 2015 with the GHG reduction goal of reducing community-wide GHG emissions by 5% from 2010 levels by 2020 and by 81% from 2010 levels by 2050 (City of Capitola 2015). Programs to achieve this goal include VMT reduction measures that include increased bicycle ridership. Although the plan did not identify quantifiable GHG reductions from open space measures, enhancing urban forests is identified as a CAP measure.

In 2022, the County approved the Climate Action and Adaptation Plan (CAAP), which strives to meet the Senate Bill 32 target of reducing GHG emissions 40% below 1990 levels before 2030, while simultaneously establishing a policy framework to achieve the longer-term target of net negative GHG emissions by 2045 (AB 1279). The CAAP includes 29 strategies in seven sectors to achieve these goals. Relevant strategies include increasing the use of public transportation, walking,

or bicycling for commute trips by 15%. Natural and working lands strategies include conservation of natural habitat and increasing the urban canopy.

Impact Analysis

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Project construction activities would generate GHG emissions caused by emissions from construction equipment. The construction-related emissions would be short term, and there would not be long-term GHG emissions generated, due to the nature of the trail alignment being for the explicit purpose of pedestrian and bicycle use. Long-term effects of the Project would result in a net benefit regarding GHG emissions in the City and County, because providing a non-vehicular option for travel would reduce VMT. Therefore, there would be no long-term adverse impact on the environment.

The short-term GHG emissions generated from the Project would be produced in the form of emissions from the operation of various construction equipment and worker supply vehicles, both of which use fossil fuels to operate. The Project would implement a goal of the MTP/SCS to increase active transportation opportunities. GHG emissions are ultimately anticipated to decrease under operation of the Project as area vehicle trips are replaced by active transportation and use of the trail. Therefore, the contribution of GHG emissions resulting from the Project would be **less than significant**.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As described under (a) above, the Project would not result in any ongoing annual GHG emissions that would impact the state, City's or County's ability to meet emissions reduction targets. However, the 2022 Scoping Plan and County CAAP also include carbon sequestration components as part of achieving statewide carbon neutrality. Specifically, the CAAP includes Natural/Working Lands Strategies 17 and 18 that include enhancing carbon sequestration through conservation of natural habitats and increasing the urban tree canopy. The Project proposed tree removal that would potentially interfere with implementation of the County CAAP Natural/Working Lands strategies. According to the Biological Resources discussion above, substantial tree removal could result in impacts that may not be mitigated to a less than significant level. Therefore, the Project could conflict with the goals and strategies of the applicable plans. This issue will be further discussed in the EIR. Therefore, the impact could be **potentially significant**.

2.4.9 Hazards and Hazardous Materials

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

Environmental Setting

The trail alignment would primarily be located along the existing SCBRL. Historically, herbicides were commonly used to control weeds along railroad corridors; and creosote, a substance known to contain carcinogenic poly-nuclear aromatic hydrocarbons, was used to protect wooden railroad ties from decay. The use of these substances on and adjacent to the railroad increases the possibility of soil contamination along the trail alignments. The rail line historically transported lumber, quarried material, agricultural products, coal, and gypsum. There is the possibility that an accidental spill of hazardous materials occurred in the past when the rail line was more active (RTC 2013). In addition, hazards materials could be used at the existing industrial, commercial, and residential uses that are adjacent to the trail alignment.

A Phase I Initial Site Assessment (ISA) was conducted by Weber, Hayes & Associates in April 2023 for Segments 10 and 11. The Phase I ISA included a review of the Phase I Environmental Site Assessment that was performed for the entirety of the Santa Cruz Branch Line by Geomatrix in 1996 and the Phase II Soil Sampling conducted by AMEC Geomatrix in 2009. The soil sampling included drilling of 21 exploratory borings within the Segment 10 and 11 footprint and laboratory analysis of 55 discrete soil samples from those borings. The sampling revealed elevated concentrations of arsenic attributed to arsenical herbicides to control weed growth. The 2023 Phase I ISA concurred the persistence of elevated concentrations of arsenic and did not find evidence of any additional Recognized Environmental Conditions or Activity and Use Limitations. The Phase I ISA notes that the overseeing health agency of the Project, Santa Cruz Health Services Agency, has previously approved an impervious paved rail trail as an acceptable cap to protect the public from direct exposure to underlying arsenic-impacted soil.

A Radius Report conducted by Environmental Data Resources on May 9, 2022, and GeoTracker and EnviroStor search by Weber, Hayes, and Associates conducted in September 2022 did not reveal hazardous sites on the Project corridor. While the record search identified eight hazardous material sites within 1/8-mile of the Project corridor, the Phase I ISA (WHA 2023) concluded that these sites do not have the potential to pose a risk to the Project area.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Routine construction-related hazardous materials would be used, transported, and disposed of during construction. However, the use, transport, and disposal of hazardous materials would be subject to federal, state, and local regulations pertaining to the transport, use, storage, and disposal of hazardous materials. The Toxic Substances Control Act and the Resource Conversation and Recovery Act, Hazardous Waste Control Act, and the City of Capitola Local Hazard Mitigation Plan would minimize risks associated with the storage, disposal, and transport of hazardous materials. The U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, regulates the transportation of hazardous materials, as described in Title 49 of the Code of Federal Regulations and Title 13 of the California Code of Regulations. This provides additional regulation for the transportation of hazardous materials by designating appropriate hazard labels shipping preparation, vehicle loading, and hazardous materials registration, among other requirements. Documentation of compliance with hazardous materials regulations codified in Titles 8, 22, and 26 of the California Code of Regulations is required for all hazardous materials and hazardous waste transport. Additionally, the California Building and Fire Code requirements detail standards for the safe management of materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards. Compliance with all applicable federal, state, and local requirements related to the routine transport, use, or disposal of hazardous materials would maximize containment through safe handling and storage practices and provide for prompt and

effective cleanup if an accidental release occurs. Additionally, impacts of moving hazardous materials would be limited via compliance with applicable California Department of Toxic Substance Control and California Occupational Safety and Health Administration regulations. Therefore, this impact related to routine use, transport, and disposal of hazardous materials during construction would be **less than significant**.

Once constructed, the trail would be utilized by pedestrians and bicyclists for active recreation and transportation. Standard recreational and transportation uses that would take place along the trail would not involve the routine transport, use, or disposal of hazardous materials. Therefore, the Project would not cause a significant hazard to the public. This impact would be **less than significant.**

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?

During ground-disturbing activities associated with construction, existing soil contaminants may be released. This could expose construction workers to soil contaminants due to former railroad operation along the alignment. In addition, construction equipment may include hazardous materials such as lubricants and fuels. Therefore, both construction activity and construction equipment could involve the release of hazardous materials which would create a possible hazard to the public or environment. As such, construction of the trail could create a significant hazard through releasing hazardous materials during construction. This impact will be discussed further in the EIR. However, it is anticipated that this potential impact could be reduced to a less than significant level by conducting soil sampling and implementing necessary remediation. Therefore, the impact would be **less than significant with mitigation incorporated.**

Once constructed, the trail would be used for active recreation and alternative (pedestrian/bicycle) transportation, and there would be no storing, transporting, or otherwise interacting with hazardous materials. Therefore, the risk of accidental release of hazardous materials during operation would be minimal, and the impact would be **less than significant**.

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?

In both segments, there are several portions of the trail alignment that are located within 0.25 mile of a school. The western terminus of Segment 10 is located approximately 150 feet northeast of Shoreline Middle School and approximately 1,000 feet north of Del Mar Elementary School and Cypress High School. Additionally, Early Learning Preschool is located approximately 750 feet north of Segment 10 where it passes Chanticleer Avenue. At the joining of Segment 10 and Segment 11, Opal Cliff Elementary School is adjacent to the Project corridor to the north. New Brighton Middle School is 500 feet north of Segment 11 where it crosses Washburn Avenue. Wavecrest Junior High School is approximately 1,000 feet north of Segment 11 where it turns east

into New Brighton State Beach. Both Twin Lakes Christian School and Cabrillo College are approximately 1,000 feet north of Segment 11 where it crosses New Brighton Road.

As discussed under criterion (b) above, there is potential for hazardous materials to exist along the rail line corridor that could be exposed during construction, which could require disturbance and movement of contaminated soil or other site remediation techniques within 0.25 mile of a school during trail construction. However, this will be analyzed further in the EIR, and it is anticipated that it could be reduced to a less than significant level by conducting soil sampling and implementing necessary remediation. Therefore, this impact would be **less than significant with mitigation incorporated**.

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?

According to the Cortese list pursuant to California Government Code, Section 65962.5, the trail alignment is not listed hazardous materials sites (DTSC 2022; State Water Resources Control Board 2022). As such, the trail alignment would not create a significant hazard to the public or the environment beyond the impacts discussed under other criterion within this section. In addition, there are eight sites within 1/8 mile of the Project corridor that are on a list of hazardous materials sites. However, the Phase I ISA (WHA 2023) concluded that these sites do not appear to have the potential to have resulted in hazardous contamination on the Project area. Because the trail alignment is not located on a site that is included on a list of hazardous materials sites compiled pursuant to California Government Code, Section 65962.5, **no impact** would occur.

e. Would the project 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, result in a safety hazard or excessive noise for people residing or working in the Project area?

The closest airport to the trail alignment would be the Monterey Bay Academy Airport, a private airport, approximately 6 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County near the City of Watsonville. The Monterey Bay Academy Airport does not have an adopted Airport Land Use Plan. The closest public airport to the trail alignment is the Watsonville Municipal Airport, located approximately 7 miles southeast of the eastern portion of Segment 11, in southern Santa Cruz County in the City of Watsonville. The trail alignment would not be located within the Watsonville Municipal Airport Master Plan area (Watsonville Municipal Airport 2003), nor within 2 miles of a public airport or public use airport. Therefore, construction personnel and trail users associated with the Project would not experience safety hazards or excessive noise related to proximity to an airport, and there would be **no impact**.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The County Operational Area Emergency Management Plan addresses the planned response to large-scale emergencies affecting the unincorporated area of Santa Cruz County (County of Santa Cruz 2015). Emergencies in the City of Capitola are covered under the County Operational Area Emergency Management Plan.

The trail alignment would not impair implementation of or physically interfere with either of these existing emergency plans, as the trail alignments would not alter existing transportation facilities which have been identified as emergency routes, have been otherwise identified for use during an emergency, or existing emergency plan routes. The trail alignments would intersect existing roadways (e.g., 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, New Brighton State Beach roadway, New Brighton Road, Estates Drive, and Mar Vista Drive); however, neither trail alignment proposes adding any physical elements that would block any existing emergency plan routes. Therefore, the impact would be **less than significant**.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The trail would be located within Incorporated and Unincorporated Local Responsibility Areas of Santa Cruz County that are not designated as Very High Fire Hazard Severity Zones (FHSZs) (CAL FIRE 2007a). None of the trail would be located in a State Responsible Area (SRA) but would be less than 0.25 mile to High and Moderate FHSZs (CAL FIRE 2007b; CAL FIRE 2022). However, the trail would be separated from the SRA FHSZs by SR-1.

Because the trail alignment would not be located in a FHSZ and separated from nearby FHSZs by State Route 1, Project implementation would not expose trail users to impacts from wildland fire. This impact would be **less than significant**. For further discussion of wildfire impacts related to the Project, refer to Section 2.4.20, Wildfire.

2.4.10 Hydrology and Water Quality

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

Environmental Setting

The Project area is located within the Arundo Gulch-Rodeo and Soquel Creek watershed. The Soquel Creek watershed drains an area of 42 square miles. Major tributaries include the West Branch (Burns, Laurel, Hester Creek, Amaya Creek, Fern Gulch, Ashbury Gulch, Hinkley Creek, and numerous unnamed waterways) and the Main Branch (fed by Moore's Gulch, Grover Gulch, Love Creek and Bate's Creek). Smaller tributaries include Noble Gulch, Porter Gulch, Tannery Gulch, and Borregas Creek. Principal land use in the watershed includes urban development, rural residential development, agriculture, parks and recreation, and mining and timber harvesting. Sedimentation and impairment of important fish habitat have been identified as principal resource concerns in this watershed. Soquel Lagoon is listed on the Clean Water Act, Section 303(d), List of Water Quality Limited Segments, for nutrients, pathogens, and sedimentation/siltation.

The Arana Gulch-Rodeo watershed drains a 3.5 square-mile area at the outer (eastern) edges of the City of Santa Cruz. Major waterways and water bodies in this watershed include Arana Gulch, Leona Creek, Schwann Lake, Rodeo Gulch, and several unnamed waterways.

Additionally, the Project area is located adjacent to the Pacific Ocean and is within the Mid-County Groundwater Basin. The geotechnical investigation showed that groundwater was encountered at depths of 21 feet to 40 feet below surface, with the potential for groundwater to be present at other depths, which could be encountered through construction activities (Pacific Crest 2021).

Impact Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Project construction activities would involve construction equipment that uses fuels and activities that would disturb the soil and create dust, both of which could result in contaminants entering the storm drainage system, which could have an adverse effect on surface or groundwater quality and potential violate water quality standards.

Trail construction includes excavation that could result in erosion of topsoil and thus impact surface water quality. Proposed construction activities would also require the use of petroleum products and other chemicals that could result impacts to water quality. Although construction activities are relatively minor, they could still result in contaminants entering the stormwater drainage system, which could have an adverse effect on water quality. Potential water quality impacts along the proposed trail alignment could be reduced through the implementation of construction BMPs. Therefore, the impact would be **less than significant with mitigation incorporated** and will be discussed further in the EIR.

For the *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration)*, construction activities include the installation of several retaining walls along the trail alignment and the realignment of 1.45 miles of rail, which requires the removal of existing tires and tracks. For the *Optional First Phase: Trail on the Rail line (Interim Trail)*, construction activities would include the removal of all rail, which could also require more extensive excavation if remediation actions are required. Additionally, the Interim Trail would include construction of the Ultimate Trail Configuration as Part 3 of Interim Trail implementation, requiring substantial additional construction activities to re-install the tracks/ties and construct the trail and associated retaining walls alongside the tracks.

Construction activities for the Project could expose the surrounding soil to pollutants associated with construction equipment, such as fuels, oils, or solvents. However, Project activities would be

limited to dry summer months to reduce the potential for stormwater runoff and soil contamination. Implementation of the Project would result in a small increase in impermeable surfaces, which would result in a small increase in the volume of stormwater runoff from the Project area.

Implementation of BMPs would be identified to address hazardous waste by requiring emergency procedures before the start of construction, in the event of a hazardous materials spill. Throughout construction and Project implementation, BMPs would be implemented to control on-site erosion and sedimentation and surface water runoff in compliance with the Caltrans Storm Water Management Plan and with the Caltrans National Pollutant Discharge Elimination System Statewide Stormwater Permit and Construction General Permit.

As described above, to protect water quality against construction-related impacts and reduce potential impacts to a less than significant level, BMPs described in the County Construction Site Stormwater Pollution Control BMP Manual would need to be implemented throughout the duration of Project construction to protect water quality. This will be discussed further in the EIR. Therefore, the impact is anticipated to be **less than significant with mitigation incorporated.**

Operation

Once constructed, the Project would not likely have adverse effects on water quality. The Project would result in new impervious surface that could result in a minor increase in stormwater runoff into adjacent drainages. Because the trail would be used by pedestrians and bicyclists (and not used by motor vehicles), there is the potential for an increase in contaminants from stormwater runoff would be low and less than significant. Refer to the discussions below for potential effects of increased impervious surface on drainage and groundwater.

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?

Trail operation would not require or generate demand for water use that could decrease groundwater supplies or interfere substantially with groundwater recharge. Trail construction could require a small amount of water for dust control, and some construction activities (e.g., installing viaduct piers) could encounter groundwater, but no adverse effects on groundwater are anticipated.

As stated above, groundwater was encountered at depths ranged from 21 feet to 40 feet below surface along the trail alignment, with the potential for groundwater to be present at other depths (Pacific Crest 2021). Groundwater recharge occurs primarily from stormwater runoff that percolates into the ground.

Project construction generally requires excavation up to 6 feet deep for the trail and utility relocations, but trail facilities such as the retaining walls and viaducts would require greater excavation depth which could reach groundwater.

Additionally, construction of Segments 10 and 11 would result in 26,690 square yards of new impervious surface. The surface flow of rainwater across the trail would drain alongside the trail and permeate into the ground, and in some cases would be directed to existing or new drainage facilities included as part of the Project. The increased amount of surface flow would result in minor drainage patterns and would not be significant enough to inhibit groundwater recharge. Further, although the project would slightly increase impermeable surfaces, the trail alignment is not located in an area that has any significant impact on the local groundwater basin.

The Project would also be required to comply with any additional permit requirements from the Regional Water Quality Control Board. For example, if groundwater is encountered during construction a dewatering plan would be required. Any potential groundwater discharge would be consistent with Water Board requirements and as such would not result in a violation of water quality standards or waste discharge requirements.

Therefore, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin; this impact would be **less than significant**.

c. 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:

i. Result in substantial erosion or siltation on- or off-site?

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

iv. Impede or redirect flood flows?

The Project is not anticipated to substantially alter the existing drainage pattern of the Project area by altering a stream or river. However, the Project could result in minor changes to localized drainage patterns from the new impervious paved trail surface. As described under (b) above, construction of Segments 10 and 11 would result in 26,690 square yards of new impervious surfaces compared to existing conditions, which would increase amount of surface flow and could result in minor alterations to localized drainage patterns.

This will be addressed in the EIR. It is anticipated that the potential impact could be reduced to a less than significant level through Project design and incorporation of recommendations from the hydrology/water quality study and geotechnical investigation to minimize impacts to drainage patterns, water quality and surface and groundwater resources. Therefore, the impact is anticipated to be **less than significant with mitigation incorporated**.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Project is largely located in Zone X, which is an area of minimal flood hazard, based on the Federal Emergency Management Area delineated Flood Insurance Rate Map Panel Numbers 06087C0352F, 0687C0353F, 0687C0354F, and 0687C0356F dated September 29, 2017. However, the Project would be located over and adjacent to Rodeo Gulch, which is mapped in a Federal Emergency Management Area Special Flood Hazard Area as Zone AE, as well as a defined floodplain. Although located within the mapped 100-year floodplain, the trail would be located outside the 100-year storm event water surface elevation (FEMA 2021).

Based on the review of the California Geologic Survey Tsunami Hazard Area Map, the portions Segment 11 are mapped within a tsunami inundation area and is susceptible to tsunami inundation. There are semi-enclosed bodies of water within the Project area, and thus the Project is not located in a seiche zone.

However, pursuant to the Supreme Court case decision in the California Building Industry Association vs. Bay Area Air Quality Management District case, CEQA does not require an analysis of how the existing environmental conditions would affect a project's residents or users, unless the project would exacerbate those conditions. Since the Project would not exacerbate the existing conditions that could expose people or structures to a significant risk due to flooding, tsunami, or seiche zones.

Further, should the trail be inundated by water from such an event, the risk of pollutants being released is minimal to none because the trail would be used by pedestrians and bicyclists (not motor vehicles) and would not require the use or storage of pollutants that could be released. This impact will be analyzed in the EIR, but it is anticipated that the impact would be **less than significant**.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project would not conflict with the Water Quality Control Plan for the Central Coastal Basin (Regional Water Quality Control Board) or the Santa Cruz Mid-County Groundwater Basin Management Plan (2019). The Project would not result in any significant and unavoidable impacts to water quality or groundwater due to the reasons described in the sections above. In the event that groundwater is encountered during construction activities, the contractor would halt work and the appropriate methods would be determined by a qualified engineer and implemented (Pacific Crest 2021). This impact will be analyzed in the EIR, but it is anticipated that the impact would be **less than significant**.

2.4.11 Land Use and Planning

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☒	☐
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Setting

The rail corridor extends through primarily urban/suburban portions of the City of Capitola and Santa Cruz County. Land uses along the Project area (SCBRL rail corridor) include commercial, industrial, residential, natural areas, public facilities, and parks and recreation (County of Santa Cruz 1994; City of Capitola 2019). Zoning districts along the trail alignments include industrial, residential, commercial, mixed-use, and recreational designations (County of Santa Cruz 2023; City of Capitola 2021).

Impact Analysis

a. Would the project physically divide an established community?

Project construction is anticipated to begin in 2026 and would last approximately 48 months. Construction staging would take place on existing disturbed or paved areas along the rail corridor within the RTC-owned right-of-way (ROW) or at the designated staging areas. All equipment and materials would be stored, maintained, and refueled in clearly defined and designated portions of the staging areas in accordance with permit requirements. Construction activities and staging would be temporary in nature, and any equipment used during construction would be removed after completion of the Project. There are no existing communities within the Project corridor and rail line ROW. The railroad ROW is an existing feature that is surrounded by developed communities, and construction activities within the railroad ROW would not physically divide communities along the Project corridor. Therefore, Project construction would not physically divide an established community, and impacts would be **less than significant**.

Once constructed, the trail alignments would not physically divide established communities, as neither the *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration)* nor the *Optional First Phase: Trail on the Rail line (Interim Trail)* alignment would be physically large enough to divide a community. Because both trail alignments would follow the existing rail line, the alignments would not act as a new dividing element that was not already introduced by the

SCBRL. It is estimated an average of 2,000 people could use the trail per day for transportation and recreation. Additionally, the trail would require intermittent maintenance, including but not limited to vegetation management, pavement sealing and repair, trash and recycling disposal, and fence repair and replacement. These trail use and maintenance activities would not result in the physical division of communities located along the Project corridor. The Project would create a multi-modal bicycle/pedestrian trail, which would encourage connections along the trail itself rather than create physical divisions. The trail would extend through established communities via the existing railroad ROW; the proposed improvements within the Project corridor would increase connectivity and access to surrounding communities by allowing formal use of the corridor for transportation and recreation purposes. As such, the Project would not physically divide an established community and would have a beneficial effect of increasing connectivity within the community. Therefore, the operational impact would be **less than significant**.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The new trail would be located in a predominately urban/suburban area around industrial, commercial, residential, natural areas, public facilities, and parks and recreational uses. In general, the new trail would not conflict with the permitted uses detailed in the County or Capitola General Plan, Santa Cruz County Zoning Regulations, or Capitola Municipal Code Zoning Ordinance. In addition, as mentioned in the County Municipal Code, Chapter 13.11, and Capitola Municipal Code, Chapter 17.120, the trail would be required to undergo design review that would ensure the trail complies with jurisdictional land use plans and policies.

However, the optional Interim Trail alignment could conflict with policies concerning rail facilities and supporting the preservation of the rails. For example, County General Plan Policy 3.7.3 supports development of the RTC-owned rail corridor for passenger transit, recreational, and goods movement, as well as the MBSST. Additionally, the RTC's MBSST Network Master Plan (RTC 2014) and Transit Corridor Alternatives Analysis (2021) support retaining the rail. However, the optional Interim Trail includes future rebuilding of the rail line and constructing the Ultimate Trail Configuration alongside the rail. The potential impact will be addressed in the EIR, but it is anticipated that the impact would be **less than significant**.

2.4.12 Mineral Resources

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Environmental Setting

The Project area is located within developed urban/suburban areas of the County. The California Board of Mining and Geology prepared a map (1982) and report (1986/87) titled Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, which did not indicate that any designated resources or resources of statewide/regional significance are within this portion of Santa Cruz County. Further, locally important mineral resources were not identified in the Santa Cruz County GIS Mineral Resources layer for this area (County of Santa Cruz 2023).

Impact Analysis

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

As described above, there are no mapped or designated mineral resources within the Project area; therefore, there would be no loss of availability to any mineral resources and thus **no impact**.

2.4.13 Noise

Would the project result in:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
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, expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

The Project alignment extends through developed portions of the County of Santa Cruz and the City of Capitola, including residential, commercial, industrial, and recreational land uses, as well as New Brighton State Beach open space. The existing noise sources include typical noise associated with those land uses and vehicular traffic.

Noise-sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound may adversely affect the use of the land. Noise-sensitive receptors typically include residences, hospitals, schools, guest lodging, and libraries. The nearest noise-sensitive receptors are the residences located adjacent to the Project corridor in Segments 10 and 11 and the Inn at Depot Hill at the Park Avenue/Monterey Avenue intersection in Segment 11. There are also residences and hotels along Cliff Drive and Monterey Avenue, where trail users are directed through Capitola Village.

Noise is based on adverse or unwanted sound that may interfere with communication, work, sleep or recreation. Both the Capitola and County Municipal Codes include noise ordinances. Construction activities required for the Project are prohibited between the hours of 9:00 p.m. and 7:30 a.m., pursuant to the Capitola Municipal Code (Chapter 9.12), and 10:00 p.m. and 8:00 a.m., pursuant to the County Municipal Code (Chapter 8.30).

Impact Analysis

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?

Project construction would temporarily increase noise levels adjacent to the construction site in the Project area. Additionally, the Project (Ultimate Trail Configuration) would require drilling for retaining wall and viaduct or bridge installation, but there would be no pile driving. The optional first phase (Interim Trail) would also include track and tie removal, as well as the future construction when the trail is removed the tracks and ties are re-installed (Part 2 of Interim Trail), and when the Ultimate Trail Configuration is constructed alongside the tracks, requiring retaining walls and viaducts (Part 3 of Interim Trail).

Construction noise levels would have the potential to exceed the County Noise Ordinance standard of 75 A-weighted decibels (dBA) for offensive noise. Noise levels from the anticipated construction fleet will be determined based on typical equipment noise levels determined by the Federal Highway Administration Roadway Construction Noise Model (RCNM) as part of the EIR analysis. The Project would be required to comply with the Capitola Noise Ordinance, Chapter 9.12, of its Municipal Code and the County Municipal Code, Section 8.30.010, that both prohibit offensive noise between the hours of 10:00 p.m. and 8:00 a.m. Additional mitigation would likely include preparation and implementation of a Noise Control Plan for construction activities. Therefore, the impact would be **potentially less than significant with mitigation**.

b. Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

Project construction could require use of equipment, such as a jackhammer, that could potentially generate groundborne vibration. Use of pile driving equipment is not anticipated. This will be evaluated in the EIR, and potential mitigation could include providing notification to adjacent land uses. Therefore, the impact would be **less than significant with mitigation incorporated**.

c. Would the project, 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, expose people residing or working in the Project area to excessive noise levels?

The Project is not located within the vicinity of a private airstrip or an Airport Land Use Plan or within 2 miles of a public airport. Therefore, there would be **no impact** caused by the Project.

2.4.14 Population and Housing

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Environmental Setting

The Project area includes the SCBRL extending through urban/suburban areas that are primarily developed with commercial, industrial, recreational, and residential land uses in the unincorporated County.

Impact Analysis

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project would not induce unplanned population growth, either directly by constructing new homes or businesses or indirectly by extending roads or other infrastructure that would support further population growth in the area. Constructing a new trail would not promote growth in the surrounding Project area, and there would be **no impact**.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project would be located primarily within the RTC-owned rail corridor ROW, City road ROW, or County road ROW. Temporary or permanent easements may be needed for construction, maintenance, and Project features such as trail connections and drainage improvements. These temporary and permanent easements would not result in the permanent displacement or relocation of people.

Of note is the mobile home park between Thompson Avenue and 38th Avenue where portions of approximately 10 mobile homes and 10 accessory structures (on both sides of the RTC-owned rail corridor) encroach into the RTC ROW. These unauthorized encroachments will be resolved by the RTC per their Encroachment Policy, regardless of the Project, as part of a separate process prior to trail construction in this area. As part of that process, property owner options include but are not

limited to physically moving the mobile homes several feet outside the RTC-owned rail corridor ROW and within the same mobile home park. If adequate space is not available to physically move an individual mobile home, property owners could modify or replace the mobile home with a slightly smaller structure that fits within the respective lot in the mobile home park or elsewhere on the owner's property, or they could move the mobile home to another nearby mobile home park that has space to accommodate it. Because the encroachments are unauthorized, residents would not be considered "displacees" as defined by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. However, the RTC would implement avoidance and minimization measure in accordance with their Encroachment Policy to reduce impacts to property owners and residents.

In summary, the Project would not result in the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The impact would be **less than significant**. No mitigation is required.

2.4.15 Public Services

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☒	☐	☐
Police protection?	☐	☒	☐	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

Environmental Setting

The Project extends through both the jurisdiction of the City and the County (**Figure 1**).

The portion of Segment 10 located in the County of Santa Cruz would be served by the Central Fire District (CFD) for fire protection services, the Santa Cruz County Sherriff's Office for police protection services, and American Medical Response (AMR) for emergency medical services. Segment 10 is approximately 250 feet north of the CFD Station 1, approximately 1.1 miles south of the Santa Cruz County Sherriff's Office Headquarters, and approximately 0.2 mile south of the nearest AMR station.

Segment 11 and the portion of Segment 10 located in the City would be served by the CFD for fire protection services, the Capitola Police Department for police protection services, and AMR for emergency medical services. The closest fire stations in Capitola are Stations 4 and 5, both located approximately 250 feet north of Segments 10 and 11, respectively. The closest police station is the Capitola Police Department Headquarters, approximately 200 feet north of Segment 11. The closest AMR station to Segment 11, which is the same AMR station within proximity to Segment 10, is approximately 0.5 mile northwest.

Table 1, General Emergency Services and Response Times to the Trail Alignment, provides the estimated response times of emergency service providers to the trail alignment, as reported in the Final EIR for the MBSST Network Project (RTC 2013).

Table 1. General Emergency Services and Response Times to the Trail Alignment

Service Provider	Existing Response Time (minutes)	Expected Response Time to Project (minutes)	Within Average Response Time?
CFD	5	5	Yes
Santa Cruz County Sherriff's Office	8–9 (priority 1)	Not Provided	N/D
City of Capitola Police Department	3–5	2–5	Yes
AMR	18–30	16–30	Yes

Source: RTC 2013.

Notes: CFD = Central Fire District

Not Provided = for these service providers, response time estimates were not provided. However, response times would be expected to vary depending on the location of the incident.

N/D = no data (response time estimates not provided by service provider; therefore, it is unknown whether future response times would meet or exceed current average response times).

Impact Analysis

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?
Police protection?
Schools?
Parks?
Other public facilities

The new trail would not directly or indirectly generate additional residents or employees that would require new or physically altered public facilities, including those listed above and other public facilities such as healthcare facilities and libraries. Once constructed and in use, the new trail would provide an additional travel option for residents or employees in the community to access public facilities, such as schools, parks, libraries, and healthcare facilities. However, any additional use of these facilities is not expected to result in the need to expand or physically alter these facilities, the construction of which could cause environmental impacts. Therefore, potential impacts to these facilities would be less than significant.

The new trail would result in increased use of the Project corridor by bicyclists and pedestrians. In addition to people using the trail for recreation and transportation, the trail corridor could be used by transient or unhoused people resting or loitering. The increased human activity along the trail could result in additional calls for fire, police, and healthcare services to the Project corridor. Potential impacts to fire, police, and healthcare services will be analyzed further in the EIR. Any potential impacts are anticipated to be less than significant or **less than significant with mitigation incorporated**.

2.4.16 Recreation

	Preliminary Determination			
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental Setting

The City and County have existing networks of parks and recreation facilities, as described in the County General Plan (County of Santa Cruz 1994) and Capitola General Plan (City of Capitola 2019). There are several parks and recreation facilities within 0.25 mile of the trail alignment, including the Simpkins Family Swim Center, Felt Street County Park, Brommer Street County Park, Jade Street Park and Community Center, Soquel Creek Park, McGregor Park, and New Brighton State Beach and State Park.

Impact Analysis

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The Project with or without the optional Interim Trail would enhance recreation opportunities by providing new facilities (multi-use trail) along Segments 10 and 11. The new trail along Segments 10 and 11 would provide additional bicycle and pedestrian access to existing neighborhood and regional parks and recreational facilities along the Project corridor, including Simpkins Family Swim Center, Jade Street Park, Capitola Beach and other beaches, and New Brighton State Beach. Therefore, County and City residents and visitors currently using these parks and recreation facilities would have an additional non-vehicular means for traveling to and accessing these facilities. Although improved access could result in a minor increase in the use of these recreation facilities, it is not expected to be a substantial increase, such that it could create or accelerate physical deterioration of these facilities. Additionally, as described in Section 2.4.14, Population and Housing, the Project would not result in additional population that would increase the demand on existing facilities. Therefore, the impact of the Project with or without the optional Interim Trail on existing recreational facilities would be **less than significant**. No mitigation is required.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Project involves construction of a new recreational facility, as well as an alternative (non-vehicular) transportation facility for bicyclists and pedestrians, and the potential impacts of the new facility will be addressed in the EIR. The Project does not include additional recreational facilities or require the construction or expansion of additional recreational facilities that could result in adverse physical effects on the environment. Therefore, the impact of the Project with or without the optional Interim Trail would be **less than significant**. No mitigation is required.

2.4.17 Transportation

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

Environmental Setting

The County General Plan Circulation Element includes policies and objectives to encourage bicycle use (Objective 3.8), coordinate regional continuity of bikeways (Policy 3.8.5), and encourage pedestrian travel as a viable means of transportation by increasing and improving pedestrian facilities (Objective 3.10) (County of Santa Cruz 1994).

The Capitola General Plan includes goals, policies, and actions to support projects, programs, policies, and regulations to maintain a balanced multi-modal transportation network (Policy MO-2.), to support opportunities to repurpose existing rights-of-way or create new rights-of-way to enhance connectivity for pedestrians, bicyclists, and transit (Policy MO-2.5), to enhance bicycle and pedestrian connections to the Capitola Village from surrounding residential neighborhoods and commercial areas (Policy MO-6.6), and to ensure that the bikeways in Capitola are well integrated with existing and proposed regional bikeways in Santa Cruz County (Policy MO-8.2) (City of Capitola 2019). The Capitola Bicycle Transportation Plan contains goals and objectives to improve bicycle circulation, connectivity, and access (Goal 1) and to coordinate with other jurisdictions to adopt a system of bikeways that complements the County system (Objective 1.3) (City of Capitola 2011).

The RTC's 2045 Santa Cruz County RTP includes Policy 1.3 to improve multi-modal access to and within key destinations and Policy 1.4 to ensure network connectivity by closing gaps in the bicycle, pedestrian, and transit networks (RTC 2022).

The trail alignment is primarily located within the RTC-owned ROW but extends alongside vehicular roads through Capitola Village where users would be directed to use the existing on-street bicycle lanes and pedestrian sidewalks. Segment 10 includes trail connections to Chanticleer

Avenue, Corcoran Avenue, and Thompson Avenue with additional roadway crossings at 30th Avenue, 38th Avenue, 41st Avenue, and 47th Avenue. Segment 11 includes trail connections to Portola Drive, Opal Cliff Drive, Cliff Drive, Prospect Avenue, Park Avenue, Coronado Street, and Poplar Street. Segment 11 includes additional roadway crossings at Grove Lane, New Brighton Road, Estates Drive, and Mar Vista Drive. Segment 11 would also include a clear span bridge over New Brighton State Beach roadway.

The trail alignment crosses multiple roadways that have existing sidewalks and Class II or Class III bicycle lanes/routes. As such, bicycle activity occurs along various parts of the Project corridor, most notably use of bike lanes at the intersections of major cross streets. There are formal bike lanes within the Project corridor along 17th Avenue, 30th Avenue, 41st Avenue, 47th Avenue, Cliff Drive, Stockton Avenue, Capitola Avenue, Monterey Avenue, and State Park Drive. Cyclists may also use informal bicycle paths within New Brighton State Beach and other roadways without bicycle infrastructure that the Project corridor intersects.

Beginning at a point on Cliff Drive approximately 0.15 mile southwest of Wharf Road, the trail alignment follows existing on-street bicycle lanes and pedestrian sidewalks through Capitola Village along Cliff Drive, the Stockton Avenue bridge, Capitola Avenue, and Monterey Avenue. Currently, most pedestrian activity near the Project corridor occurs in Capitola near Cliff Drive and through Capitola Village (Wharf Road, Stockton Avenue, Capitola Avenue, and Monterey Avenue) where pedestrians may access Capitola Beach or surrounding commercial uses and along Park Avenue and New Brighton State Beach where pedestrians may access recreational features associated with the beach and campground.

Impact Analysis

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Project would implement or conform to all of the goals, policies, and objectives, as it would include a formal multi-modal trail that would facilitate alternative transportation modes such as walking and bicycling along Segments 10 and 11. The trail alignments would expand existing alternative transportation networks by connecting the surrounding neighborhoods to the Coastal Rail Trail. In addition, as discussed under criterion (c) below, the Project would implement safety design features which would enhance the safety along the trail. As shown through the goals, policies, and objectives included in relevant plans and policies addressing the circulation system, the Project would not conflict with the current relevant plans and policies of the County of Santa Cruz or the City of Capitola. Therefore, there would be **no impact**.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The Project could increase vehicle trips during construction due to large construction equipment, machinery, worker vehicles, and truck deliveries accessing the Project corridor. However, operation of the Project would not likely generate new vehicle trips because it is anticipated that trail users would travel from their home to the trail on foot or bike (rather than drive) because most use would be local and there are no planned new parking areas. The EIR will quantitatively analyze construction trips associated with the Project, and qualitatively analyze the Project's consistency with the Office of Planning and Research, County, and City VMT screening thresholds. It is anticipated that the impacts would be **less than significant**.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The trail would follow a relatively straight alignment except for the proposed Americans with Disabilities Act (ADA)-compliant ramp connecting the trail to the Park Avenue/Coronado Street intersection and at Mar Vista Drive where the trail crosses from the coastal side of the tracks to the inland side of the tracks. Both areas would introduce sharp turns. While overall the Project is anticipated to reduce traffic related hazards and conflicts (e.g., between vehicles and bicyclists) by providing a separate trail, the Project would increase hazards associated with bicycle/pedestrian and vehicular interactions through Capitola Village and where the trail crosses a heavily traveled roadway. This issue will be addressed in the EIR. However, the impact is anticipated to be **less than significant** because overall the hazards (e.g., dangerous intersections) and the potential conflicts between uses (vehicles, bicycles, pedestrians) would be reduced with Project implementation.

d. Would the project result in inadequate emergency access?

Minimum trail widths would be required to accommodate emergency vehicles. According to the 2021 International Fire Code Appendix D, fire apparatus access roads shall be a minimum width of 20 feet (ICC 2021). Under the *Proposed Project: Trail next to Rail line (Ultimate Trail Configuration)* alignment, the typical width of the paved trail would be 12 to 14 feet. However, the trail width could be reduced to as little as 8 feet approaching the eastern side of Monterey Avenue to slow trail users and improve safety at the intersection. Under the *Optional First Phase: Trail on the Rail line (Interim Trail)* alignment, the width of the trail would typically be 16 feet but could be reduced to 12 feet at some locations. The CFD indicated that 8 feet is the minimum sufficient width for ambulances to access an area, and ambulances can navigate 7-foot-wide chokepoints when necessary and if approved by the department. When an ambulance cannot reach a certain area, foot access with a wheeled gurney is an acceptable access method (Mack 2022). Therefore, adequate emergency access would be provided, and this impact is **less than significant**.

2.4.18 Tribal Cultural Resources

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

Environmental Setting

The Project corridor lies within an area traditionally occupied by the Ohlone (or Costanoan) people. Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento Rivers merge into the San Francisco Bay to Point Sur. Their inland boundary was limited to the interior California Coast Ranges (Kroeber 1925). The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region (Kroeber 1925). It is divided into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon (Jones 2015), with the Project corridor being located within the areas of Awaswas-speaking Uypi tribes (Kroeber 1925; Milliken et al. 2009).

Impact Analysis

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

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

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

During construction ground disturbance activities, there always is potential for encountering previously undiscovered cultural resources of Native American origin that could be considered tribal cultural resources. Ground-disturbing activities would include excavation of material sources, grading, and installation of piles for viaducts. This will be evaluated in the EIR. Because of the potential to encounter previously undiscovered tribal cultural resources during ground-disturbing activities, construction monitoring will likely be required. Therefore, the impact would be **less than significant with mitigation incorporated** and will be discussed further in the EIR.

2.4.19 Utilities and Service Systems

Would the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. 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 or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☒	☐	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☒	☐	☐

Environmental Setting

Due to the cross-jurisdictional nature of the trail alignment, some utilities and service systems would differ depending on the segment (i.e., whether the segment is located in the County or City of Capitola). Both Segments 10 and 11 are located partially in the County and partially in the City of Capitola and would be served by the utilities and services that serve both the County and the City of Capitola. Some services are also provided by the City of Santa Cruz, as discussed below.

The Santa Cruz Water Department supplies potable water to the City of Santa Cruz as well as adjoining unincorporated areas of the County and a portion of the City of Capitola. The portion of Segment 10 between 17th Avenue to the west and 41st Avenue to the east falls within the Santa Cruz Water Department service area. Soquel Creek Water District supplies potable water to approximately 40,600 people throughout portions of the City of Capitola and unincorporated Santa Cruz County, including Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, and Soquel (SqCWD 2023). The portion of Segment 10 east of 41st Avenue and all of Segment 11 falls within the Soquel Creek Water District service area.

The Santa Cruz Wastewater Treatment Facility, a regional facility operated by the City of Santa Cruz, would serve the entire Project corridor. The Santa Cruz County Sanitation District provides wastewater collection, treatment, and disposal services to the City of Capitola and unincorporated communities, including Live Oak, Soquel, and Aptos, through a system of wastewater infrastructure that includes approximately 234 miles of sanitary sewer lines and 35 pump stations (SCCSD 2021). The stormwater drainage service within the County would also be under the jurisdiction of the Santa Cruz County Sanitation District, and stormwater drainage within the City of Capitola would be under the jurisdiction of the City of Capitola Public Works Department.

Segments 10 and 11 would be both be served by the following utilities and service systems: Pacific Gas and Electric (PG&E) for natural gas and electricity service and Green Waste Recovery for solid waste services.

Solid waste generated along the entire Project alignment during construction and operation would be disposed of at the Buena Vista Landfill, which is expected to close by 2031 (CalRecycle 2023). Therefore, the County is in the process of developing transfer facilities at Buena Vista Landfill, so the solid waste can be transported to the Monterey Peninsula Landfill, which has capacity to accept solid waste for approximately 100 years (Steel, pers. comm. 2022).

Impact Analysis

a. Would the project 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 or relocation of which could cause significant environmental effects?

Construction of the Project would necessitate the relocation, modification, and/or replacement of existing water, wastewater, stormwater drainage, electricity, and telecommunications facilities infrastructure, the construction or relocation of which could cause significant environmental effects. This potential impact will be analyzed in the EIR, and mitigation could be required but is unknown at this time. Therefore, impacts would **less than significant with mitigation incorporated**.

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?

The Project could require a minor amount of water usage during construction for dust suppression and revegetation of disturbed areas. Once constructed, the trail would not require water supply because there would be no restrooms, irrigation, or other water needs. This impact will be evaluated in the EIR, but it is anticipated to be **less than significant**.

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?

Construction of the Project could generate wastewater through the use of portable toilets by construction workers. The Project does not include building new restrooms or other wastewater generating features. However, it would be expected that trail users would use existing public restrooms and thus contribute to wastewater production. The potential impact will be evaluated in the EIR, but it is anticipated to be **less than significant**.

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?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project would generate construction waste, which would be disposed of at Buena Vista Landfill or the Monterey Peninsula Landfill. Additionally, the Project includes trash and recycling bins along the trail alignment. The increase in trail users could result in an increase in solid waste disposed of along the trail alignment during Project operation. This impact will be evaluated in the EIR. The impact is anticipated to be less than significant or **less than significant with mitigation incorporated**.

2.4.20 Wildfire

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

Environmental Setting

The Project area is a 4.5-mile portion of the SCBRL extending through the built-up urban area of the County. The Project is not located in or near mapped State Responsibility Areas or lands classified as Very High FHSZ.

Impact Analysis

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. The trail would be located within Incorporated and Unincorporated Local Responsibility Area of Santa Cruz County that are not designated as Very High FHSZ (CAL FIRE 2007a). None of the trail would be located in an SRA but would be less than 0.25 miles to High and Moderate FHSZs (CAL FIRE 2007b, 2022). The Project corridor is along the RTC-owned rail corridor, which is routinely maintained including vegetation trimming and removal.

The Project with or without the optional Interim Trail would not impair the County of Santa Cruz Operational Area Emergency Management Plan. The trail alignment would not alter existing transportation facilities that have been identified as emergency routes, have been otherwise

identified for use during an emergency, or existing emergency plan routes. The Project corridor would intersect existing roadways at 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, New Brighton State Beach roadway, New Brighton Road, Estates Drive, and Mar Vista Drive; however, neither trail alignment proposes adding any physical elements that would block any existing emergency plan routes. Therefore, the impact of the Project with or without the optional Interim Trail relative to emergency response plan and evacuation plan would be **less than significant**. No mitigation is required.

b. 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?

The Project is an approximately 4.5-mile new multi-use bicycle and pedestrian trail proposed to extend along the RTC-owned railroad corridor from the east side of 17th Avenue at the western limits of the Project to the western side of State Park Drive at the eastern limits of the Project. A portion of the trail extends through New Brighton State Beach, which includes dense vegetation. The Project does not include housing or other structures that would result in permanent occupants along the Project corridor. There is ongoing vegetation trimming and removal along the RTC-owned rail corridor, which would continue. Once the trail is constructed, there would be additional routine maintenance of vegetated portions of the trail, including weed removal, tree/shrub trimming and fallen tree removal, that would prevent overgrowth that could potentially fuel wildfire. Therefore, the Project with or without the optional Interim Trail would not expose Project occupants to pollutant concentrations from a wildfire, and the impact would be **less than significant**. No mitigation is required.

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?

The Project would not require the installation or maintenance of infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that would exacerbate the fire risk or impact the environment. In addition, as described above, trail maintenance activities would involve routine maintenance of vegetated portions of the trail, including weed removal, tree/shrub trimming, and fallen tree removal, that would prevent overgrowth that could potentially fuel wildfire. Therefore, the Project with or without the optional Interim Trail would not result in additional Project elements that would exacerbate wildfire risks, and the impact would be **less than significant**. No mitigation is required.

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?

The Project area is not located within a State Responsibility Area, a Very High FHSZ, or a County-mapped Critical Fire Hazard Area (CAL FIRE 2022). The Project area is relatively flat in nature and is far from any elevated features. Therefore, it is unlikely that any downslope or downstream impacts associated with wildfires would result from the Project. Therefore, the potential impact would be **less than significant**.

The Project would not 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 for the following reasons. The Project does not include permanent structures that would be occupied by people, and trail users would be transient with short-term exposure to any risks. As described above in Section 2.4.9, Hazards and Hazardous Materials, the impact related to exposure of people or structures to loss, injury, or death involving wildland fires (Threshold G) would be less than significant. Therefore, the Project with or without the optional Interim Trail would not 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. The impact would be **less than significant**. No mitigation is required.

2.4.21 Mandatory Findings of Significance

Does the project:	Preliminary Determination: Potentially Significant Impact	Preliminary Determination: Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; Sundstrom v. County of Mendocino,(1988) 202 Cal.App.3 d 296; Leonoff v. Monterey Board of Supervisors, (1990) 222 Cal.App.3 d 1337; Eureka Citizens for Responsible Govt. v. City of Eureka (2007) 147 Cal.App.4th 357; Protect the Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal.App.4th at 1109; San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

Impact Analysis

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

The Project area is located within an urban/suburban environment that is predominately developed with commercial, industrial, recreational, and residential land uses along SCBRL. The EIR will evaluate if the Project could not substantially degrade the quality of the environment, cause adverse impacts to wildlife species or sensitive habitats, or eliminate important examples of California prehistory. It is anticipated that the impacts would be **less than significant with mitigation incorporated**.

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

The Project is generally consistent with the policies set forth in the County General Plan 1994 and Capitola General Plan would not include impacts that are considered cumulatively considerable. The General Plan EIR identifies population, traffic and noise to be potentially significant due to the growth in population resulting from a proposed development project throughout the City. With respect to these cumulative impacts, the Project is anticipated to contribute to a potential net decrease of traffic and associated noise, due to creating the availability of an alternative transportation method by a pedestrian and bike path throughout the County of Santa Cruz. However, the Project could increase impacts to biological resources due to tree removal, which will be evaluated in the EIR. It is anticipated that Project impacts would be **less than significant with mitigation incorporated**.

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

Implementation of the Project could cause temporary construction-related impacts to noise, air quality and hazardous materials. However, these would be temporary in nature and would not continue past the construction phase of the Project. Therefore, the Project would not cause any substantial adverse effects on human beings, and the impacts would be **less than significant with mitigation incorporated**.

Section 3 List of Preparers

Harris & Associates

450 Lincoln Avenue, Suite 103
Salinas, California 93901

Kate Elliott, Project Manager

Esther Daigneault, Senior Environmental Analyst
Sharon Toland, Senior Air Quality, Greenhouse Gas, and Noise Specialist

EcoSystems West Consulting Group

180 7th Avenue Suite 201
Santa Cruz, California 95062

Erin McGinty, Senior Wildlife Biologist
Justin Davilla, Senior Botanist/Ecologist

Rincon Consultants

2511 Garden Road, Suite C-250
Monterey, California 93940

Megan Jones, Principal-in-Charge
Nicole West, Project Manager
Nicholas Carter, Environmental Planner
Shelby Cramton, Environmental Planner
Taylor Freeman, Environmental Planner
Kayleigh Limbach, Environmental Planner
Andrew McGrath, Paleontologist
Jesse Voremberg, Environmental Planner

This page intentionally left blank

Section 4 References

BAAQMD (Bay Area Air Quality Management District). 2017. "Air Quality Standards and Attainment Status." Last updated January 5, 2017. Accessed June 2023. https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status.

Brabb, E.E. 1997. Geologic map of Santa Cruz County, California: a digital database. [map.] United States Geological Survey, Open-File Report OF-97-489, scale 1:62,500.

CalRecycle (California Department of Resources Recycling and Recovery). 2023. Solid Waste Information System Facility/Site Activity Details: Buena Vista Drive Sanitary Landfill (44-AA-0004). Accessed June 2023. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1397?siteID=3420.

CAL FIRE (California Department of Forestry and Fire Protection). 2007a. "Santa Cruz County Draft Fire Hazard Severity Zones in LRA." Last updated June 2007. Accessed June 2023. https://osfm.fire.ca.gov/media/6770/fhszl06_1_map44.pdf.

CAL FIRE. 2007b. "Santa Cruz County Fire Hazard Severity Zones in SRA." Last updated November 2007. Accessed June 2023. https://osfm.fire.ca.gov/media/6768/fhszs_map44.pdf.

CAL FIRE. 2022. Fire Hazard Severity Zone Maps. Last updated November 2022. Accessed June 2023. https://osfm.fire.ca.gov/fire-hazard-severity-zones-maps-2022/.

Caltrans (California Department of Transportation). 2023. California State Scenic Highway System Map. Accessed June 2023. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

California Board of Mining and Geology. 1982. Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area Map.

California Board of Mining and Geology. 1986/87. Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area.

California Division of Mines and Geology. 1997. Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps. Special publication, California Department of Conservation. Revised by Earl W. Hart and Bryant. Sacramento, CA.

California Native Plant Society. 2022. Rare Plant Program. Rare Plant Inventory (online edition, v9-01 1.5). Accessed June 2023. https://www.rareplants.cnps.org.

CCRWQCB (Central Coast Regional Water Quality Control Board). 2019. Water Quality Control Plan for the Central Coast Basin, June 2019 Edition. California Environmental Protection Agency. Sacramento, California. June 2019.

CDFW (California Department of Fish and Wildlife). 2022. Natural Diversity Database (CNDDB). Special Animals List. Periodic publication. 66 pp. July 2022. Accessed June 2023. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline.

City of Capitola. 2011. City of Capitola Bicycle Transportation Plan. February 10, 2011. Accessed June 2023. https://bicycleinfrastructuremanuals.com/manuals6/City-of-Capitola-City-of-Capitola-Bicycle-Transportation-Plan-2011.pdf.

City of Capitola. 2015. Climate Action Plan for the City of Capitola. October 22, 2015.

City of Capitola. 2019. Capitola General Plan. Adopted June 26, 2014. Last Updated March 13, 2019. Accessed June 2023. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan#:~:text=The%20General%20Plan%20is%20the,an%20optional%2C%20Economic%20Development%20Element.

City of Capitola. 2021. Land Use Map. Accessed June 2023. https://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/1464/figure_lu-4_landusemap_0512_2021.pdf.

County of Santa Cruz. 1994. General Plan and Local Coastal Program for the County of Santa Cruz, California. December 19, 1994.

County of Santa Cruz. 2015. Operational Area Emergency Management Plan. Last updated October 2015. Accessed June 2023. http://www.co.santa-cruz.ca.us/Portals/0/County/OES/pdfs/DRAFTOPERATIONAL%20AREA%20EMERGENCY%20MANAGEMENT%20PLAN%20%28EMP%29%202015pdf.pdf.

County of Santa Cruz. 2020. Santa Cruz County GIS Hazard Map.

County of Santa Cruz. 2023. Land Use Map. Accessed June 2023. https://gis.santacruzcounty.us/gisweb/.

DOC (California Department of Conservation). 2023. "Important Farmland Categories." Accessed June 2023. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx.

DOC. 2023b. California Farmland Mapping and Monitoring Program. Accessed June 2023. https://maps.conservation.ca.gov/agriculture/DataViewer/index.html

DTSC (California Department of Toxic Substances Control). 2023. "EnviroStor." Accessed June 2023. https://www.envirostor.dtsc.ca.gov/public/.

FEMA (Federal Emergency Management Agency). 2021. Flood Map Service Center.

ICC (International Code Council). 2021. 2021 International Fire Code Appendix D.

Jones, Doug. 2015. "Ritual and Religion in the Ohlone Cultural Area of Central California." Master's Thesis, Department of Anthropology, San José State University.

Kroeber, Alfred J. 1925. Handbook of the Indians of California. Bulletin 78, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington, D.C. Reprinted 1976 by Dover Publications, Inc., New York.

Mack, Marco. Deputy Fire Marshal, CMF CBO, Central Fire District. Conversation regarding fire response services with representatives from Harris & Associates and Rincon Consultants, Inc. on May 12, 2022.

MBARD (Monterey Bay Air Resources District). 2017. 2012–2015 Air Quality Management Plan. Monterey, CA. March 15, 2017.

Milliken, Randall, Laurence Shoup, and Beverly Ortiz. 2009. "Ohlone/Costanoan Indians of the San Francisco Peninsula and their Neighbors, Yesterday and Today." Government Documents and Publications 6.

Pacific Crest Engineering, Inc. (Pacific Crest Engineering). 2021. Draft Geotechnical Investigation – Design Phase, Monterey Bay Sanctuary Scenic Trail (MBSST) – Segments 10 and 11, Santa Cruz, California. Project No. 2120-SZ69-F11, October 22, 2021.

RTC (Santa Cruz County Regional Transportation Commission). 2013. Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report. Santa Cruz, CA. November 7, 2013.

RTC. 2014. Monterey Bay Sanctuary Scenic Trail Network Master Plan. Santa Cruz, CA. February 6, 2014.

RTC. 2021. Transit Corridor Alternatives Analysis.

RTC. 2022. 2045 Regional Transportation Plan. Accessed June 2023.https://sccrtc.org/funding-planning/long-range-plans/2045-regional-transportation-plan/.

SCCSD (Santa Cruz County Sanitation District). 2021. Sewer System Management Plan Audit. Accessed June 2023. https://dpw.co.santacruz.ca.us/Portals/19/pdfs/Sanitation/pdf/SSMP_AUDIT_2021_FINAL%20SIGNED.pdf?ver=yjBLQDpYY5_Uejt-SY6oKw%3 D%3 D.

SWRCB (State Water Resources Control Board). 2023. "GeoTracker." https://geotracker.waterboards.ca.gov/. Accessed June 2023.

Soquel Creek Water District (SqCWD). 2023. "Facts, Figures & Maps." Accessed June 2023. https://www.soquelcreekwater.org/242/Facts-Figures-Maps.

Steel. 2022. Project Manager, Capital Projects, County of Santa Cruz Community Development and Infrastructure Department. Telephone conversation. August 4, 2022.

USFWS (U.S. Fish and Wildlife Service). 2021. Listed Species Quad Search.

Wagner, D.L., H.G. Greene, G.J. Saucedo, and C.L. Pridmore. 2002. Geologic map of the Monterey 30' x 60' quadrangle and adjacent areas, California. [map.] California Geological Survey, Regional Geologic Mapp RGM-1, scale 1:100,000.

Watsonville Municipal Airport. 2003. "Watsonville Municipal Airport Master Plan." Accessed June 2023. https://www.cityofwatsonville.org/DocumentCenter/View/987/CM-Resolution-179-03-Airport-Master-Plan-PDF.

WHA (Weber, Hayes & Associates). 2023. Initial Site Assessment Coastal Rail Trail Project Segments 10 & 11. April 13, 2023.

This page intentionally left blank

Appendix D. Draft Mitigation Monitoring and Reporting Program

This page intentionally left blank.

Summary of Mitigation Measures Identified for Proposed Project and Project Alternatives in the Draft Environmental Impact Report

Mitigation Measure	Proposed Project		Project Alternatives		
	Ultimate Trail Configuration (Trail Next to Rail Line) [1]	Optional Interim Trail (Trail on the Rail Line)	Alternative 1 (Trail Only)	Alternative 2 (Rail with Trail on Opposite Side of Tracks)	Alternative 3 (No Project)
Note: Most of the mitigation measures are required for the Ultimate Trail Configuration, Optional Interim Trail, and Alternatives 1 and 2. The shaded rows indicate for which impacts the mitigation requirements are different.					
BIO-1a. Conduct Biological Monitoring for Sensitive Wildlife Species	Yes	Yes	Yes	Yes	No
BIO-1b. Enhance Monarch Roost Habitat along Rail Corridor (Escalona Gulch, New Brighton State Beach, Borregas Creek)	Yes	Yes	Yes	Yes	No
BIO-4. Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31	Yes	Yes	Yes	Yes	No
BIO-5. Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction	Yes	Yes	Yes	Yes	No
BIO-6. Implement San Francisco Dusky-Footed Woodrat Protection Measures during Construction	Yes	Yes	Yes	Yes	No
BIO-7a. Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing	Yes	Yes	Yes	Yes	No
BIO-7b. Develop Project-specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation	Yes	Yes	Yes	Yes	No
BIO-7c. Implement Best Management Practices to Protect Biological Resources during Construction	Yes	Yes	Yes	Yes	No
BIO-8a. Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats	Yes	Yes	Yes	Yes	No
BIO-8b. Develop and Implement Aquatic Resources Mitigation and Monitoring Plan	Yes	Yes	Yes	Yes	No
CR-1. Standards Rehabilitation Review	No[2]	Yes	Yes	No	No
CR-2a. Worker's Environmental Awareness Program	Yes	Yes	Yes	Yes	No
CR-2b. Archaeological Monitoring	Yes	Yes	Yes	Yes	No
CR-2c. Native American Monitoring	Yes	Yes	Yes	Yes	No
CR-2d. Implementation of Protocol for Unanticipated Discovery of Cultural Resources	Yes	Yes	Yes	Yes	No
GEO-5. Implement Paleontological Resources Protection	Yes	Yes	Yes	Yes	No
HAZ-1a. Conduct Soil Sampling and Implement Necessary Remediations	Yes	Yes	Yes	Yes	No
HAZ-1b. Prepare and Implement Soils Management Plan	Yes	Yes	Yes	Yes	No
HAZ-1c. Evaluate and Cap Contaminated Subgrade Soil and Ballast	No[2]	Yes[3]	Yes	No	No
N-1. Implement Noise-Reducing Measures for Construction Equipment Used within 275 Feet of Residences/Hotels	Yes	Yes	Yes	Yes	No
N-3. Provide Notification of Construction Vibration to Residential Units and Manufacturing Operations within 235 Feet	Yes	Yes	Yes	Yes	No
TCR-1a. Conduct Native American Monitoring During Construction in Previously Undisturbed Native Soils	Yes	Yes	Yes	Yes	No
TCR-1b. Implement Protocol for Unanticipated Discovery of Tribal Cultural Resources if Monitor Not Present	Yes	Yes	Yes	Yes	No

[1] The Ultimate Trail Configuration includes the following design options. The mitigation measures would apply to both design options, unless otherwise indicated.

Ultimate Trail Configuration Design Option A: Interim Trail on Capitola Trestle over Soquel Creek

Ultimate Trail Configuration Design Option B: Inland Side of Track between Grove Lane and Coronado Street in Capitola

[2] This mitigation measure would be required for Design Option A, but not for Design Option B.

[3] This mitigation measure is required for Optional Interim Trail Part 1 only, not Part 2 (interim trail removal and rail reconstruction) or Part 3 (Ultimate Trail Configuration construction).

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Biological Resources					
	BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites. *BIO-2. The Project could adversely affect sensitive fish species.*[1] *BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.* *BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.* *BIO-5. Project construction could adversely affect sensitive and common roosting bat species that use coast live oak, riparian, and other trees along the alignment.* *BIO-6. The Project would adversely affect San Francisco Dusky-footed woodrat .*	**BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species** During construction of the Ultimate Trail, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement biological monitoring measures for sensitive wildlife species, as specified below: ▪ Prior to initiation of construction activities, a USFWS- and/or CDFW-approved biologist shall prepare a construction monitoring plan that identifies all areas to be protected with exclusion fencing, and all areas requiring monitoring by an agency - approved biologist or trained construction monitor. ▪ Prior to initiation of construction activities, an agency-approved biologist shall conduct an environmental training for all construction personnel. The training shall include a description of the sensitive wildlife species known or with potential to occur in the Project alignment and surroundings (monarch butterfly, sensitive fish species, potential Santa Cruz black salamander, sensitive and common native nesting avian species, sensitive and common roosting bats species, and San Francisco dusky-footed woodrat). ▪ Prior to initiation of construction activities, the construction contractor shall install temporary exclusion fencing (solid silt fencing) in specified areas along the Project boundaries, approximately 6 inches below grade and 3.0 feet above grade, with wooden stakes at intervals of not more than 8.0 feet. Breaks in the exclusion fencing at minimum intervals of 0.25 miles shall allow for wildlife passage across the alignment. The fence shall be maintained in working order for the duration of construction activities. The agency-approved biologist or trained construction monitor shall inspect the fence daily and notify the construction foreman when fence maintenance is required. ▪ Construction activities shall be timed to minimize impacts to sensitive biological resources, as shown in **Table 3.3-9 [**included at the end of this MMRP]. ▪ The agency-approved biologist shall be present on site, to direct and inspect all ground disturbing activities (including but not	County Construction Contractor	Compliance monitored by USFWS-, NOAA Fisheries-, and CDFW-approved biologist	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		limited to tree removal, vegetation removal, grading, grubbing, exclusion fence installation and removal, and for construction activities located in or near sensitive wildlife resources). Any vegetation removed shall be placed directly into a disposal vehicle. Vegetation shall not be piled on the ground unless later transferred, piece by piece, under the direct supervision of an approved biologist. ▪ The approved biologist shall train a designated construction monitor who shall oversee implementation of all protective mitigation measures when the biologist is not present. This representative shall be trained in the identification of special-status wildlife. This representative shall not have the authority to handle special-status species. ▪ Once ground disturbance activities have been completed, the approved biologist or trained construction monitor shall conduct regular inspections of the work area. Prior to the start of work each day, the biologist or monitor shall check for wildlife underneath any vehicle or heavy equipment within the construction site. ▪ The biologist will remain on call. In the event that the construction monitor identifies a sensitive wildlife species in or near the Project area, the approved biologist will be available to confirm the identification and, depending on the species and with agency authorization, relocate the animal out of harm's way. Suitable relocation sites shall be identified in advance with the approval of the relevant agencies. ▪ The approved biologist and construction monitor shall have the authority to stop work that may result in the "take" of a special-status species. ▪ At the end of each workday, excavations (i.e., trenches, holes) shall be secured with a cover (preferably) or a ramp to prevent wildlife entrapment. ▪ All trenches, pipes, culverts, or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. ▪ With agency approval, the approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat in and near the construction impact area, if present.			
	BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.	**BIO-1b: Enhance Monarch Roost Habitat along the Rail Corridor (Escalona Gulch, New Brighton State Beach, and Borregas Creek)** As a discreet component of Mitigation Measure BIO-7b [described under Impact BIO-7 (Sensitive Habitats)], the County of Santa Cruz shall work with property owners, including CDFW (Escalona Gulch) and State Parks (New Brighton State Beach and Borregas Creek) to develop a Monarch Roost Site Enhancement Plan for monarch roost	County Construction Contractor	Payment of in-lieu fees to CDFW, State Parks, and/or mitigation contractor	To be implemented to prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		sites near the rail corridor. Enhancement may include but is not limited to: ▪ Protecting and maintaining the eucalyptus grove to support monarch roosting through maintenance of roost trees and wind buffer trees; ▪ Topping, thinning, and/or limbing of the grove, as needed, to allow sun penetration while preserving wind buffers and variable roost site conditions within the grove (i.e., sun, shade, and insulation from heat and cold); ▪ Planting of saplings [to develop wind buffers and promote growth of future roost trees (avoid senescence[1])]; and ▪ Cultivating fall- and winter-blooming nectar plants.			
	BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.	**BIO-4: Conduct Breeding Bird Surveys and Identify Protective Buffers prior to Construction, if Construction occurs between February 1 and August 31** During construction, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures: ▪ The avian breeding season occurs from February 1 through August 31 with a peak in breeding/nesting activity between April and June for most birds. ▪ If feasible, Project activities will be initiated outside the breeding season in order to avoid impacts to breeding birds. Should Project activities be initiated between September and February, no avian breeding surveys would be required. ▪ If Project activities are to be initiated during breeding season, or if Project activities lapse for 1 week or more during breeding bird season, prior to construction/resumption of construction activities, an agency-approved biologist will conduct avian breeding surveys for all birds (and their nests) protected under the MBTA. According to current CDFW permit conditions, the survey area will encompass tree stands and structures within the Project corridor and the following buffers (where accessible): □ 250 feet for passerines/non-raptors; □ 500 feet for small raptors such as accipiters; and □ 1,000 feet for larger raptors such as buteos. Per current CDFW permit conditions, surveys will be conducted within 1 week of the initiation or resumption of Project activities including, but not limited to, staging equipment, tree removal, vegetation clearing, and/or ground disturbing activities.	County Construction Contractor	Agency-approved biologist to conduct surveys	To be implemented prior to and during project construction

[1] "Senescence" is the age-related declines in woody plant communities that may be affected by physiological changes (e.g. reduced stem sap flow) in individual trees as well as the growing environment (e.g. drought) and interactions between these factors.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		▪ In the event nesting avian species are observed, postpone Project activities until a qualified biologist has determined young birds have fledged or implement buffers appropriate to the construction activity and the species, such as those recommended in PG&E's Nesting Bird Management Plan (PG&E et al. 2015)[2]: □ Raptors (platform nesting): 300 feet (90 meters) □ Cavity-nesters (depending on species): 50 feet (15 meters) □ Bridge/building, tree, and ground/understory nesters: 75 feet (23 meters) ▪ Sensitive avian species, if nesting in or near the Project corridor, will be given special consideration and may require additional protective measures as determined through consultation with the relevant agency (USFWS or CDFW). The standard protective buffers recommended in PG&E et al. (2015) for sensitive birds that are known to nest or have potential to nest in or near the corridor are as follows: □ Allen's hummingbird – standard buffer: 50 feet (15 meters) □ Wrentit – standard buffer: 75 feet (23 meters) □ Olive-sided flycatcher – standard buffer: 75 feet (23 meters) □ Oak titmouse – standard buffer: 50 feet (15 meters) □ Nuttal's woodpecker – standard buffer: 50 feet (15 meters) □ Yellow warbler – standard buffer: 75 feet (23 meters) □ Peregrine falcon – standard buffer: 500 feet (152 meters) □ White-tailed kite – standard buffer: 300 feet (91 meters) □ Bald eagle – consultation required [standard buffer: 1320 feet (402 meters)]. ▪ Protective buffers will be clearly marked for avoidance by construction activities. ▪ The approved biologist will document pre-construction baseline monitoring of the nest to characterize "normal" behavior. If approved by the agencies, the biologist may have the discretion to reduce the buffer and monitor the nest for disturbance. If the birds show signs of abnormal behaviors (e.g., defensive flights/vocalizations, standing up from brooding, and flying away from the nest) that are associated with construction activity, the biologist will reinstate the larger buffer. Work within the setback will be delayed until after the young have fledged. ▪ The biologist will have the authority to stop work if breeding birds exhibit behaviors that may cause nest abandonment or failure. ▪ If postponing Project activities and/or installing buffers are not feasible, further discussions with the appropriate resource agencies (USFWS and/or CDFW) will be necessary to develop alternative requirements.			

[2] PG&E et al.'s Nesting Bird Management Plan (2015) was based on a review of the effects of nest disturbance on reproductive success and consultation with subject experts and takes into account the nesting habits of the bird and the bird's sensitivity to disturbance, as well as the type of activity, duration, and noise level of disturbance (including direct and indirect effects), to develop disturbance categories (low, medium, or high) and associated buffers.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	BIO-5. Project construction could adversely affect sensitive and common roosting bat species that use coast live oak, riparian, and other trees along the alignment.	**BIO-5: Conduct Bat Surveys and Implement Measures to Protect Roosting Bats during Construction** The County of Santa Cruz (with the approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures. To avoid impacts to individual roosts, winter hibernacula, and maternity roosts, during all months, throughout the Project corridor and especially in mature coast live oak woodland and riparian habitats, prior to limbing/tree removal, an agency-approved biologist shall conduct a pre-construction survey for bats to determine if cavity, crevice or foliage-roosting bats are present, as follows: ▪ Bat maternity roosting occurs typically between May 1 and August 31, and winter hibernacula (shelter occupied during the winter by a dormant animal) for many bat species are found between November 1 and February 15. ▪ All trees and limbs proposed for removal, topping or pruning should be marked in the field by the Project proponent in advance of the Project start date. ▪ A qualified biologist shall determine if bats are using the Project corridor for roosting. For any trees/snags/structures (bridges) that could provide roosting habitat for cavity, crevice, or foliage-roosting bats, potential bat roost features shall be thoroughly evaluated to determine if bats are present. Visual inspection, emergence, and/or acoustic surveys shall be utilized as initial techniques. □ If established maternity colonies are found, in coordination with CDFW, a buffer shall be established around the colony to protect pre-volant young from construction disturbances until the young can fly; or implement other measures acceptable to CDFW. □ If individual roosting bats or winter hibernacula[3] are found, in consultation with CDFW or based on CDFW recommendations, the qualified biologist shall develop and implement acceptable passive exclusion methods. If feasible, exclusion shall take place during the appropriate windows (between September 1 and November 1) (Authorization from CDFW is required to evict winter hibernacula for bats). ▪ If a tree is determined not to be an active roost site for cavity-roosting bats, it may be immediately limbed or removed as follows: □ If foliage-roosting bats are determined to be present, limbs shall be lowered, inspected for bats by a bat biologist, and	County Construction Contractor	Qualified biologist to conduct surveys	To be implemented prior to and during project construction

[3] "Hibernacula" are shelters occupied during the winter by a bat or group of bats in torpor (slowed heart rate and slowed breathing). Hibernacula are typically removed from predators and possess the right environmental conditions (temperatures between zero and 15 degrees Celsius and humid). Bats use up energy stores call "brown fat" in winter hibernacula but are vulnerable to disturbance (such as construction) which can cause repeated waking, and in turn, starvation and mortality.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		chipped immediately or moved to a dump site. Alternately, limbs may be lowered and left on the ground until the following day, when they can be chipped or moved to a dump site. No logs or tree sections shall be dropped on downed limbs or limb piles that have not been in place since the previous day. □ If the tree is not limbed or removed within 4 days of the survey, the survey efforts shall be repeated.			
	BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.	**BIO-6: Implement San Francisco Dusky-Footed Woodrat Protection Measures During Construction** During construction of the Project, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures. Prior to construction, a qualified biologist shall conduct a pre-construction survey for woodrat houses, and clearly flag all houses within the construction impact area and immediate surroundings. The construction contractor shall avoid woodrat houses to the extent feasible by installing a minimum 10-foot (preferably 25-foot) buffer with silt fencing or other material that shall prohibit encroachment. If this buffer and avoidance is not feasible, the qualified biologist shall allow encroachment into the buffer, but preserve microhabitat conditions such as shade, cover and adjacent food sources. Additionally, if avoidance is not possible, a qualified biologist shall develop and implement a Woodrat Relocation Plan, in consultation with CDFW, that allows for the relocation of woodrats and their houses. The plan shall include the following (or similar and CDFW-approved) criteria: ▪ Relocation will occur when vulnerable young are least likely to be present in the woodrat houses (ideally between August 1 and October 30). ▪ During dismantling of woodrat houses, woody debris, food caches, and nesting materials will be retained and relocated to reconstructed or artificial shelters. ▪ Relocation sites will be in the nearest suitable habitat outside the Project footprint. ▪ Sites for artificial shelters shall be located in proximity to the original house location and no closer than 20 feet from existing woodrat houses and other artificial shelters. Choose the best available microhabitat, ideally in a location with sun and shade and, if possible, under the same species of tree or shrub as was present at the original house location. Relocation sites shall contain biologically suitable habitat features (e.g., stands of poison oak, coast live oaks, and dense native brush).	County Construction Contractor	CDFW-approved biologist to conduct surveys	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		▪ Monitoring shall be conducted for 30 days after relocation is completed and include infrared and motion activated cameras and an occupancy assessment. ▪ A report on San Francisco dusky-footed woodrat house monitoring shall be provided to CDFW, within 30 days following the end of the monitoring period, and shall include the methods and results of relocation, occupancy determinations, and discussion of any remedies that may be needed.			
	AES-1. The Project would have an adverse effect on scenic resources and vistas through the removal of mature trees. *AES-2. The Project would be inconsistent with policies that pertain to tree and vegetation removal.* *BIO-1. The Project would adversely affect monarch butterfly and autumnal and/or wintering roost sites.* *BIO-2. The Project could adversely affect sensitive fish species.*[1] *BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.* *BIO-4. The Project would adversely affect sensitive and native nesting avian species during construction and operation.* *BIO-5. Project construction could adversely affect sensitive and common roosting bat species that may use coast live oak, riparian, and other trees along the alignment.* *BIO-6. The Project would adversely affect San Francisco dusky-footed woodrat.* *BIO-7. The Project would result in adverse effects to riparian habitat, other sensitive natural communities, and Coastal Act ESHA.*	**BIO-7a: Minimize Construction in Sensitive Habitats and Install Temporary Protective Fencing** The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures: ▪ To the extent feasible, all trail construction activities, including access routes, staging areas, stockpile areas, and equipment maintenance are to be located outside the limits of mapped sensitive habitats. Sensitive habitat areas shall be mapped by a qualified biologist and clearly shown on construction plans. Sensitive habitat areas include, but may not be limited to: monarch butterfly roost habitat near Rodeo Gulch, Escalona Gulch, Tannery Gulch, New Brighton State Beach, and Flatiron Creek; coastal scrub adjacent to the Porter-Sesnon open space element of New Brighton State Beach; mixed riparian forest, and coast live oak woodland and forest along the rail corridor. ▪ During construction, temporary fencing (e.g., silt fencing[4]) shall be installed at the outermost edge of sensitive habitats and shall not be disturbed except as required for trail construction. Vegetation removal shall be limited to the minimum extent necessary to achieve Project objectives. ▪ Areas designated as environmentally sensitive (i.e., ESHA, County sensitive habitats, and CDFW sensitive natural communities) will be avoided. No work-related activity including equipment staging, vehicular parking, etc., shall be allowed outside the limits of designated work areas when within or adjacent to sensitive habitats including the dripline of trees to be protected. ▪ Mature trees will be retained wherever feasible and limbing of trees and shrubs in mixed riparian forest, coast live oak woodland and forest, coastal scrub, and potential and/or known monarch roost habitat should be favored in lieu of removal. When possible, in temporary impact areas, stumps and burls of native coast live oaks, coast redwoods, and arroyo willows shall be retained to allow for re-sprouting following Project completion.	County Construction Contractor	Qualified biologist to map sensitive habitats	To be implemented prior to and during project construction

[4] See also Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species, Bullet 3, regarding exclusion fencing.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats. *BIO-9. The Project would interfere with wildlife movement.* *BIO-10. The Project would conflict with policies and ordinances protecting trees, including the City of Capitola Community Tree Management Ordinance and County of Santa Cruz Significant Tree Ordinance.* *GHG-2. The Project would not be consistent with applicable GHG reduction plans related to tree removal.*	▪ Limbing and removal of coast live oak trees located in coast live oak woodland and forest habitat shall be minimized to maintain canopy cover, nesting and roosting habitat for bird and bat species, and understory habitat for wildlife, including woodrats and other small mammals.			
		BIO-7b: Develop Project-Specific Biological Resources Mitigation and Management Plan for Impacts to Biological Resources Resulting from Trail Construction and Operation The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures. A qualified (USFWS- and CDFW-approved) biologist shall prepare a Project-specific Biological Resources Mitigation and Management Plan (MMP) to compensate for direct and indirect impacts to sensitive habitats, including ESHA, and other sensitive biological resources resulting from trail construction and operation. The MMP shall compensate for permanent loss of sensitive habitats, through the creation, restoration, and enhancement of in-kind sensitive habitat, as close to impacted areas as possible. Out-of-kind mitigation will be incorporated into the MMP where it contributes to the overall ecological integrity of mitigation habitat. The MMP will be prepared based on EIR-certified Design Plans (typically 60% or higher) during Project permitting. The MMP will be implemented during and after Project construction, typically within one year of Project completion. The Biological Resources MMP shall include the following: ▪ Description of the trail alignment including as-built acreage of temporary and permanent impacts to mixed riparian forest, coast live oak woodland and forest, coastal scrub, and monarch butterfly roost sites, including the number and type of trees slated for removal with City of Capitola and County status as Protected or Significant trees, respectively. ▪ Ecological functions and values assessment of sensitive habitats, including monarch butterfly habitat to determine suitable mitigation ratios (at a minimum, no net loss) in consultation with USFWS, CDFW, California Coastal Commission (CCC), the County, and the City. ▪ Goals of compensatory mitigation, including types and areas of sensitive habitat to be created, restored, enhanced and/or preserved; number and type of trees to be replaced, specific functions and values of mitigation habitat types, mitigation ratios (created/restored/enhanced/preserved: impacted), and performance criteria, including:	County (in coordination with the City, CCC, CDFW, RWQCB, USACE and USFWS) Construction Contractor	Agency-approved biologist to prepare Project-specific Biological Resources Mitigation and Management Plan (MMP)	To be implemented prior to and during project construction

		□ Conservation of functions and values of monarch autumnal and overwintering roost habitat and nectaring sites (including maintaining suitable grove structure, wind protection, and water sources)[5]; □ Conservation of edge habitats; and □ Conservation of functions and values for wildlife movement including habitat mosaics, links between creeks, open spaces and safe passage across the proposed alignment, with perennial water sources, diverse food sources, cover, and shelter. ▪ Such compensatory mitigation must occur as close to impacted areas as feasible and result in no net loss (minimum 1:1 replacement ratio) of sensitive habitat types, or their functions and values. In the Coastal Zone, mitigation ratios for ESHA typically start at 3:1 (creation/substantial restoration: impact) for ESHA. This ratio is doubled for enhancement (6:1) and tripled for preservation (9:1); however, a minimum of 1:1 must include creation of in-kind ESHA habitat for any mitigation strategy. ▪ Location and acreage of sensitive habitat, including monarch roost habitat, mitigation areas including ownership status, and existing functions and values of restored and/or enhanced sensitive habitats. ▪ Project stakeholders including the County, City of Capitola, and RTC shall identify undeveloped public and private properties as potential mitigation areas. Acquisition could include direct purchase or placement of conservation easements on portions of parcels that are in close proximity to the impacted areas, that share similar ecological value with the impacted areas, that are otherwise constrained from development due to existing conditions (such as County aquatic and riparian setbacks, ESHA, steep slopes, etc.) and currently do not but could support native sensitive habitats (habitat creation) or would benefit from restoration, enhancement, or preservation, as needed to fulfill mitigation acreage and proximity requirements. ▪ All County Significant trees, Capitola Protected trees, and native trees will be replaced at a minimum 1:1 ratio ("in kind" for native trees) at a location and ratio to be determined by the County Environmental Coordinator, City Community Development Department, and/or other responsible regulatory agencies. Wherever feasible, tree replacement plantings will be situated to promote ecosystems benefits and services by replacing displaced habitat functions and values and/or enhancing remaining habitat. Where tree replacement plantings exceed a minimum 1:1 replacement ratio, tree replacement plantings may be situated to enhance the urban streetscape with the design goals of beautifying neighborhoods (especially those with a disproportionate paucity of trees), reducing the urban heat island,			

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		and improving carbon sequestration. Urban streetscape features such as public or private greenbelts, medians, parking strips, and/or other similar available spaces with sufficient space may be used for replacement tree planting. Urban streetscape species composition may include coast redwood, coast live oak, tanoak, and buckeye in upland areas and white alder, box elder, blue elderberry, big leaf maple, and western sycamore in riparian habitats. ▪ Detailed sensitive habitat creation and/or restoration construction and planting techniques. ▪ Description and design of habitat requirements for sensitive wildlife known to occur in the study area and immediate surroundings (including monarch roost sites, sensitive fish species, potential Santa Cruz black salamander, sensitive and common native nesting avian species, sensitive and common roosting bat species, and/or San Francisco dusky-footed woodrat). ▪ Maintenance activities during operation shall include replanting native vegetation found within similar habitats within the same watershed and weed eradication that avoids take of sensitive wildlife species (e.g., woodrat, breeding birds). Trail maintenance activities would employ hand-tools only. The use of pesticides or herbicides would be prohibited. ▪ Strategies to protect remaining sensitive habitats along the trail corridor and surroundings from direct and indirect impacts from trail users and illegal camping, such as: □ Split-rail and wire fencing □ Interpretive signage including specific information about sensitive habitats and species and “leave no trace” content □ “Green fencing” (dense vegetative buffers consisting of woody and plant species that deter human passage such as poison oak, Pacific blackberry, and stinging nettle) ▪ Strategies to protect wildlife movement, both across and along the trail corridor, as well as north and/or south of the corridor to connect open spaces, supported by complex and mature sensitive habitat mosaics, including perennial water sources. ▪ Long-term quantitative and qualitative monitoring and reporting, including consideration of carrying capacity analysis and alternative approaches, and documenting the ability to meet or surpass performance criteria. ▪ Adaptive management strategies to: □ Identify shortcomings in meeting performance standards; □ Ensure long-term viability of existing, enhanced, restored, and/or newly created sensitive biological resources;			

[5] See also Mitigation Measure BIO-1b: Enhance Monarch Roost Habitat along the Rail Corridor (Escalona Gulch, New Brighton State Beach, and Borregas Creek).

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		□ Enhance ecological functions and values of sensitive habitat mitigation areas, including monarch butterfly habitat and habitat for wildlife movement; □ Ascertain the sufficiency of trail access, facilities development and management, and interpretive design features associated with the Project to protect biological resources. Mitigation area locations and final replacement ratios (e.g., potentially above the minimum "no net loss" ratio set here) shall be determined in consultation with the relevant agencies, as follows. ▪ **U.S. Fish and Wildlife Service (USFWS).** Monarch butterfly (presently federal ESA Candidate species, likely Threatened or Endangered by 2024). ▪ **California Department of Fish and Wildlife (CDFW).** Sensitive habitats, work below the break in bank of stream corridors, riparian habitat, CESA Endangered species, Fully Protected species, and Species of Special Concern. ▪ **California Coastal Commission (CCC).** Environmentally sensitive habitat areas (ESHA). ▪ **California State Parks.** Sensitive resources and habitats on New Brighton State Beach property. ▪ **Regional Water Quality Control Board (RWQCB).** Non-wetland riparian habitat. ▪ **County of Santa Cruz (County).** Sensitive habitats, including ESHA, aquatic features and riparian habitat, and Significant trees. ▪ **City of Capitola (City).** Riparian habitat and sensitive habitats, including ESHA, and Protected trees. The Draft MMP shall be submitted to USFWS, CDFW, CCC, California State Parks, County, and City of Capitola for review prior to formal adoption. Monitoring reports will be provided to relevant agencies.			
		BIO-7c: Implement Best Management Practices to Protect Biological Resources during Construction During construction of the Project, the County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall ensure the following best management practices to protect water quality and biological resources during Project construction activities are included in the construction specifications and implemented during Project construction: ▪ Minimize removal or disturbance of existing vegetation outside the footprint of Project construction activities.	County Construction Contractor	Best Management Practices (BMPs) to be implemented for duration of Project construction	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		▪ Limit site access and parking, equipment storage and stationary construction activities to the designated staging areas. ▪ Prior to staging any equipment or vehicles within or adjacent to the rail corridor, clean all equipment caked with mud, soils, or debris from off-site sources or previous Project sites to avoid introducing or spreading invasive exotic plant species. Remove invasive exotic plants from the Project area. All equipment used on the site should be cleaned prior to leaving the site for other projects. ▪ Position all stationary equipment such as motors, pumps, generators, and/or compressors over drip pans. At the end of each day, move vehicles and equipment as far away as possible from any water body adjacent to the Project area in a level staging area. Position parked equipment also over drip pans or absorbent material. ▪ Check under all equipment for wildlife before use. If any listed or special-status wildlife is observed under equipment or in the work area, do not disturb or handle it. Cease Project activities and contact the biological monitor or resource agencies for further guidance if the animal continues to be encountered in the Project area. ▪ During construction activities, if security fencing is installed around the construction site, allow for passage of wildlife to maintain a link between inland and coastal habitats including stream corridors[6]. Prohibit the use of plastic mesh safety fencing to prevent wildlife entrapment. ▪ Avoid working at night or during rain events when special-status amphibians and mammals are generally more active. Consult weather forecasts from the National Weather Service at least 72 hours prior to performing work. ▪ Properly contain and remove all food trash that may attract predators into the work area and construction debris and trash from the work site on a regular basis. ▪ Refuel and perform all vehicle and/or equipment maintenance off site at a facility approved for such activities. ▪ Stabilize all exposed or disturbed areas in the Project area. Install erosion control measures as necessary such as silt fences, jute matting, weed-free straw bales, plywood, straw wattles, and water check bars, and broadcasting weed-free straw wherever silt-laden water has the potential to leave the work site and enter the nearby streams. Prohibit the use of monofilament erosion control matting to prevent wildlife entanglement. Modify, repair, and/or replace erosion control measures as needed. ▪ Revegetate with native vegetation found within similar habitats within the same watershed to minimize erosion, prevent the			

[6] See also Mitigation Measure BIO-1a: Conduct Biological Monitoring for Sensitive Wildlife Species, Bullet 3, regarding exclusion fencing.

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		establishment of invasive weeds, and accelerate the recovery of native vegetation communities. ▪ Whenever feasible, certain construction activities will be timed to avoid impacts to sensitive habitats and wildlife species, as presented in **Table 3.3-9**. Ideally, most if not all vegetation clearing will be done in the fall.			
	BIO-2. The Project could adversely affect sensitive fish species.[1] *BIO-3. The Project could adversely affect Santa Cruz black salamander, if present.* *BIO-8. The Project would result in adverse effects to palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats.* *BIO-9. The Project would interfere with wildlife movement.*	**BIO-8a: Minimize Construction-related Activities in Palustrine Emergent Wetlands and Aquatic/Riverine Habitats** The County of Santa Cruz (with approval from the City of Capitola and RTC) and the construction contractor shall minimize construction-related activities including, but not limited to, access routes, staging areas, stockpile areas, and equipment maintenance, within or adjacent to the limits of palustrine scrub-shrub and forested wetlands and aquatic/riverine habitats, to the extent feasible. Wetlands and aquatic/riverine areas shall be clearly shown on construction plans. In coordination with a qualified biologist, temporary fencing (e.g., silt fencing) shall be installed at the outermost edge of all features not directly affected by trail construction.	County Contractor	Qualified biologist to identify areas require temporary protective fencing	To be implemented prior to and during project construction
		BIO-8b: Develop and Implement Aquatic Resources Mitigation and Monitoring Plan The County of Santa Cruz (with approval from the City of Capitola and the RTC) and the construction contractor shall implement the following measures. A qualified biologist shall be retained to prepare an Aquatic Resources Mitigation and Monitoring Plan (MMP) for all direct and indirect impacts to wetlands and aquatic/riverine habitats resulting from trail construction, resulting in no net loss (minimum 1:1 replacement) of these sensitive habitat types. The mitigation area locations and replacement ratios shall be determined in consultation with the USFWS, USACE, Central Coast RWQCB, California Coastal Commission, and/or California Department of Fish and Wildlife. It is expected that mitigation requirements shall be based on the determination by the California Coastal Commission that the trail is a resource-dependent use by providing safe pedestrian and bicycle access to the recreation (e.g., beaches, open spaces, scenic viewpoints) along the central Santa Cruz coast and based on its capacity for "nature study" pursuant to Section 30233(a)(7) of the Coastal Act. The Wetland MMP shall include the following: ▪ Description of the Project including acreage of temporary and permanent impacts to palustrine wetlands, Coastal Act wetlands, and aquatic/riverine features as identified in a forthcoming formal	County (in coordination with the City, CCC, CDFW, RWQCB, USACE and USFWS)	Qualified biologist to prepare Aquatic Resources Mitigation and Monitoring Plan (MMP)	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		delineation of jurisdictional wetlands and other non-wetland Waters of the U.S. ▪ Ecological functions and values assessment of wetlands, including a determination of regulatory status and permitting requirements to determine suitable mitigation ratios. ▪ Goals of compensatory mitigation Project including types and areas of wetland and aquatic/riverine habitat to be created, restored, and/or enhanced; specific functions and values of mitigation habitat types; and mitigation ratios (created/restored/enhanced/preserved: impacted). Based on a recent memo by the Coastal Commission for a project at Gleason Beach in Sonoma County, mitigation ratios for permanent wetland impacts will likely begin at 4:1 for creation or substantial restoration. For wetland enhancement, this ratio is doubled (8:1) and tripled for habitat preservation (12:1). For all mitigation strategies, at least 1:1 must include creation of new sensitive habitat. ▪ Location and acreage of wetland and riparian mitigation areas including size, ownership status, and existing functions and values of restored and/or enhanced sensitive habitats. ▪ Detailed wetland and aquatic/riverine construction and planting techniques. ▪ Description and design of habitat requirements for special-status plants and wildlife potentially occupying wetland and aquatic/riverine habitats. ▪ Maintenance activities during the monitoring period, including replanting native wetland and riparian vegetation and weed removal, that will not result in take of aquatic wildlife species. ▪ Long-term quantitative and qualitative monitoring and reporting, documenting ability to meet or surpass performance criteria. ▪ Adaptive management strategies to ensure long-term viability and enhance ecological functions and values of sensitive habitat mitigation areas. ▪ Strategies to protect remaining wetland and aquatic/riverine habitats along the trail alignment from direct and indirect impacts from trail users. Strategies may include split-rail fencing, interpretive signage, and green fencing (dense vegetative buffers). The Draft MMP shall be submitted to USACE, USFWS, RWQCB, CDFW, CCC, California State Parks, County, and City of Capitola for review.			

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Cultural Resources					
	CR-1. The Project may adversely affect historical resources, including the SCBRL (Ultimate Trail Configuration and Optional Interim Trail) and the Capitola Trestle Bridge (Optional Interim Trail and Design Option A).	**CR-1: Standards Design Review for Capitola Trestle Bridge Rehabilitation (Only Required for Optional Interim Trail and Design Option A)** During design of the Capitola Trestle Bridge rehabilitation and improvements for the Optional Interim Trail, as well as Design Option A of the Ultimate Trail Configuration, the County of Santa Cruz, City of Capitola, and/or RTC shall retain a qualified historic preservation professional, who meets the Secretary of the Interior's Professional Qualifications Standards in Architecture or Architectural History, to provide input on Project plans specifically relating to the Capitola Trestle Bridge. The input from the qualified historic preservation professional shall take place from conceptual and schematic phases through design development to identify and implement design elements for the Capitola Trestle Bridge that shall facilitate compliance with the Secretary of the Interior's Standards. The qualified historic preservation professional shall consider the character-defining features as outlined in the National Park Service's Preservation Brief 17: Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character and provide treatment recommendations as appropriate. The qualified historic preservation professional shall review the 60% and 90% plans for the Capitola Trestle Bridge and provide recommendations as needed, which shall be incorporated into the final design. Prior to the issuance of construction permits, the qualified historic preservation professional shall prepare a Secretary of the Interior's Standards Project Review Memorandum to document the rehabilitation and Interim Trail improvement's compliance with the standards. This memorandum shall be submitted to the County, City, and/or RTC for review and approval and included in the administrative record upon acceptance.	County, City, and/or RTC	Qualified historic preservation professional to provide input on Project plans specifically relating to Capitola Trestle Bridge	During design phase of Capitola Trestle Bridge rehabilitation and trail improvements
	CR-2. Ground-disturbing activities during project construction may unearth or adversely impact subsurface archaeological resources.	**CR-2a: Worker's Environmental Awareness Program** The County of Santa Cruz shall retain a qualified archaeologist to conduct Worker's Environmental Awareness Program training on archaeological sensitivity for all construction personnel prior to the commencement of any ground-disturbing activities. Training shall be provided periodically throughout ground-disturbing activities as new construction personnel are added to the Project. The training shall be conducted by an archaeologist who meets or exceeds the Secretary of Interior's Professional Qualifications Standards for Archeology. Archaeological sensitivity training shall include a description of the types of cultural material that may be encountered, cultural sensitivity issues, regulatory issues, and the proper protocol for treatment of the	County	Qualified archaeologist to conduct Worker's Environmental Awareness Program	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		materials in the event of a find. Training shall be documented on a sign-in sheet to be provided to the County .			
		CR-2b: Archaeological Monitoring For construction activities occurring within the boundaries of previously recorded archaeological resources and a 300-foot buffer around each resource, the County of Santa Cruz shall retain a qualified archaeologist to delineate these locations and to monitor project-related ground-disturbing activities. Archaeological monitoring shall be performed under the direction of an archaeologist meeting or exceeding the Secretary of the Interior's Professional Qualifications Standards for Archeology. Monitors shall have the authority to halt and redirect work should any archaeological resources be identified during monitoring. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt, and Mitigation Measure CR-2d, Implementation of Protocol for Unanticipated Discovery of Cultural Resources, shall be implemented. Archaeological monitoring may be reduced or halted at the discretion of the monitor, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments that are planned to be excavated are comprised of fill, or negative findings during the first 50% of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground disturbance moves to a new location within the Project corridor and when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock). Furthermore, monitoring may be terminated in the event that it is determined that the soils within the Project corridor do not have the potential to contain cultural resources. The monitor shall submit a report within 30 days of completion of all ground-disturbing activities to the County to document compliance.	County	Qualified archaeologist to monitor Project-related ground-disturbing activities	To be implemented prior to and during project construction
		CR-2c: Native American Monitoring For construction activities occurring within the boundaries of previously recorded archaeological resources and a 300-foot buffer around each resource, the County of Santa Cruz shall retain a Native American monitor from a locally affiliated Tribal member(s). Native American monitor(s) shall have the authority to halt and redirect work should any archaeological or Tribal Cultural Resources be identified during monitoring. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt, and Mitigation Measure CR-2d, Implementation of Protocol for Unanticipated Discovery of Cultural Resources, shall be implemented. Native American monitoring may be reduced or halted at the discretion of the monitors, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments	County	Native American monitor from locally affiliated tribe to monitor Project-related ground-disturbing activities	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		that are planned to be excavated are comprised of fill, or negative findings during the first 50% of ground disturbance. If monitoring is reduced to spot-checking, spot-checking shall occur when ground disturbance moves to a new location in the Project corridor and when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock). Furthermore, monitoring may be terminated in the event that it is determined that the soils within the Project corridor do not have the potential to contain cultural resources.			
		CR-2d: Implementation of Protocol for Unanticipated Discovery of Cultural Resources In the event that archaeological resources are unexpectedly encountered during ground-disturbing construction activities, the construction contractor shall halt work within 200 feet of the find, and the County of Santa Cruz shall contact an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology to immediately evaluate the find if an archaeological monitor is not already present. If the find is determined by the qualified archaeologist to be prehistoric and a Native American monitor is not already present, then the County shall contact a Native American representative to participate in the evaluation of the find. If necessary, archaeological testing for California Register of Historical Resources eligibility shall be completed by the qualified archaeologist. If the discovery proves to be eligible for the California Register of Historical Resources and impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the deposit, per the requirements of California Public Resources Code, Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The County, in coordination with the City, shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Public Resources Code, Section 15126.4(b)(3)(C).	County Construction Contractor	Contractor to halt work within 200 feet of any archaeological resources encountered during ground-disturbing activities	To be implemented prior to and during project construction
Geology and Soils					
	GEO-5. Ground-disturbing activities during Project construction may directly or indirectly destroy a unique	**GEO-5: Implement Paleontological Resources Protection Measures during Construction in High Sensitivity Areas**	County	Retain qualified professional	To be implemented prior

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
	paleontological resource or site or unique geologic feature.	The following measures shall be implemented by the County of Santa Cruz during Project excavation activities exceeding 1 foot in depth in Segments 10 and 11 in areas mapped as geologic units with high paleontological sensitivity (i.e., Quaternary marine terrace deposits, Quaternary alluvial fan deposits, and Purisima Formation). Areas along Segments 10 and 11 that do not have high sensitivity for paleontological resources, including the areas mapped as geologic units with low paleontological sensitivity, do not require the following measures. 1. **Retain a Qualified Professional Paleontologist.** Prior to excavation, the County shall retain a qualified professional paleontologist who is defined by the Society of Vertebrate Paleontology (2010) as an individual, preferably with an MS or PhD in paleontology or geology, who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for at least 2 years. The qualified professional paleontologist shall direct all mitigation measures related to paleontological resources. 2. **Prepare a Paleontological Worker Environmental Awareness Program.** Prior to the start of construction, the qualified professional paleontologist or their designee shall conduct a paleontological Worker Environmental Awareness Program training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. 3. **Monitor for Paleontological Resources during Construction.** As determined appropriate by the qualified professional paleontologist, paleontological monitoring shall be conducted during initial excavations within sediments assigned high paleontological sensitivity (i.e., Quaternary marine terrace deposits, Quaternary alluvial fan deposits, and Purisima Formation). Paleontological monitoring shall be conducted by a paleontological monitor with experience with collection and salvage of paleontological resources and who meets the minimum standards of the Society of Vertebrate Paleontology (2010) for a paleontological resources monitor. The duration and timing of the monitoring shall be determined by the qualified professional paleontologist based on the observation of the geologic setting from initial ground disturbance and subject to the review and approval by the County. The qualified professional paleontologist may determine that full-time monitoring is not warranted based on the specific geologic conditions once the full depth of excavations has been reached and may recommend that monitoring be reduced to periodic spot-checking or ceased entirely. The qualified professional paleontologist may determine that monitoring shall be reinstated if any new ground disturbances are		paleontologist to implement mitigation	to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		required, and reduction or suspension shall be reconsidered by the qualified professional paleontologist at that time. In the event of a fossil discovery by the paleontological monitor or construction personnel, all work in the immediate vicinity of the find shall cease, and a qualified professional paleontologist shall evaluate the find before construction activity in the area resumes. If it is determined that the fossil is scientifically significant, the qualified professional paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources: A. **Fossil Salvage.** If fossils are discovered, the paleontological monitor shall have the authority to halt or temporarily divert construction equipment within 50 feet of the find until the paleontological monitor and/or qualified professional paleontologist evaluate the discovery and determine if the fossil may be considered significant. Typically, fossils can be safely salvaged quickly by a single paleontological monitor and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically sensitive deposits. B. **Fossil Preparation and Curation**. Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection along with all pertinent field notes, photographs, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the qualified professional paleontologist. 4. **Prepare a Final Paleontological Mitigation Report.** Upon completion of ground-disturbing activity (and curation of fossils if necessary), the qualified professional paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts associated with the Project. The report shall include a summary of the field and laboratory methods, an overview of the Project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the County. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.			

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
Hazards and Hazardous Materials					
	HAZ-1. Demolition activities, ground disturbance, or accidental spills during construction could release contaminants, including within a 0.25 mile of schools.	**Mitigation Measure HAZ-1a: Conduct Soil Sampling and Implement Necessary Remediations** Prior to Project construction, the County of Santa Cruz, in coordination with the RTC, shall prepare and submit Work Plans for a Supplemental Soils Investigation to Santa Cruz County Environmental Health. The Supplemental Soils Investigation shall include an evaluation of near-surface materials (soil and ballast) within the Project area. Following notification that Santa Cruz County Environmental Health has received, reviewed, and accepted these Work Plan(s), the County shall conduct a Supplemental Soils Investigation, which shall include near-surface materials sampling at selected locations within the limits of the Project corridor under the supervision of a professional geologist or professional civil engineer to identify the concentrations of anticipated contaminants, which may include arsenic, pesticides, herbicides, heavy metals, creosote, PAHs, and other reasonably anticipated contaminants of concern associated with prior rail use. The County shall coordinate with Santa Cruz County Environmental Health to develop and implement a program to remediate or manage known contaminated materials during construction. If necessary, any additional information gathered from a Supplemental Soil Investigation shall be used to identify locations along the Project corridor that may require remedial action in order to prevent exposure of construction workers, school attendees, and the public to these contaminants. The environmental data collected shall also be used to identify the appropriate disposal options for those materials that require off-site disposal. Disposal shall occur at an appropriate facility licensed to handle such contaminants, and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such activities. The remediation/disposal program shall be approved by Santa Cruz County Environmental Health. The County shall submit any required correspondence to Santa Cruz County Environmental Health prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed in accordance with applicable DTSC and CalOSHA regulations. Upon completion of the Supplemental Site Investigation, the environmental consultant shall prepare a report presenting the findings of the additional assessment. The report shall be submitted to Santa Cruz County Environmental Health and include figures depicting the boring locations, summary tables of analytical data, conclusions, and recommendations.	County in coordination with RTC and Santa Cruz County Environmental Health	Prepare and submit Work Plans for Supplemental Soils Investigation	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		Mitigation Measure HAZ-1b: Prepare and Implement Soils Management Plan The County of Santa Cruz shall ensure a Soils Management Plan is developed by a qualified engineer. The plan shall be implemented to protect workers and persons at nearby schools during ground-disturbing activities and to remove and/or mitigate exposure to hazardous materials (soil and/or ballast), where present in the Project corridor. Laboratory data for the Supplemental Soils Investigation conducted under Mitigation Measure HAZ-1a shall be used to profile excavated materials prior to transport, treatment, recycling, capping, or disposal at a licensed treatment facility. Additional profiling of the export materials shall be performed as needed to satisfy requirements of the receiving facility. Removal, transportation, and disposal of contaminated materials shall be performed in accordance with applicable DTSC and CalOSHA laws, regulations, and ordinances. The Soils Management Plan shall include health and safety information for workers and the general public with an emphasis on potential adverse health effects and how to seek proper help if an accident is suspected and inform the various contractors and workers of the presence of contaminated shallow materials and the appropriate measures to avoid exposure to contaminants. These measures may include but would not be limited to the following: 1. Installing temporary security fencing around the construction site and flag/cone off the areas of contaminated soils (hotspots) until the contaminants are removed 2. Providing all personnel entering a hotspot with site-specific awareness training 3. Requiring that all personnel whose work will involve the excavation or disturbance of soils in and around the hotspot must have successfully completed 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training 4. Requiring a HAZWOPER supervisor to be on-site at all times during the excavation or disturbance of soils in a hotspot 5. Prohibiting personnel who cannot prove that they are authorized to enter a hotspot or do not have the appropriate personal protective equipment from entering a hotspot 6. Prohibiting eating, drinking, smoking, chewing gum or tobacco in hotspots, and requiring consumable items and activities be confined to designated worker break areas In the event that contaminated materials and/or groundwater is identified where not previously anticipated during construction, the Soils Management Plan shall also require that construction cease and that appropriate handling and disposal procedures be implemented. Contaminated materials and/or groundwater can be identified by	County in coordination with RTC and Santa Cruz County Environmental Health	Retain qualified engineer to develop Soils Management Plan	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		discoloration or stains, distinctive odors, absence of plants and animals, subsequent erosion from the absence of plant life, or the presence of paint chips or other materials known to contaminate near-surface materials. Procedures for properly handling, storing, and disposing of contaminated soils may include but are not limited to the following: 1. Placing contaminated materials in properly labeled drums or lined hazardous waste storage/transportation conveyance units (i.e., roll-off waste boxes) in preparation of transportation and disposal 2. Avoiding temporary stockpiling of hazardous materials 3. If temporary stockpiling is necessary: a. Covering the stockpile with plastic sheeting or tarps b. Installing a berm around the stockpile to prevent runoff from leaving the area c. Avoiding stockpiling in or near storm drains or watercourses 4. Monitoring the air quality during excavation operations at locations potentially exhibiting elevated concentrations of hazardous material 5. Collecting water from decontamination procedures and treating and/or disposing of it at an appropriate disposal site 6. Collecting non-reusable protective equipment and disposing of the equipment at an appropriate disposal site			
		Mitigation Measure HAZ-1c: Evaluate and Cap Contaminated Subgrade Soil and Ballast (Only Required for Optional Interim Trail Part 1 and Design Option A) In locations where the trail pavement would be placed on the existing rail ballast during construction of the Optional Interim Trail (Part 1) and Design Option A for the Ultimate Trail Configuration, the County of Santa Cruz, in coordination with the RTC, shall evaluate and cap the subgrade materials (soil and ballast) as follows. Prior to the finalization of pavement design for the Optional Interim Trail and prior to removal of the rail and construction of the Optional Interim Trail (Part 1), as well as Design Option A, the structural quality of the subgrade materials shall be evaluated to ensure that it has adequate strength to carry the predicted loads during the design life of the pavement and to avoid exposure of trail users to hazardous materials. The Optional Interim Trail pavement shall also be engineered to limit the expansion and loss of density of the subgrade soil. The existing ballast material shall serve as the base rock layer to support the base material and asphalt layer of the cover. The ballast material shall be leveled to establish a base rock layer at a depth to be determined following evaluation of hazardous materials.	County in coordination with RTC and Santa Cruz County Environmental Health	Develop regulatory oversight agreement to ensure asphalt cap is maintained as designed	To be implemented prior to and during project construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		Residual materials disturbed by construction (on which the trail would be placed) would be capped (e.g., covered with asphalt) to avoid exposure of trail users to hazardous materials. To ensure that the asphalt cap is maintained as designed, a regulatory oversight agreement between the owner or their designee and Santa Cruz County Environmental Health shall be required. This Post-Construction Site Management Plan shall include procedures and requirements for ongoing maintenance of the asphalt cap to ensure the cap is maintained in good condition so that it remains protective of public health and the environment. The Accountable Care Organization Agreement shall include the following elements: ▪ **Inspections.** The cap shall be regularly inspected to ensure that it is functioning as intended. These inspections shall be conducted on a routine basis as well as after unplanned events (e.g., earthquake, on-site construction activity) that may have affected the integrity of the asphalt cap. ▪ **Repairs and Maintenance.** The cap shall be maintained in a manner that ensures it is functioning as intended. Examples of cap maintenance include vegetation control and repairs due to cover erosion, asphalt cracking, settlement, and subsidence. For asphalt and concrete caps, periodic sealing of the cap surface will be necessary. Repairs and maintenance of the cap shall be performed according to the procedures and timeframes specified in the Accountable Care Organization Agreement. ▪ **Reporting, Recordkeeping, and Notification.** The Accountable Care Organization Agreement shall outline the recordkeeping requirements, provide for submittal of periodic inspection summary reports, identify the site activities or conditions that require notification of the regulatory agencies, and identify the time frame and mechanism (e.g., verbal, written) for the required notifications.			
Noise					
	N-1. Construction may result in a substantial temporary increase in noise levels.	**Mitigation Measure N-1: Implement Noise-Reducing Measures for Construction Equipment Used within 275 Feet of Residences or Hotels** The County of Santa Cruz shall include the following in the construction specifications. During construction, the construction contractor shall employ the following noise-reducing measures where use of construction equipment occurs within 275 feet of residences or hotels: ▪ Use acoustical shelters around any air compressors, generators, and any other stationary construction equipment not fitted with baffled enclosures	County Construction Contractor	Employ noise-reducing measures within 275 feet of residences or hotels	During construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		▪ Use baffling around stationary construction equipment to reduce noise and vibration levels ▪ Properly muffle and maintain all construction equipment powered by internal combustion engines ▪ Prohibit unnecessary idling of internal combustion engines ▪ Whenever feasible, use electrical power to run air compressors and similar power tools			
	N-3. Construction would potentially expose persons to or generate excessive groundborne vibration or groundborne noise levels.	**Mitigation Measure N-3: Provide Notification of Construction Vibration to Residential Units and Manufacturing Operations within 235 Feet** The County of Santa Cruz shall ensure that the construction specifications include the following noticing requirement. The construction contractor shall provide written notification at least 1 week prior to the start of any construction activities involving the use of vibratory equipment to all residential units located within 50 feet or manufacturing uses within 235 feet of the construction area that would produce the vibration. The notice shall inform residents of the estimated start date and duration of daytime vibration-generating construction activities and provide a point of contact for vibration exposure complaints.	County Construction Contractor	Notify all residential units within 50 feet and/or manufacturing uses within 235 feet at least 1 week prior to start of construction activities	Prior to and during construction
Tribal Cultural Resources					
	TCR-1. The Project may cause a substantial adverse change in the significance of a tribal cultural resource.	**Mitigation Measure TCR-1a: Conduct Native American Monitoring during Construction in Previously Undisturbed Native Soils** The County of Santa Cruz and/or their construction contractor shall retain a Native American monitor to be present during excavation activities within previously undisturbed native soils. In the event that cultural resources of Native American origin are identified during construction, the Native American monitor shall have the authority to halt and redirect ground disturbance away from the find. The County and/or tribal liaison, as appropriate, shall consult with a qualified archaeologist and begin or continue Native American consultation procedures. If the County and/or tribal liaison, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under the California Environmental Quality Act, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with Native American groups. The mitigation plan may include but would not be limited to avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.	County Construction Contractor	Retain Native American monitor to be present during excavation activities Contractor to halt work within 50 feet of any cultural resources encountered during project construction	During construction

No.	Environmental Impact	Mitigation Measures	Responsibility for Compliance	Method of Compliance	Timing of Compliance
		Mitigation Measure TCR-1b: Implement Protocol for Unanticipated Discovery of Tribal Cultural Resources if Native American Monitor is Not Present If cultural resources of Native American origin are identified during project construction while the Native American monitor is not present, the County of Santa Cruz and/or their construction contractor shall cease all earth-disturbing work within 50 feet of the find and desist until an archaeologist has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted. Staking of the area of discovery shall be implemented with stakes no more than 10 feet apart, forming a circle having a radius of no less than 100 feet from the point of discovery. If the County, in consultation with local Native American tribes, determines that the resource is a tribal cultural resource and thus significant under the California Environmental Quality Act, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with local Native American groups. The plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include but are not limited to protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, and/or performing heritage recovery.			

[1] Sensitive fish species include tidewater goby (and its critical habitat), central California coast steelhead (and its critical habitat), and Pacific lamprey.

CalOSHA = California Occupational Safety and Health Administration; CCC = California Coastal Commission; CDFW = California Department of Fish and Wildlife; CESA = California Endangered Species Act; DTSC = California Department of Toxic Substance Control; ESHA = Environmental Sensitive Habitat Area; FESA = federal Endangered Species Act; HAZWOPER = Hazardous Waste Operations and Emergency Response; MBTA = Migratory Bird Treaty Act; MMP = Mitigation and Management Plan; MMRP = Mitigation Monitoring and Reporting Program; NOAA = National Oceanic and Atmospheric Administration; PG&E = Pacific Gas & Electric; RTC = Santa Cruz County Regional Transportation Commission; RWQCB = Regional Water Quality Control Board; SCBRL = Santa Cruz Branch Rail Line; USACE = U.S. Army Corps of Engineers; USFWS = U.S. Fish and Wildlife Service

Sources:

Pacific Gas & Electric Company (PG&E), ICF International, and H. T. Harvey & Associates. 2015. *Nesting Bird Management Plan: Biologists Guidelines for PG&E Utility Operations, Maintenance, and Projects*. August 2015.

Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.

Santa Cruz County Regional Transportation Commission (RTC). 2013. *Monterey Bay Sanctuary Scenic Trail Network Master Plan Final Environmental Impact Report*. Santa Cruz, CA. November 7, 2013. Accessed October 2023. https://sccrtc.org/projects/multi-modal/monterey-bay-sanctuary-scenic-trail/final-environmental-impact-report-on-the-monterey-bay-santucary-scenic-trail-mbsst/.

Weber, Hayes & Associates (WHA). 2023. *Initial Site Assessment Coastal Rail Trail Project Segments 10 & 11*. April 13, 2023.

Appendix E. Air Quality and Greenhouse Gas Modeling Assumptions

This page intentionally left blank.

Rail Trail 10/11 Ultimate Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

3.3. Linear, Grading & Excavation (2026) - Unmitigated

3.5. Linear, Grading & Excavation (2027) - Unmitigated

3.7. Linear, Grading & Excavation (2028) - Unmitigated

3.9. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

3.11. Linear, Drainage, Utilities, & Sub-Grade (2029) - Unmitigated

3.13. Linear, Paving (2029) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Rail Trail 10/11 Ultimate
Construction Start Date	1/2/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	0.60
Location	36.96393876369363, -121.9656080602527
County	Santa Cruz
City	Unincorporated
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3138
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	4.20	Mile	10.7	0.00	—	—	—	—

Bridge/Overpass Construction	2.00	Mile	2.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.3	9.47	76.9	92.2	0.19	3.32	4.90	8.22	3.06	0.65	3.70	—	21,340	21,340	0.91	0.28	4.33	21,452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.3	9.47	77.1	92.2	0.19	3.32	4.90	8.22	3.06	0.65	3.70	—	21,306	21,306	0.92	0.28	0.11	21,413
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.71	6.49	51.2	65.2	0.14	2.16	3.50	5.66	1.99	0.46	2.45	—	15,201	15,201	0.65	0.20	1.24	15,278
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.41	1.18	9.34	11.9	0.02	0.39	0.64	1.03	0.36	0.08	0.45	—	2,517	2,517	0.11	0.03	0.21	2,530

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.3	9.47	76.9	92.2	0.19	3.32	4.90	8.22	3.06	0.65	3.70	—	21,340	21,340	0.91	0.28	4.33	21,452
2027	10.8	9.10	71.6	91.6	0.19	3.02	4.90	7.92	2.78	0.65	3.43	—	21,315	21,315	0.90	0.28	4.02	21,426
2028	7.83	6.59	51.7	66.2	0.15	1.98	4.30	6.28	1.82	0.55	2.37	—	16,842	16,842	0.70	0.18	2.59	16,918
2029	7.56	6.36	48.3	65.3	0.15	1.82	4.30	6.12	1.68	0.55	2.22	—	16,824	16,824	0.70	0.18	2.38	16,899
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.3	9.47	77.1	92.2	0.19	3.32	4.90	8.22	3.06	0.65	3.70	—	21,306	21,306	0.92	0.28	0.11	21,413
2027	10.8	9.10	71.7	91.5	0.19	3.02	4.90	7.92	2.78	0.65	3.43	—	21,281	21,281	0.91	0.28	0.10	21,388
2028	10.4	8.71	66.9	90.8	0.19	2.75	4.90	7.65	2.53	0.65	3.17	—	21,255	21,255	0.91	0.28	0.10	21,361
2029	7.56	6.36	48.3	65.2	0.15	1.82	4.30	6.12	1.68	0.55	2.22	—	16,797	16,797	0.69	0.19	0.06	16,870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	5.24	4.41	35.6	42.8	0.09	1.55	2.45	4.00	1.42	0.33	1.75	—	9,611	9,611	0.41	0.13	0.97	9,660
2027	7.71	6.49	51.2	65.2	0.14	2.16	3.50	5.66	1.99	0.46	2.45	—	15,201	15,201	0.65	0.20	1.24	15,278
2028	5.96	5.01	39.2	50.7	0.12	1.53	3.17	4.69	1.41	0.40	1.81	—	12,678	12,678	0.53	0.15	0.87	12,736
2029	3.15	2.66	20.1	29.3	0.06	0.72	1.65	2.37	0.66	0.23	0.89	—	6,762	6,762	0.29	0.09	0.62	6,796
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.96	0.80	6.50	7.82	0.02	0.28	0.45	0.73	0.26	0.06	0.32	—	1,591	1,591	0.07	0.02	0.16	1,599
2027	1.41	1.18	9.34	11.9	0.02	0.39	0.64	1.03	0.36	0.08	0.45	—	2,517	2,517	0.11	0.03	0.21	2,530
2028	1.09	0.91	7.15	9.26	0.02	0.28	0.58	0.86	0.26	0.07	0.33	—	2,099	2,099	0.09	0.02	0.14	2,109
2029	0.58	0.48	3.66	5.35	0.01	0.13	0.30	0.43	0.12	0.04	0.16	—	1,120	1,120	0.05	0.01	0.10	1,125

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.31	1.09	9.50	10.7	0.02	0.46	—	0.46	0.42	—	0.42	—	1,489	1,489	0.06	0.01	—	1,494
Dust From Material Movemen	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.31	1.09	9.50	10.7	0.02	0.46	—	0.46	0.42	—	0.42	—	1,489	1,489	0.06	0.01	—	1,494
Dust From Material Movemen	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.71	3.05	< 0.005	0.13	—	0.13	0.12	—	0.12	—	424	424	0.02	< 0.005	—	426
Dust From Material Movemen	—	—	—	—	—	—	0.12	0.12	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	1.41	1.41	< 0.005	< 0.005	< 0.005	1.49

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.49	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	70.2	70.2	< 0.005	< 0.005	—	70.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.25
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.15	2.20	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.02	0.01	1.41	351
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.20	2.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	330	330	0.02	0.01	0.04	335
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.58	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	94.1	94.1	0.01	< 0.005	0.17	95.7
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	1.41	1.41	< 0.005	< 0.005	< 0.005	1.49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.25
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	7.44	7.44	< 0.005	< 0.005	0.01	7.85
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	7.44	7.44	< 0.005	< 0.005	< 0.005	7.84
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.54	3.81	32.3	37.0	0.08	1.41	—	1.41	1.30	—	1.30	—	8,520	8,520	0.35	0.07	—	8,549
Dust From Material Movemen	—	—	—	—	—	—	1.59	1.59	—	0.17	0.17	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.17	3.17	< 0.005	< 0.005	< 0.005	3.35
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.70	5.90	6.75	0.01	0.26	—	0.26	0.24	—	0.24	—	1,411	1,411	0.06	0.01	—	1,415
Dust From Material Movement	—	—	—	—	—	—	0.29	0.29	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.55
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.56	0.53	0.36	5.20	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	817	817	0.05	0.03	3.35	831
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	0.10	43.7
Hauling	0.06	0.01	0.75	0.30	0.01	0.01	0.12	0.13	0.01	0.03	0.04	—	504	504	0.05	0.08	0.88	530
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.53	0.47	5.15	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	782	782	0.06	0.03	0.09	794
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	< 0.005	43.6
Hauling	0.06	0.01	0.78	0.30	0.01	0.01	0.12	0.13	0.01	0.03	0.04	—	504	504	0.05	0.08	0.02	529
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.22	0.18	2.07	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	334	334	0.02	0.01	0.62	339
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.8	17.8	< 0.005	< 0.005	0.02	18.6
Hauling	0.02	< 0.005	0.33	0.13	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	215	215	0.02	0.03	0.16	226
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.38	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.3	55.3	< 0.005	< 0.005	0.10	56.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.94	2.94	< 0.005	< 0.005	< 0.005	3.08

Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.6	35.6	< 0.005	0.01	0.03	37.4

3.5. Linear, Grading & Excavation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.2	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	7.32	7.32	< 0.005	< 0.005	< 0.005	7.73
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.2	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	7.33	7.33	< 0.005	< 0.005	< 0.005	7.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.29	6.12	50.3	61.6	0.13	2.15	—	2.15	1.98	—	1.98	—	14,265	14,265	0.58	0.12	—	14,314

Dust From Material Movemen	—	—	—	—	—	—	2.66	2.66	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	5.23	5.23	< 0.005	< 0.005	< 0.005	5.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.33	1.12	9.18	11.3	0.02	0.39	—	0.39	0.36	—	0.36	—	2,362	2,362	0.10	0.02	—	2,370
Dust From Material Movemen	—	—	—	—	—	—	0.49	0.49	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.87	0.87	< 0.005	< 0.005	< 0.005	0.91
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.35	4.90	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	803	803	0.05	0.03	3.11	817
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	0.09	42.9
Hauling	0.05	0.01	0.71	0.29	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	493	493	0.04	0.08	0.82	519
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.44	4.85	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	769	769	0.05	0.03	0.08	780
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	< 0.005	42.8
Hauling	0.05	0.01	0.74	0.29	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	493	493	0.04	0.08	0.02	518
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.36	0.28	3.27	0.00	0.00	0.55	0.55	0.00	0.13	0.13	—	549	549	0.04	0.02	0.96	558
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.2	29.2	< 0.005	< 0.005	0.03	30.6
Hauling	0.04	0.01	0.52	0.21	< 0.005	< 0.005	0.08	0.09	< 0.005	0.02	0.03	—	352	352	0.03	0.06	0.25	370

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.60	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.9	90.9	0.01	< 0.005	0.16	92.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.83	4.83	< 0.005	< 0.005	< 0.005	5.06
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	58.4	58.4	0.01	0.01	0.04	61.3

3.7. Linear, Grading & Excavation (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	9.80	8.23	65.7	85.9	0.18	2.74	—	2.74	2.52	—	2.52	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	7.21	7.21	< 0.005	< 0.005	< 0.005	7.60
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.40	1.18	9.39	12.3	0.03	0.39	—	0.39	0.36	—	0.36	—	2,853	2,853	0.12	0.02	—	2,863
Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.03	1.03	< 0.005	< 0.005	< 0.005	1.09

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.21	1.71	2.24	< 0.005	0.07	—	0.07	0.07	—	0.07	—	472	472	0.02	< 0.005	—	474
Dust From Material Movemen	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.18
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.53	0.47	0.39	4.57	0.00	0.00	0.77	0.77	0.00	0.18	0.18	—	756	756	0.05	0.03	0.07	767
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.9	39.9	< 0.005	0.01	< 0.005	41.7
Hauling	0.05	0.01	0.70	0.28	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	481	481	0.04	0.08	0.02	505
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.05	0.62	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	108	108	0.01	< 0.005	0.18	110
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.70	5.70	< 0.005	< 0.005	< 0.005	5.97
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	68.8	68.8	0.01	0.01	0.05	72.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.03	18.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.99
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.4	11.4	< 0.005	< 0.005	0.01	12.0

3.9. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.38	6.19	51.1	62.3	0.15	1.98	—	1.98	1.82	—	1.82	—	16,024	16,024	0.65	0.13	—	16,079
Dust From Material Movemen	—	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.80	4.80	< 0.005	< 0.005	< 0.005	5.06
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.38	6.19	51.1	62.3	0.15	1.98	—	1.98	1.82	—	1.82	—	16,024	16,024	0.65	0.13	—	16,079
Dust From Material Movemen	—	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.81	4.81	< 0.005	< 0.005	< 0.005	5.07
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.23	3.55	29.3	35.7	0.09	1.13	—	1.13	1.04	—	1.04	—	9,188	9,188	0.37	0.07	—	9,220
Dust From Material Movemen	—	—	—	—	—	—	1.78	1.78	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.77	0.65	5.35	6.52	0.02	0.21	—	0.21	0.19	—	0.19	—	1,521	1,521	0.06	0.01	—	1,526
Dust From Material Movement	—	—	—	—	—	—	0.32	0.32	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.40	0.26	3.70	0.00	0.00	0.62	0.62	0.00	0.14	0.14	—	631	631	0.04	0.03	2.31	642
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.80	4.80	< 0.005	< 0.005	< 0.005	5.06
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	177	177	0.02	0.03	0.27	186
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.38	0.31	3.66	0.00	0.00	0.62	0.62	0.00	0.14	0.14	—	605	605	0.04	0.03	0.06	614
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.81	4.81	< 0.005	< 0.005	< 0.005	5.07
Hauling	0.02	< 0.005	0.27	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	177	177	0.02	0.03	0.01	185
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.21	0.16	1.98	0.00	0.00	0.35	0.35	0.00	0.08	0.08	—	347	347	0.02	0.02	0.57	353
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.90
Hauling	0.01	< 0.005	0.15	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	101	101	0.01	0.02	0.07	106
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.36	0.00	0.00	0.06	0.06	0.00	0.02	0.02	—	57.4	57.4	< 0.005	< 0.005	0.09	58.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.48
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.8	16.8	< 0.005	< 0.005	0.01	17.6

3.11. Linear, Drainage, Utilities, & Sub-Grade (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.14	5.99	47.7	61.7	0.15	1.82	—	1.82	1.67	—	1.67	—	16,021	16,021	0.65	0.13	—	16,076
Dust From Material Movemen	—	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.14	5.99	47.7	61.7	0.15	1.82	—	1.82	1.67	—	1.67	—	16,021	16,021	0.65	0.13	—	16,076
Dust From Material Movemen	—	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.73	4.73	< 0.005	< 0.005	< 0.005	4.99
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.01	1.69	13.4	17.4	0.04	0.51	—	0.51	0.47	—	0.47	—	4,515	4,515	0.18	0.04	—	4,530
Dust From Material Movemen	—	—	—	—	—	—	0.87	0.87	—	0.09	0.09	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.40
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.45	3.17	0.01	0.09	—	0.09	0.09	—	0.09	—	747	747	0.03	0.01	—	750
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.37	0.24	3.49	0.00	0.00	0.62	0.62	0.00	0.14	0.14	—	621	621	0.04	0.03	2.13	632
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.98
Hauling	0.02	< 0.005	0.25	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	172	172	0.01	0.03	0.25	181
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.36	0.29	3.43	0.00	0.00	0.62	0.62	0.00	0.14	0.14	—	595	595	0.02	0.03	0.06	603
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.73	4.73	< 0.005	< 0.005	< 0.005	4.99
Hauling	0.02	< 0.005	0.26	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	172	172	0.01	0.03	0.01	181
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	0.91	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	168	168	0.01	0.01	0.26	170
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	1.33	1.33	< 0.005	< 0.005	< 0.005	1.40
Hauling	0.01	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.5	48.5	< 0.005	0.01	0.03	50.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.8	27.8	< 0.005	< 0.005	0.04	28.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.22	0.22	< 0.005	< 0.005	< 0.005	0.23

Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	8.03	8.03	< 0.005	< 0.005	0.01	8.44

3.13. Linear, Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.09	1.75	14.7	23.2	0.04	0.48	—	0.48	0.44	—	0.44	—	4,153	4,153	0.17	0.03	—	4,167
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.09	1.75	14.7	23.2	0.04	0.48	—	0.48	0.44	—	0.44	—	4,153	4,153	0.17	0.03	—	4,167
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.73	4.73	< 0.005	< 0.005	< 0.005	4.99
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.75	6.26	9.92	0.02	0.20	—	0.20	0.19	—	0.19	—	1,775	1,775	0.07	0.01	—	1,781

Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	2.02	2.02	< 0.005	< 0.005	< 0.005	2.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.14	1.81	< 0.005	0.04	—	0.04	0.03	—	0.03	—	294	294	0.01	< 0.005	—	295
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.35
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.27	0.18	2.61	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	466	466	0.03	0.02	1.60	474
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.98
Hauling	0.01	< 0.005	0.20	0.09	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	137	137	0.01	0.02	0.20	145
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.29	0.27	0.22	2.58	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	446	446	0.02	0.02	0.04	453
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.35	0.35	< 0.005	0.04	0.04	—	4.73	4.73	< 0.005	< 0.005	< 0.005	4.99
Hauling	0.01	< 0.005	0.21	0.09	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	137	137	0.01	0.02	0.01	144
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.08	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	191	191	0.01	0.01	0.29	194
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	—	2.02	2.02	< 0.005	< 0.005	< 0.005	2.13
Hauling	0.01	< 0.005	0.09	0.04	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	58.7	58.7	< 0.005	0.01	0.04	61.7

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31.6	31.6	< 0.005	< 0.005	0.05	32.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.35
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.72	9.72	< 0.005	< 0.005	0.01	10.2

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/2/2026	5/27/2026	5.00	104	—
Linear, Grading & Excavation	Linear, Grading & Excavation	5/28/2026	3/13/2028	5.00	468	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	3/14/2028	5/24/2029	5.00	312	—
Linear, Paving	Linear, Paving	5/25/2029	12/29/2029	5.00	156	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	12.0	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	2.00	6.00	33.0	0.73
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	7.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	5.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	4.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	12.0	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48

Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	12.0	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Linear, Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	12.0	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Welders	Diesel	Average	1.00	6.00	46.0	0.45

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	47.5	9.71	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	2.00	0.25	HHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	2.00	0.25	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	113	9.71	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	6.06	HHDT,MHDT
Linear, Grading & Excavation	Hauling	3.16	40.0	HHDT
Linear, Grading & Excavation	Onsite truck	3.00	0.25	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	90.0	9.71	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	2.00	0.25	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	2.29	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	2.00	0.25	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	67.5	9.71	LDA,LDT1,LDT2
Linear, Paving	Vendor	2.00	0.25	HHDT
Linear, Paving	Hauling	1.83	20.0	HHDT
Linear, Paving	Onsite truck	2.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction

Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	0.00	0.00	12.7	0.00	—
Linear, Grading & Excavation	0.00	11,811	12.7	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	5,728	0.00	12.7	0.00	—
Linear, Paving	2,287	0.00	12.7	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	10.7	100%
Bridge/Overpass Construction	2.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	704	204	0.03	< 0.005
2027	352	204	0.03	< 0.005
2028	704	204	0.03	< 0.005
2029	704	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	4.53	annual days of extreme heat
Extreme Precipitation	11.3	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	8.29	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6

AQ-PM	3.62
AQ-DPM	16.4
Drinking Water	43.1
Lead Risk Housing	56.0
Pesticides	0.00
Toxic Releases	16.0
Traffic	19.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	28.1
Haz Waste Facilities/Generators	27.1
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	25.4
Cardio-vascular	25.5
Low Birth Weights	7.66
Socioeconomic Factor Indicators	—
Education	48.3
Housing	66.1
Linguistic	24.8
Poverty	48.4
Unemployment	2.29

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Economic	—
Above Poverty	57.35916848
Employed	70.51199795
Median HI	40.78018735
Education	—
Bachelor's or higher	76.26074682
High school enrollment	100
Preschool enrollment	70.47350186
Transportation	—
Auto Access	30.23225972
Active commuting	79.5072501
Social	—
2-parent households	31.01501347
Voting	70.25535737
Neighborhood	—
Alcohol availability	16.50198896
Park access	81.35506224
Retail density	34.65930964
Supermarket access	39.90760939
Tree canopy	76.4275632
Housing	—
Homeownership	44.28333119
Housing habitability	56.21711793
Low-inc homeowner severe housing cost burden	74.22045425
Low-inc renter severe housing cost burden	30.87386116
Uncrowded housing	46.38778391
Health Outcomes	—

Insured adults	67.2783267
Arthritis	0.0
Asthma ER Admissions	75.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	39.1
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	80.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.5
Children	47.4

Elderly	48.0
English Speaking	76.4
Foreign-born	27.9
Outdoor Workers	47.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	40.9
Traffic Density	30.6
Traffic Access	0.0
Other Indices	—
Hardship	28.3
Other Decision Support	—
2016 Voting	86.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction would tak
Construction: Off-Road Equipment	Added additional equipment listed in Project Description
Construction: Trips and VMT	Assume 50% of excavated material requires hazardous disposal, Added two onsite water trucks, made one a vendor trip in all but excavation to avoid empty cells
Construction: On-Road Fugitive Dust	Project accessible by paved roadways
Construction: Dust From Material Movement	Added paving for import of materials

10/11 Ultimate Both Design Options Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

3.3. Linear, Grading & Excavation (2026) - Unmitigated

3.5. Linear, Grading & Excavation (2027) - Unmitigated

3.7. Linear, Grading & Excavation (2028) - Unmitigated

3.9. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

3.11. Linear, Drainage, Utilities, & Sub-Grade (2029) - Unmitigated

3.13. Linear, Paving (2029) - Unmitigated

3.15. Linear, Paving (2030) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	10/11 Ultimate Both Design Options
Construction Start Date	1/2/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	0.60
Location	36.96393876369363, -121.9656080602527
County	Santa Cruz
City	Unincorporated
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3138
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	4.70	Mile	12.0	0.00	—	—	—	—

Bridge/Overpass Construction	2.00	Mile	2.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.49	77.0	92.4	0.19	3.33	6.12	9.45	3.06	0.77	3.83	—	21,413	21,413	0.91	0.29	4.50	21,528
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.49	77.2	92.3	0.19	3.33	6.12	9.45	3.06	0.77	3.83	—	21,377	21,377	0.92	0.29	0.12	21,488
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.50	51.2	65.3	0.14	2.16	4.37	6.53	1.99	0.55	2.54	—	15,251	15,251	0.65	0.21	1.29	15,331
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.19	9.35	11.9	0.02	0.39	0.80	1.19	0.36	0.10	0.46	—	2,525	2,525	0.11	0.03	0.21	2,538

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	9.49	77.0	92.4	0.19	3.33	6.12	9.45	3.06	0.77	3.83	—	21,413	21,413	0.91	0.29	4.50	21,528
2027	9.11	71.7	91.7	0.19	3.02	6.12	9.14	2.78	0.77	3.55	—	21,386	21,386	0.91	0.29	4.18	21,500
2028	8.75	66.9	91.0	0.19	2.75	6.12	8.87	2.53	0.77	3.30	—	21,358	21,358	0.91	0.29	3.87	21,470
2029	6.37	48.3	65.4	0.15	1.82	4.33	6.15	1.68	0.55	2.23	—	16,849	16,849	0.70	0.19	2.46	16,925
2030	1.97	14.7	25.8	0.04	0.45	1.06	1.51	0.41	0.18	0.59	—	4,780	4,780	0.19	0.08	1.72	4,810
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	9.49	77.2	92.3	0.19	3.33	6.12	9.45	3.06	0.77	3.83	—	21,377	21,377	0.92	0.29	0.12	21,488
2027	9.11	71.8	91.6	0.19	3.02	6.12	9.14	2.78	0.77	3.55	—	21,351	21,351	0.92	0.29	0.11	21,461
2028	8.73	67.0	90.9	0.19	2.75	6.12	8.87	2.53	0.77	3.30	—	21,324	21,324	0.91	0.29	0.10	21,432
2029	6.37	48.3	65.3	0.15	1.82	4.33	6.15	1.68	0.55	2.23	—	16,822	16,822	0.69	0.19	0.06	16,895
2030	1.97	14.8	25.8	0.04	0.45	1.06	1.51	0.41	0.18	0.59	—	4,760	4,760	0.20	0.08	0.04	4,788
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.04	32.5	39.2	0.08	1.42	2.78	4.20	1.31	0.35	1.66	—	8,776	8,776	0.38	0.12	0.95	8,823
2027	6.50	51.2	65.3	0.14	2.16	4.37	6.53	1.99	0.55	2.54	—	15,251	15,251	0.65	0.21	1.29	15,331
2028	5.50	42.7	56.4	0.12	1.70	3.76	5.46	1.57	0.48	2.04	—	13,720	13,720	0.58	0.17	1.02	13,787
2029	4.20	31.9	43.4	0.10	1.20	2.83	4.03	1.10	0.36	1.46	—	11,072	11,072	0.47	0.13	0.74	11,122
2030	0.81	6.08	10.6	0.02	0.18	0.44	0.62	0.17	0.07	0.24	—	1,965	1,965	0.08	0.03	0.31	1,978
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.74	5.94	7.15	0.01	0.26	0.51	0.77	0.24	0.06	0.30	—	1,453	1,453	0.06	0.02	0.16	1,461
2027	1.19	9.35	11.9	0.02	0.39	0.80	1.19	0.36	0.10	0.46	—	2,525	2,525	0.11	0.03	0.21	2,538
2028	1.00	7.79	10.3	0.02	0.31	0.69	1.00	0.29	0.09	0.37	—	2,272	2,272	0.10	0.03	0.17	2,283
2029	0.77	5.82	7.93	0.02	0.22	0.52	0.74	0.20	0.07	0.27	—	1,833	1,833	0.08	0.02	0.12	1,841
2030	0.15	1.11	1.93	< 0.005	0.03	0.08	0.11	0.03	0.01	0.04	—	325	325	0.01	0.01	0.05	327

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	8.38	9.35	0.01	0.43	—	0.43	0.39	—	0.39	—	1,306	1,306	0.05	0.01	—	1,310
Dust From Material Movement	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.62
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	8.38	9.35	0.01	0.43	—	0.43	0.39	—	0.39	—	1,306	1,306	0.05	0.01	—	1,310
Dust From Material Movement	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.61
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.73	3.05	< 0.005	0.14	—	0.14	0.13	—	0.13	—	426	426	0.02	< 0.005	—	427

Dust From Material Movement	—	—	—	—	—	0.13	0.13	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	0.81	0.81	< 0.005	< 0.005	< 0.005	0.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.50	0.56	< 0.005	0.03	—	0.03	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.7
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.15	2.20	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.02	0.01	1.41	351
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	2.18	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	330	330	0.02	0.01	0.04	335
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.67	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	108	108	0.01	< 0.005	0.20	109
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.61
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.8	17.8	< 0.005	< 0.005	0.03	18.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.94	6.94	< 0.005	< 0.005	0.01	7.31
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.93	6.93	< 0.005	< 0.005	< 0.005	7.30
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	3.44	29.2	33.4	0.07	1.28	—	1.28	1.18	—	1.18	—	7,699	7,699	0.31	0.06	—	7,725
Dust From Material Movement	—	—	—	—	—	1.44	1.44	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.57	0.57	< 0.005	0.06	0.06	—	2.67	2.67	< 0.005	< 0.005	< 0.005	2.82
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	5.33	6.10	0.01	0.23	—	0.23	0.21	—	0.21	—	1,275	1,275	0.05	0.01	—	1,279
Dust From Material Movement	—	—	—	—	—	0.26	0.26	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.47
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.36	5.32	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	835	835	0.05	0.03	3.42	850
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	0.10	43.7
Hauling	0.01	0.83	0.33	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	558	558	0.05	0.09	0.97	587
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.48	5.27	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	800	800	0.06	0.03	0.09	811
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	< 0.005	43.6
Hauling	0.01	0.87	0.33	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	558	558	0.05	0.09	0.03	586
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.16	1.91	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	308	308	0.02	0.01	0.57	313

Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.1	16.1	< 0.005	< 0.005	0.02	16.8
Hauling	< 0.005	0.33	0.13	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	215	215	0.02	0.03	0.16	226
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.35	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	51.0	51.0	< 0.005	< 0.005	0.09	51.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.66	2.66	< 0.005	< 0.005	< 0.005	2.78
Hauling	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.6	35.6	< 0.005	0.01	0.03	37.5

3.5. Linear, Grading & Excavation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.82	6.82	< 0.005	< 0.005	0.01	7.19
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—

Onsite truck	< 0.005	0.04	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.82	6.82	< 0.005	< 0.005	< 0.005	7.18
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.12	50.3	61.6	0.13	2.15	—	2.15	1.98	—	1.98	—	14,265	14,265	0.58	0.12	—	14,314
Dust From Material Movement	—	—	—	—	—	2.66	2.66	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.01	< 0.005	< 0.005	1.05	1.05	< 0.005	0.11	0.11	—	4.87	4.87	< 0.005	< 0.005	< 0.005	5.13
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	9.18	11.3	0.02	0.39	—	0.39	0.36	—	0.36	—	2,362	2,362	0.10	0.02	—	2,370
Dust From Material Movement	—	—	—	—	—	0.49	0.49	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	0.81	0.81	< 0.005	< 0.005	< 0.005	0.85
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.52	0.36	5.01	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	821	821	0.05	0.03	3.18	835
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	0.09	42.9
Hauling	0.01	0.78	0.32	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	547	547	0.05	0.09	0.90	575
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.52	0.45	4.96	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	786	786	0.06	0.03	0.08	798
Vendor	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	< 0.005	42.8

Hauling	0.01	0.82	0.32	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	547	547	0.05	0.09	0.02	574
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.36	0.28	3.35	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	561	561	0.04	0.02	0.98	571
Vendor	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.2	29.2	< 0.005	< 0.005	0.03	30.6
Hauling	0.01	0.58	0.23	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	391	391	0.03	0.06	0.28	410
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.61	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	92.9	92.9	0.01	< 0.005	0.16	94.5
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.83	4.83	< 0.005	< 0.005	< 0.005	5.06
Hauling	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.7	64.7	0.01	0.01	0.05	67.9

3.7. Linear, Grading & Excavation (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.23	65.7	85.9	0.18	2.74	—	2.74	2.52	—	2.52	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.03	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.69	6.69	< 0.005	< 0.005	0.01	7.05
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	8.23	65.7	85.9	0.18	2.74	—	2.74	2.52	—	2.52	—	19,970	19,970	0.81	0.16	—	20,039

Dust From Material Movement	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.04	0.02	< 0.005	< 0.005	1.47	1.47	< 0.005	0.15	0.15	—	6.70	6.70	< 0.005	< 0.005	< 0.005	7.05
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.04	24.3	31.8	0.07	1.01	—	1.01	0.93	—	0.93	—	7,386	7,386	0.30	0.06	—	7,412
Dust From Material Movement	—	—	—	—	—	1.38	1.38	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.54	0.54	< 0.005	0.05	0.05	—	2.47	2.47	< 0.005	< 0.005	< 0.005	2.61
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	4.44	5.80	0.01	0.19	—	0.19	0.17	—	0.17	—	1,223	1,223	0.05	0.01	—	1,227
Dust From Material Movement	—	—	—	—	—	0.25	0.25	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.51	0.33	4.73	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	807	807	0.05	0.03	2.95	821
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.9	39.9	< 0.005	0.01	0.08	41.8
Hauling	0.01	0.74	0.31	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	534	534	0.04	0.08	0.83	561
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.48	0.40	4.67	0.00	0.00	0.79	0.79	0.00	0.18	0.18	—	773	773	0.05	0.03	0.08	784
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.9	39.9	< 0.005	0.01	< 0.005	41.7
Hauling	0.01	0.77	0.31	0.01	0.01	0.13	0.14	0.01	0.04	0.04	—	534	534	0.04	0.08	0.02	560
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.14	1.63	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	286	286	0.02	0.01	0.47	291
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.8	14.8	< 0.005	< 0.005	0.01	15.4
Hauling	< 0.005	0.28	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	197	197	0.02	0.03	0.13	207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.30	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47.3	47.3	< 0.005	< 0.005	0.08	48.1
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.56
Hauling	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.7	32.7	< 0.005	0.01	0.02	34.3

3.9. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.19	51.1	62.3	0.15	1.98	—	1.98	1.82	—	1.82	—	16,024	16,024	0.65	0.13	—	16,079
Dust From Material Movement	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	6.19	51.1	62.3	0.15	1.98	—	1.98	1.82	—	1.82	—	16,024	16,024	0.65	0.13	—	16,079
Dust From Material Movement	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.14	17.7	21.6	0.05	0.68	—	0.68	0.63	—	0.63	—	5,550	5,550	0.23	0.05	—	5,569
Dust From Material Movement	—	—	—	—	—	1.07	1.07	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	—	0.83	0.83	< 0.005	< 0.005	< 0.005	0.88
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	3.23	3.94	0.01	0.12	—	0.12	0.11	—	0.11	—	919	919	0.04	0.01	—	922
Dust From Material Movement	—	—	—	—	—	0.20	0.20	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.27	3.81	0.00	0.00	0.63	0.63	0.00	0.15	0.15	—	649	649	0.04	0.03	2.37	660
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.73	1.73	< 0.005	< 0.005	< 0.005	1.82
Hauling	< 0.005	0.28	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	190	190	0.02	0.03	0.29	200

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.32	3.76	0.00	0.00	0.63	0.63	0.00	0.15	0.15	—	621	621	0.04	0.03	0.06	631
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.74	1.74	< 0.005	< 0.005	< 0.005	1.82
Hauling	< 0.005	0.29	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	190	190	0.02	0.03	0.01	200
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.10	1.23	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	215	215	0.01	0.01	0.36	219
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	0.60	0.60	< 0.005	< 0.005	< 0.005	0.63
Hauling	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	65.9	65.9	0.01	0.01	0.04	69.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.6	35.6	< 0.005	< 0.005	0.06	36.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.10
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.9	10.9	< 0.005	< 0.005	0.01	11.5

3.11. Linear, Drainage, Utilities, & Sub-Grade (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.99	47.7	61.7	0.15	1.82	—	1.82	1.67	—	1.67	—	16,021	16,021	0.65	0.13	—	16,076
Dust From Material Movement	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.49

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.99	47.7	61.7	0.15	1.82	—	1.82	1.67	—	1.67	—	16,021	16,021	0.65	0.13	—	16,076
Dust From Material Movement	—	—	—	—	—	3.10	3.10	—	0.33	0.33	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.49
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.81	30.4	39.2	0.10	1.16	—	1.16	1.06	—	1.06	—	10,189	10,189	0.41	0.08	—	10,224
Dust From Material Movement	—	—	—	—	—	1.97	1.97	—	0.21	0.21	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	0.01	< 0.005	< 0.005	0.23	0.23	< 0.005	0.02	0.02	—	1.50	1.50	< 0.005	< 0.005	< 0.005	1.58
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.69	5.54	7.16	0.02	0.21	—	0.21	0.19	—	0.19	—	1,687	1,687	0.07	0.01	—	1,693
Dust From Material Movement	—	—	—	—	—	0.36	0.36	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.25	0.25	< 0.005	< 0.005	< 0.005	0.26
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.38	0.24	3.58	0.00	0.00	0.63	0.63	0.00	0.15	0.15	—	638	638	0.04	0.03	2.19	649

Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.79
Hauling	< 0.005	0.27	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	185	185	0.02	0.03	0.27	195
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.37	0.30	3.53	0.00	0.00	0.63	0.63	0.00	0.15	0.15	—	611	611	0.02	0.03	0.06	620
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.79
Hauling	< 0.005	0.28	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	185	185	0.02	0.03	0.01	195
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.17	2.12	0.00	0.00	0.40	0.40	0.00	0.09	0.09	—	389	389	0.03	0.02	0.60	395
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	1.08	1.08	< 0.005	< 0.005	< 0.005	1.14
Hauling	< 0.005	0.17	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	118	118	0.01	0.02	0.07	124
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.39	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	64.4	64.4	< 0.005	< 0.005	0.10	65.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Hauling	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.5	19.5	< 0.005	< 0.005	0.01	20.5

3.13. Linear, Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.75	14.7	23.2	0.04	0.48	—	0.48	0.44	—	0.44	—	4,153	4,153	0.17	0.03	—	4,167

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.36	2.36	< 0.005	< 0.005	< 0.005	2.49
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.15	1.82	< 0.005	0.04	—	0.04	0.03	—	0.03	—	325	325	0.01	< 0.005	—	326
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.21	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	53.8	53.8	< 0.005	< 0.005	—	54.0
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.03	0.03	< 0.005	< 0.005	< 0.005	0.03
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.28	0.23	2.67	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	463	463	0.02	0.02	0.04	469
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.79
Hauling	< 0.005	0.23	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	152	152	0.01	0.02	0.01	159

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.2	36.2	< 0.005	< 0.005	0.06	36.8
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.9	11.9	< 0.005	< 0.005	0.01	12.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.00	6.00	< 0.005	< 0.005	0.01	6.10
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.02	0.02	< 0.005	< 0.005	< 0.005	0.02
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.96	1.96	< 0.005	< 0.005	< 0.005	2.06

3.15. Linear, Paving (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	14.3	23.1	0.04	0.44	—	0.44	0.41	—	0.41	—	4,153	4,153	0.17	0.03	—	4,167
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.31	2.31	< 0.005	< 0.005	< 0.005	2.44
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.70	14.3	23.1	0.04	0.44	—	0.44	0.41	—	0.41	—	4,153	4,153	0.17	0.03	—	4,167

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.02	0.01	< 0.005	< 0.005	0.37	0.37	< 0.005	0.04	0.04	—	2.32	2.32	< 0.005	< 0.005	< 0.005	2.45
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.70	5.91	9.56	0.02	0.18	—	0.18	0.17	—	0.17	—	1,715	1,715	0.07	0.01	—	1,721
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	—	0.96	0.96	< 0.005	< 0.005	< 0.005	1.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.08	1.74	< 0.005	0.03	—	0.03	0.03	—	0.03	—	284	284	0.01	< 0.005	—	285
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.17
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.17	2.56	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	475	475	0.01	0.02	1.52	483
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.75
Hauling	< 0.005	0.21	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	147	147	0.01	0.02	0.20	155
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.27	0.21	2.51	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	455	455	0.02	0.02	0.04	462
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.76
Hauling	< 0.005	0.22	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	147	147	0.01	0.02	0.01	155
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.08	0.98	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	188	188	0.01	0.01	0.27	191
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.07	0.07	< 0.005	0.01	0.01	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
Hauling	< 0.005	0.09	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	60.8	60.8	< 0.005	0.01	0.04	63.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	31.1	31.1	< 0.005	< 0.005	0.04	31.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.01	10.6

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/2/2026	6/17/2026	5.00	119	—
Linear, Grading & Excavation	Linear, Grading & Excavation	6/18/2026	7/7/2028	5.00	536	—

Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	7/8/2028	11/21/2029	5.00	358	—
Linear, Paving	Linear, Paving	11/22/2029	7/30/2030	5.00	179	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	13.0	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	7.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	5.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	4.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	13.0	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37

Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	13.0	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Linear, Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	13.0	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Welders	Diesel	Average	1.00	6.00	46.0	0.45

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	47.5	9.71	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	1.00	0.25	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	1.00	0.25	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	115	9.71	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	6.06	HHDT,MHDT
Linear, Grading & Excavation	Hauling	3.50	40.0	HHDT
Linear, Grading & Excavation	Onsite truck	2.00	0.50	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	92.5	9.71	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	1.00	0.25	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	2.47	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	1.00	0.25	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	70.0	9.71	LDA,LDT1,LDT2
Linear, Paving	Vendor	1.00	0.25	HHDT,MHDT
Linear, Paving	Hauling	2.02	20.0	HHDT
Linear, Paving	Onsite truck	1.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	0.00	0.00	14.0	0.00	—
Linear, Grading & Excavation	0.00	14,998	14.0	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	7,076	0.00	14.0	0.00	—
Linear, Paving	2,896	0.00	14.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	12.0	100%
Bridge/Overpass Construction	2.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	763	204	0.03	< 0.005
2027	382	204	0.03	< 0.005
2028	763	204	0.03	< 0.005
2029	763	204	0.03	< 0.005
2030	382	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	4.53	annual days of extreme heat
Extreme Precipitation	11.3	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	8.29	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract

Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	3.62
AQ-DPM	16.4
Drinking Water	43.1
Lead Risk Housing	56.0
Pesticides	0.00
Toxic Releases	16.0
Traffic	19.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	28.1
Haz Waste Facilities/Generators	27.1
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	25.4
Cardio-vascular	25.5
Low Birth Weights	7.66
Socioeconomic Factor Indicators	—
Education	48.3
Housing	66.1
Linguistic	24.8
Poverty	48.4
Unemployment	2.29

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	57.35916848
Employed	70.51199795
Median HI	40.78018735
Education	—
Bachelor's or higher	76.26074682
High school enrollment	100
Preschool enrollment	70.47350186
Transportation	—
Auto Access	30.23225972
Active commuting	79.5072501
Social	—
2-parent households	31.01501347
Voting	70.25535737
Neighborhood	—
Alcohol availability	16.50198896
Park access	81.35506224
Retail density	34.65930964
Supermarket access	39.90760939
Tree canopy	76.4275632
Housing	—
Homeownership	44.28333119
Housing habitability	56.21711793
Low-inc homeowner severe housing cost burden	74.22045425
Low-inc renter severe housing cost burden	30.87386116
Uncrowded housing	46.38778391

Health Outcomes	—
Insured adults	67.2783267
Arthritis	0.0
Asthma ER Admissions	75.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	39.1
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	80.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.5

Children	47.4
Elderly	48.0
English Speaking	76.4
Foreign-born	27.9
Outdoor Workers	47.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	40.9
Traffic Density	30.6
Traffic Access	0.0
Other Indices	—
Hardship	28.3
Other Decision Support	—
2016 Voting	86.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Off-Road Equipment	Added equipment per project description
Construction: Dust From Material Movement	Added paving for asphalt
Construction: Trips and VMT	Adjusted haul length for hazardous materials, added water truck to vendor to avoid empty cells
Construction: On-Road Fugitive Dust	Site accessible by paved roads

Segments 10 and 11 Interim Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

3.2. Linear, Grubbing & Land Clearing (2026) - Mitigated

3.3. Linear, Grading & Excavation (2026) - Unmitigated

3.4. Linear, Grading & Excavation (2026) - Mitigated

3.5. Linear, Grading & Excavation (2027) - Unmitigated

3.6. Linear, Grading & Excavation (2027) - Mitigated

3.7. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

3.8. Linear, Drainage, Utilities, & Sub-Grade (2027) - Mitigated

3.9. Linear, Paving (2027) - Unmitigated

3.10. Linear, Paving (2027) - Mitigated

3.11. Linear, Paving (2028) - Unmitigated

3.12. Linear, Paving (2028) - Mitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Segments 10 and 11 Interim
Construction Start Date	1/2/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	0.60
Location	36.96393876369363, -121.9656080602527
County	Santa Cruz
City	Unincorporated
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3138
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	4.70	Mile	13.2	0.00	—	—	—	—

Bridge/Overpass Construction	1.00	Mile	1.00	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.5	9.51	80.8	93.7	0.22	3.37	5.40	8.77	3.09	0.80	3.88	—	23,942	23,942	1.15	0.71	8.83	24,191
Mit.	11.5	9.51	80.8	93.7	0.22	3.37	5.40	8.77	3.09	0.80	3.88	—	23,942	23,942	1.15	0.71	8.83	24,191
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.5	9.51	81.1	93.6	0.22	3.37	5.40	8.77	3.09	0.80	3.89	—	23,908	23,908	1.16	0.71	0.23	24,148
Mit.	11.5	9.51	81.1	93.6	0.22	3.37	5.40	8.77	3.09	0.80	3.89	—	23,908	23,908	1.16	0.71	0.23	24,148
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.76	5.58	47.4	54.7	0.13	1.98	3.21	5.19	1.81	0.48	2.29	—	13,844	13,844	0.67	0.41	2.25	13,984

Mit.	6.76	5.58	47.4	54.7	0.13	1.98	3.21	5.19	1.81	0.48	2.29	—	13,844	13,844	0.67	0.41	2.25	13,984
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.23	1.02	8.64	9.99	0.02	0.36	0.59	0.95	0.33	0.09	0.42	—	2,292	2,292	0.11	0.07	0.37	2,315
Mit.	1.23	1.02	8.64	9.99	0.02	0.36	0.59	0.95	0.33	0.09	0.42	—	2,292	2,292	0.11	0.07	0.37	2,315
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.5	9.51	80.8	93.7	0.22	3.37	5.40	8.77	3.09	0.80	3.88	—	23,942	23,942	1.15	0.71	8.83	24,191
2027	8.09	6.79	55.5	66.9	0.16	2.14	4.09	6.23	1.97	0.53	2.50	—	17,154	17,154	0.73	0.24	3.24	17,246
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.5	9.51	81.1	93.6	0.22	3.37	5.40	8.77	3.09	0.80	3.89	—	23,908	23,908	1.16	0.71	0.23	24,148
2027	11.1	9.14	75.6	92.9	0.22	3.05	5.40	8.45	2.81	0.80	3.61	—	23,832	23,832	1.14	0.69	0.21	24,066
2028	2.49	2.07	16.0	26.1	0.04	0.52	0.82	1.34	0.48	0.16	0.64	—	5,106	5,106	0.25	0.12	0.06	5,149
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.76	5.58	47.4	54.7	0.13	1.98	3.21	5.19	1.81	0.48	2.29	—	13,844	13,844	0.67	0.41	2.25	13,984
2027	4.81	4.02	32.8	40.8	0.09	1.26	2.31	3.57	1.16	0.32	1.48	—	10,119	10,119	0.45	0.18	1.08	10,184
2028	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	< 0.005	10.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	1.23	1.02	8.64	9.99	0.02	0.36	0.59	0.95	0.33	0.09	0.42	—	2,292	2,292	0.11	0.07	0.37	2,315
2027	0.88	0.73	5.98	7.44	0.02	0.23	0.42	0.65	0.21	0.06	0.27	—	1,675	1,675	0.07	0.03	0.18	1,686
2028	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.65	1.65	< 0.005	< 0.005	< 0.005	1.67

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.5	9.51	80.8	93.7	0.22	3.37	5.40	8.77	3.09	0.80	3.88	—	23,942	23,942	1.15	0.71	8.83	24,191
2027	8.09	6.79	55.5	66.9	0.16	2.14	4.09	6.23	1.97	0.53	2.50	—	17,154	17,154	0.73	0.24	3.24	17,246
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	11.5	9.51	81.1	93.6	0.22	3.37	5.40	8.77	3.09	0.80	3.89	—	23,908	23,908	1.16	0.71	0.23	24,148
2027	11.1	9.14	75.6	92.9	0.22	3.05	5.40	8.45	2.81	0.80	3.61	—	23,832	23,832	1.14	0.69	0.21	24,066
2028	2.49	2.07	16.0	26.1	0.04	0.52	0.82	1.34	0.48	0.16	0.64	—	5,106	5,106	0.25	0.12	0.06	5,149
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.76	5.58	47.4	54.7	0.13	1.98	3.21	5.19	1.81	0.48	2.29	—	13,844	13,844	0.67	0.41	2.25	13,984
2027	4.81	4.02	32.8	40.8	0.09	1.26	2.31	3.57	1.16	0.32	1.48	—	10,119	10,119	0.45	0.18	1.08	10,184
2028	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.99	9.99	< 0.005	< 0.005	< 0.005	10.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.23	1.02	8.64	9.99	0.02	0.36	0.59	0.95	0.33	0.09	0.42	—	2,292	2,292	0.11	0.07	0.37	2,315
2027	0.88	0.73	5.98	7.44	0.02	0.23	0.42	0.65	0.21	0.06	0.27	—	1,675	1,675	0.07	0.03	0.18	1,686
2028	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.65	1.65	< 0.005	< 0.005	< 0.005	1.67

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.38	9.35	0.01	0.43	—	0.43	0.39	—	0.39	—	1,306	1,306	0.05	0.01	—	1,310
Dust From Material Movemen	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.61
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.19	1.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	186	186	0.01	< 0.005	—	187
Dust From Material Movemen	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.8	30.8	< 0.005	< 0.005	—	30.9

Dust From Material Movemen	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.20	0.18	1.95	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	295	295	0.02	0.01	0.03	300
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.08	42.8
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.25	0.25	< 0.005	< 0.005	< 0.005	0.27
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.08
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Linear, Grubbing & Land Clearing (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.15	0.96	8.38	9.35	0.01	0.43	—	0.43	0.39	—	0.39	—	1,306	1,306	0.05	0.01	—	1,310
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.61
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.19	1.33	< 0.005	0.06	—	0.06	0.06	—	0.06	—	186	186	0.01	< 0.005	—	187
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.22	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.8	30.8	< 0.005	< 0.005	—	30.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21	0.20	0.18	1.95	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	295	295	0.02	0.01	0.03	300
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.88
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.1	42.1	< 0.005	< 0.005	0.08	42.8
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.25	0.25	< 0.005	< 0.005	< 0.005	0.27
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.97	6.97	< 0.005	< 0.005	0.01	7.08
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.04	0.04	< 0.005	< 0.005	< 0.005	0.04
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039

Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.05	5.09	43.1	49.4	0.11	1.89	—	1.89	1.74	—	1.74	—	11,372	11,372	0.46	0.09	—	11,411
Dust From Material Movemen	—	—	—	—	—	—	2.12	2.12	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	2.82	2.82	< 0.005	< 0.005	< 0.005	2.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.93	7.87	9.01	0.02	0.34	—	0.34	0.32	—	0.32	—	1,883	1,883	0.08	0.02	—	1,889
Dust From Material Movemen	—	—	—	—	—	—	0.39	0.39	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.35	5.08	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	799	799	0.05	0.03	3.27	813
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	0.10	43.7
Hauling	0.35	0.06	4.64	1.86	0.03	0.05	0.73	0.78	0.03	0.20	0.23	—	3,126	3,126	0.29	0.51	5.46	3,290
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.46	5.04	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	765	765	0.06	0.03	0.08	776
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	< 0.005	43.6
Hauling	0.35	0.06	4.85	1.85	0.03	0.05	0.73	0.78	0.03	0.20	0.23	—	3,126	3,126	0.29	0.51	0.14	3,284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.29	0.23	2.70	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	436	436	0.03	0.02	0.81	443
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.7	23.7	< 0.005	< 0.005	0.02	24.8
Hauling	0.20	0.04	2.73	1.06	0.02	0.03	0.41	0.44	0.02	0.11	0.13	—	1,780	1,780	0.16	0.29	1.34	1,872
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.49	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	72.1	72.1	< 0.005	< 0.005	0.13	73.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.93	3.93	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.04	0.01	0.50	0.19	< 0.005	0.01	0.08	0.08	< 0.005	0.02	0.02	—	295	295	0.03	0.05	0.22	310

3.4. Linear, Grading & Excavation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.93	75.7	86.7	0.18	3.32	—	3.32	3.05	—	3.05	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.96	4.96	< 0.005	< 0.005	< 0.005	5.23
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.05	5.09	43.1	49.4	0.11	1.89	—	1.89	1.74	—	1.74	—	11,372	11,372	0.46	0.09	—	11,411
Dust From Material Movemen	—	—	—	—	—	—	2.12	2.12	—	0.23	0.23	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	2.82	2.82	< 0.005	< 0.005	< 0.005	2.98
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.93	7.87	9.01	0.02	0.34	—	0.34	0.32	—	0.32	—	1,883	1,883	0.08	0.02	—	1,889
Dust From Material Movemen	—	—	—	—	—	—	0.39	0.39	—	0.04	0.04	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.49
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.35	5.08	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	799	799	0.05	0.03	3.27	813
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	0.10	43.7
Hauling	0.35	0.06	4.64	1.86	0.03	0.05	0.73	0.78	0.03	0.20	0.23	—	3,126	3,126	0.29	0.51	5.46	3,290
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.55	0.51	0.46	5.04	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	765	765	0.06	0.03	0.08	776
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.7	41.7	< 0.005	0.01	< 0.005	43.6
Hauling	0.35	0.06	4.85	1.85	0.03	0.05	0.73	0.78	0.03	0.20	0.23	—	3,126	3,126	0.29	0.51	0.14	3,284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.29	0.23	2.70	0.00	0.00	0.43	0.43	0.00	0.10	0.10	—	436	436	0.03	0.02	0.81	443
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.7	23.7	< 0.005	< 0.005	0.02	24.8
Hauling	0.20	0.04	2.73	1.06	0.02	0.03	0.41	0.44	0.02	0.11	0.13	—	1,780	1,780	0.16	0.29	1.34	1,872
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.49	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	72.1	72.1	< 0.005	< 0.005	0.13	73.3
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.93	3.93	< 0.005	< 0.005	< 0.005	4.11
Hauling	0.04	0.01	0.50	0.19	< 0.005	0.01	0.08	0.08	< 0.005	0.02	0.02	—	295	295	0.03	0.05	0.22	310

3.5. Linear, Grading & Excavation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.2	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039
Dust From Material Movement	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.89	4.89	< 0.005	< 0.005	< 0.005	5.15
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.10	6.25	0.01	0.22	—	0.22	0.20	—	0.20	—	1,446	1,446	0.06	0.01	—	1,451
Dust From Material Movement	—	—	—	—	—	—	0.27	0.27	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.14	< 0.005	0.04	—	0.04	0.04	—	0.04	—	239	239	0.01	< 0.005	—	240
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.43	4.74	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	752	752	0.05	0.03	0.08	763
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	< 0.005	42.8
Hauling	0.33	0.06	4.59	1.80	0.03	0.03	0.73	0.76	0.03	0.20	0.23	—	3,063	3,063	0.27	0.49	0.13	3,216
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.10	55.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.96	2.96	< 0.005	< 0.005	< 0.005	3.10
Hauling	0.02	< 0.005	0.33	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	222	222	0.02	0.04	0.16	233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.01	9.01	< 0.005	< 0.005	0.02	9.16
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.49	0.49	< 0.005	< 0.005	< 0.005	0.51
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.7	36.7	< 0.005	0.01	0.03	38.6

3.6. Linear, Grading & Excavation (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.2	8.57	70.4	86.3	0.18	3.02	—	3.02	2.77	—	2.77	—	19,970	19,970	0.81	0.16	—	20,039

Dust From Material Movemen	—	—	—	—	—	—	3.72	3.72	—	0.40	0.40	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	4.89	4.89	< 0.005	< 0.005	< 0.005	5.15
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	0.62	5.10	6.25	0.01	0.22	—	0.22	0.20	—	0.20	—	1,446	1,446	0.06	0.01	—	1,451
Dust From Material Movemen	—	—	—	—	—	—	0.27	0.27	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.37
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.93	1.14	< 0.005	0.04	—	0.04	0.04	—	0.04	—	239	239	0.01	< 0.005	—	240
Dust From Material Movemen	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.54	0.50	0.43	4.74	0.00	0.00	0.75	0.75	0.00	0.18	0.18	—	752	752	0.05	0.03	0.08	763
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.9	40.9	< 0.005	0.01	< 0.005	42.8
Hauling	0.33	0.06	4.59	1.80	0.03	0.03	0.73	0.76	0.03	0.20	0.23	—	3,063	3,063	0.27	0.49	0.13	3,216

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.32	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.10	55.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.96	2.96	< 0.005	< 0.005	< 0.005	3.10
Hauling	0.02	< 0.005	0.33	0.13	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	222	222	0.02	0.04	0.16	233
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.01	9.01	< 0.005	< 0.005	0.02	9.16
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.49	0.49	< 0.005	< 0.005	< 0.005	0.51
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	36.7	36.7	< 0.005	0.01	0.03	38.6

3.7. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.61	6.38	54.5	62.8	0.15	2.13	—	2.13	1.96	—	1.96	—	16,026	16,026	0.65	0.13	—	16,081
Dust From Material Movement	—	—	—	—	—	—	3.10	3.10	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.61	6.38	54.5	62.8	0.15	2.13	—	2.13	1.96	—	1.96	—	16,026	16,026	0.65	0.13	—	16,081

Dust From Material Movemen	—	—	—	—	—	—	3.10	3.10	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.25	2.73	23.3	26.8	0.06	0.91	—	0.91	0.84	—	0.84	—	6,850	6,850	0.28	0.06	—	6,873
Dust From Material Movemen	—	—	—	—	—	—	1.33	1.33	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.10
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.25	4.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,134	1,134	0.05	0.01	—	1,138
Dust From Material Movemen	—	—	—	—	—	—	0.24	0.24	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.18
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.40	0.27	3.81	0.00	0.00	0.60	0.60	0.00	0.14	0.14	—	624	624	0.04	0.03	2.42	636
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.06	0.01	0.76	0.32	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	498	498	0.04	0.08	0.82	524
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.43	0.40	0.35	3.77	0.00	0.00	0.60	0.60	0.00	0.14	0.14	—	598	598	0.04	0.03	0.06	607
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.06	0.01	0.79	0.32	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	498	498	0.04	0.08	0.02	523
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.13	1.52	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	256	256	0.02	0.01	0.45	260
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.79
Hauling	0.02	0.01	0.33	0.14	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	213	213	0.02	0.03	0.15	224
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.28	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.3	42.3	< 0.005	< 0.005	0.07	43.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.3	35.3	< 0.005	0.01	0.02	37.0

3.8. Linear, Drainage, Utilities, & Sub-Grade (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.61	6.38	54.5	62.8	0.15	2.13	—	2.13	1.96	—	1.96	—	16,026	16,026	0.65	0.13	—	16,081
Dust From Material Movement	—	—	—	—	—	—	3.10	3.10	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	7.61	6.38	54.5	62.8	0.15	2.13	—	2.13	1.96	—	1.96	—	16,026	16,026	0.65	0.13	—	16,081
Dust From Material Movement	—	—	—	—	—	—	3.10	3.10	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.25	2.73	23.3	26.8	0.06	0.91	—	0.91	0.84	—	0.84	—	6,850	6,850	0.28	0.06	—	6,873
Dust From Material Movement	—	—	—	—	—	—	1.33	1.33	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.10
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.50	4.25	4.90	0.01	0.17	—	0.17	0.15	—	0.15	—	1,134	1,134	0.05	0.01	—	1,138
Dust From Material Movement	—	—	—	—	—	—	0.24	0.24	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.17	0.17	< 0.005	< 0.005	< 0.005	0.18
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.40	0.27	3.81	0.00	0.00	0.60	0.60	0.00	0.14	0.14	—	624	624	0.04	0.03	2.42	636
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.06	0.01	0.76	0.32	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	498	498	0.04	0.08	0.82	524

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43	0.40	0.35	3.77	0.00	0.00	0.60	0.60	0.00	0.14	0.14	—	598	598	0.04	0.03	0.06	607
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.06	0.01	0.79	0.32	0.01	0.01	0.12	0.12	0.01	0.03	0.04	—	498	498	0.04	0.08	0.02	523
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.17	0.13	1.52	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	256	256	0.02	0.01	0.45	260
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.79
Hauling	0.02	0.01	0.33	0.14	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	213	213	0.02	0.03	0.15	224
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.28	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	42.3	42.3	< 0.005	< 0.005	0.07	43.0
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.3	35.3	< 0.005	0.01	0.02	37.0

3.9. Linear, Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	15.7	23.3	0.04	0.59	—	0.59	0.54	—	0.54	—	4,153	4,153	0.17	0.03	—	4,168
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	15.7	23.3	0.04	0.59	—	0.59	0.54	—	0.54	—	4,153	4,153	0.17	0.03	—	4,168
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.35	4.96	0.01	0.13	—	0.13	0.12	—	0.12	—	886	886	0.04	0.01	—	889
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.55
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.61	0.91	< 0.005	0.02	—	0.02	0.02	—	0.02	—	147	147	0.01	< 0.005	—	147
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.20	2.83	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	464	464	0.03	0.02	1.80	472

Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.05	0.01	0.65	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	430	430	0.04	0.07	0.70	452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.26	2.80	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	444	444	0.03	0.02	0.05	451
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.05	0.01	0.68	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	430	430	0.04	0.07	0.02	451
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.8	94.8	0.01	< 0.005	0.17	96.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.40
Hauling	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	91.7	91.7	0.01	0.01	0.06	96.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.03	15.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.07
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.01	16.0

3.10. Linear, Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	15.7	23.3	0.04	0.59	—	0.59	0.54	—	0.54	—	4,153	4,153	0.17	0.03	—	4,168

Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.23	1.87	15.7	23.3	0.04	0.59	—	0.59	0.54	—	0.54	—	4,153	4,153	0.17	0.03	—	4,168
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.58
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.40	3.35	4.96	0.01	0.13	—	0.13	0.12	—	0.12	—	886	886	0.04	0.01	—	889
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.55
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.61	0.91	< 0.005	0.02	—	0.02	0.02	—	0.02	—	147	147	0.01	< 0.005	—	147
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.30	0.20	2.83	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	464	464	0.03	0.02	1.80	472
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.05	0.01	0.65	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	430	430	0.04	0.07	0.70	452
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.29	0.26	2.80	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	444	444	0.03	0.02	0.05	451
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.85
Hauling	0.05	0.01	0.68	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	430	430	0.04	0.07	0.02	451
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.56	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.8	94.8	0.01	< 0.005	0.17	96.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.40
Hauling	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	91.7	91.7	0.01	0.01	0.06	96.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.7	15.7	< 0.005	< 0.005	0.03	15.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.07
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.01	16.0

3.11. Linear, Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.13	1.79	15.1	23.2	0.04	0.51	—	0.51	0.47	—	0.47	—	4,154	4,154	0.17	0.03	—	4,168
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.13	8.13	< 0.005	< 0.005	—	8.16
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.35	1.35	< 0.005	< 0.005	—	1.35
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.27	0.23	2.64	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	437	437	0.03	0.02	0.04	443
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.74	1.74	< 0.005	< 0.005	< 0.005	1.82
Hauling	0.05	0.01	0.64	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	420	420	0.04	0.07	0.02	440
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14

3.12. Linear, Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.13	1.79	15.1	23.2	0.04	0.51	—	0.51	0.47	—	0.47	—	4,154	4,154	0.17	0.03	—	4,168

Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	2.40	2.40	< 0.005	< 0.005	< 0.005	2.53
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.13	8.13	< 0.005	< 0.005	—	8.16
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.35	1.35	< 0.005	< 0.005	—	1.35
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.27	0.23	2.64	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	437	437	0.03	0.02	0.04	443
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.74	1.74	< 0.005	< 0.005	< 0.005	1.82
Hauling	0.05	0.01	0.64	0.27	< 0.005	< 0.005	0.10	0.11	< 0.005	0.03	0.03	—	420	420	0.04	0.07	0.02	440

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.82	0.82	< 0.005	< 0.005	< 0.005	0.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.14

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/2/2026	3/15/2026	5.00	52.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	3/16/2026	2/6/2027	5.00	234	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	2/7/2027	9/13/2027	5.00	156	—
Linear, Paving	Linear, Paving	9/14/2027	1/1/2028	5.00	78.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Linear, Grading & Excavation	Excavators	Diesel	Average	7.00	8.00	36.0	0.38
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41

Linear, Grading & Excavation	Rollers	Diesel	Average	5.00	8.00	36.0	0.38
Linear, Grading & Excavation	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	4.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Linear, Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38

Linear, Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Paving	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Welders	Diesel	Average	1.00	6.00	46.0	0.45

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Linear, Grading & Excavation	Excavators	Diesel	Average	7.00	8.00	36.0	0.38
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	3.00	8.00	87.0	0.43
Linear, Grading & Excavation	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	5.00	8.00	36.0	0.38
Linear, Grading & Excavation	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37

Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	4.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Grading & Excavation	Cranes	Diesel	Average	1.00	8.00	367	0.29
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	6.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	3.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Linear, Paving	Rollers	Diesel	Average	4.00	8.00	36.0	0.38
Linear, Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Paving	Signal Boards	Electric	Average	11.0	8.00	6.00	0.82

Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Welders	Diesel	Average	1.00	6.00	46.0	0.45

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	42.5	9.71	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	1.00	0.25	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	1.00	0.25	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	110	9.71	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	6.06	HHDT,MHDT
Linear, Grading & Excavation	Hauling	19.6	40.0	HHDT
Linear, Grading & Excavation	Onsite truck	2.00	0.25	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	87.5	9.71	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	1.00	0.25	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	6.31	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	1.00	0.25	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	65.0	9.71	LDA,LDT1,LDT2
Linear, Paving	Vendor	1.00	0.25	HHDT,MHDT
Linear, Paving	Hauling	5.45	20.0	HHDT

Linear, Paving	Onsite truck	1.00	0.25	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	42.5	9.71	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	1.00	0.25	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	1.00	0.25	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	110	9.71	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	2.00	6.06	HHDT,MHDT
Linear, Grading & Excavation	Hauling	19.6	40.0	HHDT
Linear, Grading & Excavation	Onsite truck	2.00	0.25	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	87.5	9.71	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	1.00	0.25	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	6.31	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	1.00	0.25	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	65.0	9.71	LDA,LDT1,LDT2
Linear, Paving	Vendor	1.00	0.25	HHDT,MHDT
Linear, Paving	Hauling	5.45	20.0	HHDT
Linear, Paving	Onsite truck	1.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	0.00	0.00	13.2	0.00	—
Linear, Grading & Excavation	0.00	36,670	13.2	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	7,878	0.00	13.2	0.00	—
Linear, Paving	3,397	0.00	13.2	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	13.2	100%
Bridge/Overpass Construction	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	646	204	0.03	< 0.005
2027	969	204	0.03	< 0.005
2028	323	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	4.53	annual days of extreme heat
Extreme Precipitation	11.3	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	8.29	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	3.62
AQ-DPM	16.4
Drinking Water	43.1
Lead Risk Housing	56.0
Pesticides	0.00
Toxic Releases	16.0
Traffic	19.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	28.1
Haz Waste Facilities/Generators	27.1
Impaired Water Bodies	72.2
Solid Waste	0.00

Sensitive Population	—
Asthma	25.4
Cardio-vascular	25.5
Low Birth Weights	7.66
Socioeconomic Factor Indicators	—
Education	48.3
Housing	66.1
Linguistic	24.8
Poverty	48.4
Unemployment	2.29

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	57.35916848
Employed	70.51199795
Median HI	40.78018735
Education	—
Bachelor's or higher	76.26074682
High school enrollment	100
Preschool enrollment	70.47350186
Transportation	—
Auto Access	30.23225972
Active commuting	79.5072501
Social	—
2-parent households	31.01501347

Voting	70.25535737
Neighborhood	—
Alcohol availability	16.50198896
Park access	81.35506224
Retail density	34.65930964
Supermarket access	39.90760939
Tree canopy	76.4275632
Housing	—
Homeownership	44.28333119
Housing habitability	56.21711793
Low-inc homeowner severe housing cost burden	74.22045425
Low-inc renter severe housing cost burden	30.87386116
Uncrowded housing	46.38778391
Health Outcomes	—
Insured adults	67.2783267
Arthritis	0.0
Asthma ER Admissions	75.0
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	39.1
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	84.0

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	80.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.5
Children	47.4
Elderly	48.0
English Speaking	76.4
Foreign-born	27.9
Outdoor Workers	47.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	40.9
Traffic Density	30.6
Traffic Access	0.0
Other Indices	—
Hardship	28.3
Other Decision Support	—
2016 Voting	86.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Off-Road Equipment	Added equipment per Project Description
Construction: Dust From Material Movement	Added paving for material import
Construction: Trips and VMT	One vendor truck assumed to be water truck in all but excavation phase to avoid empty cells
Construction: On-Road Fugitive Dust	Project site is accessible from paved roads

Rail Trail 10/11 Interim Demo Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2046) - Unmitigated

3.3. Linear, Grading & Excavation (2046) - Unmitigated

3.5. Linear, Grading & Excavation (2047) - Unmitigated

3.7. Linear, Grading & Excavation (2048) - Unmitigated

3.9. Linear, Drainage, Utilities, & Sub-Grade (2048) - Unmitigated

3.11. Linear, Drainage, Utilities, & Sub-Grade (2049) - Unmitigated

3.13. Linear, Paving (2049) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Rail Trail 10/11 Interim Demo
Construction Start Date	1/2/2046
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	0.60
Location	36.96393876369363, -121.9656080602527
County	Santa Cruz
City	Unincorporated
Air District	Monterey Bay ARD
Air Basin	North Central Coast
TAZ	3138
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.13

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	4.70	Mile	13.2	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.35	1.95	12.9	27.1	0.07	0.33	2.19	2.52	0.29	0.35	0.64	—	7,821	7,821	0.30	0.27	0.42	7,893
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.35	1.95	13.0	27.1	0.07	0.33	2.19	2.52	0.29	0.35	0.64	—	7,808	7,808	0.30	0.27	0.01	7,880
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.65	1.37	9.06	19.2	0.05	0.22	1.57	1.79	0.20	0.25	0.45	—	5,566	5,566	0.21	0.15	0.11	5,617
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.25	1.65	3.51	0.01	0.04	0.29	0.33	0.04	0.05	0.08	—	921	921	0.04	0.03	0.02	930

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2046	2.35	1.95	12.9	27.1	0.07	0.33	2.19	2.52	0.29	0.35	0.64	—	7,821	7,821	0.30	0.22	0.42	7,893
2047	2.32	1.92	12.6	27.0	0.07	0.31	2.19	2.51	0.28	0.35	0.63	—	7,805	7,805	0.30	0.22	0.36	7,877
2048	2.09	1.75	10.7	22.5	0.06	0.29	1.70	1.99	0.27	0.23	0.50	—	6,402	6,402	0.25	0.07	0.13	6,430
2049	2.08	1.74	10.6	22.5	0.06	0.29	1.70	1.99	0.26	0.27	0.50	—	6,400	6,400	0.25	0.27	0.37	6,428
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2046	2.35	1.95	13.0	27.1	0.07	0.33	2.19	2.52	0.29	0.35	0.64	—	7,808	7,808	0.30	0.22	0.01	7,880
2047	2.32	1.92	12.7	26.9	0.07	0.31	2.19	2.51	0.28	0.35	0.63	—	7,792	7,792	0.30	0.22	0.01	7,864
2048	2.27	1.89	12.4	26.7	0.07	0.30	2.19	2.49	0.27	0.35	0.61	—	7,779	7,779	0.30	0.22	0.01	7,851
2049	2.08	1.74	10.6	22.5	0.06	0.29	1.70	1.99	0.26	0.27	0.50	—	6,388	6,388	0.25	0.27	0.01	6,416
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2046	1.12	0.93	6.37	13.0	0.03	0.15	1.13	1.28	0.14	0.18	0.31	—	3,571	3,571	0.14	0.09	0.09	3,603
2047	1.65	1.37	9.06	19.2	0.05	0.22	1.57	1.79	0.20	0.25	0.45	—	5,566	5,566	0.21	0.15	0.11	5,617
2048	1.52	1.27	7.91	16.7	0.04	0.21	1.29	1.50	0.19	0.18	0.38	—	4,775	4,775	0.19	0.07	0.05	4,802
2049	1.11	0.92	6.80	12.9	0.03	0.14	0.99	1.13	0.12	0.18	0.30	—	3,749	3,749	0.14	0.14	0.08	3,793
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2046	0.20	0.17	1.16	2.38	0.01	0.03	0.21	0.23	0.02	0.03	0.06	—	591	591	0.02	0.02	0.01	597
2047	0.30	0.25	1.65	3.51	0.01	0.04	0.29	0.33	0.04	0.05	0.08	—	921	921	0.04	0.03	0.02	930
2048	0.28	0.23	1.44	3.05	0.01	0.04	0.24	0.27	0.04	0.03	0.07	—	791	791	0.03	0.01	0.01	795
2049	0.20	0.17	1.24	2.36	0.01	0.02	0.18	0.21	0.02	0.03	0.06	—	621	621	0.02	0.02	0.01	628

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2046) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.91	4.70	0.01	0.04	—	0.04	0.04	—	0.04	—	673	673	0.03	0.01	—	676
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.90	1.90	< 0.005	< 0.005	< 0.005	1.99
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.29	2.91	4.70	0.01	0.04	—	0.04	0.04	—	0.04	—	673	673	0.03	0.01	—	676
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.93	1.93	< 0.005	< 0.005	< 0.005	2.03
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.83	1.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	192	192	0.01	< 0.005	—	193
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.57
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.15	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.8	31.8	< 0.005	< 0.005	—	31.9
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.02	0.51	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	174	174	< 0.005	< 0.005	0.08	175
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.03	0.49	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	167	167	< 0.005	< 0.005	< 0.005	167
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.31	1.31	< 0.005	< 0.005	< 0.005	1.37
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.13	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	47.5	47.5	< 0.005	< 0.005	0.01	47.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.39
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.87	7.87	< 0.005	< 0.005	< 0.005	7.90
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2046) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.19	1.84	11.9	25.8	0.06	0.31	—	0.31	0.28	—	0.28	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movemen	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.79	3.79	< 0.005	< 0.005	< 0.005	3.99
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.19	1.84	11.9	25.8	0.06	0.31	—	0.31	0.28	—	0.28	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movemen	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.85	3.85	< 0.005	< 0.005	< 0.005	4.05
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.79	5.07	11.0	0.03	0.13	—	0.13	0.12	—	0.12	—	2,770	2,770	0.11	0.02	—	2,780
Dust From Material Movemen	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	1.63	1.63	< 0.005	< 0.005	< 0.005	1.71
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	0.92	2.01	< 0.005	0.02	—	0.02	0.02	—	0.02	—	459	459	0.02	< 0.005	—	460
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.28
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.04	0.89	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	305	305	< 0.005	< 0.005	0.14	306
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	< 0.005	11.8
Hauling	0.05	0.02	0.98	0.43	0.01	0.02	0.40	0.42	0.01	0.11	0.12	—	1,006	1,006	0.03	0.16	0.28	1,055
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.06	0.86	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	292	292	< 0.005	< 0.005	< 0.005	293
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.3	11.3	< 0.005	< 0.005	< 0.005	11.8
Hauling	0.05	0.02	1.03	0.43	0.01	0.02	0.40	0.42	0.01	0.11	0.12	—	1,007	1,007	0.03	0.16	0.01	1,055
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.02	0.35	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	125	125	< 0.005	< 0.005	0.03	125
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.82	4.82	< 0.005	< 0.005	< 0.005	5.04
Hauling	0.02	0.01	0.43	0.18	< 0.005	0.01	0.17	0.18	< 0.005	0.05	0.05	—	429	429	0.01	0.07	0.05	450
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	20.6	20.6	< 0.005	< 0.005	< 0.005	20.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.84

Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	71.1	71.1	< 0.005	0.01	0.01	74.5

3.5. Linear, Grading & Excavation (2047) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.16	1.82	11.6	25.7	0.06	0.29	—	0.29	0.27	—	0.27	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.78	3.78	< 0.005	< 0.005	< 0.005	3.97
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.16	1.82	11.6	25.7	0.06	0.29	—	0.29	0.27	—	0.27	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.84	3.84	< 0.005	< 0.005	< 0.005	4.04
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	8.30	18.3	0.04	0.21	—	0.21	0.19	—	0.19	—	4,639	4,639	0.19	0.04	—	4,654

Dust From Material Movemen	—	—	—	—	—	—	0.89	0.89	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	—	2.72	2.72	< 0.005	< 0.005	< 0.005	2.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	1.51	3.34	0.01	0.04	—	0.04	0.04	—	0.04	—	768	768	0.03	0.01	—	771
Dust From Material Movemen	—	—	—	—	—	—	0.16	0.16	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.47
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.04	0.88	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	303	303	< 0.005	< 0.005	0.12	305
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	< 0.005	11.6
Hauling	0.05	0.02	0.95	0.42	0.01	0.02	0.40	0.42	0.01	0.11	0.12	—	992	992	0.03	0.16	0.24	1,040
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.05	0.84	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	291	291	< 0.005	< 0.005	< 0.005	292
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.1	11.1	< 0.005	< 0.005	< 0.005	11.6
Hauling	0.05	0.02	1.00	0.42	0.01	0.02	0.40	0.42	0.01	0.11	0.12	—	992	992	0.03	0.16	0.01	1,040
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.03	0.58	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	208	208	< 0.005	< 0.005	0.04	209
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.93	7.93	< 0.005	< 0.005	< 0.005	8.31
Hauling	0.03	0.01	0.70	0.30	0.01	0.01	0.29	0.30	0.01	0.08	0.09	—	709	709	0.02	0.11	0.08	743

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	34.4	34.4	< 0.005	< 0.005	0.01	34.5
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.31	1.31	< 0.005	< 0.005	< 0.005	1.38
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	117	117	< 0.005	0.02	0.01	123

3.7. Linear, Grading & Excavation (2048) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.12	1.78	11.3	25.4	0.06	0.28	—	0.28	0.25	—	0.25	—	6,494	6,494	0.26	0.05	—	6,516
Dust From Material Movement	—	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.83	3.83	< 0.005	< 0.005	< 0.005	4.03
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.25	1.62	3.62	0.01	0.04	—	0.04	0.04	—	0.04	—	928	928	0.04	0.01	—	931
Dust From Material Movement	—	—	—	—	—	—	0.18	0.18	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.57

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.29	0.66	< 0.005	0.01	—	0.01	0.01	—	0.01	—	154	154	0.01	< 0.005	—	154
Dust From Material Movemen	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.05	0.84	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	290	290	< 0.005	< 0.005	< 0.005	291
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	< 0.005	11.5
Hauling	0.05	0.02	0.98	0.41	0.01	0.02	0.40	0.42	0.01	0.11	0.12	—	980	980	0.03	0.16	0.01	1,028
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.56	1.56	< 0.005	< 0.005	< 0.005	1.64
Hauling	0.01	< 0.005	0.14	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	140	140	< 0.005	0.02	0.01	147
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.86	6.86	< 0.005	< 0.005	< 0.005	6.88
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.2	23.2	< 0.005	< 0.005	< 0.005	24.3

3.9. Linear, Drainage, Utilities, & Sub-Grade (2048) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	10.5	21.6	0.06	0.29	—	0.29	0.27	—	0.27	—	5,977	5,977	0.24	0.05	—	5,998
Dust From Material Movemen	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.99	1.67	10.5	21.6	0.06	0.29	—	0.29	0.27	—	0.27	—	5,977	5,977	0.24	0.05	—	5,998
Dust From Material Movemen	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.91	1.91	< 0.005	< 0.005	< 0.005	2.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14	0.96	6.02	12.4	0.03	0.17	—	0.17	0.15	—	0.15	—	3,427	3,427	0.14	0.03	—	3,439
Dust From Material Movemen	—	—	—	—	—	—	0.59	0.59	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	1.09	1.09	< 0.005	< 0.005	< 0.005	1.14
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.21	0.17	1.10	2.26	0.01	0.03	—	0.03	0.03	—	0.03	—	567	567	0.02	< 0.005	—	569
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.18	0.18	< 0.005	< 0.005	< 0.005	0.19
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.83	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	288	288	< 0.005	< 0.005	0.10	289
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.33
Hauling	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	133	133	< 0.005	0.02	0.03	140
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.80	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	276	276	< 0.005	< 0.005	< 0.005	277
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.36
Hauling	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	133	133	< 0.005	0.02	< 0.005	140
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.02	0.44	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	158	158	< 0.005	< 0.005	0.02	159
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.77
Hauling	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	76.3	76.3	< 0.005	0.01	0.01	80.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.08	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	26.2	26.2	< 0.005	< 0.005	< 0.005	26.3
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.12	0.12	< 0.005	< 0.005	< 0.005	0.13
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.6	12.6	< 0.005	< 0.005	< 0.005	13.3

3.11. Linear, Drainage, Utilities, & Sub-Grade (2049) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	1.66	10.4	21.6	0.06	0.29	—	0.29	0.26	—	0.26	—	5,977	5,977	0.24	0.05	—	5,998
Dust From Material Movemen	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.98	1.66	10.4	21.6	0.06	0.29	—	0.29	0.26	—	0.26	—	5,977	5,977	0.24	0.05	—	5,998
Dust From Material Movemen	—	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.91	1.91	< 0.005	< 0.005	< 0.005	2.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.47	2.93	6.08	0.02	0.08	—	0.08	0.07	—	0.07	—	1,684	1,684	0.07	0.01	—	1,690
Dust From Material Movemen	—	—	—	—	—	—	0.29	0.29	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.56
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.53	1.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	279	279	0.01	< 0.005	—	280
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.83	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	287	287	< 0.005	< 0.005	0.09	289
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.33
Hauling	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	132	132	< 0.005	0.02	0.03	138
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.80	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	275	275	< 0.005	< 0.005	< 0.005	276
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35
Hauling	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	132	132	< 0.005	0.02	< 0.005	138
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.01	0.21	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	77.6	77.6	< 0.005	< 0.005	0.01	77.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.05	0.05	< 0.005	< 0.005	< 0.005	—	0.36	0.36	< 0.005	< 0.005	< 0.005	0.38
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	37.1	37.1	< 0.005	0.01	< 0.005	39.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	< 0.005	12.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06

Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.15	6.15	< 0.005	< 0.005	< 0.005	6.45

3.13. Linear, Paving (2049) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.25	14.0	0.03	0.10	—	0.10	0.09	—	0.09	—	2,817	2,817	0.11	0.02	—	2,827
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.88	1.88	< 0.005	< 0.005	< 0.005	1.98
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.25	14.0	0.03	0.10	—	0.10	0.09	—	0.09	—	2,817	2,817	0.11	0.02	—	2,827
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.09	0.09	< 0.005	0.01	0.01	—	1.91	1.91	< 0.005	< 0.005	< 0.005	2.01
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.38	3.10	5.98	0.01	0.04	—	0.04	0.04	—	0.04	—	1,204	1,204	0.05	0.01	—	1,208

Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	0.81	0.81	< 0.005	< 0.005	< 0.005	0.85
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.57	1.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	199	199	0.01	< 0.005	—	200
Dust From Material Movemen	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.13	0.13	< 0.005	< 0.005	< 0.005	0.14
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.78	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	273	273	< 0.005	< 0.005	0.08	274
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.33
Hauling	0.07	0.04	1.56	0.76	0.02	0.03	0.60	0.63	0.01	0.17	0.18	—	1,476	1,476	0.04	0.24	0.29	1,549
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.04	0.76	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	261	261	< 0.005	< 0.005	< 0.005	263
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.18	0.18	< 0.005	0.02	0.02	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.35
Hauling	0.07	0.03	1.65	0.77	0.02	0.03	0.60	0.63	0.01	0.17	0.18	—	1,478	1,478	0.04	0.24	0.01	1,550
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.02	0.31	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	112	112	< 0.005	< 0.005	0.02	112
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.57
Hauling	0.03	0.01	0.69	0.33	0.01	0.01	0.26	0.27	0.01	0.07	0.08	—	631	631	0.02	0.10	0.05	662

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	18.5	18.5	< 0.005	< 0.005	< 0.005	18.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Hauling	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	105	105	< 0.005	0.02	0.01	110

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/2/2046	5/27/2046	5.00	104	—
Linear, Grading & Excavation	Linear, Grading & Excavation	5/28/2046	3/13/2048	5.00	468	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	3/14/2048	5/24/2049	5.00	312	—
Linear, Paving	Linear, Paving	5/25/2049	12/29/2049	5.00	156	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	9.00	8.00	6.00	0.82
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Concrete/Industrial Saws	Diesel	Average	1.00	6.00	33.0	0.73
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Signal Boards	Electric	Average	9.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40

Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	9.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Bore/Drill Rigs	Diesel	Average	1.00	6.00	83.0	0.50
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Signal Boards	Electric	Average	9.00	8.00	6.00	0.82
Linear, Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Linear, Paving	Off-Highway Trucks	Diesel	Average	1.00	6.00	376	0.38
Linear, Paving	Welders	Diesel	Average	1.00	6.00	46.0	0.45

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	30.0	9.71	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	1.00	0.25	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	1.00	0.25	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	52.5	9.71	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	6.06	HHDT,MHDT
Linear, Grading & Excavation	Hauling	11.0	40.0	HHDT
Linear, Grading & Excavation	Onsite truck	2.00	0.25	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	50.0	9.71	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	1.00	0.25	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	2.95	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	1.00	0.25	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	47.5	9.71	LDA,LDT1,LDT2
Linear, Paving	Vendor	1.00	0.25	HHDT,MHDT
Linear, Paving	Hauling	33.1	20.0	HHDT
Linear, Paving	Onsite truck	1.00	0.25	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	0.00	0.00	13.2	0.00	—
Linear, Grading & Excavation	0.00	41,295	13.2	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	7,363	0.00	13.2	0.00	—
Linear, Paving	41,295	0.00	13.2	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	13.2	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2047	264	204	0.03	< 0.005
2048	528	204	0.03	< 0.005
2049	528	204	0.03	< 0.005
2046	528	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	4.53	annual days of extreme heat
Extreme Precipitation	11.3	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	8.29	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.6
AQ-PM	3.62
AQ-DPM	16.4
Drinking Water	43.1

Lead Risk Housing	56.0
Pesticides	0.00
Toxic Releases	16.0
Traffic	19.9
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	28.1
Haz Waste Facilities/Generators	27.1
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	25.4
Cardio-vascular	25.5
Low Birth Weights	7.66
Socioeconomic Factor Indicators	—
Education	48.3
Housing	66.1
Linguistic	24.8
Poverty	48.4
Unemployment	2.29

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	57.35916848
Employed	70.51199795

Median HI	40.78018735
Education	—
Bachelor's or higher	76.26074682
High school enrollment	100
Preschool enrollment	70.47350186
Transportation	—
Auto Access	30.23225972
Active commuting	79.5072501
Social	—
2-parent households	31.01501347
Voting	70.25535737
Neighborhood	—
Alcohol availability	16.50198896
Park access	81.35506224
Retail density	34.65930964
Supermarket access	39.90760939
Tree canopy	76.4275632
Housing	—
Homeownership	44.28333119
Housing habitability	56.21711793
Low-inc homeowner severe housing cost burden	74.22045425
Low-inc renter severe housing cost burden	30.87386116
Uncrowded housing	46.38778391
Health Outcomes	—
Insured adults	67.2783267
Arthritis	0.0
Asthma ER Admissions	75.0

High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	39.1
Cognitively Disabled	22.1
Physically Disabled	22.7
Heart Attack ER Admissions	84.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	80.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	32.5
Children	47.4
Elderly	48.0
English Speaking	76.4
Foreign-born	27.9

Outdoor Workers	47.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	40.9
Traffic Density	30.6
Traffic Access	0.0
Other Indices	—
Hardship	28.3
Other Decision Support	—
2016 Voting	86.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	9.00
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Off-Road Equipment	Updated construction fleet per Project Description
Construction: Dust From Material Movement	Added paving for material import
Construction: Trips and VMT	One vendor truck represents a water truck in phases other than excavation to avoid empty cells
Construction: On-Road Fugitive Dust	Project site accessible from paved roads

Appendix F. Biological Resources

- F.1, Special-Status Plants and Wildlife Species with Potential to Occur
- F.2, U.S. Fish and Wildlife Service Official Species List
- F.3, Observed Plant Species
- F.4, Avian Species Detected

This page intentionally left blank.

Appendix F.1-1 Potential special-status plant species: conservation status, habitat types, and potential for occurrence in the vicinity of the proposed Santa Cruz Rail Trail Project Segments 10 and 11, Santa Cruz County, California.

Species Common Name[1]	Federal Status[2]	State Status[3]	CNPS Status[4]	Habitat Type[5]	Distribution by County[6]	Flowering Period[7]	Potential for Occurrence
Arenaria paludicola marsh sandwort	FE	SE	List 1B.1	Freshwater marshes	LAX*, SBD*, SCR*, SFO*, SLO, Washington*	May-August	**A** Marsh sandwort has been reintroduced in several areas north of Santa Cruz in Wilder Ranch State Park including Baldwin Creek. However, natural occurrences of this species are considered extirpated from Santa Cruz County and have never been observed in the vicinity of the study area. Moreover, freshwater marsh habitat is not present within the BSA.
Chorizanthe robusta var. hartwegii Scotts Valley spineflower	FE	None	List 1B.1	Meadows and seeps (sandy), valley and foothill grassland (mudstone, Purisima outcrops)	SCR	April-July	**A** Known to occur in small populations in mesic, sandy soils in Scott's Valley and Felton. There is no potential to occur in the study area.
Chorizanthe robusta var. *robusta* robust spineflower	FE	None	List 1B.1	Coastal dunes, coastal scrub, openings in cismontane woodland, in sandy or gravelly soil	ALA*, MNT, MRN, SCL*, SCR, SFO, SMT*	April-September	**A** Grassland in the study area is limited to the Porter-Sesnon Open Space of New Brighton State Beach south of Hwy 1 and does not support sandy or gravelly soils. This species has never been observed at this location despite past floristic surveys by California State Parks biologists. Robust spineflower was not observed during April 2023 floristic survey of the study area.
Erysimum teretifolium Ben Lomond wallflower	FE	SE	List 1B.1	Maritime chapparal, lower montane coniferous (Ponderosa pine) forest; inland marine sands	SCR	March-July	**A** Known to occur in small populations in sandy openings in Scott's Valley, Ben Lomond, Felton, and Bonny Doon. This species is entirely restricted to the Santa Cruz sandhills and there is no potential to occur in the study area.
Gilia tenuiflora ssp. arenaria Monterey gillia	FE	FT	List 1B.2	Maritime chapparal, cismontane woodland, coastal dunes, coastal scrub; sandy openings	MNT, SCR	April-June	**A** Known to occur in primarily in aeolian sand dunes near the coast in openings in maritime chapparal and coastal scrub. The nearest known occurrences are on coastal hind dunes extending from the Pajaro River Mouth to the Moss Landing harbor. There is no potential for this species to occur in the study area.
Holocarpha macradenia Santa Cruz tarplant	FT	SE	List 1B.1	Coastal prairie, valley and foothill grassland, coastal scrub, often in clay or sandy soils	ALA*, CCA*, MNT, MRN*, SCR, SON*	June-October	**HP** Santa Cruz tarplant is located west of the study area in Twin Lakes State Beach in degraded coastal prairie grassland north of Schwan Lagoon. South of the Study Area, numerous extant occurrences are present in Watsonville near the sloughs and municipal airport. Although degraded coastal prairie grassland supports suitable Watsonville loam soils, Santa Cruz tarplant has never been observed at this location despite past floristic surveys by California State Parks staff. A subsequent June/July 2023 survey visit will target this species during the blooming to confirm absence in the study area.

Species Common Name[1]	Federal Status[2]	State Status[3]	CNPS Status[4]	Habitat Type[5]	Distribution by County[6]	Flowering Period[7]	Potential for Occurrence
Perideridia gairdneri ssp. *gairdneri* Gairdner's yampah	None	None	List 4.2	Moist sites in coastal prairie, broadleaved upland forest, chaparral, valley and foothill grassland, vernal pools	CCA, DNT, KRN, LAX*, MEN, MNT, MRN, NAP, ORA*, SBT, SCL, SCR, SDG*, SLO, SMT(*?), SOL, SON	June-October	**HP** Gairdner's yampah is typically located in semi- mesic grasslands and may be associated with disturbance similar to that which occurs at New Brighton State Beach. However, this species has never been documented as occurring at this location despite past floristic surveys by California State Parks biologists. The nearest known extant occurrences are approximately 3.5 miles northwest of the Study Area in the UCSC West Marshall Field. This species was not observed during the April 2023 floristic surveys which were outside of the blooming period and will be targeted during the June/July 2023 survey visit.
Plagiobothrys diffusus San Francisco popcorn flower	None	SE	List 1B.1	Coastal prairie, valley and foothill grassland	ALA, SCR, SFO*, SMT	March-June	**A** Grasslands in the study area associated with the Porter Sesnon Open Space element of New Brighton State Beach are significantly disturbed and support invasive species including French broom, jubata grass, and extensive annual grasses. The nearest extant occurrence is approximately 3 miles west of the study area in Moore Creek Preserve. This species was not observed during the April 2023 floristic survey of the study area.
Polygonum hickmanii Scotts Valley polygonum	FE	SE	List 1B.1	Valley and foothill grassland; sandstone	SCR	May-August	**A** This sandstone specific species is known only from two small populations in Scotts Valley in sandstone substrate. There is no potential to occur in the study area.
Trifolium buckwestiorum Santa Cruz clover	None	None	List 1B.1	Coastal prairie; margins of broadleaved upland forest, cismontane woodland	MEN, MNT, SCL, SCR, SMT, SON	April-October	**A** Santa Cruz clover typically occurs in relatively intact coastal prairie grasslands dominated by *Stipa* species and other native forbs not occurring the disturbed coastal prairie grasslands of New Brighton State Beach. This species has never been documented as occurring at this location despite past floristic surveys by California State Parks biologists. The nearest known extant occurrence is approximately 3 miles northwest of the study area in Pogonip Park. This species was not observed during the April 2023 floristic survey of the study area.

NOTES:

[1]Nomenclature follows Hickman (1993); Tibor (2001); California Native Plant Society (2023).

[2]U.S. Fish and Wildlife Service (2023a, b, c).

[3]Section 1904, California Fish and Game Code (California Department of Fish and Game 2023a).

[4]Tibor (2001); California Native Plant Society (2023).

CNPS Lists: List 1A: Presumed extinct in California. List 1B: Rare, Threatened, or Endangered in California and elsewhere. List 2: Rare, Threatened, or Endangered in California, more common elsewhere. List 3: Plants about which more information is needed. List 4: Plants of limited distribution: a watch list.

Threat Code extensions: .1: Seriously endangered in California. .2: Fairly endangered in California. .3 Not very endangered in California.

[5]Thomas (1961); Munz and Keck (1973); Hickman (1993); Baldwin et al (2012); Tibor (2001); California Native Plant Society (2023); and unpublished information.

[6]Tibor (2001); California Native Plant Society (2023); and unpublished information; counties abbreviated by a three-letter code (below); occurrence in other states as indicated.

[7]Munz and Keck (1973); Tibor (2001); California Native Plant Society (2023)

***** Presumed extinct in these counties or states.

? Uncertainty about distribution or identity

ALA: Alameda
AMA: Amador
BUT: Butte
CCA: Contra Costa
COL: Colusa
DNT: Del Norte
FRE: Fresno
GLE: Glenn
HUM: Humboldt
KRN: Kern
LAK: Lake
LAX: Los Angeles
MAD: Madera
MEN: Mendocino
MER: Merced
MNT: Monterey
MOD: Modoc
MPA: Mariposa
MRN: Marin
NAP: Napa
NEV: Nevada
ORA: Orange
PLA: Placer
PLU: Plumas
RIV: Riverside
SAC: Sacramento
SBA: Santa Barbara
SBD: San Bernardino
SBT: San Benito
SCL: Santa Clara
SCR: Santa Cruz
SCZ: Santa Cruz Island (SBA Co.)
SDG: San Diego
SFO: San Francisco
SHA: Shasta
SIE: Sierra
SIS: Siskiyou
SJQ: San Joaquin
SLO: San Luis Obispo
SMT: San Mateo
SOL: Solano
SON: Sonoma
SRO: Santa Rosa Island (SBA Co.)
STA: Stanislaus
SUT: Sutter
TEH: Tehama
TRI: Trinity
TUL: Tulare
TUO: Tuolumne
VEN: Ventura
YOL: Yolo
YUB: Yuba

Occurrence Potential

A = Absent - no habitat present and no further work needed.

HP = Habitat Present - habitat is, or may be present. The species may be present.

P = Present - the species is present.

CH = Critical Habitat - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

Appendix F.1-2 Potential sensitive wildlife species: conservation status, habitat requirements, and potential for occurrence in the vicinity of the proposed Santa Cruz Rail Trail Project Segments 10 and 11, Santa Cruz County, California.

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
Invertebrates					
monarch butterfly *Danaus plexippus* (overwintering population)	FC	-	E-IUCN S2S3 L	The wintering monarch butterfly occupies a narrow band of habitat close to (typically within 1.5 miles of) the ocean. Eucalyptus groves (*Eucalyptus globulus*) and conifer groves are commonly utilized as overwintering sites in California. Abiotic and biotic factors including southeast aspect, wind protection and proximity to nectaries determine habitat suitability (Dayton and Bell 1992).	**P** Known from Capitola along Park Avenue at Escalona Gulch (Xerces Site 2985), New Brighton State Beach (Xerces Site 2986), and along Borregas Creek (Xerces Site 2987). Potential habitat in eucalyptus groves along the corridor.
Fish					
tidewater goby *Eucyclogobius newberryi*	FE	SSC	S3 AFS-E	Coastal lagoons and creeks; found up to 3 miles upstream in slow-moving water (USFWS 2005).	**P** Reported in Corcoran Lagoon/Rodeo Gulch up to one mile upstream from the mouth. Known to occur in Soquel Creek between Capitola State Beach and Highway 1. Considered an "intermittent" population in this location (CNDDB 2023).
Central California Coast coho salmon *Oncorhynchus kisutch*	FE	SE	S2? AFS-E	Spawns in loose silt-free coarse gravel; requires sufficient fall stream flow for spawning (NOAA Fisheries 2012).	**A** Not known to occur in creeks that intersect the alignment. Closest occurrence is from the San Lorenzo River and tributaries approximately 1.5 miles west of the western terminus of the alignment.
Central California Coast steelhead *Oncorhynchus mykiss irideus*	FT	-	S2S3 AFS-TH	Requires silt-free gravel for spawning; spends the first few years of its life in fresh water before migrating to the ocean. Adults later return to breed in the same freshwater locations where they were spawned (CalFish 2011, NOAA 2006, NOAA Fisheries 2005).	**P, CH** Present in Soquel Creek. Surveys conducted annually.
Pacific lamprey *Entosphenus tridentatus*	-	SSC	S3	Perennial creeks and rivers with ocean access and gravel present for spawning (Alley 2023).	**P** Known to occur in Soquel Creek (Alley 2023).
Amphibians and Reptiles					
California red-legged frog (CRLF) *Rana draytonii*	FT	SSC	S2S3	Requires the presence of surface water until mid to late summer for reproduction; occupies ephemeral and/or perennial water with standing or slow-moving flows. Upland habitat includes leaf litter, dense grassland, small mammal burrows, irrigated agricultural fields, and greenhouses. Adults are known to travel up to 2 miles overland between aquatic sites (USFWS 2002, Fellers and Kleeman 2007, USFWS 2010).	**A** The alignment lacks suitable aquatic habitat for this species. The closest historic (1978) record is from Valencia Lagoon along Highway 1 in Aptos (CNDDB 2023); however, extensive research by expert herpetologists has been done at this location since and no CRLF have been observed. Other occurrence records are from the west side of Santa Cruz and, further away, from Larkin Valley and La Selva Beach.
foothill yellow-legged frog (FYLF) *Rana boylii*	-	SE	S3	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats; needs at least some cobble-sized substrate for egg-laying (CNDDB 2023a, CNDDB2023b).	**A** The alignment lacks suitable habitat for this species. This species is known to occur upstream (approximately 1.0 river mile or 0.85 miles north) of the alignment in Soquel Creek.

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
California giant salamander *Dicamptodon ensatus*	-	SSC	S2S3	Wet coastal forests near cool streams and seeps. Aquatic larvae are found in streams and occasionally lakes and ponds (Stebbins and McGinnis 2012, Nafis 2023).	**A** The alignment lacks the wet forests this species occupies. Nearest record are from Arana Gulch near Paul Sweet Road, and upper Aptos Creek, both 2 miles north of the alignment (CNDDB 2021).
Santa Cruz black salamander *Aneides niger*	-	SSC	S3	Mixed deciduous woodland, coniferous forests, and coastal grasslands. Found under rocks near streams, in talus, under damp logs, and other objects. In Santa Cruz, found near water under rocks near streams, seeps, and springs (Stebbins and McGinnis 2012, CDFW CWHR 2014, 2016, Nafis 2023).	**HP** May occur along the creeks/drainages adjacent to the alignment. Known occurrences are from Pogonip Park, University of Santa Cruz quarry, 3.5 miles northwest and Aptos Creek 2.5 miles north from eastern terminus of the alignment (CNDDB 2023).
western pond turtle (WPT) *Emys marmorata*	-	SSC	S3	Found in ponds, marshes, rivers, streams, and irrigation ditches containing aquatic vegetation; usually seen sunning on logs, banks, or rocks. Moves up to 3-4 miles within a creek system, especially during "walk-abouts" before a female lays eggs; nests up to several hundred feet from aquatic habitat, in woodlands, grasslands, or open forest (Holland and Bury 1998).	**A** This species does not occur within the alignment or within dispersal distance of the BSA. Closest occurrences are from Soquel Creek, upstream of Hwy 1, approximately 1.1 river miles upstream of the proposed trail (Alley 2022, CNDDB 2023) and historically, in Schwan Lagoon within Twin Lakes State Beach, approximately 0.75 river miles downstream (southwest) of the proposed trail for Segment 9 (CNDDB 2023).
Birds (Nesting and/or Wintering)					
nesting birds of prey (various species)	MBTA	CFGC 3503.5	-	Variety of woodland and savanna habitats.	**P**
native nesting birds/rookeries	MBTA	CFGC 3503		Various habitats.	**P**
golden eagle *Aquila chrysaetos*	-	FP	S3	Resident in open mountains, foothills, canyons, or plains near open spaces for hunting. Nests in a mass of sticks on cliffs or in trees (Katzner et al., 2020).	**A** These segments lack the open grasslands that this species typically favors. Ebird (2022) documents three (rare) occurrences in the vicinity of the alignment at Twin Lakes State Beach open space (2014), along Rodeo Gulch 2 miles north of the rail corridor (2022), and the Porter-Sesnon open space in New Brighton State Beach (2016).
bald eagle *Haliaeetus leucocephalus* (nesting and wintering)	BCC	SE/FP	S3	Occupies forested areas next to large bodies of water with diverse, abundant, and vulnerable prey base. Nests are typically in mature or old growth trees with edge habitat and within 2 kilometers of the water. Roosts in large trees with an open and accessible canopy (Buehler 2020).	**HP** Adult and juvenile eagles have been observed in the vicinity of the alignment at the Twin Lakes State Beach open space (2023) a known nesting site, and within the New Brighton State Beach open space (2023), during nesting season (ebird 2023).
northern harrier *Circus cyaneus* (nesting)	BCC	SSC	S3	Ground nester; grasslands, sloughs, wet meadows, savanna, prairies and marshes (Brekenridge 1935, Simmons 1988, Smith et al. 2020).	**A** ebird (2022) documents only rare occurrences in the vicinity of the alignment. Twin Lakes State Beach open space (2016, 2022) and New Brighton State Beach open space (2017, 2018) provide limited nesting and foraging habitat.

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
white-tailed kite *Elanus leucurus*	-	FP	S3S4	Nests in trees on the margins of open areas including grasslands and sloughs containing a high abundance of small mammals and lizards (Dunk 2020) .	**HP** Tree stands within and adjacent to the alignment provide potential nesting habitat. Uncommon sightings are primarily from the New Brighton State Beach open space (2017) outside of breeding bird season (ebird 2023).
American peregrine falcon *Falco peregrinus anatum*	BCC	FP	S3S4	Inhabits open wetlands near cliffs, also occurs in some cities where nests on buildings and bridges (White et al. 2020).	**HP** Ebird (2023) documents sightings along the alignment, including recent sightings near New Brighton State Beach. The Capitola bluffs south of Park Avenue and west of New Brighton State Beach provide potential nesting habitat near the alignment.
western snowy plover *Charadrius nivosus nivosus* (nesting)	FT, BCC	SSC	S2S3	Coastal beaches and open sandy coastal areas, sparsely vegetated dues, salt pans at lagoons and salt-evaporation ponds, estuaries, levees, and some sand/cobble river bars up to 7 miles from the beach (Page et al. 2020).	**A** The alignment lacks suitable nesting habitat. Winter sightings are from the open space at Twin Lakes State Beach, Corcoran Lagoon, Capitola Beach, and New Brighton Beach (ebird 2023).
western gull (*Larus occidentalis*) (nesting)	BCC	-	-	Breeding habitat is predominantly islands and urban rooftops; typically forages and roosts away from nesting habitat, e.g..,at sea, intertidal zones, harbors, beaches, refuse dumps and other open urban environments (Pierotti and Annett 2020).	**A** The alignment lacks suitable nesting, foraging, and roosting habitat that would be directly impacted by the project. This species is opportunistic and habituated to human activity.
California least tern *Sternula antillarum browni* (nesting colony)	FE	SE/FP	S2	Forms colonies near a lagoon, estuary, river, or on the coast; on bare or sparsely vegetated sand, dried mudflats, shell islands, gravel or sand pits, or sometimes on stones; more recently, occasionally in human-influenced environments such as agricultural fields, airports, and flat, graveled rooftops.	**A** Rare observations of individuals in Santa Cruz County. Historical colonies on the Pajaro River. Closest current colonies are from southernmost San Francisco Bay approximately 31 miles north of the alignment.
marbled murrelet *Brachyramphus marmoratus* (nesting)	FT	SE	S2	Nests in coastal mature and old growth coniferous forests that have large limbs or platforms; moss, thick needle layer, or other nesting substrate; and multilayered canopies (Nelson 2020).	**A** The alignment lacks the mature coniferous forest this species utilizes for breeding. The closest known occurrences of breeding are from the North Coast old growth forests of Santa Cruz County.
long-eared owl *Asio otus* (nesting)	BCC	SSC	S3?	Utilizes abandoned stick nests of other large birds or squirrel nests in a variety of wooded areas, including orchards and usually near aquatic and open areas for foraging; forages mostly on rodents (Marks et al. 2020).	**A** Ebird March 2013 records document a rare owl at the Twin Lakes State Beach open space (ebird 2021). Not known to nest in Santa Cruz County (Suddjian 2013).
burrowing owl *Athene cunicularia* (nesting/wintering)	BCC	SSC	S3	Found in open areas with low-growing vegetation including annual and perennial grasslands, deserts, open scrub habitats, and agricultural fields with suitable burrows. Burrows of fossorial mammals are an essential component of their nesting and wintering habitat, but they may also use artificial structures such as culverts, openings in asphalt pavement, woody debris/rock piles, and crevices in stacks of straw bales (Poulin et al. 2020).	**A** Closest wintering records are from the meadows at UCSC. Breeding activities are extirpated from Santa Cruz County (CBD et al. 2003; Townsend and Lenihan 2007; Trulio 2018); the most recent breeding record is from 1987 at UCSC (CBD et al. 2003; Santa Cruz Bird Club 2013). Sightings are limited throughout the county.

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
Nuttall's woodpecker *Dryobates nuttallii* (nesting)	BCC	-	-	Occurs primarily in oak woodlands; also observed in riparian woodlands and rarely in conifer forests (Lowtherand Patten 2020).	**P** Observed in suitable habitat at various locations along the alignment.
Least Bell's vireo *Vireo bellii pusillus* (nesting)	FE/BCC	SE	S1S2	Uses shrubs and small trees (dense, low shrubby vegetation characteristic of early successional stages in riparian areas, brushy fields, scrub oak woodland, and coastal chaparral) for habitat and nest building.	**A** Extirpated from its historical distribution in the vicinity. This subspecies currently breeds from Ventura County south. Rare northernmost nesting pairs are from Gilroy in Santa Clara County from 1997 (Kus 2002) and the San Joaquin River in Stanislaus County from 2009 (Kus 2020). Only rare observations of individuals on the Pajaro River (1996) (ebird 2023).
Vaux's swift *Chaetura vauxi* (nesting)	BCC	SSC	S2S3	Nests in large tree hollows in forested environments. Nests made of conifer needles or small twigs are glued together with salvia and attached to inside wall of hallow tree usually near the bottom. Post breeding flocks up to several hundred may roost together in chimney like tree hollows. Also known to use manmade chimneys (Schwitters et al., 2021).	**A** Rare observations of solitary birds near the alignment are from Twin Lakes State Beach open space (August 2021), Corcoran Lagoon (May 2022), and a migrant detected along Soquel Creek upstream of the alignment (May 2020) (ebird 2023).
black swift *Cypseloides niger* (nesting)	BCC	SSC	S2	Nests sites include seacliff crevices along coastal areas and behind inland waterfalls in mountain regions. Feeds primarily on flying insects (Gunn et al., 2023).	**A** No recent sightings near the alignment or suitably moist nesting habitat. Closest recent nesting records are from the North Coast of Santa Cruz (Rinkert 2022).
olive-sided flycatcher *Contopus cooperi* (nesting)	BCC	SSC	-	Inhabits woodland and forest habitats. Nests in tall trees, generally near the edges and openings to meadows, grasslands, wetlands, and ponds (Altman and Sallabanks 2020).	**P** Observed within New Brighton State Beach and along New Brighton Creek in the Porter Sesnon open space.
Southwestern willow flycatcher *Empidonax traillii extimus* (nesting)	FE/BCC	SE	-	Willow riparian forest for nesting and foraging (Sedgwick 2020).	**A** No breeding records in Santa Cruz County.
wrentit *Chamaea fasciata* (nesting)	BCC	-	-	Abundant in shrublands, especially coastal scrub and chaparral; and a variety of other habitats with adequate cover such as timber and riparian forests, oak woodland, and urbanized areas (Geupel and Ballard 2020).	**P** Observed in suitable habitat at various locations along the alignment.
loggerhead shrike *Lanius ludovicianus* (nesting)	BCC	SSC	-	Grassland, agricultural fields, and shrub habitats with small reptiles and insects. Nests in dense trees or shrubs adjacent to open areas. Known to impale prey items on barbed wire fences (Yosef 2020).	**A** Uncommon observations near New Brighton State Beach and Seacliff State Beach outside of breeding season (eBird 2023). No recent breeding records in Santa Cruz County.
bank swallow *Riparia riparia* (nesting)	-	ST	-	Nests in erodible soils on vertical or near-vertical banks and bluffs of rivers and streams. Also found in sand and gravel quarries (Garrison and Turner 2020).	**A** Considered extirpated as a breeding species in Santa Cruz County. Closest known breeding colony is from Ano Nuevo (Rinkert 2018).
oak titmouse *Baeolophus inornatus* (nesting)	BCC	-	-	Nests in tree stands with natural cavities and old woodpecker holes, artificial nest boxes from mid-March through April. Inhabits oak woodlands along the Pacific Slope. Requires elevated perches for foraging and eating (Cicero 2020).	**P** Observed at Tannery Gulch and near the unnamed creek (herein New Brighton Creek) within the Porter Sesnon open space, both within New Brighton State Beach. Also known to nest along the alignment near Soquel Creek (ebird 2023).

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
yellow-breasted chat *Icteria virens* (nesting)	-	SSC	S3	Dense riparian vegetation 1-8 ft. above the ground, with a well-developed understory (Thompson and Eckerle 2022).	**A** No expected to breed on the coast. Only rare records from the vicinity of the alignment are documented (ebird 2023).
yellow warbler *Setophaga petechia* (nesting)	BCC	SSC	S3S4	Nests in deciduous riparian woodland with open canopy along streams or other watercourses; forages in dense understory of riparian woodland (Lowther et al. 2020).	**HP** Observed in New Brighton State Beach and along Soquel Creek during 2023 breeding season. Confirmed nesting records along the San Lorenzo River and Pajaro River. Also observed during breeding season at Moran Lake.
grasshopper sparrow *Ammodramus savannarum* (nesting)	-	SSC	S3	Associated with short to medium-height grasslands with little or no shrub cover. May be found in pastures and agricultural fields. Feeds on insects and seeds. Nest on ground in grassland habitats between April and May (Vickery 2020).	**A** Rare recent (2018) occurrence near the alignment in the open space adjacent New Brighton State Beach outside of the breeding season (ebird 2023). Closest recent potential breeding records are from UCSC (ebird 2023).
tricolored blackbird *Agelaius tricolor*	BCC	ST	S1S2	Colonial breeders. Breeding sites require nearby water, suitable nesting substrate, and open-range foraging habitat of natural grassland, shrubland, or agricultural cropland (Meese and Beedy 2015, Meese 2017, Beedy et al. 2017).	**A** Fall migrants observed at Capitola Beach and New Brighton State Beach open space (ebird 2023). No confirmed breeding in Santa Cruz County since 2008 (Meese 2017).
Lawrence's goldfinch *Spinus lawrencei* (nesting)	BCC	-	S3S4	Typically occupies arid and open woodlands within the near vicinity of three habitat components: chaparral or other brushy areas; tall annual weed fields; and water source such as stream, small lake, or farm pond (Watt et al. 2020).	**A** An uncommon breeder on the coast. Ebird (2023) records near the alignment are rare and during fall migration.
Allen's Hummingbird *Selasphorus sasin* (nesting)	BCC	-	-	Migrates along coastal slopes in shrub, chaparral, riparian woodland and eucalyptus groves. Breeds in coastal best affected by summer fog, where males set up territories in coastal scrub, riparian shrubs, and mixed evergreen and nonnative forests; females selecting the thicker riparian vegetation for nesting (Clark and Mitchell 2020).	**P** Observed in suitable habitat at various locations along the alignment.
Mammals					
roosting bat species	-	CFGC	-	Variable	**P** Tree stands, woodland, forest, and riparian habitats within the BSA support roosting bat species.
Townsend's big-eared bat *Corynorhinus [Plecotus] townsendii*	-	SSC	HP S2	Roost sites are highly associated w/ caves and mines; buildings must offer "cave-like" features; known to roost in large tree hollows and under bridges (WBWG 2017).	**A** The alignment lacks preferred roosting features. Nearest recent roost records are from a burnt (hollowed out) redwood tree at UCSC (EcoSystems West 1999).
pallid bat *Antrozous pallidus*	-	SSC	HP S3	Roost sites are primarily associated with oak, redwood, ponderosa pine, and giant Sequoia forests. Will also roost under bridges and in buildings and rock outcrops (WBWG 2017).	**A** Although mature trees adjacent to the project site may provide suitable habitat, the closest record (2003) for the species is from upper Soquel Creek approximately 5 miles from the alignment (CDFW 2023c,d).
western mastiff bat *Eumops perotis*	-	SSC	HP S3S4	Roosts are generally under exfoliating rock slabs associated with cliffs but are also known to utilize crevices in boulders and buildings. Oak woodland, chapparal, floodplains, grassland, and agricultural fields are used for foraging in this region (WBWG 2017).	**A** Although this species was detected during surveys of the BSA, no roost habitat is present in or near the impact area, and the bat has an extensive range for foraging (WBWG 2017).

Common Name *Scientific Name*	Status Federal/State/Other			Habitat Requirements	Potential to Occur in Project Site
hoary bat *Lasiurus cinereus*	-	-	MP S4	Roosts primarily in foliage of coniferous and deciduous trees near the ends of branches, which are usually at the edges of clearings but also known to have roosted in caves, under rock ledges, woodpecker holes, grey squirrel nests, and clinging to the sides of a buildings; foraging is associated with forested areas (WBWG 2017).	**P** Acoustically detected at Tannery Gulch, Rodeo Gulch, and Borregas Creek.
silver-haired bat *Lasionycteris noctivagans*	-	-	MP S3S4	Roosts, including maternity roosts in hollows and cavities of trees or loose bark of large-diameter snags, using multiple roosts in limited areas; forages above the canopy, over open meadows, and riparian zones along water courses (WBWG 2017).	**P** Acoustically detected at Tannery Gulch, Rodeo Gulch, and Borregas Creek.
western red bat *Lasiurus blossevillii*	-	SSC	HP S3	Roosts in foliage primarily in riparian and wooded habitats (WBWG 2017, Harvey et al.1999, Pierson et al. 1997).	**HP** Tree canopies provide potential roosting habitat. Nearest detection record is from Leona Creek at the Twin Lakes State Beach open space (EcoSystems West 2022).
long-legged myotis *Myotis volans*	-	-	HP S3	Roosts primarily in large hollow tree snags, or live trees with exfoliating bark; also uses rock crevices, mines, and buildings (Warner and Czaplewski 1984).	**HP** Mature trees adjacent to the rail corridor provide potential habitat. Occurs on Moore Creek Preserve (EcoSystems West 2004, Heady 2018).
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	-	SC	S2S3	Associated with riparian, oak woodland and redwood forest habitats and edge habitats. Builds houses from sticks and leaves under or in buildings and trees, in hollow trees, or in tree canopy (Sakai and Noon 1993).	**P** The open spaces adjacent to the alignment provide potential habitat for the woodrat. Significant number of stick houses observed along the alignment in the open space near New Brighton State Beach.
American badger *Taxidea taxus*	-	SSC	-	Occurs in open, uncultivated grasslands and meadows, and open stages of shrub and forest habitats with dry with friable soils. Forages on burrowing rodents, insects, and ground nesting birds (Quinn 2015).	**A** The fragmented open spaces adjacent to the alignment are isolated from the larger contiguous open spaces this shy species utilizes. Nearest record is from UCSC campus lands approximately 4 miles northwest of alignment (EcoSystems West 2004).

NOTES:

Federal Status

FE = Endangered: Any species which is in danger of extinction throughout all, or a significant portion of its range (USFWS 2023a).

FT = Threatened: Any species, which is likely to become an endangered species within the foreseeable future throughout all, or a significant portion of its range (USFWS 2023a).

FC = Candidate: Candidate species are plants and animals for which the U.S. Fish and Wildlife Service (FWS) has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities (USFWS 2023c).

BCC = Species of migratory nongame birds that are of concern in the United States because of (1) documented or apparent population declines, (2) small or restricted populations, (3) dependence on restricted or vulnerable habitats (USFWS 2021).

State Status

SE Endangered: A native species or subspecies of animal which is in serious danger of becoming extinct throughout all, or a significant portion of its range, due to loss of habitat, change in habitat, over exploitation, predation, competition and/or disease (CDFW 2023b).

ST Threatened: A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code, §2067 (CDFW 2023b).

SSC = CDFW Species of Special Concern: Designated because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction (CDFW 2023d, CDFW CNDDB 2023).

FP = Fully Protected[1]: State's initial protection for animals that were rare or faced possible extinction. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock (CDFW 2023e).

CFGC = California Fish and Game Code:
3503 - Protects active nests and eggs of birds from take, possession, or needless destruction
3503.5. - Protects birds of prey (Orders Falcinoformes and Strigiformes)
Section 86; 2000; 2014; 3007; 4150, and Title 14 CCR - Protects non-listed bat species and their roosting habitat, including individual roosts and maternity colonies.

Other (CDFW CNDDB 2023)

NatureServe Ranking[2]: S1 = Critically Imperiled—Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of 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 from the state.

AFS = American Fisheries Society; E = Endangered; T = Threatened

L = Locally unique and protected by City and County ordinances

HP = Considered “High Priority” on the Western Bat Working Group’s (WBWG) Western Bat Species Regional Priority Matrix (2017)

MP= Considered “Medium Priority” on the WBWG’s Western Bat Species Regional Priority Matrix (2017)

Occurrence Potential

A = Absent - no habitat present and no further work needed.

HP = Habitat Present - habitat is or may be present. The species may be present.

P = Present - the species is present.

CH = Critical Habitat - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

---

[1] More information on Fully Protected species and the take provisions can be found in the Fish and Game Code, (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515). Additional information on Fully Protected fish can be found in the California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 2, Article 4, §5.93 (CDFW 2023e).

[2] Originally developed by The Nature Conservancy and now maintained and recently revised by NatureServe. Includes a **Global rank** (G-rank), over the taxon’s entire distribution, and a **State rank** (S-rank), over its state distribution. For subspecies and varieties, there is also a “T” rank describing the global rank for the infraspecific taxon. Criteria are used to assign element ranks, from G1 to G5 for the Global rank and from S1 to S5 for the State rank, taking into account rarity, threats, and trends (CDFW CNDDB 2023).

Appendix F.1-3 Species Narratives for Special-Status Wildlife Species Known or With Potential to Occur in or Near the Santa Cruz Rail Trail Segments 10 and 11, Santa Cruz County, California.

Monarch Butterfly (overwintering population)

The life history of the monarch butterfly can be divided into two temporally defined periods: a spring/summer reproductive period and a fall/winter non-reproductive (wintering) period. During the spring and summer, monarchs exploit the widely distributed North American milkweed flora (*Asclepias* spp.) as food for their larvae. In the fall, the adult butterflies that are produced during the latter part of summer migrate to wintering habitats in coastal California or central Mexico to spend the winter months. Monarchs spend from 1 to 9 months as adults, depending on when they become reproductive. If they become reproductive immediately, they live 1-2 months as adults. Monarch adults that emerge from August through October typically migrate and overwinter before becoming reproductive the following spring. These monarchs live approximately 8-9 months as adults.

Monarchs arrive at overwintering sites in September and the first half of October to form fall aggregations. By mid-November they form more stable aggregations, which persist through January or February (Pelton et al. 2016). The monarch butterfly utilizes eucalyptus, Monterey pine, or Monterey cypress tree groves for winter roost sites, typically within 1.5 miles (2.4 kilometers) of the Pacific Ocean. Monarchs form aggregations on the underside of peripheral branches. The suitability of the stand is determined by both abiotic and biotic factors including:

- periodic exposure to (dappled) sunlight (often southeast aspect);
- cool shady roost areas for periods of warm weather;
- primary and secondary wind protection;
- proximity to nectaries (fall or winter blooming flowers);
- humidity; and
- water sources.

Monarchs typically emerge from a state of nocturnal torpor and begin to fly at temperatures around 55° F. Below this temperature, monarchs are unable to fly and are often killed or injured if dislodged from their roosts. Winter roost sites are sufficiently heterogeneous to permit shifts of roost location in accordance with prevailing weather conditions and seasonal variation in insulation. The roost site consists of the trees upon which the butterflies cluster, as well as the surrounding trees that provide wind protection. In addition, overwintering habitat includes nectar plants and water sources surrounding the roost site, since monarchs may fly some distance to obtain these resources (Pelton et al. 2016, Griffiths and Villablanca 2015).

Tidewater Goby

The tidewater goby is a small fish that inhabits coastal brackish water habitats entirely within California, ranging from the Smith River in Del Norte County south to Agua Hedionda Lagoon in San Diego County. The tidewater goby is uniquely adapted to coastal lagoons and the uppermost brackish zone of larger estuaries. The goby is typically found in water less than 1 meter (3.3 feet) deep and salinities of less than 12 parts per thousand. During spring floods that scour the lagoons and breach the sandbar barriers, the tidewater goby utilizes muddy backwater habitats. The goby may migrate upstream from the estuaries a distance of 0.5 miles to 3.5 miles. Upstream locations may be used for reproduction which occurs year-round with peaks in April-May, after the lagoons close, and in summer (USFWS 2005).

Santa Cruz Black Salamander

The Santa Cruz black salamander (*Aneides flavipunctatus niger*) occurs in Santa Cruz County and San Mateo County; this population is disjunct from the northern California population *A. f. flavipunctatus*. The Santa Cruz black salamander can be found near streams, seeps, and springs, under damp logs, rocks, and other objects in mixed deciduous woodland, coniferous forests, and coastal grasslands (Stebbins and McGinnis 2012, CDFW 2014, CDFW 2016, Nafis 2023).

Bald Eagle

The bald eagle is a large bird of prey typically observed in the winter throughout most of California at lakes, reservoirs, rivers, rangelands, and coastal wetlands. They are opportunistic foragers preying upon a variety of small animals, with a preference for fish over other types. The species often scavenges, pirating food from other species, and catching its own only as a last resort. Breeding habitats throughout the state are primarily mountain and foothill forests and woodlands adjacent to water bodies. Breeding pairs remain together for life, or until the death of one individual at which time the surviving bird may seek a new mate. Large stick nests frequently built in the upper canopy of the tallest trees in the area. Breeding adults will reuse previous nests, repairing and expanding previous nests each year, or build new ones. The pair's territory typically includes several nests. Migratory bald eagles arrive in California during the fall and early winter before the breeding season which occurs from January through July or August. One to three eggs are laid in the winter or early spring, and chicks fledge when they are about 11 or 12 weeks old. Soon after leaving the nest, many young birds will migrate north (Buehler 2020).

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) inhabits agricultural fields, open grasslands, savannah-like habitats, and riparian and oak woodlands in a relatively narrow band on the west coast of the U.S. and Canada and over large parts of Mexico. An abundance of prey is a requisite habitat feature. The white-tailed kite feeds on rodents, lizards, birds, and insects. Nests sites are variable, and may be located in herbaceous open stages of most habitats from large scrub to trees. The kite makes a stick nest near the top of its nest site, camouflaged from below but open on top. Some nest site fidelity has been observed. Kites may nest semi-colonially. Breeding season occurs from late February to early August. Occasionally kites will double brood in a single season (Dunk 2020).

American Peregrine Falcon

Habitat for the American peregrine falcon (*Falco peregrinus anatum*) is variable. Most commonly occupied habitats contain cliffs open to the air for nesting and open landscapes for foraging. The peregrine is known to use towers and buildings in urban environments for nesting. Typically the peregrine falcon breeds February through July with replacement clutches only after nest failure. The peregrine predominantly captures its prey, mainly birds, in the air, but may also feed on mammals and pirated foods from other raptors (White et al. 2020).

Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) occurs primarily in California's oak woodlands but may also be observed in riparian woodlands and, rarely, in conifer forests. Its distribution stretches from northernmost California to northern Baja California. The Nuttall's woodpecker forages in the crevices of oaks and willows, gleaning insects primarily. Breeding occurs between April and July. Nest sites are cavities in soft wood, with the male typically excavating the cavity prior to egg laying and the both the male and female refining the cavity during egg-laying (Lowther and Patten 2020).

Olive-sided flycatcher

The olive-sided flycatcher (*Contopus cooperi*) breeds in woodlands and forests, at edges and openings, such as meadows, grasslands, wetlands and ponds, near open water from Alaska through Canada into California. This bird builds a cup nest of twigs, rootlets, and lichens, placed near the tip on a horizontal branch of a tree. Tall, prominent trees and snags are used for perching, singing and from foraging. The olive-sided flycatcher winters primarily in Panama and the Andes Mountains of South America (Altman and Sallabanks 2020).

Wrentit

The wrentit (*Chamaea fasciata)* occurs along the west coast (west of the Cascades and the Sierra Nevada) from the Columbia River to Baja California. The wrentit is abundant in shrublands, especially coastal scrub and chaparral; and a variety of other habitats with adequate cover such as timber and riparian forests, oak woodland, and urban and suburban areas. Wrentits typically mate for life and both the male and the female defend their territory yearlong. Breeding occurs from mid-March to early August. Nest sites are often in dense scrub such as California sage, California blackberry, poison oak or coffeeberry, but may also be situated in trees. Nests are constructed of strips of bark, twigs, cobwebs, and are lined with grasses, and other softer materials and decorated with lichen along with materials gleaned from humans. The wrentit eats insects, spiders, fruit, and seeds (Geupel and Ballard 2020).

Oak Titmouse

The oak titmouse (*Baeolophus inornatus*) is a common year-round resident of warm, dry woodlands, restricted almost entirely to California, but ranging from southwest Oregon to northwest Baja California. The oak titmouse occupies predominantly oak or mixed oak-pine forests but has also adapted to other similar habitats such as open pine forests in central California. This bird species has a varied diet that is composed of plant parts including seeds and berries, as well as invertebrates. The oak titmouse pair bonds during the first breeding season, and the pair mates for life. The oak titmouse is a solitary nester that defends its territory year-round. The breeding pair builds a nest of grass, moss, mud, hair, feathers, and fur in a woodpecker hole, natural cavity, or nest box and may partially excavate their own cavities. In central California, breeding activity typically occurs between late February and the end of June; late nest-building (June) indicates a replacement nest or a second clutch (Cicero 2020).

Allen's Hummingbird

The Allen's hummingbird (*Selasphorus sasin*) migrates from Mexico to arrive in coastal California midwinter. This species breeds from southwest Oregon to southern California, including on some of the Channel Islands. The breeding period is from February 1 to mid-July, with most breeding occurring March – June. In anticipation of the arrival of the females, males squabble to defend food sources and territory in shrub, chaparral, riparian woodland, mixed evergreen, and eucalyptus groves in the fog belt. Females typically select thicker riparian vegetation for nesting. Females build the nest from downy material such as from willows mixed with spider webs and with decorated with moss and lichen. The female provides all the care at the nest. The Allen's hummingbird feeds on floral nectar and small insects (Clark and Mitchell 2020).

Bat Species

The hoary bat (*Lasiurus cinereus)* roosts primarily in foliage of coniferous and deciduous trees near the ends of branches, usually at the edges of clearings. This species is also known to roost in caves, under rock ledges, in woodpecker holes, grey squirrel nests, and clinging to the sides of buildings. The hoary bat forages in forested areas (WBWG 2017).

The silver-haired bat (*Lasionycteris noctivagans)* roosts in hollows and cavities of trees or loose bark of large-diameter snags. Maternity roosts are also in cavities and may consist of multiple roosts in areas with limited habitat features. This species forages above the canopy, over open meadows, and riparian zones along water courses (WBWG 2017).

The western red bat roosts in foliage, primarily in riparian and wooded habitats, along streams and in edge habitats or habitat mosaics that provide open areas for foraging. The western red bat prefers roost sites that are protected from above and open below and located above dark ground cover (Harvey et al. 1999, Pierson et al. 1997). Young are born between late May and July and volant 3-6 weeks later. The western red bat begins foraging 1 - 2 hours after sunset and again several hours before sunrise, corresponding to periods of insect activity. This species may migrate a short distance between summer and winter ranges (WBWG 2017).

The long-legged myotis roosts primarily in large hollow tree snags, or live trees with exfoliating bark; but also uses rock crevices, mines, and buildings. This species is most common in woodland and forest habitats but also occupies chaparral and coastal scrub. The long-legged myotis forages in and around the forest canopy, over water and open habitats and is associated with short-lived patches of high insect density. The long-legged myotis forms maternity colonies with young born in June and July and volant 3-6 weeks later. The long-legged myotis is most active 3-4 hours after sunset. This species probably makes short migrations to winter hibernacula (Warner and Czaplewski 1984).

San Francisco Dusky-footed Woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is associated with riparian, oak woodland, redwood forest, and chaparral or other scrub habitats. The woodrat builds houses on the ground or in trees, utilizing understory, woody debris, human debris, structures or buildings. Houses range in size from 3 to 8 feet across at the base, up to 6 feet tall, and up to approximately 30 feet above the ground in tree canopies. The woodrat tends to live in colonies of 3 to 15 or more houses, with the inhabitants often representing multiple generations. Houses have food caches, latrines, and often *Peromyscus* sp. nests and/or amphibians within. The woodrat is mostly nocturnal, leaving its house to forage on different parts of the same woody plant seasonally including leaves, bark, seeds and fruit of coast live oak, coffeeberry, poison oak, elderberry, but also grasses, flowers, and fungi. The woodrat breeds from December to September with a peak in mid-spring (Sakai and Noon 1993).

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958
Email Address: FW8VenturaSection7@FWS.Gov

In Reply Refer To: August 31, 2023
Project Code: 2022-0082555
Project Name: Segment 10/11 Rail Trail

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

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

PROJECT SUMMARY

Project Code: 2022-0082555
Project Name: Segment 10/11 Rail Trail
Project Type: Recreation - New Construction
Project Description: Construct a bicycle/pedestrian trail within the existing rail corridor adjacent to the railroad tracks.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.97497475,-121.95192318109062,14z



Counties: Santa Cruz County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 23 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

REPTILES

NAME	STATUS
San Francisco Garter Snake *Thamnophis sirtalis tetrataenia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5956	Endangered

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog *Rana boylii* Population: Central Coast Distinct Population Segment (Central Coast DPS) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5133	Proposed Threatened

FISHES

NAME	STATUS
Tidewater Goby *Eucyclogobius newberryi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/57	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Mount Hermon June Beetle *Polyphylla barbata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3982	Endangered
Ohlone Tiger Beetle *Cicindela ohlone* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8271	Endangered
Zayante Band-winged Grasshopper *Trimerotropis infantilis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1036	Endangered

FLOWERING PLANTS

NAME	STATUS
Ben Lomond Spineflower *Chorizanthe pungens var. hartwegiana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7498	Endangered
Ben Lomond Wallflower *Erysimum teretifolium* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7429	Endangered
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Gilia *Gilia tenuiflora ssp. arenaria* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/856	Endangered
Santa Cruz Tarplant *Holocarpha macradenia* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6832	Threatened
Scotts Valley Polygonum *Polygonum hickmanii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3222	Endangered
Scotts Valley Spineflower *Chorizanthe robusta var. hartwegii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7108	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Oystercatcher *Haematopus bachmani* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer *Rynchops niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10

NAME	BREEDING SEASON
Black Tern *Chlidonias niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black Turnstone *Arenaria melanocephala* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch *Carduelis lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

NAME	BREEDING SEASON
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

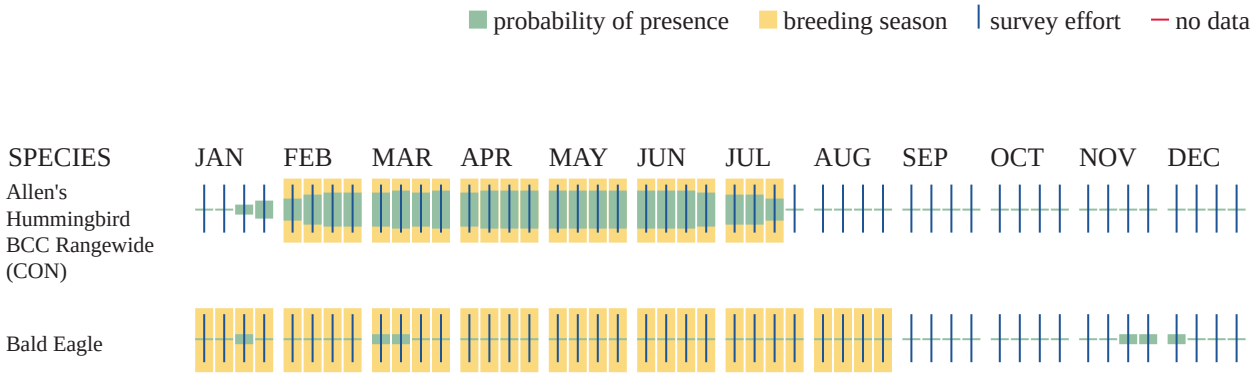
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

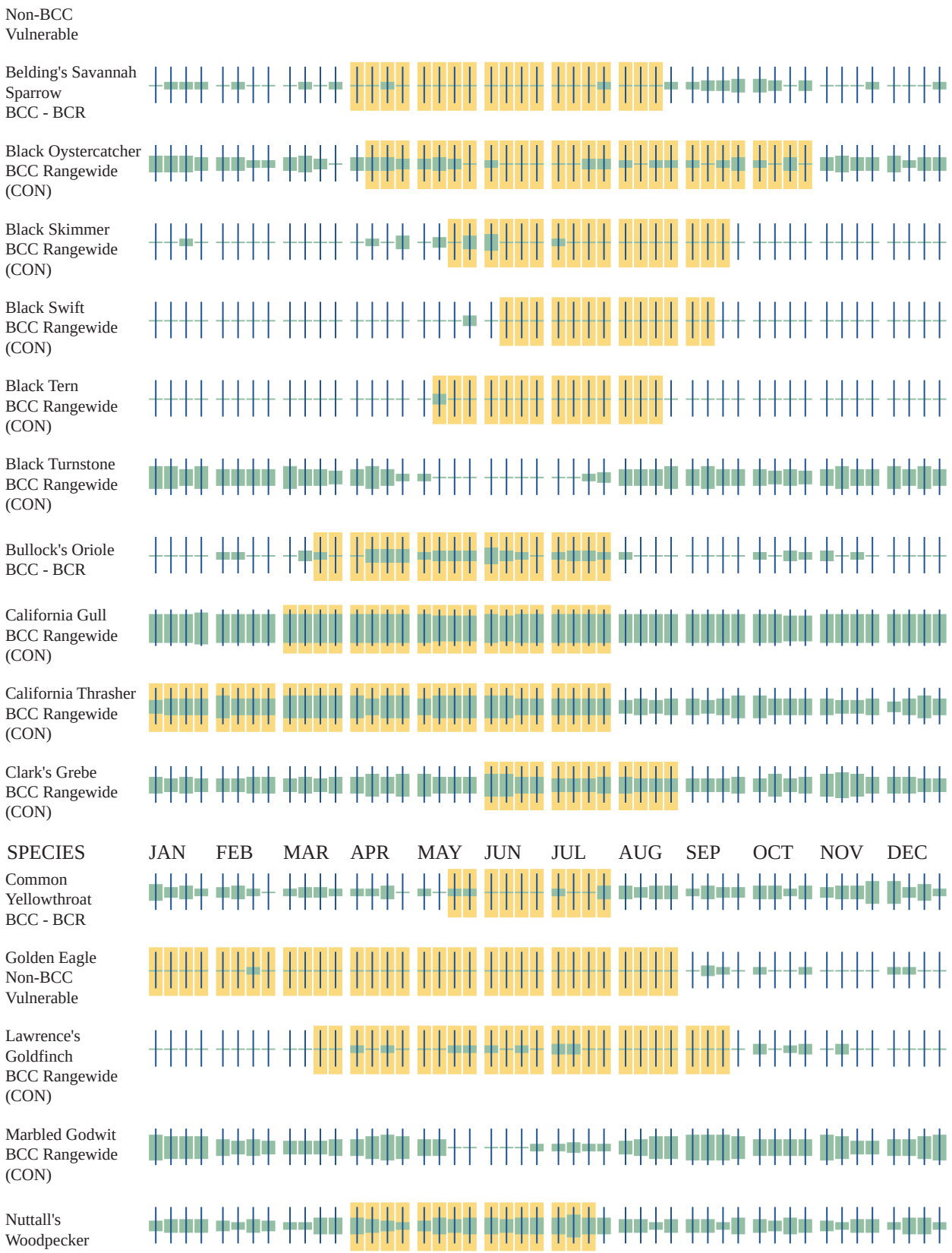
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

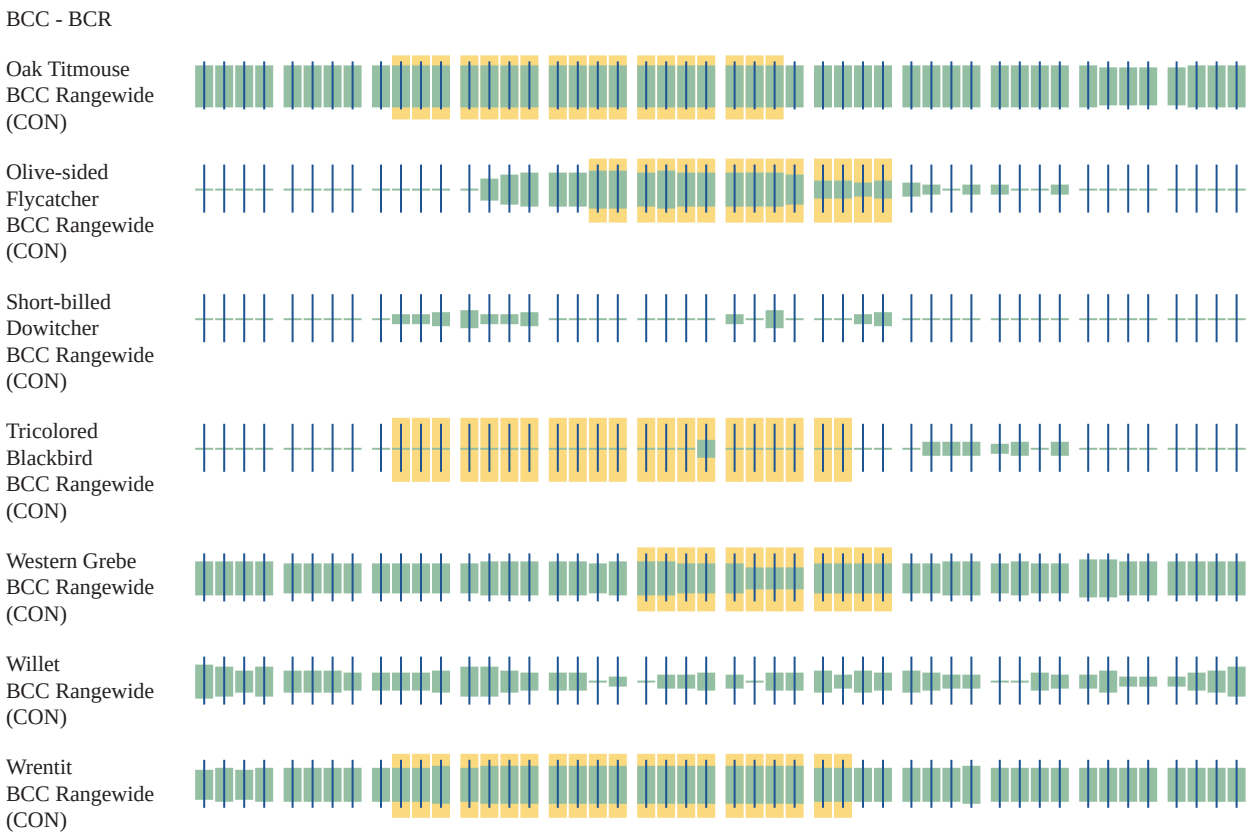
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.




Non-BCC Vulnerable
Belding's Savannah Sparrow BCC - BCR
Black Oystercatcher BCC Rangewide (CON)
Black Skimmer BCC Rangewide (CON)
Black Swift BCC Rangewide (CON)
Black Tern BCC Rangewide (CON)
Black Turnstone BCC Rangewide (CON)
Bullock's Oriole BCC - BCR
California Gull BCC Rangewide (CON)
California Thrasher BCC Rangewide (CON)
Clark's Grebe BCC Rangewide (CON)
SPECIES
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Common Yellowthroat BCC - BCR
Golden Eagle Non-BCC Vulnerable
Lawrence's Goldfinch BCC Rangewide (CON)
Marbled Godwit BCC Rangewide (CON)
Nuttall's Woodpecker



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell

me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

IPAC USER CONTACT INFORMATION

Agency: EcoSystems West Consulting Group
Name: Erin McGinty
Address: 180 7th Aveune, Suite 201
City: Santa Cruz
State: CA
Zip: 95062
Email emcginty@sbcglobal.net
Phone: 8313451595

LEAD AGENCY CONTACT INFORMATION

Lead Agency: County of Santa Cruz

Appendix F.3 List of Plants Observed during 2023 floristic surveys of the Santa Cruz Rail Trail Segments 10 and 11 Study Area, Santa Cruz County, California.

Scientific Name	Common Name	Status	Duration/Life Strategy
	AGAVACEAE		
Agave americana ssp. americana	American century plant	non-native	Shrub
	AIZOACEAE		
Carpobrotus chilensis	Sea fig	• invasive non-native	Perennial herb
Carpobrotus edulis	Iceplant	• invasive non-native	Perennial herb
	ALLIACEAE		
Allium triquetrum	White flowered onion	non-native	Perennial herb (bulb)
	ANACARDIACEAE		
Schinus terebinthifolius	Brazilian pepper tree	non-native	Tree, Shrub
Toxicodendron diversilobum	Poison oak	native	Vine, Shrub
	APIACEAE		
Conium maculatum	Poison hemlock	• invasive non-native	Perennial herb
Foeniculum vulgare	Fennel	• invasive non-native	Perennial herb
Oenanthe sarmentosa	Water parsley	native	Perennial herb
Sanicula crassicaulis	Pacific sanicle	native	Perennial herb
Torilis arvensis	Field hedge parsley	• invasive non-native	Annual herb
	APOCYNACEAE		
Vinca major	Periwinkle	• invasive non-native	Perennial herb
	AQUIFOLIACEAE		
Ilex aquifolium	Holly	• invasive non-native	Tree, Shrub
	ARACEAE		
Zantedeschia aethiopica	Callalily	non-native	Perennial herb
	ARALIACEAE		
Hedera canariensis	Canary ivy	• invasive non-native	Vine
Hedera helix	English ivy	• invasive non-native	Vine, Shrub
	ARECACEAE		
Syagrus romanzoffiana	Queen palm	non-native	Tree
Washingtonia robusta	Mexican fan palm	• invasive non-native	Tree
	ASPHODELACEAE		
Kniphofia uvaria	Redhot poker	non-native	Perennial herb
	ASTERACEAE		
Achillea millefolium	Yarrow	native	Perennial herb
Ageratina adenophora	Sticky snakewort	• invasive non-native	Perennial herb
Baccharis pilularis	Coyote brush	native	Shrub
Calendula arvensis	Field marigold	non-native	Annual herb
Carduus pycnocephalus	Italian thistle	• invasive non-native	Annual herb
Cirsium brevistylum	Indian thistle	native	Perennial herb
Cirsium vulgare	Bullthistle	• invasive non-native	Perennial herb
Crepis capillaris	Smooth hawksbeard	non-native	Annual, Perennial herb
Delairea odorata	Cape ivy	• invasive non-native	Perennial herb
Erigeron bonariensis	Flax-leaved horseweed	non-native	Annual herb
Erigeron canadensis	Canada horseweed	native	Annual herb
Gerbera jamesonii	Barberton daisy	non-native	Perennial herb
Gnaphalium palustre	Lowland cudweed	native	Annual herb
Hypochaeris radicata	Hairy cat's ear	• invasive non-native	Perennial herb
Lactuca saligna	Willow lettuce	non-native	Annual herb
Lactuca serriola	Prickly lettuce	non-native	Annual herb
Matricaria discoidea	Pineapple weed	native	Annual herb
Pseudognaphalium luteoalbum	Jersey cudweed	non-native	Annual herb
Silybum marianum	Milk thistle	• invasive non-native	Annual, Perennial herb

Sonchus asper	Spiny sowthistle	non-native	Annual herb
Sonchus oleraceus	Sow thistle	non-native	Annual herb
Taraxacum officinale ssp. officinale	Common dandelion	non-native	Perennial herb
BETULACEAE			
Corylus cornuta ssp. californica	Beaked hazelnut	native	Shrub
BORAGINACEAE			
Adelinia grandis	Adelinia	native	Perennial herb
Echium candicans	Pride of madeira	non-native	Shrub
Echium pininana	Pine echium	non-native	Shrub
Myosotis latifolia	Wide leaved forget me not	non-native	Perennial herb
BRASSICACEAE			
Brassica nigra	Black mustard	• invasive non-native	Annual herb
Cardamine oligosperma	Idaho bittercress	native	Annual, Perennial herb
Hirschfeldia incana	Mustard	• invasive non-native	Perennial herb
Lunaria annua	Annual moonwort	non-native	Annual, Perennial herb
Nasturtium officinale	Watercress	native	Perennial herb (aquatic)
Raphanus sativus	Wild radish	non-native	Annual, Biennial herb
Rorippa palustris	Bog yellow cress	native	Annual, Perennial herb
CAPRIFOLIACEAE			
Lonicera hispidula	Pink honeysuckle	native	Vine, Shrub
Lonicera involucrata	Coast twinberry	native	Shrub
Lonicera involucrata var. involucrata	Twinberry	native	Shrub
Lonicera involucrata var. ledebourii	Coast twinberry	native	Shrub
CARYOPHYLLACEAE			
Cerastium glomeratum	Large mouse ears	non-native	Annual herb
Polycarpon tetraphyllum	Four leaved allseed	non-native	Annual herb
Spergularia rubra	Purple sand spurry	non-native	Annual, Perennial herb
Stellaria media	Chickweed	non-native	Annual herb
CORNACEAE			
Cornus sericea ssp. occidentalis	Western dogwood	native	Shrub
CRASSULACEAE			
Crassula connata	Sand pygmy weed	native	Annual herb
Crassula ovata	Jade plant	non-native	Shrub
Sedum praealtum	Green cockscomb	non-native	Perennial herb
CUCURBITACEAE			
Marah fabacea	California man-root	native	Perennial herb, Vine
CUPRESSACEAE			
Calocedrus decurrens	Incense cedar	native	Tree
Hesperocyparis macrocarpa	Monterey cypress	native	Tree
Juniperus chinensis	Chinese juniper	non-native	Tree
Sequoia sempervirens	Coast redwood	native	Tree
CYPERACEAE			
Carex densa	Sedge	native	Perennial grasslike herb
Carex subbracteata	Small bract sedge	native	Perennial grasslike herb
Carex tumulicola	Split awn sedge	native	Perennial grasslike herb
Cyperus eragrostis	Tall cyperus	native	Perennial grasslike herb
DENNSTAEDTIACEAE			
Pteridium aquilinum var. pubescens	Western bracken fern	native	Fern
DRYOPTERIDACEAE			
Dryopteris arguta	Wood fern	native	Fern
Polystichum munitum	Western sword fern	native	Fern
EQUISETACEAE			
Equisetum arvense	Common horsetail	native	Fern

Equisetum telmateia	Giant horsetail	native	Fern
ERICACEAE			
Arbutus menziesii	Madrono	native	Tree
EUPHORBIACEAE			
Euphorbia lathyris	Gopher plant	non-native	Annual, Perennial herb
Euphorbia oblongata	Eggleaf spurge	non-native	Perennial herb
Euphorbia peplus	Petty spurge	non-native	Annual herb
FABACEAE			
Acacia dealbata	Silver wattle	• invasive non-native	Tree, Shrub
Acacia melanoxylon	Blackwood acacia	• invasive non-native	Tree
Acmispon glaber var. glaber	Deerweed	native	Perennial herb
Genista monspessulana	French broom	• invasive non-native	Shrub
Lathyrus sativus	White pea	non-native	Annual herb, Vine
Lathyrus vestitus	Common pacific pea	native	Perennial herb
Lupinus arboreus	Coastal bush lupine	native	Shrub
Medicago polymorpha	California burclover	non-native	Annual herb
Trifolium dubium	Shamrock	non-native	Annual herb
Trifolium incarnatum	Crimson clover	non-native	Annual herb
Vicia sativa ssp. sativa	Common vetch	non-native	Annual herb, Vine
Vicia villosa ssp. varia	Smooth vetch	non-native	Annual herb, Vine
Wisteria sinensis	Chinese wisteria	non-native	Perennial herb
FAGACEAE			
Quercus agrifolia	Coast live oak	native	Tree
Quercus virginiana	Live oak	non-native	Tree
GERANIACEAE			
Erodium botrys	Big heron bill	non-native	Annual herb
Erodium moschatum	Whitestem filaree	non-native	Annual herb
Erodium cicutarium	Redstem filaree	non-native	Annual herb
Geranium dissectum	Cutleaf geranium	non-native	Annual herb
Geranium robertianum	Robert's geranium	non-native	Annual herb
GROSSULARIACEAE			
Ribes sanguineum	Flowering currant	native	Shrub
IRIDACEAE			
Sisyrinchium bellum	Blue eyed grass	native	Perennial herb
JUGLANDACEAE			
Juglans regia	English walnut	non-native	Tree
JUNCACEAE			
Juncus effusus ssp. pacificus	Pacific rush	native	Perennial grasslike herb
Juncus patens	Rush	native	Perennial grasslike herb
Juncus phaeocephalus	Brown headed rush	native	Perennial grasslike herb
LAMIACEAE			
Clinopodium douglasii	Yerba buena	native	Perennial herb
Lavandula stoechas	French lavender	non-native	Shrub
Stachys bullata	Southern hedge nettle	native	Perennial herb
LAURACEAE			
Cinnamomum camphora	Camphortree	non-native	Tree
Persea americana	Avocado	non-native	Tree
LYTHRACEAE			
Lythrum hyssopifolia	Hyssop loosestrife	non-native	Annual, Perennial herb
MALVACEAE			
Malva parviflora	Cheeseweed	non-native	Annual herb
MONTIACEAE			
Claytonia perfoliata	Miner's lettuce	native	Annual herb

MORACEAE			
Ficus pumila	Climbingfig	non-native	Shrub
MYRSINACEAE			
Lysimachia arvensis	Scarlet pimpernel	non-native	Annual herb
MYRTACEAE			
Eucalyptus camaldulensis	Red gum	non-native	Tree
Eucalyptus globulus	Blue gum	• invasive non-native	Tree
Syzygium paniculatum	Brush cherry	non-native	Tree
OLEACEAE			
Ligustrum japonicum	Japanese privet	non-native	Tree, Shrub
Ligustrum lucidum	Glossy privet	non-native	Tree, Shrub
Olea europaea	Olive	non-native	Tree, Shrub
ONAGRACEAE			
Epilobium brachycarpum	Willow herb	native	Annual herb
Oenothera elata ssp. hooker i	Evening primrose	native	Perennial herb
Taraxia ovata	Sun cup	native	Perennial herb
OXALIDACEAE			
Oxalis corniculata	Creeping wood sorrel	non-native	Perennial herb
Oxalis incarnata	Crimson woodsorrel	non-native	Perennial herb
Oxalis pes-caprae	Bermuda buttercup	• invasive non-native	Perennial herb
PAPAVERACEAE			
Dicentra formosa	Pacific bleedinghearts	native	Perennial herb
Eschscholzia californica	California poppy	native	Annual, Perennial herb
Fumaria capreolata	White ramping fumitory	non-native	Perennial herb
PINACEAE			
Pinus canariensis	Canary island pine	non-native	Tree
Pinus pinea	Italian stone pine	non-native	Tree
Pinus radiata	Monterey pine	native	Tree
Pinus thunbergiana	Japanese black pine	non-native	Tree
Pseudotsuga menziesii var. menziesii	Douglas fir	native	Tree
PITTOSPORACEAE			
Pittosporum crassifolium	Thick leaf box	non-native	Tree, Shrub
Pittosporum tenuifolium	Short leaf box	non-native	Tree
Pittosporum tobira	Mock orange	non-native	Tree, Shrub
Pittosporum undulatum	Victorian box	non-native	Tree, Shrub
PLANTAGINACEAE			
Plantago coronopus	Cutleaf plantain	non-native	Annual herb
Plantago lanceolata	Ribwort	non-native	Perennial herb
PLUMBAGINACEAE			
Limonium sinuatum	Statice	non-native	Perennial herb
POACEAE			
Avena barbata	Slim oat	• invasive non-native	Annual grass
Bromus catharticus	Rescue grass	non-native	Annual, Perennial grass
Bromus diandrus	Ripgut brome	• invasive non-native	Annual grass
Bromus hordeaceus	Soft chess	non-native	Annual grass
Bromus laevipes	Narrow flowered brome	native	Perennial grass
Bromus sitchensis var. carinatus	California brome	native	Perennial grass
Cortaderia jubata	Andean pampas grass	• invasive non-native	Perennial grass
Cynodon dactylon	Bermuda grass	• invasive non-native	Perennial grass
Dactylis glomerata	Orchardgrass	non-native	Perennial grass
Danthonia californica	California oatgrass	native	Perennial grass
Ehrharta erecta	Upright veldt grass	• invasive non-native	Perennial grass
Elymus glaucus ssp. glaucus	Blue wild rye	native	Perennial grass

Festuca arundinacea	Reed fescue	• invasive non-native	Perennial grass
Festuca bromoides	Brome fescue	non-native	Annual grass
Festuca myuros	Rattail sixweeks grass	• invasive non-native	Annual grass
Festuca perennis	Italian rye grass	• invasive non-native	Annual, Perennial grass
Holcus lanatus	Common velvetgrass	• invasive non-native	Perennial grass
Hordeum murinum ssp. leporinum	Farmer's foxtail	non-native	Annual grass
Nassella tenuissima	Mexican feathergrass	non-native	Perennial grass
Pennisetum clandestinum	Kikuyu grass	non-native	Perennial grass
Pennisetum setaceum	Fountaingrass	• invasive non-native	Perennial grass
Poa annua	Annual blue grass	non-native	Annual grass
Polypogon monspeliensis	Annual beard grass	non-native	Annual grass
Pseudosasa japonica	Arrow bamboo	non-native	Shrub
Stipa pulchra	Purple needle grass	native	Perennial grass
PODOCARPACEAE			
Podocarpus macrophyllus	Yew plum pine	non-native	Shrub
POLYGONACEAE			
Persicaria maculosa	Spotted ladysthumb	non-native	Annual herb
Polygonum aviculare ssp. depressum	Prostrate knotweed	non-native	Annual, Perennial herb
Rumex acetosella	Sheep sorrel	• invasive non-native	Perennial herb
Rumex crispus	Curly dock	non-native	Perennial herb
Rumex obtusifolius	Broadleaf dock	non-native	Perennial herb
Rumex pulcher	Fiddleleaf dock	non-native	Perennial herb
RHAMNACEAE			
Frangula californica	California coffeeberry	native	Shrub
ROSACEAE			
Cotoneaster pannosus	Woolly cotoneaster	• invasive non-native	Shrub
Heteromeles arbutifolia	Toyon	native	Shrub
Prunus caroliniana	Carolina laurelcherry	non-native	Tree
Prunus cerasifera	Cherry plum	non-native	Tree
Prunus domestica	European plum	non-native	Tree
Prunus ilicifolia ssp. ilicifolia	Holly leaf cherry	native	Tree, Shrub
Prunus laurocerasus	Cherry laurel	non-native	Tree, Shrub
Pyrus calleryana	Callery pear	non-native	Tree
Rubus armeniacus	Himalayan blackberry	• invasive non-native	Shrub
Rubus ursinus	California blackberry	native	Vine, Shrub
RUBIACEAE			
Galium aparine	Cleavers	native	Annual herb
SALICACEAE			
Populus nigra	Lombardy poplar	non-native	Tree
Populus trichocarpa	Black cottonwood	native	Tree
Salix laevigata	Polished willow	native	Tree
Salix lasiolepis	Arroyo willow	native	Tree, Shrub
SAPINDACEAE			
Acer macrophyllum	Bigleaf maple	native	Tree
Acer negundo	Boxelder	native	Tree
Aesculus californica	Buckeye	native	Tree
Cupaniopsis anacardioides	Carrotwood	non-native	Tree
SCROPHULARIACEAE			
Myoporum laetum	Ngaio tree	• invasive non-native	Tree, Shrub
Scrophularia californica	California bee plant	native	Perennial herb
SOLANACEAE			
Solanum nigrum	Black nightshade	non-native	Annual herb
TROPAEOLACEAE			

Tropaeolum majus	Garden nasturtium	non-native	Annual herb, Vine
TYPHACEAE			
Typha latifolia	Broadleaf cattail	native	Perennial herb (aquatic)
ULMACEAE			
Ulmus minor	English elm	non-native	Tree
URTICACEAE			
Urtica dioica	Stinging nettle	native	Perennial herb
VALERIANACEAE			
Centranthus ruber	Jupiter's beard	non-native	Annual, Perennial herb
VIBURNACEAE			
Sambucus nigra	Black elderberry	native	Shrub

Appendix F.4 Avian species detected and associated potential habitat type along the Coastal Rail Trail - Segments 10 and 11, Santa Cruz County, CA.

	Conservation Status	Non-Native Grassland	Degraded Coastal Terrace Prairie	Oak Woodland/ Forest	Coastal Scrub	Arroyo Willow/ Mixed Riparian Forest	Aquatic	Sandy Beach	Mudstone Cliff	Non-Native Forest	Ornamental/ Landscaped	Ruderal/ Developed
Anatidae												
Mallard *Anas Platyrhynchos*							X	X				
Trochilidae												
Allen's Hummingbird *Selasphorus sasin*	BCC		X	X	X	X				X	X	X
Anna's Hummingbird *Calypte anna*		X	X	X	X	X				X	X	X
Columbidae												
Band-tailed Pigeon *Patagioenas fasciata*				X							X	X
Eurasian Collared-Dove *Streptopelia decaocto**				X		X				X	X	X
Mourning Dove *Zenaida macroura*		X	X	X	X	X				X	X	X
Rock Pigeon *Columba livia**									X		X	X
Cathartidae												
Turkey Vulture *Cathartes aura*		X	X	X	X			X				X
Accipitridae												
Cooper's Hawk *Accipiter cooperii*				X		X				X	X	X
Red-tailed Hawk *(Buteo jamaicensis)*		X	X	X	X					X		X
Red-shouldered Hawk (*Buteo lineatus)*				X		X				X	X	X
Strigidae												
Great Horned Owl *Bubo virginianus*		X	X	X	X	X				X	X	X
Odontophoridae												
California Quail *Callipepla californica*			X	X	X						X	X
Laridae												

	Conservation Status	Non-Native Grassland	Degraded Coastal Terrace Prairie	Oak Woodland/ Forest	Coastal Scrub	Arroyo Willow/ Mixed Riparian Forest	Aquatic	Sandy Beach	Mudstone Cliff	Non-Native Forest	Ornamental/ Landscaped	Ruderal/ Developed
Western Gull *Larus occidentalis*	BCC						X	X				X
Ardeidae												
Great Blue Heron *Ardea Herodias*		X	X		X		X	X				
Picidae												
Acorn Woodpecker *Melanerpes formicivorus*				X		X					X	X
Downy Woodpecker *Dryobates pubescens*				X		X				X	X	X
Hairy Woodpecker *Dryobates villosus*				X		X				X	X	X
Nuttall's Woodpecker *Dryobates nuttallii*	BCC			X		X				X	X	X
Tyrannidae												
Black Phoebe *Sayornis nigricans*			X	X	X	X	X	X		X	X	X
Pacific-slope Flycatcher *Empidonax difficilis*				X		X				X		
Olive-sided Flycatcher *Contopus cooperi*	BCC SSC											
Vireonidae												
Hutton's Vireo *Vireo huttoni*				X	X	X				X	X	
Warbling Vireo *Vireo gilvus*				X		X				X		
Corvidae												
American Crow *Corvus brachyrhynchos*				X		X				X	X	X
California Scrub-Jay *Aphelocoma californica*			X	X	X	X					X	X
Common Raven *Corvus corax*		X		X	X	X					X	X
Steller's Jay *Cyanocitta stelleri*				X		X				X		
Hirudinidae												

	Conservation Status	Non-Native Grassland	Degraded Coastal Terrace Prairie	Oak Woodland/ Forest	Coastal Scrub	Arroyo Willow/ Mixed Riparian Forest	Aquatic	Sandy Beach	Mudstone Cliff	Non-Native Forest	Ornamental/ Landscaped	Ruderal/ Developed
Barn Swallow *Hirundo rustica*		X	X	X	X	X		X			X	X
Paridae												
Chestnut-backed Chickadee *Poecile rufenscens*				X	X	X				X	X	X
Oak Titmouse *Baeolophus inornatus*	BCC S4			X		X				X	X	X
Aegithalidae												
Bushtit *Psaltriparus minimus*			X	X	X	X				X	X	X
Sittidae												
Pygmy Nuthatch *Sitta pygmaea*				X		X				X		X
Certhiidae												
Brown Creeper *Certhia americana*				X		X				X	X	
Sylviidae												
Wrentit *Chamaea fasciata*	BCC		X	X	X	X					X	
Troglodytidae												
Bewick's Wren *Thryomanes bewickii*			X	X	X	X				X	X	X
Sturnidae												
European Starling *Sturnus vulgaris**		X		X		X				X	X	X
Turdidae												
American robin *Turdus migratorius*				X		X				X	X	X
Swainson's Thrush *Catharus ustulatus*				X		X				X		
Mimidae												
Northern Mockingbird *Mimus polyglottos*			X		X						X	X
Bombycillidae												
Cedar Waxwing *Bombycilla cedrorum*+				X		X				X	X	

	Conservation Status	Non-Native Grassland	Degraded Coastal Terrace Prairie	Oak Woodland/ Forest	Coastal Scrub	Arroyo Willow/ Mixed Riparian Forest	Aquatic	Sandy Beach	Mudstone Cliff	Non-Native Forest	Ornamental/ Landscaped	Ruderal/ Developed
Parulidae												
Common Yellowthroat *Geothlypis trichas*						X						
Orange-crowned Warbler Oreothlypis celata				X	X	X				X	X	
Townsend's Warbler *Setophaga townsendi*+				X		X				X	X	
Yellow-rumped Warbler *Setophaga coronata*				X		X				X	X	
Wilson's Warbler *Cardellina pusilla*				X		X				X		
Cardinalidae												
Black-headed Grosbeak *Pheucticus melanocephalus*				X		X				X		
Passerellidae												
California Towhee *Melozone crissalis*			X	X	X	X				X	X	X
Dark-eyed Junco *Junco hyemalis*				X		X				X	X	X
House Sparrow* *Passer domesticus*						X					X	X
Golden-crowned Sparrow *Zonotrichia atricapilla*+		X	X		X	X					X	X
Spotted Towhee *Pipilo maculatus*			X	X	X	X				X	X	
Song Sparrow *Melospiza melodia*			X	X	X	X				X	X	X
Icteridae												
Brewer's Blackbird *Euphagus cyanocephalus*		X									X	X
Fringillidae												
House Finch *Haemorhous mexicanus*		X	X	X	X	X				X	X	X
Lesser Goldfinch *Spinus psaltria*		X	X	X		X				X	X	X

NOTES:

* Non-native Species
+Wintering/Nonbreeding Only

Federal Status (USFWS 2021)

BCC = Species of migratory nongame birds that are considered to be of concern in the United States because of (1) documented or apparent population declines, (2) small or restricted populations, (3) dependence on restricted or vulnerable habitats.

State Status (CDFW 2023d)

SSC = CDFW Species of Special Concern: Designated because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Other (CDFW CNDDB 2023)

NatureServe Ranking[1]:

S1 = Critically Imperiled - Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of 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 from the state.
S4 = Apparently Secure - At fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.

---

1 Originally developed by The Nature Conservancy and now maintained by NatureServe. Includes a Global rank (G-rank), over the taxon's entire distribution, and a State rank (S-rank), over its state distribution. For subspecies and varieties, there is also a "T" rank describing the global rank for the infraspecific taxon. Criteria are used to assign element ranks, from G1 to G5 for the Global rank and from S1 to S5 for the State rank, taking into account rarity, threats, and trends (CDFW CNDDB 2023).

Appendix G. Traffic Technical Memorandum

This page intentionally left blank.

Rincon Consultants, Inc.
2511 Garden Road, Suite C-250
Monterey, California 93940
831-333-0310

May 4, 2023
Project No.: 20-10372
Federal Project No.: ATPL-5936 (154)
Caltrans ID No.: 05-2300-0030

Kelso Vidal
California Department of Transportation, District 5
50 Higuera Street
San Luis Obispo, California 93401
Via email: kelso.vidal@dot.ca.gov

Subject: Coastal Rail Trail Segments 10 and 11, Traffic Technical Memorandum

Dear Mr. Vidal:

Rincon Consultants, Inc. is pleased to submit this Traffic Technical Memorandum for the proposed Coastal Rail Trail Segments 10 and 11 in Santa Cruz County on behalf of the County of Santa Cruz (project proponent and California Environmental Quality Act [CEQA] lead agency). The purpose of this memorandum is to detail transportation impacts associated with construction and operation of the proposed trail.

Project Description

The County of Santa Cruz (County), in coordination with the City of Capitola and the Santa Cruz County Regional Transportation Commission (RTC), is proposing the Coastal Rail Trail Segments 10 and 11 Project (Project) to be developed along RTC-owned rail corridor right-of-way (ROW) that generally parallels the coastline in central Santa Cruz County (regional location is shown in Figure 1). This memorandum evaluates the Proposed Project: Trail Next to Rail line (Ultimate Trail Configuration).[1]

The Project is a 4.2-mile bicycle and pedestrian system proposed to extend along the RTC-owned railroad corridor from 17th Avenue on the west to State Park Drive on the east, extending through unincorporated County and the City of Capitola. Segment 10 (1.5 miles) extends from 17th Avenue to 47th Avenue, and Segment 11 (2.7 miles) extends from 47th Avenue to State Park Drive (segments and Project location are shown in Figure 2. Both segments are comprised of a separated multi-use bicycle and pedestrian trail (graphic rendering shown in Figure 3). The new multi-use trail would not include an approximately 0.5-mile section of the rail corridor, from Opal Street to Monterey Avenue (which encompasses the Capitola Trestle Bridge), in the City of Capitola. Instead, trail users would be directed to the existing on-street bicycle lanes and pedestrian sidewalk extending through Capitola Village.

The trail would be Americans with Disabilities Act (ADA)-accessible and intended for pedestrians and bicyclists only. Although electric bicycles with a rating limited to 20 miles per hour would be allowed in accordance with California law (Assembly Bill 1096),[2] motorized vehicles would not be allowed (excluding emergency vehicles). Electronic skateboards with a rating limited to 20 miles per hour would

[1] The Environmental Impact Report for this Project analyzes two options—the Ultimate Trail Configuration (the Project, which is solely discussed in this Traffic Technical Memorandum) and an optional first phase called the Interim Trail Configuration. The proposed project described in this memorandum is consistent with the proposed project described in the Active Transportation Program grant application.
[2] According to Assembly Bill 1096, which took effect in January 2016, electric bicycles (e-bikes) are no longer regulated like mopeds, and the same rules of the road apply to both e-bikes and human-powered bicycles. Class 3 E-bikes go up to 28 mph and are not allowed on paths. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1096

be allowed as well. Depending on the volume of users, other speed limits may be imposed and indicated on posted signage. Flexible bollards would be installed at some roadway crossings to keep unauthorized motorists off the trail. The Project would not include installation of parking lots or other parking improvements, except for the reconfiguration of the existing diagonal parking along Cliff Drive to parallel parking (reducing the delineated spaces from 46 to 34 spaces) and the addition of a staircase for access to the New Brighton State Beach parking lot.

The Project would include eight at-grade roadway crossings at 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Grove Lane, New Brighton Road, Estates Drive, and Mar Vista Drive. Improvements at these roadway crossings include trail chicanes[3] to slow users before intersections, new sidewalks, ADA-compliant curb ramps, concrete track panels, grading and drainage improvements, roadway lighting, signage, and striping improvements on the roadway and trail. Additional improvements relevant to safety and unique to several crossings are identified below.

- **30th Avenue**
  - Light-emitting diode (LED) W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacon placed in advance of the crossing in each direction to warn drivers
  - Bulb-out on east side
- **38th Avenue**
  - LED W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacon placed in advance of the crossing in each direction to warn drivers
  - Relocated rail crossing equipment
  - Bulb-out on east side
- **41st Avenue**
  - LED W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacon placed in advance of the crossing in each direction to warn drivers
  - Relocated rail crossing equipment
  - Extension of sidewalk north to Melton Street
  - Bulb-outs
- **47th Avenue**
  - Bulb-out at southeast corner
  - Relocated rail crossing equipment
  - Crosswalk striping across 47th Avenue and Portola Drive on coastal side of tracks
- **New Brighton Road**
  - Regrading of roadway
- **Estates Drive**
  - Regrading of roadway
- **Mar Vista Drive**
  - LED W11-15 flashing pedestrian/bicycle signs placed in advance of the crossing in each direction to warn drivers
  - Concrete track panels
  - Trail chicanes

[3] Curves added by design

- New crosswalk across Mar Vista Drive, north side of the rail, to facilitate trail switching from coastal side to inland side of the tracks

The Project would cross New Brighton State Beach roadway via a clear span bridge with fiberglass reinforced polymer deck. This roadway crossing would not interfere with existing users.

The Project would include a 0.5-mile section between Opal Street and Monterey Avenue where trail users would be directed from the rail corridor and onto existing on-street bicycle lanes and pedestrian sidewalks. Where the trail along the rail corridor transitions to on-street bicycle and pedestrian facilities at Cliff Drive, there would be a plaza area with decorative pavers. Chicanes would be used along the trail approaching the plaza to slow bicycle and pedestrian traffic. The plaza area would include benches, bike racks, trash receptacles, concrete track panels across the rail line, and improved stairs to Prospect Avenue at Opal Street on the inland side. From the plaza area, bicyclists and pedestrians using the trail would be directed with signage and trail markings to the on-street bicycle lanes and sidewalks through Capitola Village. From Cliff Drive, bicyclists and pedestrians would cross Soquel Creek via the Stockton Avenue bridge, and continue through the village on Capitola Avenue and Monterey Avenue. At the Monterey Avenue/Park Avenue intersection, the off-street multipurpose trail would continue on the coastal side of the rail along Park Avenue.

Design Option

The Project would include one design option, which includes laying the trail on the inland side of the rail corridor from Grove Lane to Coronado Street. This design option would not impact roadway safety during construction or operation; as such, they are considered as part of the entire Project and are not discussed separately in the environmental consequence analysis below.

Purpose and Need

The purpose of the Project is to provide an ADA-accessible bicycle/pedestrian path for active transportation, recreation, and environmental and cultural education along the rail corridor, consistent with the Monterey Bay Sanctuary Scenic Trail Network Master Plan. The Project objectives include the following:

1. Provide a continuous public trail with continuity in design along the Santa Cruz Branch Line railroad corridor and connecting spur trails in Santa Cruz County.
2. Develop the trail so future rail transportation service along the corridor is not precluded.
3. Maximize ocean views and scenic coastal vistas along a coastal alignment for experiencing and interpreting the Monterey Bay National Marine Sanctuary (sanctuary), and historical and agricultural landscapes.
4. Maximize safety and serenity for experiencing and interpreting the sanctuary and landscapes by providing a trail separate from roadway vehicle traffic.
5. Minimize trail impacts to private lands, including agricultural, residential, and other land uses.
6. Minimize trail impacts to sensitive habitat areas and special-status plant and animal species.
7. Comply with requirements of local, state, and federal agencies with jurisdiction.

Affected Environment

The Project corridor is located in unincorporated Santa Cruz County and the City of Capitola, approximately 75 miles south of San Francisco and 340 miles north of Los Angeles (Figure 1). The western portion of Segment 10 and eastern portion of Segment 11 are in the County, while the eastern portion of Segment 10 and western portion of Segment 11 are in the City of Capitola (Figure 2). Largely built out, this portion of the County and Capitola are on the northern edge of Monterey Bay and are bounded on the southwest by the Pacific Ocean and on the inland side by the forested Santa Cruz Mountains. The central portion of Segment 11 extends through the New Brighton State Beach, which is under the jurisdiction of California State Parks, and is in both unincorporated Santa Cruz County and the City of Capitola.

None of the rail line along the Project corridor is active with train usage. Although the RTC owns the rail ROW, the RTC does not own the freight rail operation rights. Currently, freight service is only provided in the City of Watsonville, approximately 10 miles south of the Project corridor. Additionally, recreational passenger service is provided by Roaring Camp between the Santa Cruz Boardwalk and Felton, approximately three miles north of the Project corridor.

From west to east, the Project corridor extends along the rail corridor from 17th Avenue to 47th Avenue. From there the Project corridor stays within the rail corridor adjacent to Cliff Drive until reaching Opal Street. After Opal Street the Project corridor would utilize existing bicycle and pedestrian infrastructure along Cliff Drive, across the Stockton Avenue bridge over Soquel Creek, east on Capitola Avenue, and north on Monterey Avenue towards Park Avenue. At Park Avenue the Project corridor would continue along the rail corridor through New Brighton State Beach, extending to its terminus at State Park Drive. The Project corridor is adjacent to residential and commercial uses and is lined with vegetation and trees throughout.

Roadway Network and Traffic Circulation

Several local roads lead to, terminate at, and intersect with the Project corridor, including (from west to east): 17th Avenue, Chanticleer Avenue, Corcoran Avenue, 30th Avenue, Thompson Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Cliff Drive, Wharf Road, Stockton Avenue, Esplanade, Capitola Avenue, San Jose Avenue, Monterey Avenue, Park Place, Cherry Avenue, El Camino Medio, Fanmar Way, Escalona Drive, Central Avenue, Park Avenue, Grove Lane, New Brighton Road, Estates Drive, Mar Vista Drive, Cedar Street, and State Park Drive.

Existing user conflicts near the Project corridor primarily occur in Capitola Village on roadways, sidewalks, and crossings where pedestrian, bicycle, and vehicular traffic is intermixed. Conflicts may also occur at roadway crossings at 30th Avenue, 38th Avenue, 41st Avenue, 47th Avenue, Grove Lane, New Brighton Road, Estates Drive, and Mar Vista Drive. Further, conflicts may occur at Park Avenue where pedestrians and bicyclists cross from residential neighborhoods in the west to New Brighton State Beach in the east. According to data from the Statewide Integrated Traffic Record System, collisions involving bicyclists or pedestrians are common along roadways that would be crossed by pedestrians utilizing the rail trail (University of California [UC] Berkeley 2023). Along 17th Avenue, between Capitola Road and Portola Drive, six collisions involving bicyclists or pedestrians occurred between 2017 and 2021 (UC Berkeley 2023). One collision involving bicyclists or pedestrians occurred between 2017 and 2021 at the intersection of 41st Avenue and Portola Drive, south of the Project corridor (UC Berkeley 2023). Two collisions involving bicyclists or pedestrians occurred between 2017 and 2021 at the intersection of Stockton Avenue and Capitola Avenue, where the Project corridor would be directed from the rail corridor (UC Berkeley 2023). Few user conflicts occurred east of

Monterey Avenue, except for five collisions involving bicyclists or pedestrians occurred between 2017 and 2021 along State Park Drive between the Project corridor and Soquel Drive (UC Berkeley 2023).

Bicycle and Pedestrian Network

Most of the Project corridor is along the RTC-owned rail corridor, which crosses roadways that have existing sidewalks and Class II or Class III bicycle lanes/routes. In the portion of the Project corridor that extends outside the rail corridor through Capitola Village, trail users would be directed to the existing bicycle and pedestrian network.

Currently, most pedestrian activity near the Project corridor occurs in Capitola near Cliff Drive and through Capitola Village (Wharf Road, Stockton Avenue, Capitola Avenue and Monterey Avenue) where pedestrians may access Capitola Beach or surrounding commercial uses, and along Park Avenue and New Brighton State Beach, where pedestrians may access recreational features associated with the beach and campground.

Bicycle activity occurs along various parts of the Project corridor, most notably using bike lanes at the intersections of major cross streets (RTC 2023). There are bike lanes within the Project corridor along 17th Avenue, 30th Avenue, 41st Avenue, 47th Avenue, Cliff Drive, Stockton Avenue, Capitola Avenue, Monterey Avenue, and State Park Drive (RTC 2023). Cyclists may also utilize informal bicycle paths within New Brighton State Beach and other roadways without bicycle infrastructure that the Project corridor intersects.

Environmental Consequences

Project Construction

Construction of the Project could introduce a temporary hazard where trail construction within the rail corridor crosses existing roadways due to the potential for conflict between construction vehicles and existing traffic (vehicular, bicycle, pedestrian) along the roadways, and due to potential temporary lane closures that could occur periodically during construction (e.g., constructing the trail's roadway crossings). Where construction necessitates sidewalk closures at roadway crossings or where the Project corridor diverts from the rail corridor, pedestrian traffic would be detoured to the opposite side of the roadway. In most cases, construction-related roadway closures would not result in vehicle detours or require closure of one lane and temporary one-way traffic or narrowed roadways; instead, directional signage would be utilized. Bicycle and vehicle traffic would co-exist in these areas with "Share the Road" and/or "Bike May Use Full Lane" signs. Vehicle lane closures and bicyclist and pedestrian detours are anticipated to result in a minor time delay.

Construction activities are not anticipated to result in any long-term road or lane closures. Any road closures would be short-term and alternative access or detours would be provided. Construction and equipment staging, and stockpiling would take place on existing disturbed or paved areas within the rail corridor or nearby vacant land (including at 2700 Brommer Street, 835 Bay Avenue, 4510 Jade Street, and 1500 Park Avenue). Construction staging would be temporary in nature and any equipment utilized during construction would be removed after completion of the Project.

Project Operation

One of the Project objectives is to improve safety by providing a trail that is separate from vehicular traffic. Therefore, as a project that introduces a Class I transportation corridor, the Project would have no significant permanent transportation impacts. Rather, the Project would result in net benefits by providing active transportation opportunities, removing vehicles from area roadways, reducing greenhouse gas emissions, and reducing potential conflicts between vehicles and pedestrians and bicyclists. The proposed trail is anticipated to reduce vehicle trips by providing the opportunity to ride bicycles or walk instead of driving. This improved public access to the Pacific coast and important community destinations for bicycle users and pedestrians would reduce the need for vehicle parking, such as the twelve spaces that would be removed along Cliff Drive. Further, the Project integrates improvements that would reduce user conflicts, such as implementation of more high visibility striping and surface improvements for the existing bike lanes and crosswalks.

The Project would include other safety features for trail users. Retaining walls would be located in several locations along the alignment to provide the required safety distance between the trail and existing rail line. Safety fencing would be installed to separate trail users from the rail, and fencing and guardrails would be installed along the sides of bridges and other areas along the trail alignment for safety and security, as needed. Operation of the Project would improve vehicular, bicycle, and pedestrian safety at roadway crossings with the introduction of new and safer roadway crossings.

Additionally, a variety of design features have been incorporated into the Project for safety and to reduce the potential for user conflicts at roadway crossings. Specifically, most roadway crossings would include chicanes to slow trail users before the intersection and ensure safety for users approaching the intersection. LED-W11-15 flashing pedestrian/bicycle signs or rectangular rapid-flashing beacons would be placed in advance of the trail crossing in each direction on 30th Avenue, 38th Avenue, 41st Avenue, and Mar Vista Drive to warn vehicular drivers of the potential for bicyclist and pedestrian crossings. In addition, bulb-outs would be located along 30th Avenue, 41st Avenue, and 47th Avenue to extend the sidewalk into the parking lane to provide additional pedestrian space and visibility and reduce crossing distance for trail users. The New Brighton State Beach roadway would be traversed utilizing a clear span bridge to avoid user conflicts. Pedestrian infrastructure, such as crosswalk striping and sidewalk extensions, would be improved along 41st Avenue (sidewalk extension to Melton Street), 47th Avenue (crosswalk striping), Park Avenue (sidewalk extension from Grove Lane to Park Ave) and Mar Vista Drive (new crosswalk) to improve pedestrian safety.

Avoidance and Minimization Measures

The following avoidance and minimization measures would be implemented during construction as part of the Project.

Construction Measures

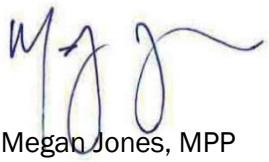
- Emergency personnel shall be notified in advance of construction-related lane closures to ensure that alternative emergency response measures could be taken, if necessary.
- To avoid and minimize traffic impacts, truck activity and haul routes shall be limited to arterial and collector roads where feasible.
- Construction signage and a flagger (as needed) shall be present at the location of any lane closure or substantial construction equipment or activity, which would maintain public safety while facilitating the necessary equipment and vehicular access to the Project corridor.

- To minimize impacts from construction equipment staging, all equipment and materials shall be stored, maintained, and refueled in clearly defined and designated portions of the staging areas in accordance with permit requirements.
- A traffic control plan shall be prepared and implemented to minimize traffic delays and detour motorists, bicycles and pedestrians when appropriate.

Sincerely,
Rincon Consultants, Inc.



Jesse Voremberg
Environmental Planner



Megan Jones, MPP
Managing Principal/Principal-in-Charge

Attachments

Figure 1 Regional Location
Figure 2 Coastal Rail Trail Segments 10 and 11
Figure 3 Graphic Representation of Coastal Rail Trail Segments 10 and 11

References

Santa Cruz County Regional Transportation Commission. 2023. Signed Bicycle Routes & Other Bikeways of Santa Cruz County. https://sccrtc.maps.arcgis.com/apps/StoryMapBasic/index.html?appid=dc90c3b75f3b4bd191277f7099cca3ff&extent=-122.2023,36.8662,-121.7773,37.0681 (accessed March 2023).

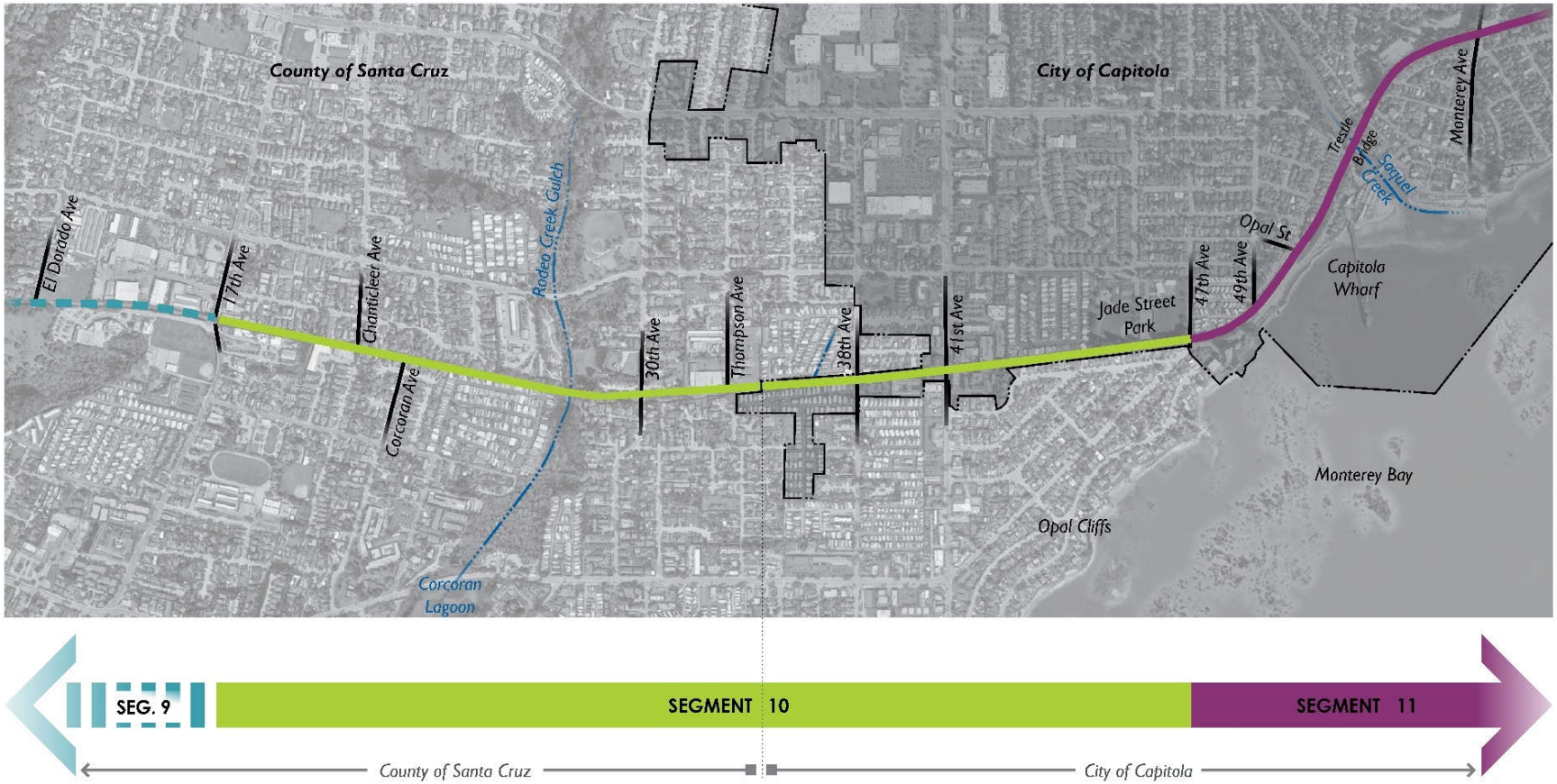
University of California at Berkley (UC Berkley). 2023. Transportation Injury Mapping System. *SWITRS GIS Map.* https://tims.berkeley.edu/tools/gismap/ (accessed March 2023).

Figures

Figure 1 Regional Location



Figure 2 Coastal Rail Trail Segments 10 and 11



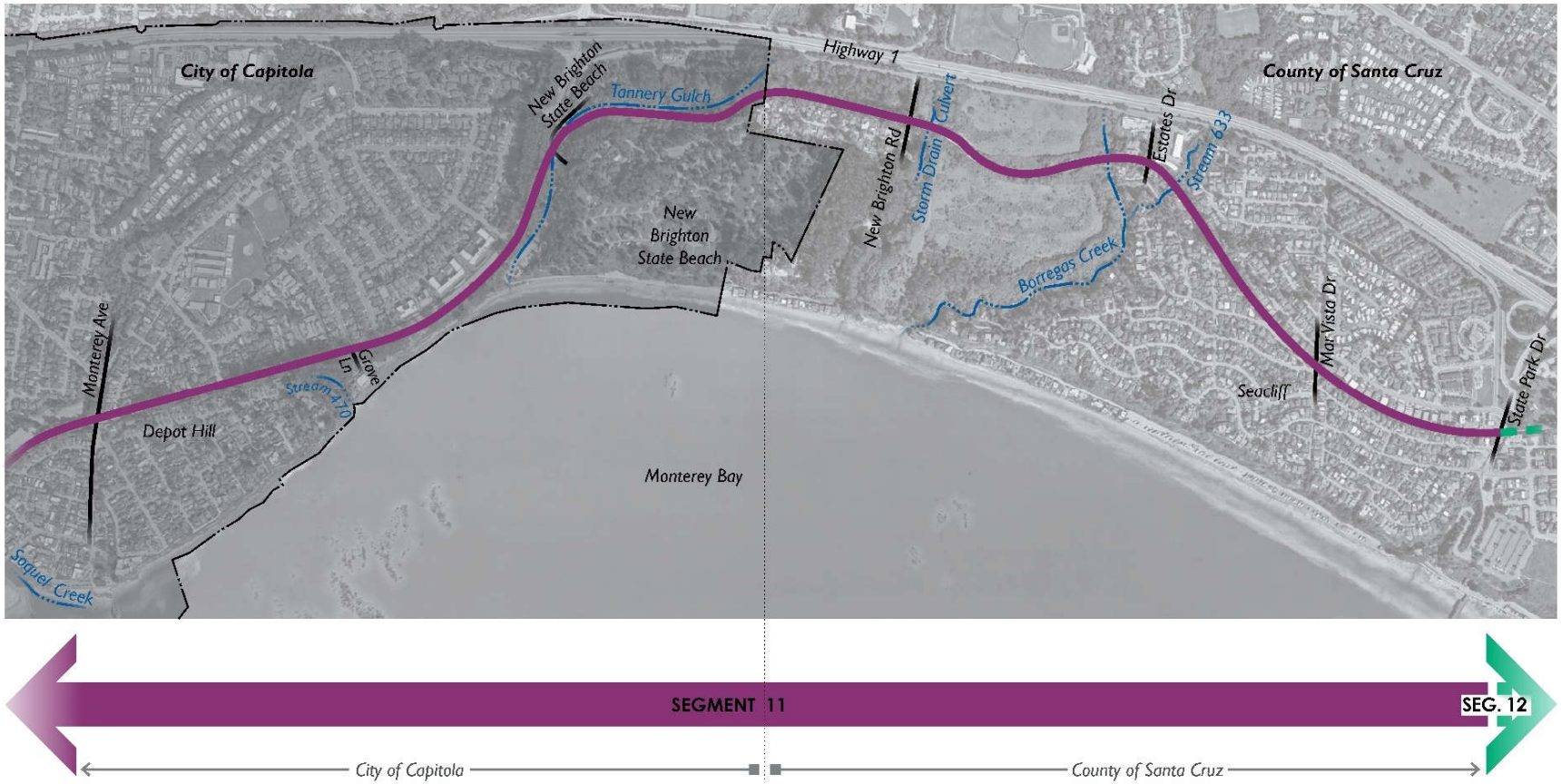

City of Capitola
New Brighton State Beach
Tannery Gulch
Highway 1
County of Santa Cruz
New Brighton Rd
Storm Drain Culvert
Estates Dr
Stream 633
New Brighton State Beach
Borregas Creek
Mar Vista Dr
Monterey Ave
Grove Ln
Stream 470
Depot Hill
Seacliff
State Park Dr
Monterey Bay
Soquel Creek
SEGMENT 11
SEG. 12
City of Capitola
County of Santa Cruz

Figure 3 Graphic Representation of Coastal Rail Trail Segments 10 and 11

