

**INITIAL STUDY /
MITIGATED NEGATIVE DECLARATION**

**BAY AREA RIDGE TRAIL – FREMONT TO GARIN
ALAMEDA COUNTY, CALIFORNIA**



LSA

September 2018

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**BAY AREA RIDGE TRAIL – FREMONT TO GARIN
ALAMEDA COUNTY, CALIFORNIA**

Submitted to:

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Prepared by:

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Project No. EBR1701



September 2018

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LIST OF ABBREVIATIONS AND ACRONYMS

ABAG	Association of Bay Area Governments
ACCWP	Alameda Countywide Clean Water Program
ACE	U.S. Army Corps of Engineers
ACFC	Alameda County Flood Control
ACWD	Alameda County Water District
APE	Area of Potential Effects
ARB	California Air Resources Board
ATV	All-Terrain Vehicle
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CNDDDB	California Natural Diversity Database
CO	carbon monoxide
CoIWMP	Countywide Integrated Waste Management Plan
COPC	contaminants of potential concern
CPRR	Central Pacific Railroad
CPUC	California Public Utilities Commission
District	East Bay Regional Park District
DOT	U.S. Department of Transportation
DTSC	California Department of Toxic Substances Control
EFZ	Earthquake Fault Zones
ESLs	Environmental Screening Levels
EVMA	Emergency Vehicle and Maintenance Access

FEMA	Federal Emergency Management Agency
FMMP	California Department of Conservation Farmland Mapping and Monitoring Program
GHG	greenhouse gases
GWP	Global Warming Potential
HDPE	high-density polyethylene
HFCs	Hydrofluorocarbons
IS/MND	Initial Study/Mitigated Negative Declaration
LUST	leaking underground storage tanks
MLD	most likely descendant
mph	miles per hour
MTC	Metropolitan Transportation Commission
MUTCD	Manual on Uniform Traffic Control Devices
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
O ₃	ozone
OS	Open Space (City of Fremont Zoning Designation)
OS HF	Open Space-Hill Face (City of Fremont General Plan Designation)
OS HL	Open Space-Hill (City of Fremont General Plan Designation)
OS PK	Park (City of Fremont General Plan Designation)
Pb	lead
PCA	Priority Conservation Area
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric
PLA	Pacific Locomotive Association
PM ₁₀	respirable particulate matter
PM _{2.5}	fine particulate matter

PRC	California Public Resources Code
R-1-6 (H-1)	Single Family Residential Hillside Overlay (City of Fremont Zoning Designation)
Ridge Trail	Bay Area Ridge Trail
ROG	reactive organic gases
RRCOR ROW	Railroad Corridor Right-of-Way (City of Fremont Zoning Designation)
RWQCB	California Regional Water Quality Control Board (San Francisco Bay Region)
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SMP	Site Management Plan
SO ₂	sulfur dioxide
SOI	sphere of influence
SPRR	Southern Pacific Railway
SVOC	semi-volatile organic compound
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TACs	toxic air contaminants
UBC	Uniform Building Code
USD	Union Sanitary District
VOC	volatile organic compound

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1.0 INTRODUCTION

1. Project Title

Bay Area Ridge Trail – Fremont to Garin

2. Lead Agency Name and Address

East Bay Regional Park District
2950 Peralta Oaks Court, Oakland, California 94605

3. Contact Person and Phone Number

Suzanne Wilson/Senior Planner-Trails Development
510-544-2609
swilson@ebparks.org

4. Project Location

Union City APNs: 85-5275-33-0, 85-5275-36-0, 85-5275-37-0, 85-5275-42-0, 85-5400-1-1

Fremont APNs: 507-70-1-4, 507-70-1-10, 507-70-1-11, 507-70-1-12, 507-70-10-0, 507-70-11-0,
507-150-5-1, 507-480-14-2, 507-480-10-1

5. Project Sponsor's Name and Address

East Bay Regional Park District
2950 Peralta Oaks Court, Oakland, California 94605

6. General Plan Designation

City of Fremont: Residential-Hillside, Park (OS PK), Open Space-Hill (OS HL), Open Space-Hill Face (OS HF)

City of Union City: Agriculture (A)

7. Zoning

City of Fremont: Open Space (OS), Single Family Residential Hillside Overlay (R-1-6 [H-1]), Railroad Corridor Right-of-Way (RRCOR ROW).

City of Union City: Agriculture (A)

8. Description of Project

The proposed project would construct approximately 3.9 miles of new multi-use recreational trail and utilize an additional approximately 1.1 miles of existing maintained dirt roads within a District easement across private ranch land to connect existing segments of the Bay Area Ridge Trail between Garin Regional Park and the Vargas Plateau.

9. Surrounding Land Uses and Setting

The proposed trail alignment is surrounded by grazed grasslands, the Niles Canyon Railway, and local roadways. Vallejo Mill Historical Park is located at the southern end of the trail alignment.

10. Other Public Agencies Whose Approval is Required

- California Regional Water Quality Control Board (RWQCB) (San Francisco Bay Region)
- California Public Utilities Commission (CPUC)
- U.S. Army Corps of Engineers (ACE)
- California Department of Fish and Wildlife (CDFW)

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, has consultation begun?

On December 14, 2017, the District notified California Native American tribes of the proposed project. To date, two tribes have requested consultation pursuant to Public Resources Code section 21080.3.1, as summarized below:

- Ms. Katherine Erolinda Perez, Chairperson of the North Valley Yokuts Tribe, responded via email on January 23, 2018, requesting consultation with the District. The District responded via email to Chairperson Perez requesting a date and time to meet. No response from Chairperson Perez to the District's email has been received to date.
- On January 16, 2018, Mr. Andrew Galvan of the Ohlone Indian Tribe sent a letter to the City of Fremont regarding the Native American human remains discovered at the Vallejo Mill Historical Park. The letter also included recommendations for the trail project, which included archaeological testing within the park. Mr. Galvan called the District requesting consultation for the project on January 17, 2018. On March 19, 2018, the District met with Mr. Galvan to discuss his recommendations for the project. On July 10, 2018, the District sent an email to Mr. Galvan, stating,

We determined that an Archaeological Treatment Plan is not warranted because the District does not propose to conduct archaeological testing within Vallejo Mill Historical Park. Archaeological testing is not proposed or warranted because testing has the potential for greater impacts to the archaeological site than implementation of the proposed trail project, which is not expected to have any significant impacts due to our proposed construction methods. In lieu of testing, the District will require full-time monitoring of trail implementation in the park by both an archaeologist and a Native American monitor appointed by the Most Likely Descendant.

On July 27, 2018, Mr. Galvan sent an email accepting the District’s recommendations.
The results of the consultation outreach are summarized in the table below (Table A).

Table A: Native American Consultation

Organization/ Individual	Tribal Affiliation	Date of Contact Letter Sent	Date and Medium of Follow-up Contact	Tribal Response	Agency Response
Tony Cerda, Chairperson	Costanoan Rumsen Carmel Tribe	Dec. 15, 2017	Jan. 22, 2018 emailed: rumsen@aol.com	None to date	None to date
Irenne Zwierlein, Chairperson	Amah Mutsun Band of Mission San Juan Bautista	Dec. 15, 2017	Jan. 22, 2018 emailed: amahmutsuntribal@gmail.com	None to date	None to date
Katherine Erolinda Perez, Chairperson	North Valley Yokuts Tribe	Dec. 15, 2017	Jan. 22, 2018 emailed: canutes@verizon.net	Received an email from Ms. Perez on Jan. 23, 2018 initiating consultation.	Responded to Ms. Perez's email on Jan. 24, 2018 acknowledging request to consult. Followed up to set up a meeting time on Jan. 26, 2018. Did not receive a response to either email.
Rosemary Cambra, Chairperson	Muwekma Ohlone Tribe of the SF Bay Area	Dec. 15, 2017	Jan. 22, 2018 emailed: muwekma@muwekma.org	None to date	None to date
Andrew Galvan	The Ohlone Indian Tribe	Dec. 15, 2017	No follow up contact needed	On Jan. 17, 2018, Mr. Galvan contacted the District to initiate consultation.	On March 19, 2018, the District met with Mr. Galvan regarding his questions, concerns, and recommendations for the project.
Ann Marie Sayers, Chairperson	Indian Canyon Mutsun Band of Costanoan	Dec. 15, 2017	Jan. 22, 2018 emailed: ams@indiancanyon.org	None to date	None to date
Steve Hutchason, Exec. Dir. of Env. Resources	Wilton Rancheria	Dec. 15, 2017	Jan. 22, 2018 emailed: shutchason@wiltonrancheria-nsn.gov	None to date	None to date

2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist in Chapter 3.0.

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

2.1 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. 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Name, Title - Suzanne Wilson, Senior Planner, Trails Development

9-19-18
Date

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3.0 PROJECT DESCRIPTION

The East Bay Regional Park District (District) proposes to open approximately 5 miles of the Bay Area Ridge Trail (Ridge Trail) to the public between Garin Regional Park and Vallejo Mill Historical Park at the mouth of Niles Canyon in Fremont (proposed project) (Figure 1). The Ridge Trail is a planned 550-mile multi-use trail along the ridgelines surrounding the San Francisco Bay. Currently, approximately 375 miles of the trail are complete and open to trail users. When fully completed, the trail will connect over 75 parks and open space areas and provide access for hikers, runners, bicyclists, and equestrians. The proposed project would connect existing segments of the Ridge Trail in Garin Regional Park and the Vargas Plateau (Figure 2). The project would construct approximately 3.9 miles of new multi-use recreational trail and utilize an additional approximately 1.1 miles of existing maintained dirt roads within a District easement across private ranch land.

3.1 CONTACT PERSON

Any questions or comments regarding this Initial Study/Mitigated Negative Declaration (IS/MND) or the assumptions or conclusions included herein should be referred to the following:

Suzanne Wilson/Senior Planner-Trails Development
East Bay Regional Park District
2950 Peralta Oaks Court, Oakland, California 94605
Tel: 510-544-2609
Email: swilson@ebparks.org

3.2 PROJECT LOCATION

The proposed trail alignment would be located between Garin Regional Park in Union City and Vallejo Mill Historical Park in Fremont, Alameda County, California (Figure 3). Vallejo Mill Historical Park is located at the northeast corner of Niles Canyon Road and Mission Boulevard and is owned and managed by the City of Fremont. Vehicles would use an existing maintained dirt ranch road to access the proposed trail between Garin Regional Park and Mission Boulevard. The District has acquired an easement from the owner of the private ranch lands (Louie family) for use of the dirt road as an Emergency Vehicle and Maintenance Access (EVMA) road, as well as a separate 20-foot-wide easement for the planned recreational trail alignment. North of Vallejo Mill Historical Park the trail would cross the Niles Canyon Railway, which is owned by Alameda County. From the railroad crossing, the trail would connect with the existing sidewalk on the west side of the park which extends to the intersection of Niles Canyon Road and Mission Boulevard. From the intersection, the new trail would be located on the north side of Niles Canyon Road to the Vallejo Mill Historical Park entrance road and parking lot. Trail users would also have the option of accessing the trail from the District's Niles Canyon Staging Area, located adjacent to the Alameda Creek Trail. A future Ridge Trail segment (not a part of this project) would ultimately connect the Niles Canyon Staging Area to trails within the Vargas Plateau.

The proposed trail alignment is located within Assessor Parcel Numbers 85-5275-33-0, -36-0, -37-0, and -42-0, and 85-5400-1-1 in Union City and 507-70-1-4, -1-10, -1-11, -1-12, -10-0, and 11-0; 507-

150-5-1 and 507-480-14-2 along the Niles Canyon Railway, and 507-480-10-1 in the Vallejo Mill Historical Park.

3.3 ENVIRONMENTAL SETTING

The southern terminus of the planned trail alignment is located at approximately 80 feet above mean sea level within the Vallejo Mill Historical Park along the north side of Niles Canyon Road east of its intersection with Mission Boulevard in the City of Fremont. The northern terminus of the trail is located at an elevation of approximately 1,300 feet where the proposed trail alignment connects with the dirt road EVMA that extends up to Garin Regional Park.

The proposed trail alignment is surrounded by grazed grasslands, the Niles Canyon Railway, and local roadways. The trail alignment is generally located on steep south-facing slopes above Niles Canyon. Some of the alignment traverses slopes with historic and recent landslides. Vegetation in the project area is predominantly ruderal non-native annual grassland, though the alignment also extends through woodlands dominated by tree species that include coast live oak, California bay laurel, California buckeye, big leaf maple, and California sycamore. Photos of the trail alignment are included in Figures 9a through 9j, and photo locations are shown in Figure 3.

3.4 PROJECT DESCRIPTION

The District proposes to construct and open approximately 5 miles of the Ridge Trail to the public between Vallejo Mill Historical Park and Garin Regional Park. The project would construct approximately 3.9 miles of new non-motorized multi-use recreational trail and also utilize approximately 1.1 miles of existing maintained dirt roads. The multi-use trail would be open to hikers, bicyclists, and equestrians. Dogs would also be permitted on the trail but would be required to remain on-leash. With the exception of the two parks at the end points of the trail, most of the proposed trail alignment would be located within an easement across private ranch lands. The proposed trail would utilize portions of existing, partially maintained ranch roads that are still used by service and/or authorized off-highway vehicles. Other portions of the trail would require new construction of a narrow trail. A total of seven drainage crossings (two new and five existing) would be provided for the proposed trail alignment, requiring hardening/modification and/or culvert upgrades, fords, or bridge construction. Most of the new trail alignment would be constructed using a SWECO Trail Dozer or similar small-scale trail construction equipment, as well as manual labor. Several retaining walls would also be constructed. The District would employ the Trail Construction BMPs outlined in Section 3.4.2.1, below, as applicable. Each of these project components is described in more detail below.

3.4.1 Project Characteristics

3.4.1.1 Recreational Trail

The proposed recreational trail would be constructed within a 20-foot-wide easement that the District has purchased across the Louie Ranch, a privately owned ranch property. The proposed multi-use trail would consist of an approximately 4 to 6-foot-wide trail bed within the easement. Eight to 10 feet of horizontal clearance (2 feet of temporary disturbance on either side of the trail bed) and 10 feet of vertical clearance would be provided along most of the alignment to

accommodate trail users, particularly equestrians, and to allow for authorized All-Terrain Vehicle (ATV) access, in case of emergency or maintenance needs (Figure 4). Improvements at drainage crossings would be wider than the standard trail improvements to address potential erosion and to accommodate continued use by ranching or trail maintenance vehicles (see description of drainage improvements in Section 3.4.1.2 below). The new recreational trail would extend for approximately 5 miles with some portions located on existing ranch roads, and other portions to be newly constructed where needed to accomplish a better recreational trail design. The proposed trail would be designed and constructed similar to other unpaved natural surface multi-use trails in parklands managed by the District.

Construction of the proposed trail would require improvements including: grading to create/improve the trail surface and to provide adequate drainage; installation of retaining walls at switchbacks and other areas for trail stabilization; tree trimming/vegetation removal to ensure sufficient horizontal and vertical clearance; installation of drainage crossing improvements (e.g., articulated crossings [fords], culvert repair, pedestrian bridge), as described in Section 3.4.1.2 below; and construction of an at-grade railroad crossing to connect the trail to Vallejo Mill Historical Park and the intersection of Niles Canyon Road and Mission Blvd (see Section 3.4.1.3 below). Depth of excavation for the trail bed and fords would not exceed 5 feet. Excavation required for culvert replacement could be as deep as 20 feet, to remove existing failing culverts. Wayfinding trail signs would also be installed along the route. The proposed trail alignment and associated improvements are depicted on Figure 3.

Vallejo Mill Historical Park, located at the mouth of Niles Canyon, would serve as a potential trailhead and staging area for recreational users at the south end of the new trail alignment. The park is owned and operated by the City of Fremont. From the existing parking lot, the trail alignment would extend southwest along the existing park entrance road and use a maintenance road adjacent to Niles Canyon Road to connect to the Niles Canyon/Mission Boulevard intersection. From the intersection, the trail would follow along the existing sidewalk to the planned railroad crossing at the northwest corner of the park. The proposed trail alignment at Vallejo Mill Historical Park would be constructed at-grade with gravel placed on the surface to delineate the route. No other improvements to the existing park are proposed as part of the trail project, with the exception of trail signage. The District would install trail signs on the railroad crossing infrastructure, and on existing posts near the parking lot at Vallejo Mill Historical Park. A Ridge Trail sign would also be installed in the concrete sidewalk where the proposed trail connects to the existing Ridge Trail at Mission Boulevard. Vallejo Mill Historical Park is anticipated to be the primary staging area for access to the trail due to its location at the mouth of Niles Canyon and the intersection of Mission Boulevard and Niles Canyon Road, thereby providing easy access for potential trail users. Trail users could also access the trail by parking at the District's Niles Canyon Staging Area, which is located adjacent to the Alameda Creek Trail.

Currently, the Geldermann portion of Garin Regional Park is not open to the public. No trailhead improvements are proposed within Garin Regional Park. Recreational and maintenance access from Garin Regional Park to the new recreational trail would be via an existing EVMA road within a District easement. The Garin and Dry Creek Pioneer Regional Parks Land Use Plan Amendment adopted in 2012 included future public access to the Geldermann portion of Garin Regional Park.

Once construction of the proposed trail is complete, the Geldermann portion of the park would open to the public. No improvements are proposed along the EVMA road, which extends from Garin Regional Park to Mission Boulevard; however, the EVMA road and other connecting ranch roads would be used by construction crews to access the trail alignment. Trail wayfinding signage would be placed at the intersection of the EVMA road and the new recreational trail to direct trail users from the EVMA road to the trail.

3.4.1.2 Drainage Crossings/Specific Trail Improvements

As described above, the proposed trail alignment would include a total of seven drainage crossings (two new, and five existing along the existing ranch roads), requiring hardening/modification and/or culvert upgrades, fords, or pedestrian bridge construction. Grading for retaining walls or other minor grade alterations would occur along the trail where steep slopes would require shoring. Improvements would include:
















- **Articulated Fords.** In crossing locations where the stream/drainage is relatively shallow and the upstream/downstream sections are not severely eroded, an articulated ford would be placed within the channel to provide a crossing for trail users. In several locations these fords would replace existing culverts. As shown in Figure 5, the articulated ford/crossing would consist of a series of interlocking concrete blocks with open-cells to be filled with permeable soil or gravel. The articulated crossing would be placed perpendicular to the centerline of the channel in order to maintain existing stream flow through the crossing. The maximum dimensions of articulated crossings would not exceed 10 feet in width (perpendicular to the trail/road) by 30 feet in length (parallel to the trail/road), with a maximum depth of 5 feet. Bank stabilization or installation of energy dissipation materials (e.g., placement of riprap or use of geotextile/filter fabric) may be required up to 5 feet upstream and/or downstream of the proposed crossing to prevent erosion and sedimentation.
- **Culvert Upgrades.** A culvert is a structure that allows water to flow under a road, railroad, or trail. In several proposed crossing locations on the existing ranch roads, existing culverts fail to adequately channel stream flow and are in need of replacement and/or repair. In these locations, the District would upgrade the existing culvert and replace the head and tail walls to prevent scour of the stream banks and to provide a safe trail crossing. Replacement culverts would be made of either high-density polyethylene (HDPE) or precast concrete. In some locations, the existing culvert would be abandoned in place; in others, the existing culvert would be removed. Existing culvert pipes in good condition may be reused. Replacement of existing culverts, and head and tail walls would require excavation up to 20 feet in depth and would not exceed 30 feet in length. Figures 6a-6c exhibit standard drawings for culvert replacement.
- **Trail Bridge.** At new drainage crossings, or where the size of the drainage precludes installation of either a culvert or an articulated ford, an approximately 6-foot-wide trail bridge would be installed. The District would likely use a trail bridge kit, which is made of pre-cut lightweight pieces and parts, allowing for ease of transport and assembly on site. The bridge would be installed on concrete footings or other foundation type on either side of the drainage channel. The District envisions the new trail would require one new pedestrian bridge across a steep

drainage. Figure 7 is an example of a pedestrian bridge design; the final design has not been specified.

- **Stabilize Turn.** At several sharp switchbacks along the trail alignment, small retaining walls (up to 6 feet high) may be necessary to stabilize the trail. Other stabilization techniques may include cut and fill adjacent to the trail.
- **Trail Gate.** Because the recreational trail is located primarily on private ranch lands, existing barbed wire fences traverse the property and intersect the proposed trail alignment at several locations. In these locations, a trail gate would be installed to allow safe passage of trail users, while maintaining the integrity of the existing fence and keeping grazing livestock on the appropriate side of the fence.

Improvements associated with the proposed trail are described in Table B below. The locations corresponding to these improvements are numbered on Figure 3.

Table B: Proposed Trail Improvements

Feature Number	Map Symbol	Feature Type	Description
1		Parking Lot	No improvements to the existing parking lot are proposed. Wayfinding signs would be installed to direct trail users to the proposed trail.
2		Railroad Crossing	At-grade railroad crossing with pedestrian safety gates.
3		Gate	Install trail gate.
4		Gate	Install trail gate.
5		Stabilize Turn	Install retaining wall.
6		Gate	Install trail gate.
7		Ford	Install articulated ford at drainage crossing.
8		Ford	Install articulated ford at existing drainage crossing. Abandon existing culvert in place.
9		Ford	Install articulated ford at existing drainage crossing. Abandon existing culvert in place. May require installation of energy dissipater to remediate existing drainage conditions.
10		Stabilize Trail and Upgrade Culvert	Trench trail to fix and re-use (or replace) the existing pipe. Repair upstream drainage conditions. Replace head and tail walls and install new energy dissipaters.
11		Ford	Install articulated ford at drainage crossing.
12		Stabilize Turn	Install retaining wall or regrade.
13		Upgrade Culvert	Replace the existing culvert and head/tail walls. Tree trimming required to provide adequate clearance.
14		Bridge	Install 6-foot-wide, approximately 50-foot-long kit bridge to span the drainage. In this location, the trail may be re-routed upstream to accommodate a shorter bridge.
15		Gate	Install trail gate.

Source: EBRPD, 2017.

3.4.1.3 Railroad Crossing

The proposed project would include construction of an approximately 10-foot-wide, 55-foot-long, at-grade trail crossing of the Niles Canyon Railway near Vallejo Mill Historical Park. The railway right-of-way is owned by Alameda County and operated by the Pacific Locomotive Association (PLA). The PLA is a non-profit entity that operates the Niles Canyon Railway as a museum, showcasing historic railroad operations, specifically during the period from 1910 to 1960. Trains travel between Niles and Sunol from February to December. According to the current schedule, passengers board on specific Sundays at the Niles Station at 11:30 a.m. and 1:20 p.m., and at Sunol at 10:30 a.m., 12:30 p.m., and 2:30 p.m. During late November and December, PLA hosts a holiday event with trains operating on Wednesday and Friday through Sunday. PLA runs about 86 days per year with approximately 205 train trips, not including maintenance, serving approximately 47,000 riders annually. PLA operates both historic diesel and steam locomotives along the corridor at a maximum allowable speed of 30 miles per hour (mph); however, trains typically operate at about 20 mph. This railway corridor is the original alignment of the transcontinental railroad constructed by the Western Pacific Railroad Company in about 1866.

Because the railway right-of-way is owned by Alameda County, the County requires an encroachment permit and license agreement to permit the rail crossing. The rail crossing would also require approval by the California Public Utilities Commission (CPUC) and would therefore comply with CPUC guidelines and regulations. The District would submit the project application to CPUC once Alameda County issues the license. Alameda County and CPUC are considered California Environmental Quality Act (CEQA) Responsible Agencies as both agencies have permitting authority over portions of the project.

The proposed railroad crossing would be located just east of Mission Boulevard. Two tracks are present at this location: the north tracks lead to the Niles train station, and the south tracks lead toward San Jose. The existing terrain to the north slopes upward to the ridge, while the terrain to the south slopes down to Niles Canyon Road/Highway 84.

The proposed railroad crossing would include removal and replacement of the existing tracks, ties, and ballast with a concrete grade panel. A 3-foot section of textured detectable warning surface would be installed on each side of the crossing, adjacent to the existing tracks. Chain link fencing and pedestrian swing gates would be installed to prevent trail users from crossing when trains are passing. Swing gates would also have signage consistent with the Manual on Uniform Traffic Control Devices (MUTCD) standards. Figure 8 illustrates the conceptual design for the railroad crossing. The design of the at-grade crossing would be consistent with published standards, including those of the Federal Railroad Administration and CPUC.

3.4.2 Construction

Project construction would commence in the spring of 2019 and would extend for approximately 6 months. Construction would occur during daylight hours, from approximately 7:00 a.m. to 5:00 p.m. daily, with approximately four to five construction workers arriving and departing each day. Construction equipment and material would likely be staged along the EVMA road and adjacent ranch roads connecting to the trail alignment.

Access to the trail construction area is expected from Peggy Wright Way, off of Mission Boulevard, and through the District-owned Geldermann property to the north. This northern access point would be used for access by larger construction equipment. From these access points, construction workers would use the existing ranch road/EVMA and other existing ranch roads to access the proposed trail alignment. Access to construction of the railroad crossing may come from the existing maintenance road in Vallejo Mill Historical Park.

Trail construction would require the use of a SWECO Trail Dozer or similar small-scale trail construction equipment (e.g., chainsaws, trenching tools), hand tools (e.g., pick mattocks, shovels, Pulaskis), and a water truck. Work at the drainage crossings may require use of a backhoe, an excavator, a D4 dozer, and a soil compactor/vibraplate. Construction of the railroad crossing would likely be staged from Vallejo Mill Historical Park. Project construction would require excavation and importing of engineered fill material, primarily as part of the improvements at the drainages and railroad crossing. The District would employ the Trail Construction BMPs outlined in Section 3.4.2.1, below, as applicable.

3.4.2.1 Trail Construction Best Management Practices

The District has developed a set of trail construction Best Management Practices (BMPs) that are implemented to minimize the potential environmental effects for the construction of recreational trail construction projects. The following are BMPs that will be employed to minimize adverse impacts to the parkland environment during trail construction, modification, and/or restoration activities, as appropriate:

- Develop trails to contour alongside slopes (not the fall line of a slope) as fall-line trails become watercourses, erode easily and then are difficult to maintain. Contour trails should be cut on a full bench, rather than a combination of cut and fill. The cut material should be broadcast downslope, unless the trail is near a creek. Cut material can also be utilized for the ramp section of rolling dips if it is compacted one layer at a time.
- Out-slope trails in most cases (except for short sections at outside bends) to encourage water to run off the side of the trail, rather than along the trail. Trails should be built to have about 3 to 5 percent out-slope after trail compaction has occurred, so initial out-sloping should be greater than 5 percent. After a year or two, it should be expected that maintenance would be needed to return and “de-berm” sections of trail where soil compaction and displacement have exceeded the out-sloping.
- Incorporate rolling dips (grade reversals 12 to 20 feet long) that avoid the short and abrupt style of traditional “water bars” into a trail where they will enhance natural grade dips (as a backup to out-sloping) to avoid water flow along a trail.
- Locate the outside bend of a trail at a relatively high point to help reduce erosion; a reduction in erosion is achieved because the upslope naturally slows a bicycle rider, reducing the need to brake or skid, which can displace sediments on the trail surface.
- Locate climbing turns or switchbacks whenever possible where the side-slope is 10 percent or less, in order to create a sustainable, low-erosion trail. The actual trail gradient should be determined by site geology and terrain. The wider the turn and the lower the slope of the turn itself, the less braking and skidding (going downhill) is needed, and less wheel spinning (going uphill) is likely.
- Reduce locations where bicycles tend to brake heavily and or have to climb steep hills, which could cause erosion. Make a conscious effort to design trails with consistent “flow” (International Mountain Bicycling Association [IMBA] 2004). Exaggerate grade reversals at outside bends. Gradual flow transitions should also reduce user conflicts.
- If landslides or slope failures occur, cut a temporary ramp through the edge of the scarp, have the trail traverse across the slide, and then cut another ramp to go up the scarp on the other side to reduce the tendency for users to create unsanctioned trails around the head of the landslide scarp.

- Close trails in areas with active landslides and highly erodible soils during wet weather and storm events.
- Maintain the trail corridor by trimming encroaching vegetation to keep trails in a safe and operable condition thereby encouraging users to stay within the constructed trail bed.
- Conform trail approaches as they intersect with other trails to reduce water collection at the junction and to moderate the speed of trail users.
- Minimize disturbance to the soil surface to reduce erosion and maintenance problems; minimized trail widths reduce the amount of bare soil subject to erosion and produce less concentrated runoff than wider trails (with all other factors being equal).
- Prepare specific erosion control plans as part of the trail construction documentation for new trail alignments. Criteria to be used in determining the erosion potential and developing the plan include: slope; soil type; soil composition and permeability; and the relative stability of the underlying geologic unit.
- Incorporate erosion- and sediment-control measures where trails are located in riparian zones to minimize the mobilization of sediment to creeks and other water bodies, including:
 - Using paving stones or other rock work (to armor the trail surface).
 - Providing settling areas for trail drainage where water can infiltrate and sediment can settle out.
 - Constructing creek crossings so that they do not greatly alter the cross-sectional shape of the channel or floodplain.
 - Sloping the approach to a creek or drainage crossing downward toward the creek and then climbing upward when traveling away from the creek drainage bed, so that in the event of a blockage in the channel, the creek water would not be diverted to flow along the trail.
 - Enclosing and covering exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
 - Containing soil and filtering runoff from distributed areas by berms, vegetated filters, silt fencing, straw wattles, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from disturbed areas.
 - Prohibiting the placement of earth or organic material where it may be directly carried into a stream, swale, ditch, marsh, pond, or body of standing water.
 - Prohibiting the following types of materials from being rinsed or washed into waterways: concrete, solvents and adhesives, fuels, dirt, gasoline, asphalt, and concrete saw slurry.

- Only conducting dewatering activities with implementation of proper construction water quality control measures in place.
- Use rock drains and gravel surfaces where trails cross seep areas to minimize the potential for trail users to bypass the soggy area in ever-increasing arcs. Use soil amendments such as sand, crushed rock, or gravel to make a trail less prone to compaction and displacement; amendments can also help the tread drain better.
- Limit the source of water for horse troughs to seeps, springs, and existing water lines; do not divert water from creeks or other waterways.
- Abandon, obliterate, and restore trails where it has been determined that the trail would be a significant risk to park resources or safety of the park users. In these cases, the decommissioned trail will be:
 - Blocked with local native vegetation materials such as limbs, logs, rocks, and brush (or fencing) that will be placed in such a way as to create obstacles for the trail user.
 - Rehabilitated by filling and reshaping the former trail surface to blend with the natural contours. If soil compaction has occurred, the soil will be scarified and aerated.
 - Revegetated by planting native vegetation, transplanted from the vicinity, or seeded with native species found in the area.
 - Posted “not a trail, habitat restoration taking place.”
- Once the obliteration and restoration has been completed, the decommissioned trail should be totally obscured, present a difficult and uncomfortable route to the potential trail user, and, if possible, block views of the trail from a designated trail in order to prevent use of the decommissioned trail.

3.5 RELATED PROJECTS

A list of related, but separate, District projects in the vicinity of the project site is provided below.

- Connection of the Bay Area Ridge Trail from the Niles Canyon Road/Mission Boulevard intersection to Vargas Plateau
- Niles Canyon Regional Trail
- Garin Land Use Plan
- Vargas Land Use Plan

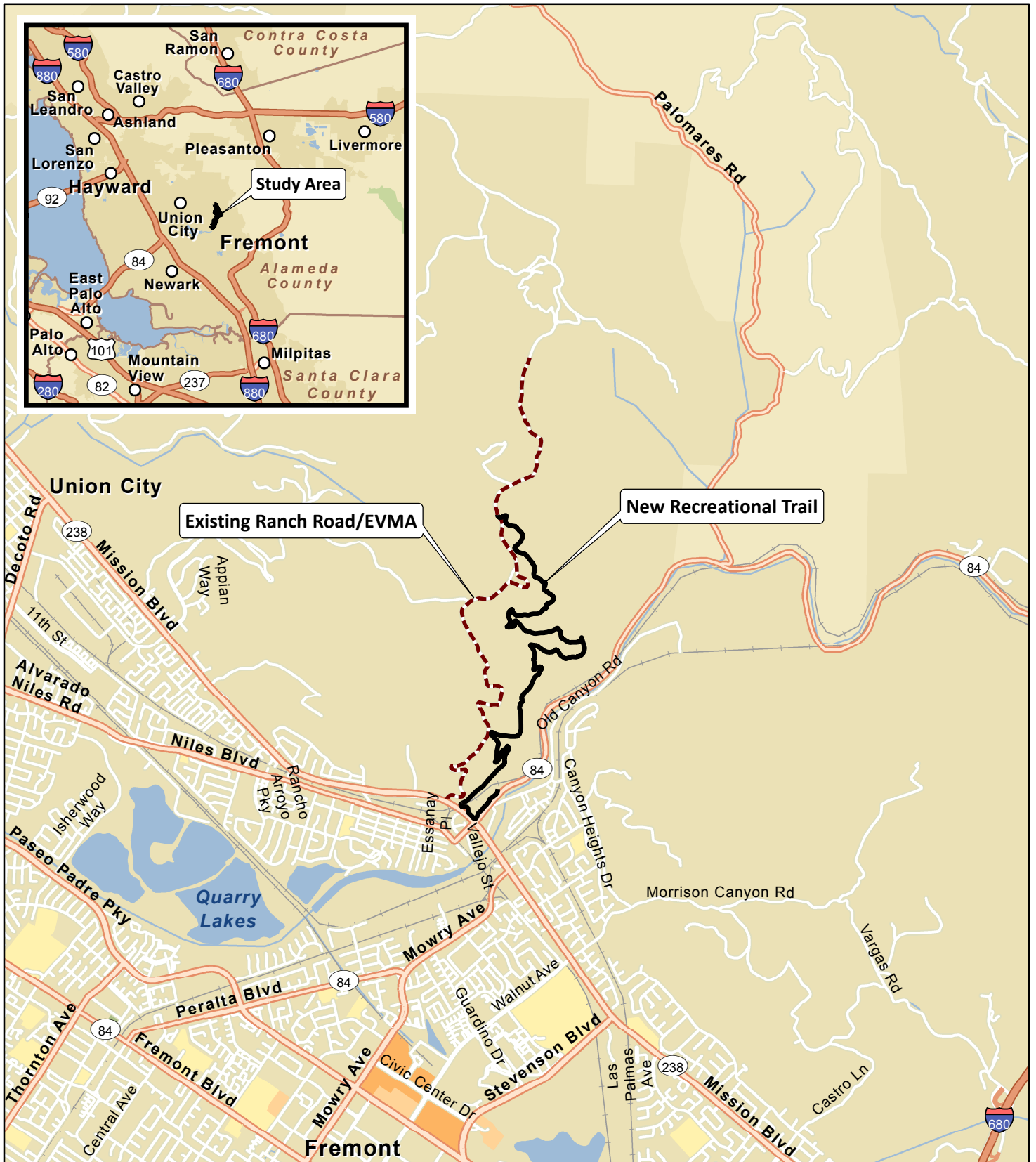
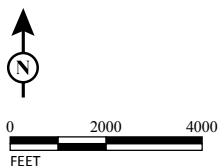


FIGURE 1

LSA



SOURCE: ESRI StreetMap North America (2012).

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Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Regional Location

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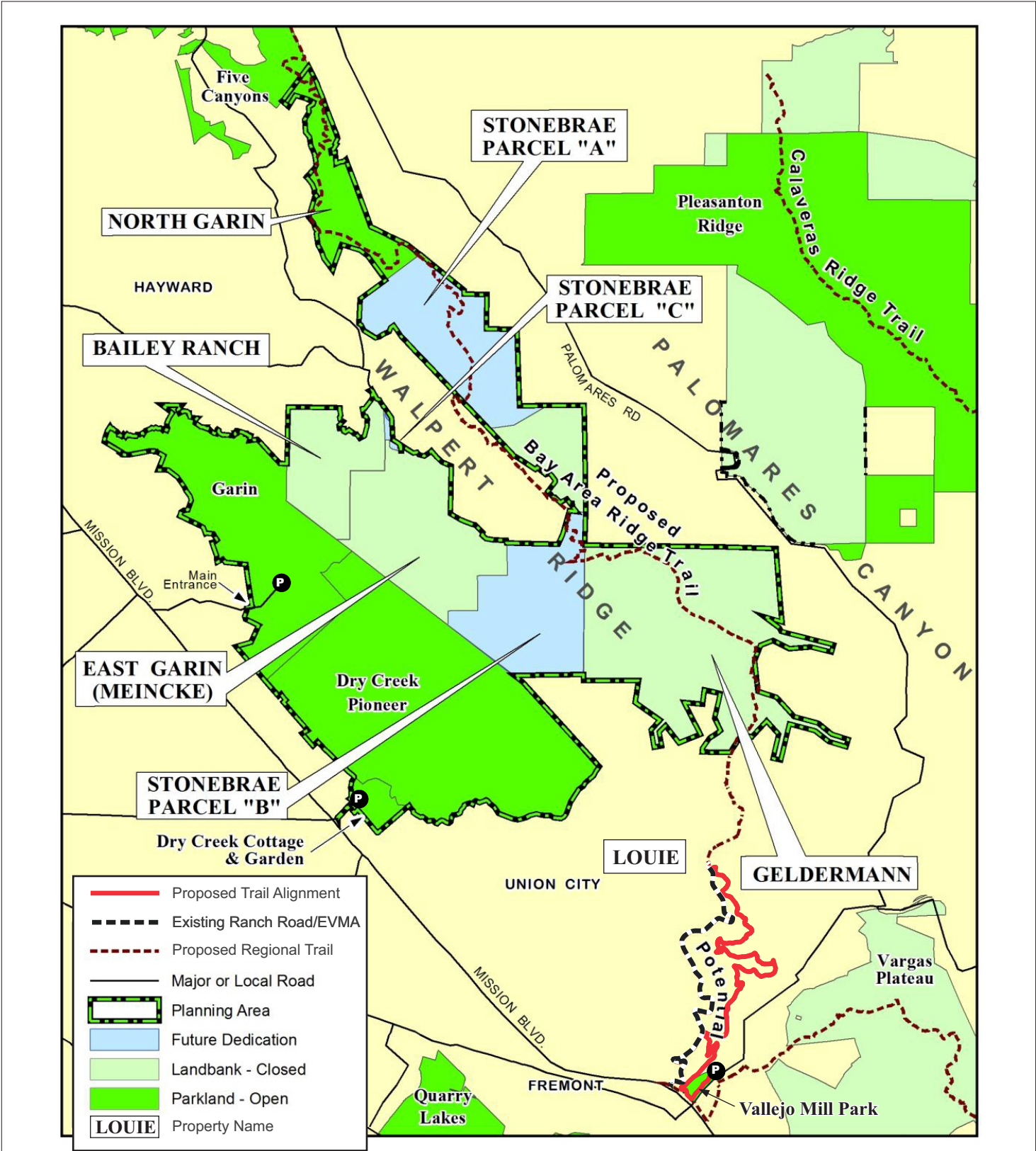
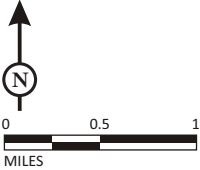


FIGURE 2

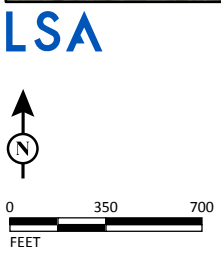
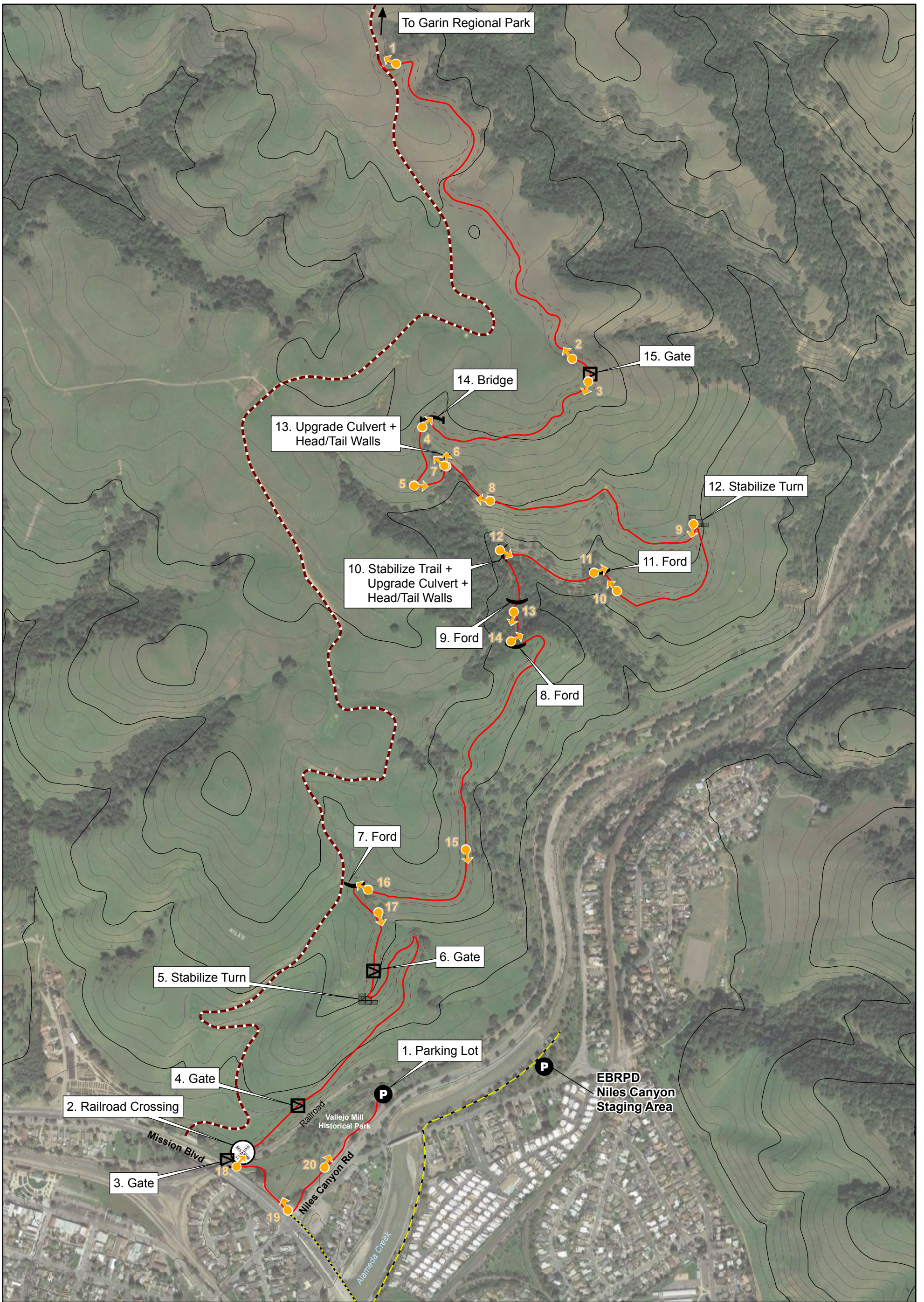
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SOURCE: East Bay Regional Parks District 2017.

Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Regional Context

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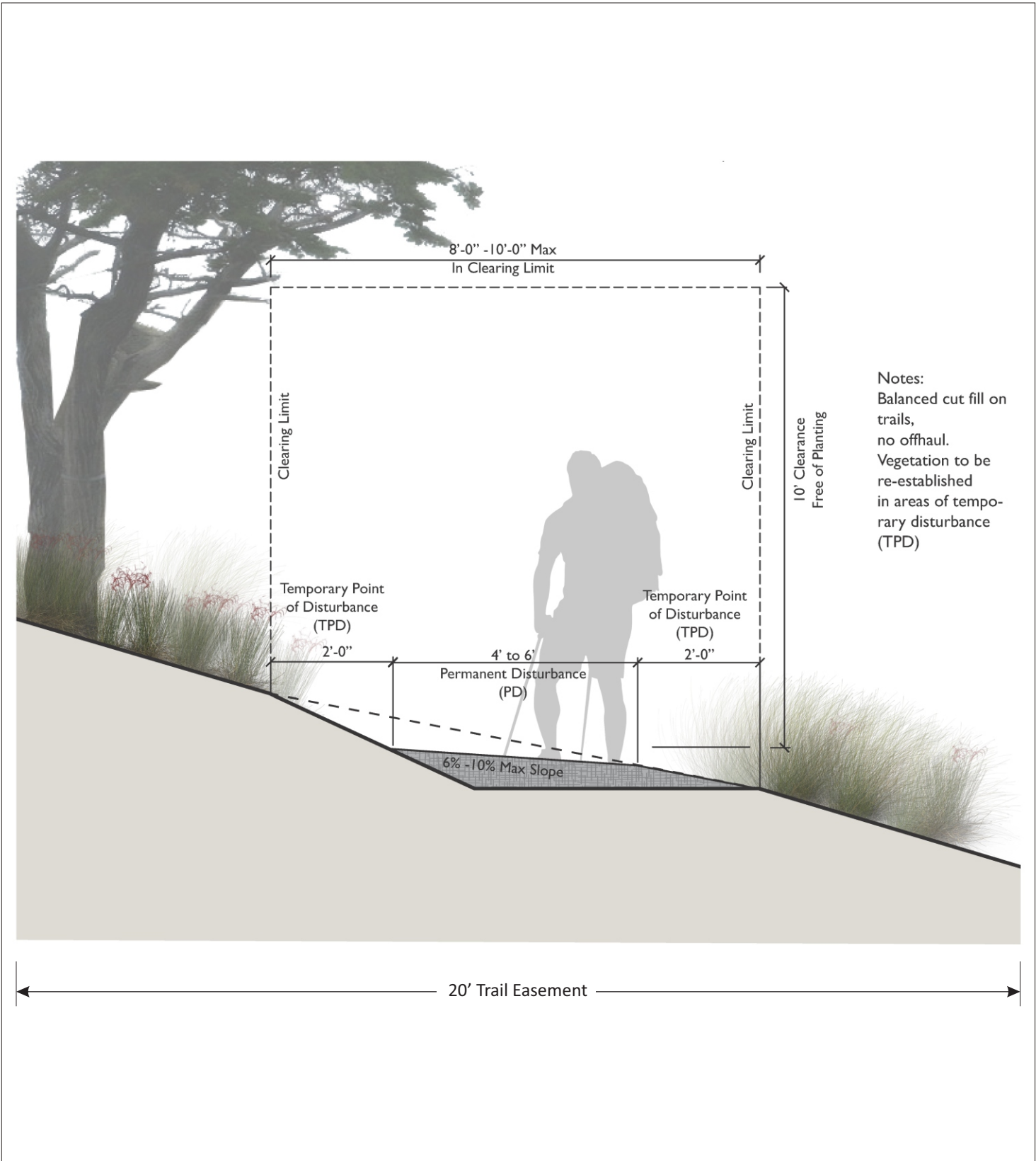
- LEGEND**
- Proposed Trail Alignment
 - Existing Ranch Road/EVMA
 - Connection to Alameda Creek Trail
 - Alameda Creek Trail
 - Elevation Contour (200-foot interval)
 - Elevation Contour (40-foot interval)
 - ↑ Photo Location
 - Gate
 - Parking Lot
 - Railroad Crossing
 - Stabilize Turn
 - Bridge
 - Ford
 - Culvert Work

FIGURE 3

Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Photo Location Map

SOURCE: Google Maps Satellite (2016).
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Notes:
 Balanced cut fill on trails,
 no offhaul.
 Vegetation to be re-established
 in areas of temporary
 disturbance (TPD)

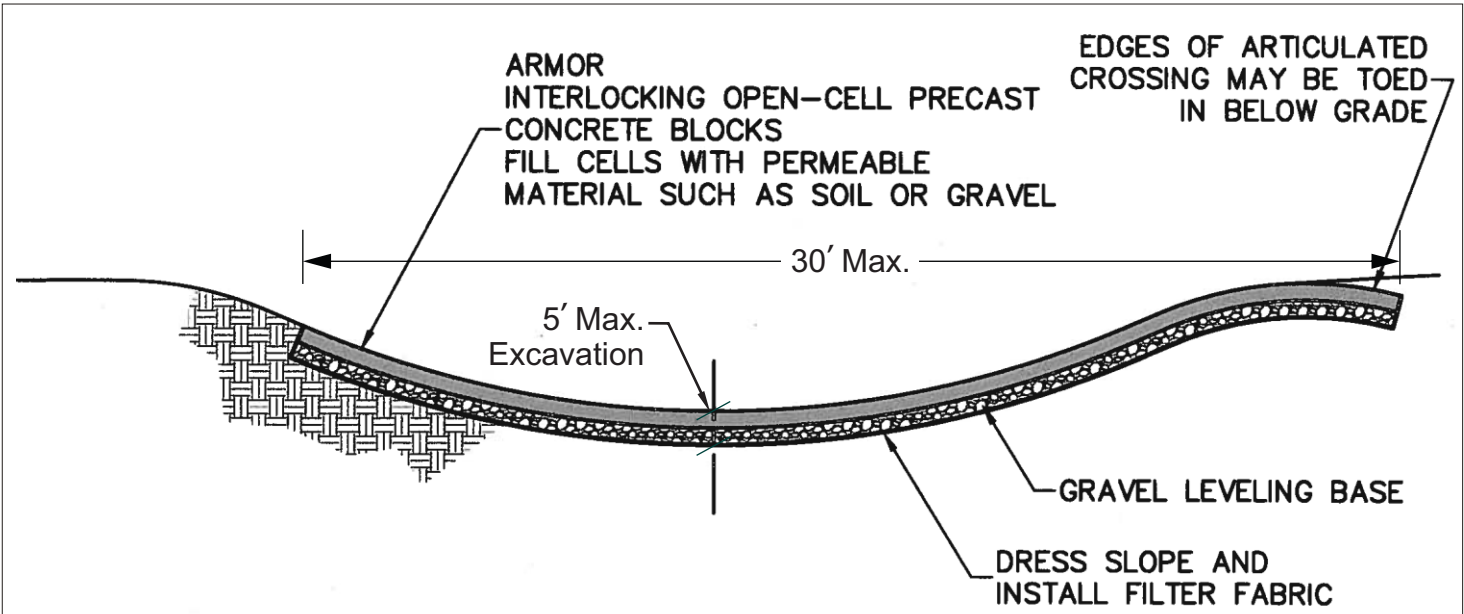
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FIGURE 4

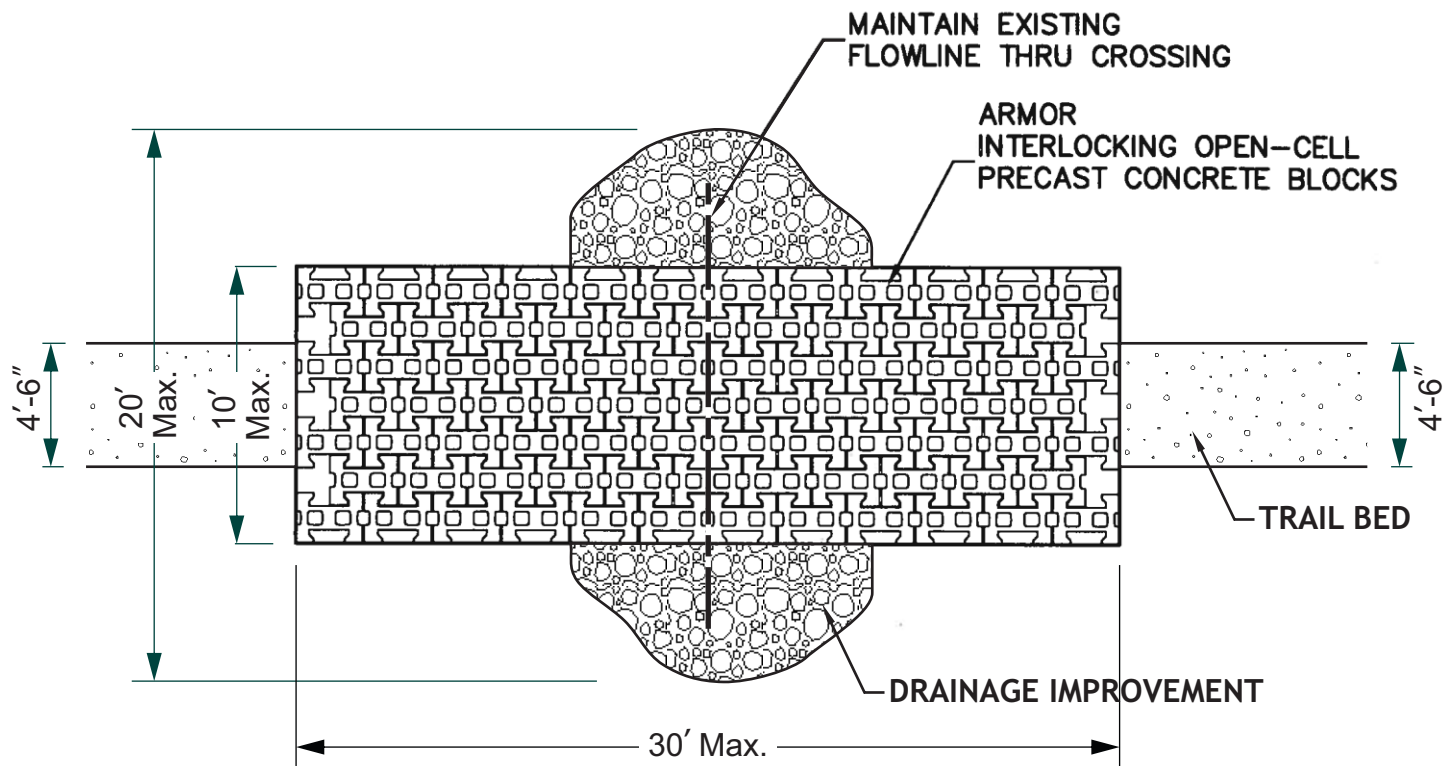
Bay Area Ridge Trail – Fremont to Garin
 Alameda County, California
 Typical Trail Section

SOURCE: East Bay Regional Parks District 2017.

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ARTICULATED CROSSING – LONGITUDINAL SECTION



ARTICULATED CROSSING – PLAN VIEW

LSA

FIGURE 5

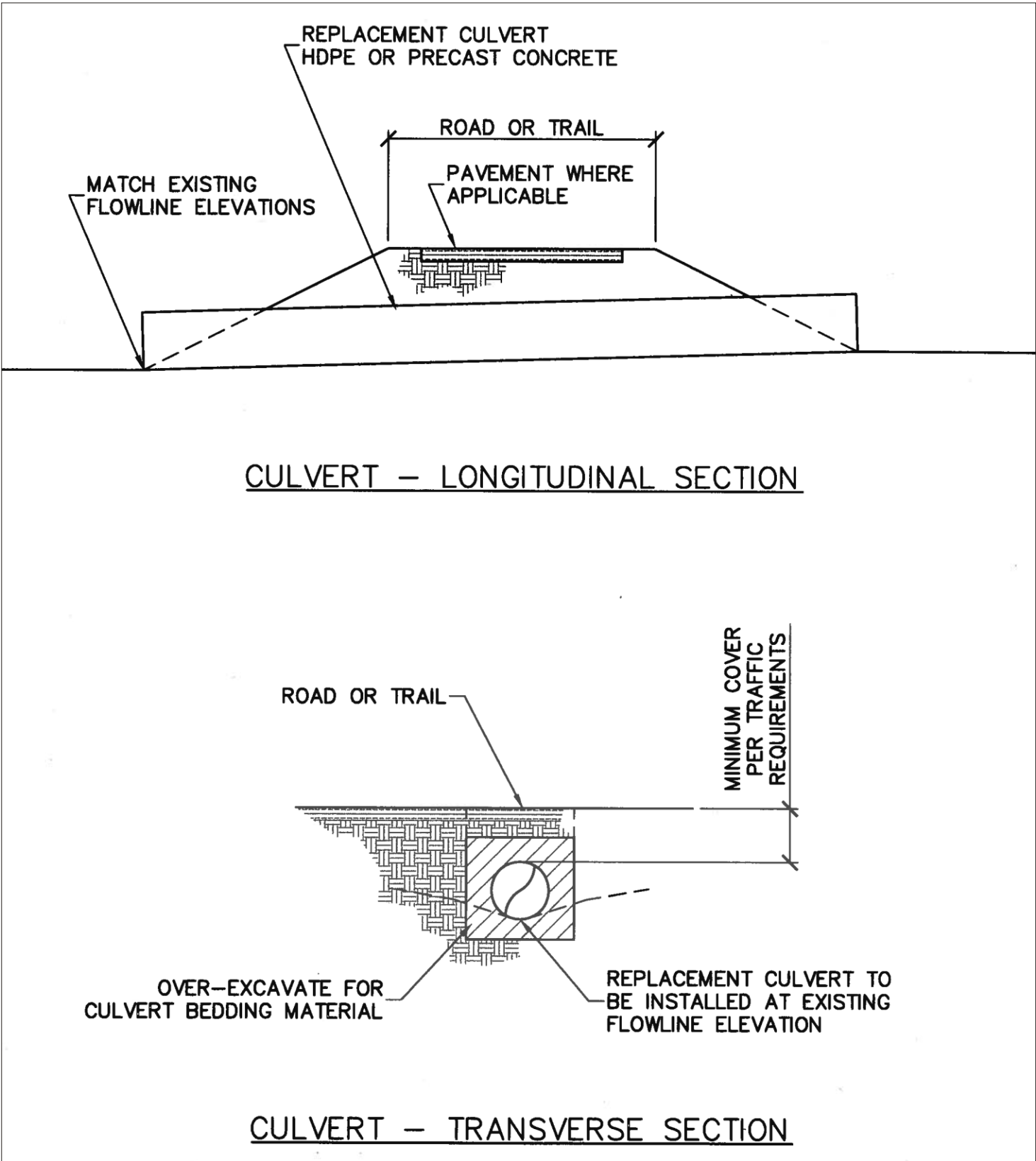
*Bay Area Ridge Trail – Fremont to Garin
 Alameda County, California*

Ford

SOURCE: East Bay Regional Parks District March 2010.

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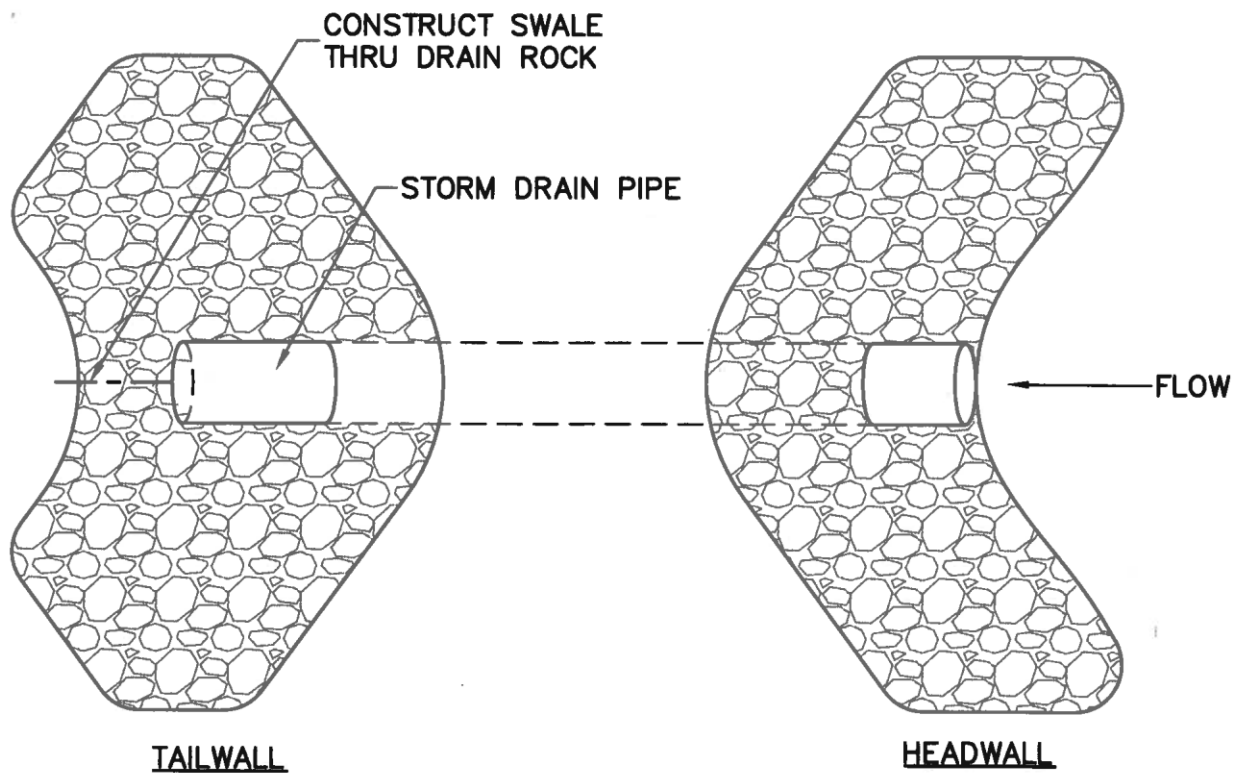
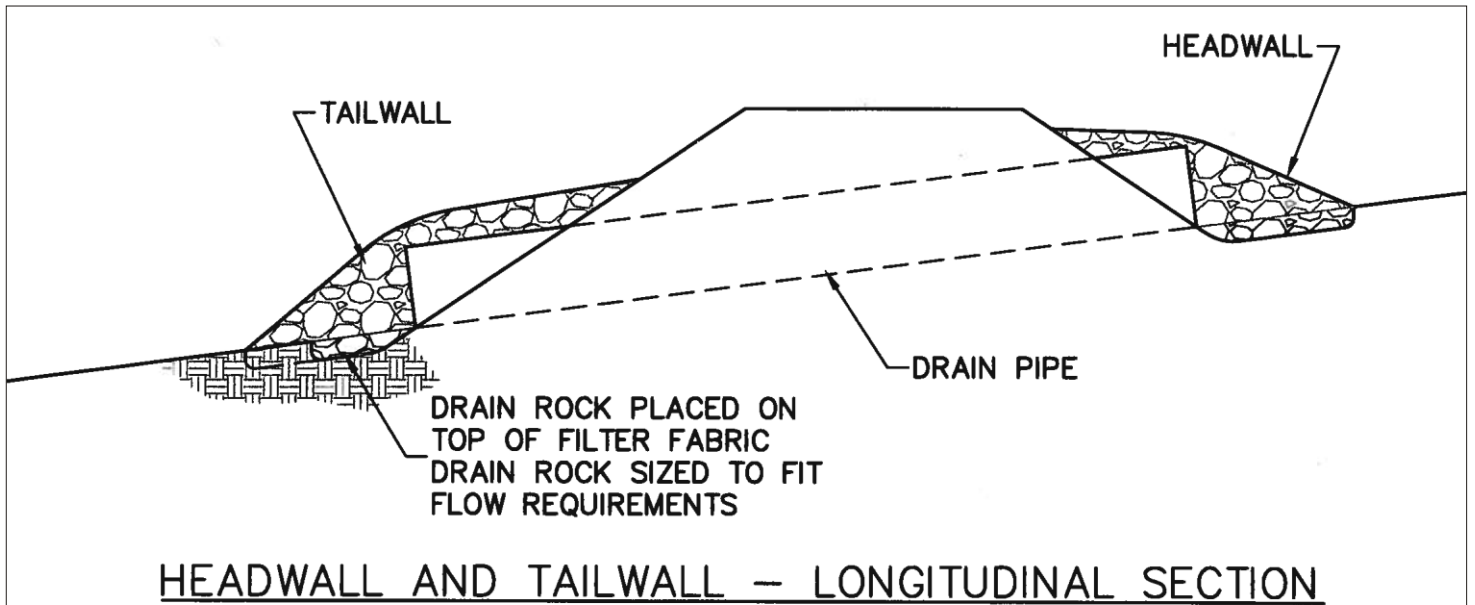
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FIGURE 6a

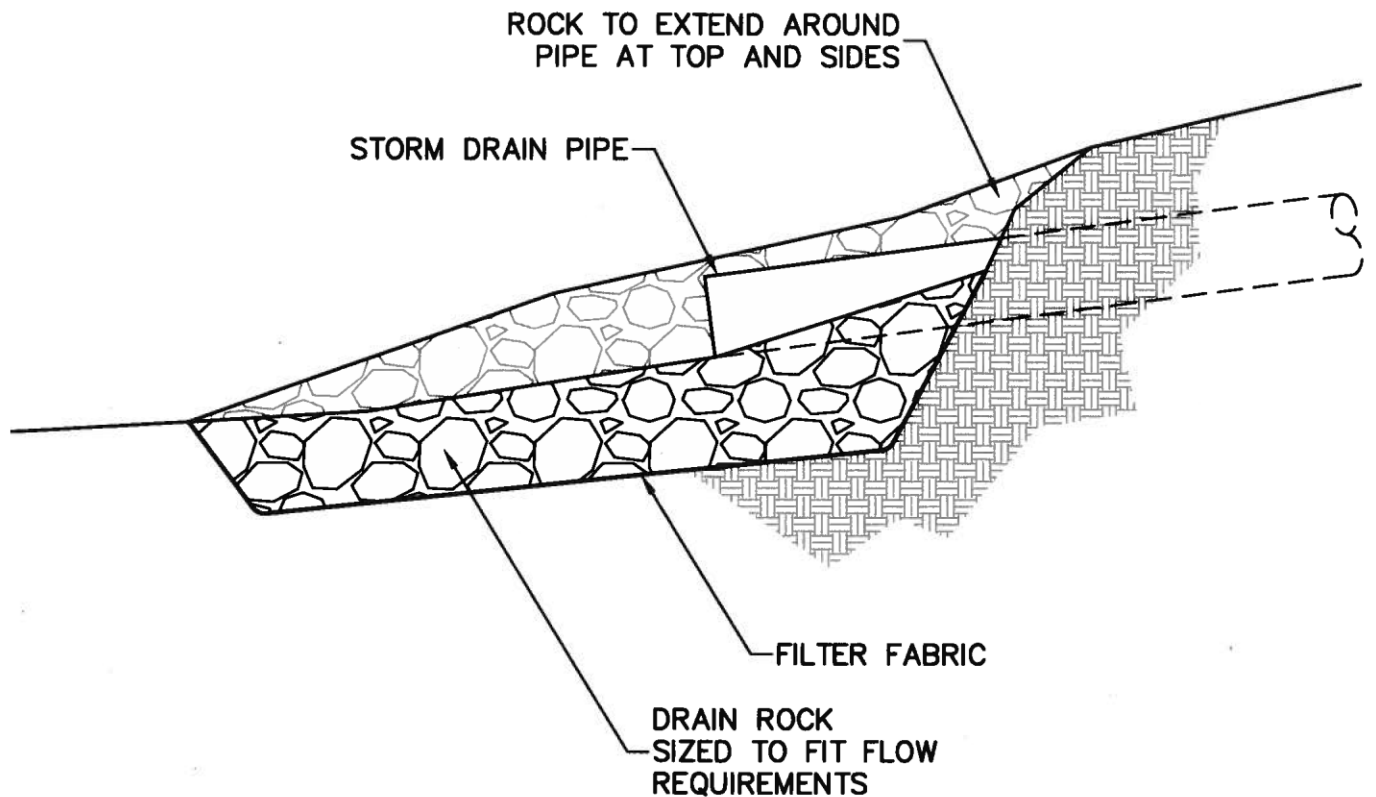
*Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Culvert Replacement - Sections*

SOURCE: East Bay Regional Parks District March 2010.

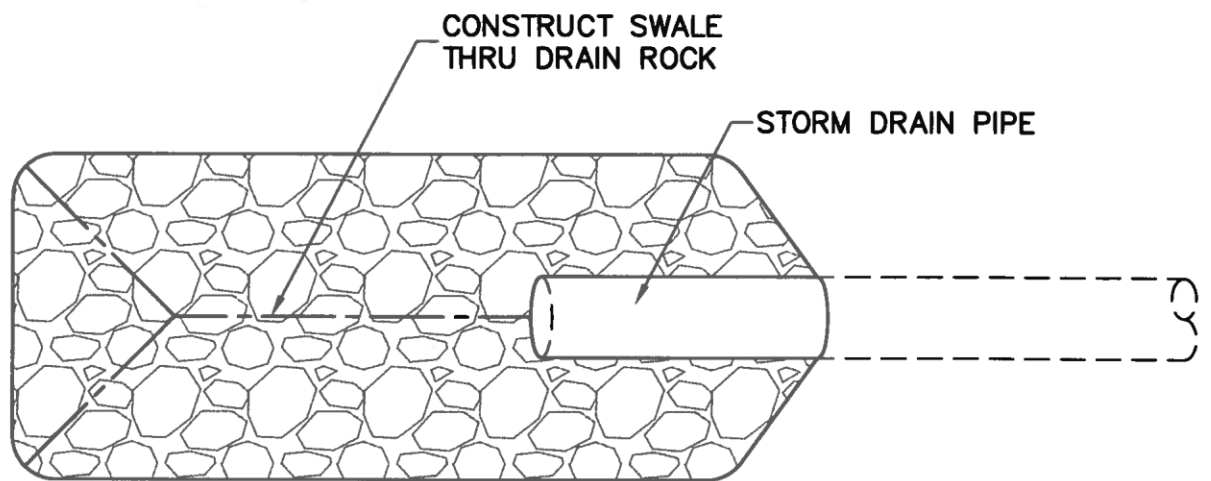
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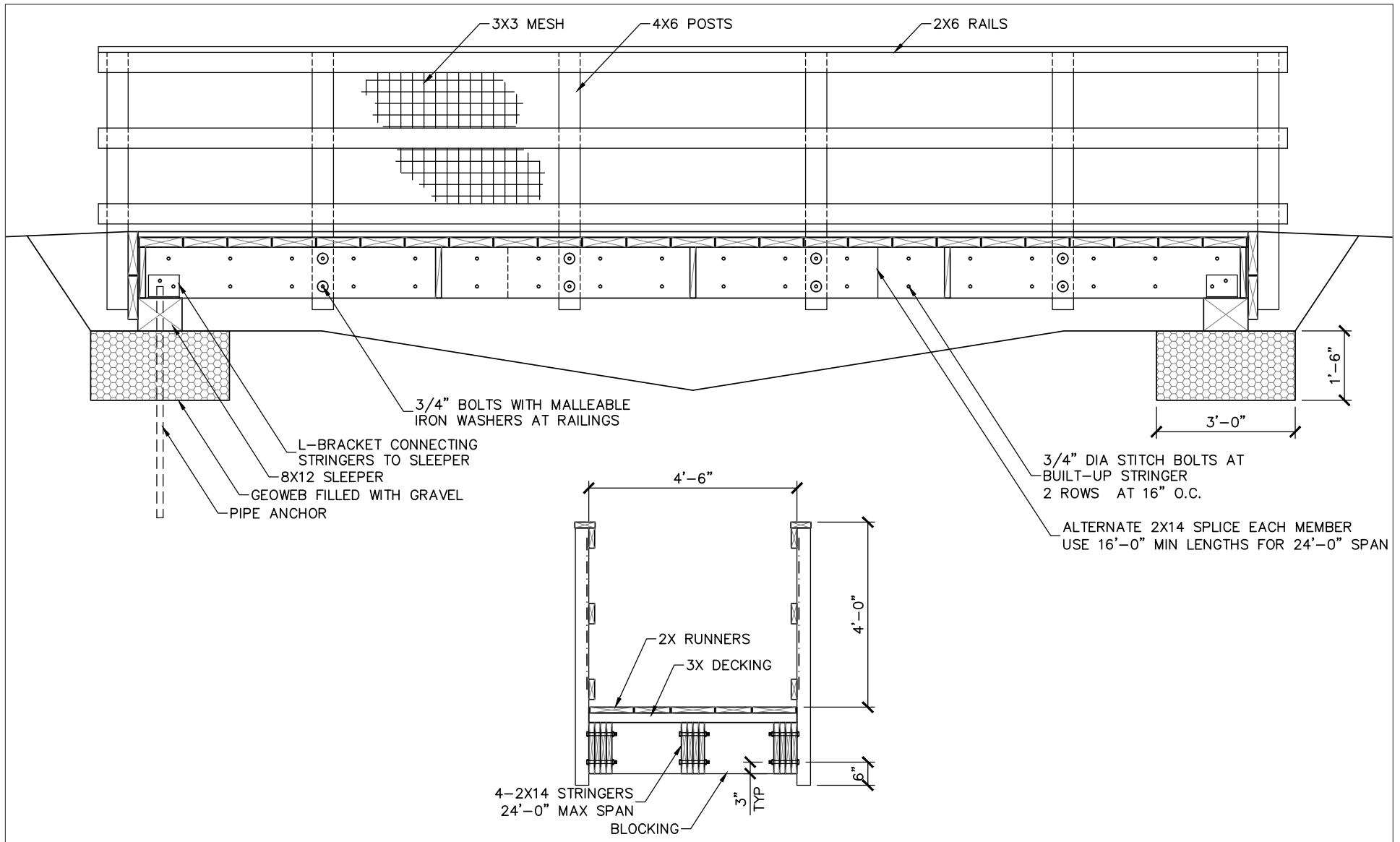


ENERGY DISSIPATER – LONGITUDINAL SECTION



ENERGY DISSIPATER – PLAN VIEW

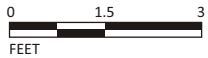
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LSA

FIGURE 7

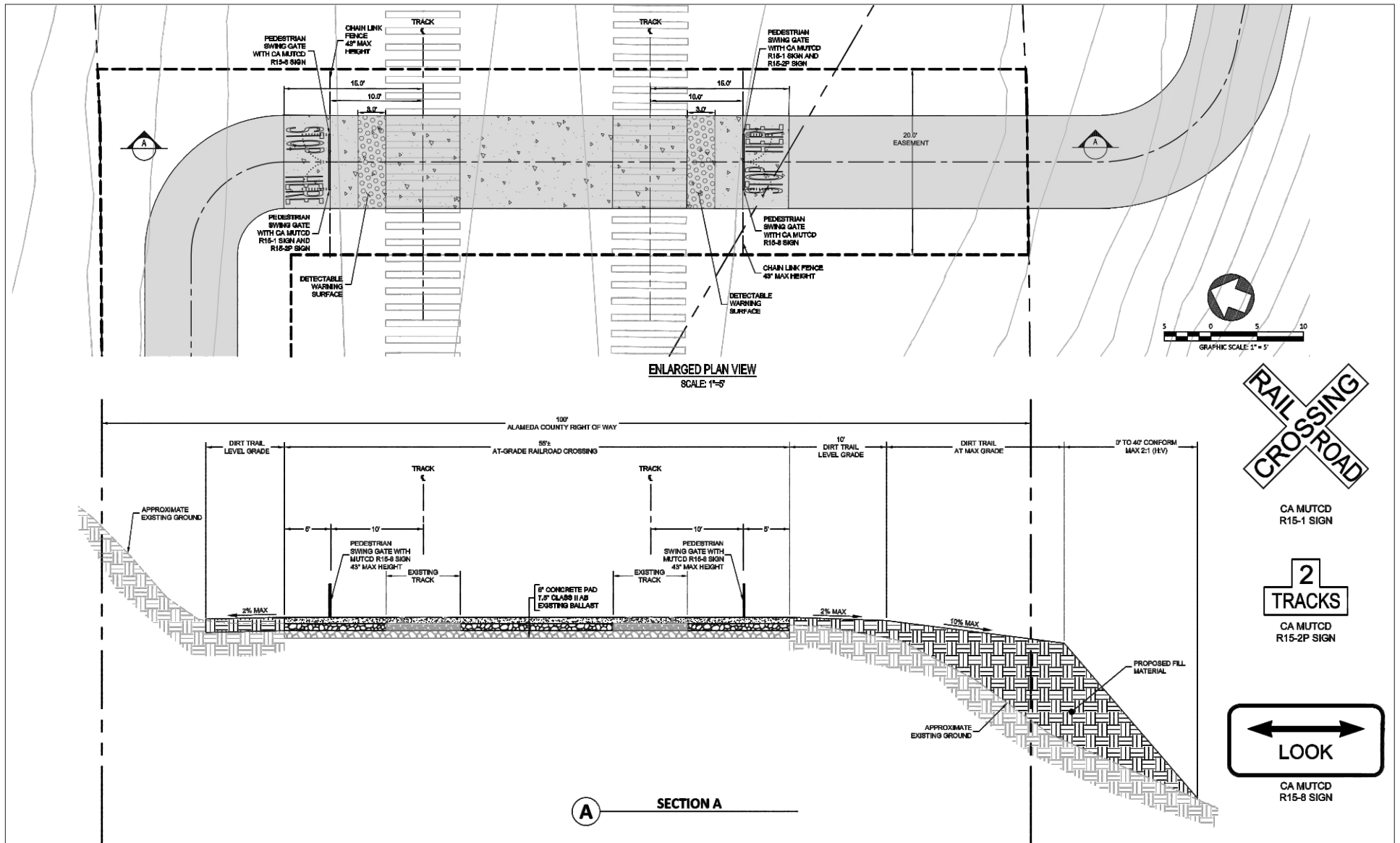
* Example of a wooden bridge. Actual design will vary.



SOURCE: East Bay Regional Parks District, September 5, 2017.

Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Pedestrian Bridge - Example

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LSA

FIGURE 8

Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Railroad Crossing

SOURCE: East Bay Regional Parks District, November 9, 2016.

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Photo 1 - Existing Ranch Road/EVMA at junction with planned trail.



Photo 2 - Looking northwest along ridgeline.



Photo 3 - Location of planned trail gate (Improvement #15).



Photo 4 - Possible bridge crossing (Improvement #14).



Photo 5 - Trail at intersection with existing ranch road.



Photo 6 - Location of culvert upgrade (Improvement #13).

LSA

FIGURE 9c

*Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Photos*

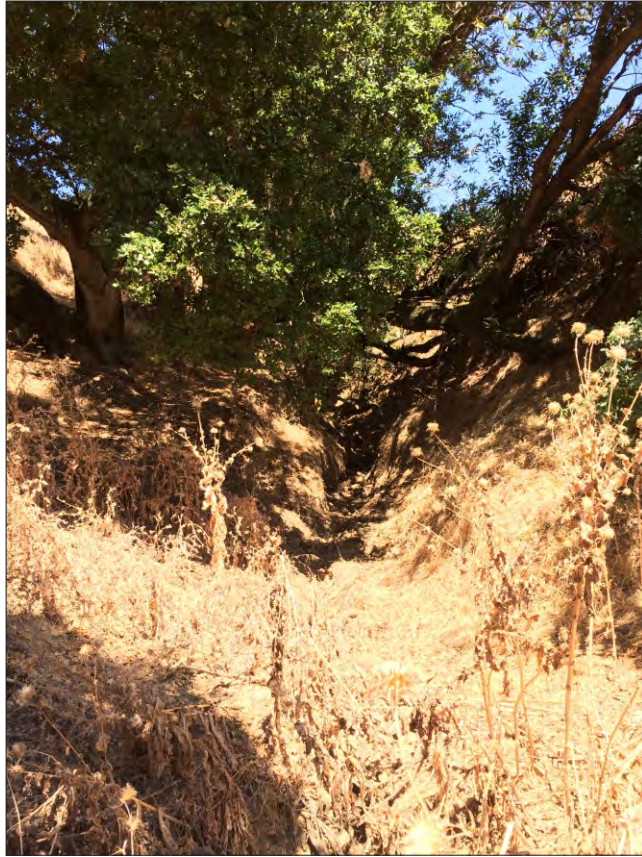


Photo 7 - Location of culvert upgrade (Improvement #13).



Photo 8 - Landslide damage along trail.

LSA

FIGURE 9d

*Bay Area Ridge Trail – Fremont to Garin
Alameda County, California
Photos*



Photo 9 - Location of planned trail switchback and stabilization (Improvement #12).



Photo 10 - Hazard oak tree branch above trail requires removal.



Photo 11 - Location of planned ford (Improvement #11).



Photo 12 - Road damage requiring stabilization of trail with culvert upgrade and head/tail walls (Improvement #10).



Photo 13 - Trail crossing at Ford (Improvement #9).



Photo 14 - Location of planned trail crossing at ford (Improvement #8).



Photo 15 - Trail alignment along existing road.



Photo 16 - Planned ford location (Improvement #7).



Photo 17 - Existing landslide along trail alignment.



Photo 18 - Railroad crossing location.



Photo 19 - Sidewalk in Vallejo Mill Park at Niles/Mission intersection, extending toward historic mill ruins and railroad tracks.



Photo 20 - Trail alignment in Vallejo Mill Park, southwest of park entrance road.

4.0 ENVIRONMENTAL ANALYSIS

4.1 AESTHETICS

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

4.1.1 Affected Environment

The project site is designated Open Space, Agricultural, and Hillside Residential land located north of the Niles Canyon Road/Mission Boulevard intersection. The majority of the project site is undeveloped and lacks urban services. The area is characterized by ridges and ravines containing grasslands, trees, and chaparral. Agricultural use in the project area consists of non-intensive, grazing land for livestock. A number of existing dirt ranch roads cross the project site. Developed features are located at the trailhead in Vallejo Mill Historical Park and include the remains of a historic flour mill, as well as the Niles Canyon Railroad tracks. Developed urban areas are located west of Mission Boulevard. The proposed trail alignment would have an approximately 1,200-foot elevation change, and views of the Cities of Fremont and Union City and the greater San Francisco Bay Area would be available along the proposed trail.

4.1.2 Impact Analysis

(a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The project location is within the Hillside Area of Union City and Fremont, and both the City of Union City General Plan¹ and the City of Fremont General Plan² identify the entire Hillside Area as a scenic resource. The City of Union City General Plan allows for residential development and promotes recreational uses and improvements within the area, so long as the improvements protect and enhance the area’s natural resources. The City of Fremont zoning also designates portions of the site for limited hillside residential development.

¹ Union City, City of, 2002. *2020 General Plan*. Available online at: www.ci.union-city.ca.us/departments/economic-community-development/general-plan (accessed September 6, 2017).

² Fremont, City of, 2011. *Fremont General Plan Conservation Element*. Available online at: www.fremont.gov/398/General-Plan (accessed September 13, 2017).

Visible elements of the project would include an unpaved graded dirt trail, pedestrian gates, wayfinding signage, retaining walls, and drainage crossings, including a pedestrian bridge. An at-grade railroad crossing would be constructed over the Niles Canyon Railway consisting of swing gates, signage, and a detectable warning surface. The gates for the railroad crossing would be located at the edge of existing urban development and would not impair views of the hillsides. Trail design would not include tall structures or landscaping that might obscure views of the surrounding open space environment. The proposed trail would be unpaved and designed to follow the existing topography in order to minimize grading. Due to their relatively small scale and distance from existing public views, these improvements would not be visible to the general public or result in substantial adverse effects to scenic vistas; therefore, impacts would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. The California Scenic Highway Program is administered by the California Department of Transportation (Caltrans). State Route 84 (Niles Canyon Road) is an officially designated State scenic highway from State Route 238 (Mission Boulevard) in Fremont to Interstate 680 in the unincorporated community of Sunol, California.³

The City of Fremont's General Plan identifies Mission Boulevard as a City-designated scenic corridor, and the Union City General Plan categorizes Mission Boulevard as a visual corridor. These designations express the Cities' intent to maintain or improve visual quality along these routes, as well as protect the visual features that contribute to the scenic designation, including land use, capital improvements, landscaping, and maintenance activities. The proposed project location is north of both Mission Boulevard and Niles Canyon Road, and the project site is visible from segments of these visual corridors.

Implementation of the project would not substantially damage scenic resources within scenic highway corridors. Where necessary, trees would be trimmed rather than removed in order to provide the required horizontal and vertical clearance for the trail corridor, particularly for equestrian trail users. Vegetation would be cleared and removed as needed. Several small boulders are located along the proposed trail alignment and would remain undisturbed. The majority of improvements would be at-grade and would not impair scenic views. No substantial damage to scenic resources within a State scenic highway would occur as a result of implementation of the proposed project. Impacts related to scenic resources would be less than significant, and no mitigation is required.

³ California Department of Transportation, 2017. List of Eligible and Officially Designated State Scenic Highways. Available online at: www.dot.ca.gov/design/lap/livability/scenic-highways (accessed September 1, 2017).

(c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The existing visual character of the project site includes grassy hillsides, low vegetation and trees, an existing railway, and Vallejo Mill Historical Park.

The park contains foundations of a historic flour mill, which is regarded as a cultural resource and is listed on the Office of Historic Preservation/Historic Properties Directory. This site is currently within a City-owned park that is open to the public. The proposed trail would be demarcated on the existing ground surface, and no excavation would take place within the historic site. Some wayfinding trail signage would be installed in the park on railroad crossing infrastructure, existing signs, and/or embedded in the existing sidewalk, and the historical structures would be undisturbed.

Construction activities may be visible from adjacent uses and may result in visual impacts due to the presence of construction equipment during the construction phase. Equipment required for trail construction would only be visible during construction activities and would be removed following the completion of construction; therefore, these impacts would be temporary.

Grading to create the trail would be minimal, and the trail would be unpaved. Most of the proposed improvements would be at-grade following existing ranch roads for the majority of the alignment and would not be visible from adjacent land uses. The project has been designed to minimize visual impacts to the surrounding area, and conditions after project completion would be similar to the existing visual character of the project site. Therefore, implementation of the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings, and impacts related to this topic would be less than significant. No mitigation is required.

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

No Impact. No permanent sources of lighting or glare would be installed as part of the proposed project. Construction would not occur at night, so lighting would not be required. Therefore, implementation of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and no mitigation is required.

4.2 AGRICULTURE AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.2.1 Affected Environment

The proposed trail would cross through two local jurisdictions and multiple parcels of land. The project site is designated Open Space in the City of Fremont General Plan and Agriculture in the City of Union City General Plan. The majority of the site is privately owned and used as grazing lands. Easements have been acquired from the property owners for construction and operation of the trail, and the proposed project would not prevent continued grazing use on the land. There is no recent history of intensive agriculture use of the land, nor does the land meet the definitions for prime agricultural land as defined by the California State Department of Conservation.⁴

⁴ Union City, City of, 2004. *Union City General Plan Appendix B Hillside Area Plan*. Available online at: www.ci.union-city.ca.us/departments/economic-community-development/general-plan (accessed September 11, 2017).

4.2.2 Impact Analysis

- a) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

No Impact. The project site is classified as “Grazing Land” by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).⁵ Grazing Land is land on which the existing vegetation is suited to the grazing of livestock, and is not protected farmland. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. Implementation of the proposed project would have no impact relating to this topic, and no mitigation is required.

- (b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. The California Land Conservation Act of 1965, also referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or open space use. The California Department of Conservation maps the project site as “Non-enrolled land” or land not enrolled in a Williamson Act contract. No portion of the proposed trail would cross a parcel under a Williamson Act contract.⁶ A portion of the project site is zoned for agriculture; however, the proposed project would not prevent the land from continuing to be used for agricultural purposes. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Implementation of the proposed project would have no impact relating to this topic, and no mitigation is required.

- (c) *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

No Impact. The project site is not currently used for timberland production, nor is it zoned for forest land or timberland. No forest lands or timberland are located on the project site. Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Implementation of the proposed project would have no impact relating to this topic, and no mitigation is required.

⁵ California Department of Conservation, Division of Land Resource Protection, 2014. *Alameda County Important Farmland 2014*. Available online at: www.conservation.ca.gov/dlrp/fmmp/Pages/Alameda.aspx (accessed September 5, 2017).

⁶ California Department of Conservation, Division of Land Resource Protection, 2014. *Alameda County Williamson Act FY 2014/2015*. Available online at: ftp.consrv.ca.gov/pub/dlrp/wa/Alameda_14_15_WA.pdf (accessed September 5, 2017).

(d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Implementation of the proposed project would not result in the loss of any forest land or convert forest land to non-forest use. Refer to Response 4.2.2 (c) above. The proposed project would have no impact relating to this topic, and no mitigation is required.

(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Implementation of the proposed project would not result in any other changes to the existing environment that would convert farmland to a non-agricultural use or convert forest land to non-forest use. Refer to Responses 4.2.2 (a) and 4.2.2 (b) above. The proposed project would have no impact relating to this topic, and no mitigation is required.

4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.3.1 Affected Environment

The proposed project is located within the City of Union City and the City of Fremont and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially since the BAAQMD’s establishment. In Union City and Fremont and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM_{2.5} 24-hour standard.

4.3.2 Impact Analysis

(a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The applicable air quality plan is the BAAQMD 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan/Regional Climate Protection Strategy serves as a roadmap for the BAAQMD to reduce air pollution and protect public health and the global climate.

The 2017 Clean Air Plan also includes measures and programs to reduce emissions of fine particulates and toxic air contaminants. In addition, the Regional Climate Protection Strategy is included in the 2017 Clean Air Plan, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases throughout the Bay Area.

Consistency with the 2017 Clean Air Plan is determined by whether or not the proposed project would result in significant and unavoidable air quality impacts or hinder implementation of control measures (e.g., excessive parking or preclude extension of transit lane or bicycle path). The proposed project would open approximately 5 miles of the Ridge Trail to the public between Vallejo Mill Historical Park and Garin Regional Park. The project would construct approximately 3.9 miles of new non-motorized multi-use recreational trail and utilize an additional approximately 1.1 miles of existing maintained dirt roads within a District easement across private ranch land to connect Vargas Plateau and Garin Regional Park for the Bay Area Ridge Trail. The project would promote the BAAQMD initiatives to reduce vehicle trips and vehicle miles traveled and would increase the use of alternate means of transportation.

In addition, the project would promote the policies and actions set forth in the California Air Resources Board (ARB) *Mobile Source Strategy* and *Plan Bay Area*, adopted by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). The Plan Bay Area includes Priority Conservation Areas (PCAs) that provide scenic and recreational functions in need of protection from urban development. The Bay Area Ridge Trail is adopted as a PCA in multiple counties, including Alameda County.

In addition, as indicated in the analysis that follows, implementation of the proposed project would not result in significant operational or construction-period emissions. Therefore, the proposed project supports the goals of the Clean Air Plan and would not conflict with any of the control measures identified in the plan or measures designed to bring the region into attainment. Additionally, the proposed project would not substantially increase the population, vehicle trips, or vehicle miles traveled. The proposed project would not hinder the region from attaining the goals outlined in the Clean Air Plan. Therefore, implementation of the proposed project would not hinder or disrupt implementation of any control measures from the Clean Air Plan.

(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant with Mitigation. Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria pollutants: CO, O₃, NO₂, SO₂, Pb, and suspended particulate matter (PM). These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

According to the BAAQMD's CEQA Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the project must not:

- Generate average daily construction emissions of reactive organic gases (ROG), nitrogen oxides (NO_x), or PM_{2.5} greater than 54 pounds per day or PM₁₀ exhaust emissions greater than 82 pounds per day;

- Contribute to CO concentrations exceeding the State ambient air quality standards; or
- Generate operation emissions of ROG, NO_x, or PM_{2.5} of greater than 10 tons per year or 54 pounds per day or PM₁₀ emissions of greater than 15 tons per year or 82 pounds per day.

Construction and operation emissions associated with the proposed project are analyzed below. As discussed, the proposed project would not generate significant operation-period emissions and, with implementation of Mitigation Measure AIR-1, the project would not generate construction-period emissions in excess of established standards. Therefore, implementation of the proposed project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

4.3.2.1 Construction Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (e.g., fugitive dust) generated by grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly emitted particulate matter (PM_{2.5} and PM₁₀), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Site preparation and project construction would involve some grading of the trail surface, limited paving at the railroad crossing, and the installation or upgrades of fords and culverts along the trail. Construction-related effects on air quality from the proposed project would be greatest during the trail construction phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the number of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM₁₀). With the implementation of these Basic Construction Mitigation Measures (Mitigation Measure AIR-1), fugitive dust emissions from construction activities would not result in adverse air quality impacts.

If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site. However, as discussed in Section 4.16, Transportation/Traffic, construction-related traffic is not anticipated to result in substantial congestion or vehicle delays.

Trail construction would use a trail dozer, chain saws, hand tools, a water truck, a backhoe, an excavator, a dozer, and a soil compactor. Construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District’s Road Construction Emissions Model, Version 8.1.0 (Roadmod) as recommended by the BAAQMD for linear construction projects. Construction-related emissions are presented in Table C. Detailed calculations are provided in Appendix A.

Table C: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Grubbing/Land Clearing	1.0	11.8	0.5	0.5
Grading/Excavation	2.7	26.7	1.6	1.4
Drainage	3.3	30.2	1.8	1.6
Paving	0.9	9.1	0.6	0.5
Maximum (pounds/day)	3.3	30.2	1.8	1.6
Average Daily (pounds/day)	1.8	17.3	1.0	0.9
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	No	No	No	No

Source: LSA (November 2017).

As shown in Table C, construction emissions associated with the project would be less than significant for ROG, NO_x, PM_{2.5}, and PM₁₀ exhaust emissions. The BAAQMD requires the implementation of Basic Construction Mitigation Measures specified below to reduce construction dust impacts to a less than significant level. Implementation of Mitigation Measure AIR-1 would reduce construction dust emissions to a less than significant level.

Mitigation Measure AIR-1: Consistent with the Basic Construction Mitigation Measures required by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) within the immediate working area shall be watered as needed with reclaimed water, if available.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Structural pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]).
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the East Bay Regional Park District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

As indicated in Table C, construction of the proposed project would not exceed daily emissions thresholds. Therefore, air quality impacts associated with construction of the proposed project would be less than significant with mitigation incorporated.

4.3.2.2 Operational Emissions – Regional Emissions Analysis

Long-term air emission impacts are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. As discussed above, the proposed project would develop a multi-use recreational trail to ultimately connect Vargas Plateau and Garin Regional Park for the Bay Area Ridge Trail. Some trips may be generated due to the users of the trail driving to the site; however, these trips are expected to be minimal and would typically not occur during peak traffic hours, as discussed in the traffic analysis. The project would not result in a significant increase in the generation of vehicle trips that would increase air pollutant emissions. Therefore, the proposed project would not be a significant source of operational emissions and this impact would be less than significant.

4.3.2.3 Localized CO Impacts

Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD 2017 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed transportation projects. A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the project. The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less than significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

Implementation of the proposed project would not conflict with the Alameda Countywide Transportation Plan, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air is substantially limited. The project would not increase traffic volumes at intersections to more than 44,000 vehicles per hour and intersection level of service associated with the project would not decline with the project. Therefore, implementation of the proposed project would not result in localized CO concentrations that exceed State or federal standards, and this impact would be less than significant.

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

Less Than Significant Impact. As discussed in Section 4.3.2 (b), with implementation of Mitigation Measure AIR-1, construction of the proposed project would not result in significant levels of criteria air pollutants or pollutant precursors, and operation of the project would not generate air emissions. Therefore, construction and operation of the project would not significantly contribute to cumulative levels of pollution in the Air Basin. This impact would be less than significant.

(d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient PM_{2.5} increase greater than 0.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). A significant cumulative impact would occur if the project in combination with other projects located within a 1,000-foot radius of the project site would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient PM_{2.5} increase greater than 0.8 $\mu\text{g}/\text{m}^3$ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below and would be less than significant.

The closest sensitive receptors include single-family residential uses located approximately 200 feet southwest of the proposed railway crossing and approximately 300 feet south of the proposed trailhead at Vallejo Mill Historical Park. As described in Section 4.3.2 (b), above, construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement Mitigation Measure AIR-1 and due to the linear nature of the construction project, emissions would not be concentrated in any one area. Project construction emissions would be below the BAAQMD significance thresholds and once the project is constructed, the project would not be a source of substantial emissions. In addition, individuals using the trail would not be impacted by existing roadway emissions due to the short-term nature of trail use and the distance between the proposed trail and the existing roadways. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction or operation, and potential impacts would be considered less than significant.

(e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people, and this impact would be less than significant.

4.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.4.1 Affected Environment

The *Biological Resources Assessment*⁷ prepared for the project provides a more detailed description of the project area’s natural communities and associated species based on background research and reconnaissance surveys. The assessment methodology, findings, and the project setting are summarized below.

4.4.1.1 Methodology

Prior to conducting fieldwork, available biological databases were reviewed. The California Natural Diversity Database (CNDDDB) was reviewed for records of special-status plant and wildlife species and sensitive habitat occurrences within 5 miles of the project site. The California Native Plant Society’s *Inventory of Rare and Endangered Plants of California* and the East Bay Chapter of the CNPS’s *Rare*,

⁷ LSA, 2018. *Biological Resources Assessment*, Bay Area Ridge Trail - Fremont to Garin. January.

Unusual, and Significant Plants of Alameda and Contra Costa Counties were also reviewed for records of special-status plant species.

LSA also reviewed the United States Fish and Wildlife Service (USFWS) Critical Habitat Portal, current and historic Google Earth aerial images of the site, and the USFWS National Wetlands Inventory (NWI) map for wetlands on and near the site. LSA also obtained an official species list from the USFWS, which identifies threatened, endangered, proposed and candidate plant and wildlife species, as well as proposed and final designated critical habitat, that may occur within the boundary of the project site and/or may be affected by the project.

Focused rare plant surveys were conducted in April, June, and August 2017 to determine the presence of rare plant and plant communities within the project area. A reconnaissance-level biological survey was conducted in July 2017 to assess current habitat conditions and to evaluate the potential for the site to support special-status species and natural communities. A delineation of potential waters of the U.S. within the alignment was conducted in July 2017.

Refer to Table A and Table B in the *Biological Resources Assessment* for a complete list of special-status plant and wildlife species potentially occurring in the project area. Key report findings are summarized below.

4.4.1.2 Vegetation

Vegetation communities present on the project site include grasslands (including non-native annual grassland and native grassland), scrublands (including California sagebrush scrub and coyote brush scrub), and woodlands (including coast live oak woodlands, California bay woodland, and remnant California sycamore woodland).

Two sensitive natural communities were identified on the project site: California sycamore woodland and purple needle grass grassland, both of which are considered a high priority for inventory in the CNDDDB. A stand of California sycamore woodland is present at the Vallejo Mill Historical Park. Purple needle grass grassland is present in several locations along the project alignment.

4.4.1.3 Wildlife

Wildlife observed during the field surveys included several common bird species. A California quail (*Callipepla californica*) nest with nestlings was located in a cistern in the middle of the proposed trail alignment. A juvenile northern flicker (*Colaptes auratus*) was observed begging next to an adult northern flicker from a branch on a tree that supported a recently excavated nest cavity. In addition, a northern harrier (*Circus cyaneus*), a California Species of Special Concern, was observed flying overhead during the field survey.

Other species seen included western fence lizard (*Sceloporus occidentalis*), black-tailed deer (*Odocoileus hemionus*), and California slender salamander (*Batrachoseps attenuatus*). California ground squirrels (*Otospermophilus beecheyi*) were seen at lower elevations of the trail alignment.

4.4.1.4 Special-Status Species

The following 11 special-status plant species have the potential to occur within the area of the project site due to the presence of suitable habitat: bent-flowered fiddleneck (*Amsinckia lunaris*), big-scale balsamorhiza (*Balsamorhiza macrolepis*), Oakland star-tulip (*Calochortus umbellatus*), Santa Clara red ribbons (*Clarkia concinna* subsp. *automixa*), western leatherwood (*Dirca occidentalis*), Diablo helianthella (*Helianthella castanea*), bristly leptosiphon (*Leptosiphon acicularis*), San Antonio hills monardella (*Monardella antonina* subsp. *antonina*), Michael's rein orchid (*Piperia michaelii*), Lobb's aquatic buttercup (*Ranunculus lobbii*), and slender-leaved pondweed (*Stuckenia filiformis* subsp. *alpina*). However, none of these plant species was identified during the three focused rare plant surveys that were conducted along the project alignment, so they are considered absent from the project site.

The following eight special-status wildlife species have the potential to occur in the vicinity of the project site: California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), Alameda striped racer (*Coluber lateralis euryxanthus*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), American peregrine falcon (*Falco peregrinus anatum*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and ringtailed cat (*Bassariscus astutus*).

4.4.1.5 Potentially Jurisdictional Features

LSA conducted a jurisdictional delineation of potential Waters of the U.S. along the trail alignment in July 2017. The trail alignment includes one wetland swale and several drainage crossings. A small human-made pond is present approximately 210 feet north of the trail alignment near the north end of the trail alignment. The pond appears to have been constructed in late 2013 to provide water for cattle.

4.4.2 Impact Analysis:

(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?*

Less Than Significant with Mitigation. Impacts would be less than significant with the incorporation of mitigation measures as discussed below.

4.4.2.1 Special-Status Plant Species

No special-status plant species were identified during the three focused rare plant surveys that were conducted along the project alignment, so special-status plant species are presumed absent from the project site. Therefore, no impacts to special-status plant species would occur with implementation of the proposed project.

4.4.2.2 Construction and Operational Impacts–General

Construction and maintenance activities, as well as recreational use of the trail, have the potential to impact biological resources if measures are not taken to avoid impacts. Wildlife could be directly impacted if they were killed by trail construction activities or recreational use. Wildlife deaths could result from motor vehicles operating on the EVMA road, existing ranch road, or while travelling overland. Wildlife could be disturbed by noise from construction-related vehicles, equipment, and personnel. Nocturnal wildlife species could alter their behavior in response to lights or noise from nighttime construction activities. However, nighttime construction is not proposed. Because the trail will not be open for recreation at night, operation of the trail will not impact nocturnal wildlife. Food-related trash left on the construction site could attract additional predators such as coyotes, ravens, or feral cats, leading to increased predation pressure on native wildlife species. Spills of oil or fuel from construction equipment and vehicles could degrade soil or water. Pet dogs running off leash could kill or disturb ground-nesting birds and other wildlife. The District would require trail users to keep dogs on a leash at all times, as the trail is within an easement on actively grazed private lands. Therefore, this potential impact would be avoided. Implementation of the following general biological resource protection measures would reduce most construction and operational impacts to a less than significant level. Impacts and mitigation specific to individual species is discussed separately below.

Mitigation Measure BIO-1: Prior to the initiation of construction activities (including staging of equipment and clearing of vegetation) all personnel associated with project construction shall attend an Environmental Awareness Training. The training shall be prepared and conducted by a qualified biologist to aid workers in recognizing special-status resources that may occur in the project area. The specifics of this program shall include identification of the special-status species and habitats, a description of the regulatory status, and review of the measures required to reduce impacts to biological resources on the project site. Each worker shall be given a handout with key points. At the end of the training, all workers shall sign a document verifying their participation in the program and acknowledging their understanding of the measures.

Mitigation Measure BIO-2: During construction of the trail, no pets or firearms shall be allowed at the project site, with the exception of those associated with authorized law enforcement personnel.

Mitigation Measure BIO-3: All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from any wetlands or waterbodies. Secondary containment shall be used during refueling.

Mitigation Measure BIO-4: All vehicles and equipment shall be maintained in good working condition and free of leaks.

Mitigation Measure BIO-5: Standard Best Management Practices (BMPs) shall be employed as necessary to avoid degradation of aquatic habitat by maintaining water quality and controlling erosion and sedimentation during construction.

Mitigation Measure BIO-6: To prevent the entanglement of wildlife, no erosion control devices containing plastic monofilament netting shall be used or stored on site.

Mitigation Measure BIO-7: Construction personnel shall not feed or otherwise attract wildlife in the project area. All food-related trash and garbage shall be placed in animal-proof containers that shall be emptied or removed from the construction site on a regular basis.

Mitigation Measure BIO-8: Construction activities shall be restricted to the daytime hours, from 30 minutes after sunrise to 30 minutes before sunset.

Mitigation Measure BIO-9: To reduce the potential for vehicle strikes, all construction-related traffic shall not exceed 15 miles per hour on unpaved roads.

Mitigation Measure BIO-10: All burrows shall be avoided to the maximum extent possible. If a burrow has to be impacted, a qualified biologist shall use hand tools to excavate the burrow to inspect it for special-status species. If any special-status species are seen, work shall stop in the immediate area and the animal shall not be further disturbed. The species occupying the burrow shall either be protected in place or relocated, consistent with established protocol for the species.

Mitigation Measure BIO-11: In the unlikely event that a special-status species is inadvertently killed or injured or if a special-status species is observed to be injured, dead, or entrapped, the construction crew will stop work and notify the USFWS and CDFW.

Mitigation Measure BIO-12: Upon completion of trail construction, temporarily impacted areas, alongside the trail bench, will be restored to pre-project grades and contours and stabilized to prevent erosion. A seed mix of native grass and forb species will be applied to all of the grassland areas, alongside the trail bench, disturbed by the project. The seed will be from sources that are regionally appropriate for the site.

4.4.2.3 Special-Status Wildlife Species

Eight special-status wildlife species were identified as potentially occurring within the vicinity of the trail alignment due to the presence of potentially marginal and/or suitable habitat. The following is a discussion of the habitat requirements and suitable habitat available within the project alignment for each of these eight species, with a discussion of potential impacts.

Ring-Tailed Cat. Ring-tailed cat is a CDFW Fully Protected species and inhabits rock outcroppings, cliffs, or large trees with cavities that are used as dens during the day. A single ring-tailed cat will use several dens and move between them. There is a low potential for a ring-tailed cat to be denning in an area that will be affected by trail construction activities. However, several large trees are located within the riparian areas of the trail alignment and could provide potential den habitat for ring-tailed cats. Therefore, construction activities associated with the trail could result in indirect impacts to ring-tailed cats through increased noise and disturbance during construction and could result in ring-tailed cats no longer using dens in close proximity to the trail alignment. Because ring-tailed cats maintain multiple dens, the loss of one den would be a negligible impact. However, the loss of a

natal or maternity den would be a significant impact. By implementing Mitigation Measure BIO-13, impacts to ring-tailed cat would be less than significant.

Mitigation Measure BIO-13: If vegetation removal or construction activities occur outside of the breeding season for ring-tailed cat (February 1 through May 1), no mitigation is necessary. If the breeding season cannot be completely avoided, a qualified biologist shall conduct a pre-construction survey within 2 weeks prior to commencement of construction for potential natal or maternity den trees. If an active den is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the den until the young have left the den.

Alameda Striped Racer. Alameda striped racer is a State- and federally threatened species. The upper portion of the trail alignment is within designated Critical Habitat Unit 3. This species inhabits scrub dominated communities, including grasslands and oak woodland that lie adjacent to chaparral/scrub habitats. The trail alignment consists primarily of grasslands but is surrounded by scrub and chaparral communities that could provide habitat for Alameda striped racers. In addition, rock outcroppings and burrows in the grasslands could provide potential cover for the species. However, because the majority of the trail alignment is located several hundred feet from scrub or chaparral communities and few outcroppings and burrows exist on site, it is unlikely that individual Alameda striped racers would be within the trail alignment during construction.

Because Alameda striped racers occur in low densities and spend most of their time in chaparral communities that the trail has been designed to avoid, it is unlikely any will be encountered during trail construction. Potential direct effects on Alameda striped racer may result from crushing of individuals by construction equipment, vehicles, or crews while working within a suitable habitat. Any Alameda racers that happened to be on the EVMA or proposed trail alignment would likely flee project personnel before they were in danger. Due to the small size of the construction area relative to the surrounding open space, the temporary disturbance during construction would be a negligible impact. There is only a negligible potential to affect racers that may be in the few burrows in grasslands within the trail alignment during the proposed trail construction. During operation of the trail, there is a negligible potential for a basking Alameda striped racer to be crushed by a pedestrian, equestrian, or cyclist. Alameda striped racers do occur in grasslands, but they spend most of their time in large patches of chaparral, which are not present within the trail alignment. Furthermore, Alameda striped racers are very fast, and they would almost certainly flee any large object moving toward them. By implementing the previously described measures and Mitigation Measures BIO-14 and BIO-15 below, impacts to Alameda striped racers would be less than significant.

Mitigation Measure BIO-14: To reduce the potential of impacting Alameda striped racers, the proposed trail shall be routed to avoid rock outcroppings and chaparral or scrub vegetation to the maximum extent practical.

Mitigation Measure BIO-15: If it is necessary to remove rock outcroppings or chaparral or scrub vegetation, only hand tools shall be used. A qualified biologist shall monitor these activities.

California Red-Legged Frog. California red-legged frog is federally threatened and is a CDFW Species of Special Concern. California red-legged frogs inhabit permanent and temporary aquatic habitat, as well as upland areas for foraging and refuge. California red-legged frog critical habitat is located approximately 2 miles to the northwest of the trail alignment. A small human-made pond is located approximately 210 feet from the trail alignment, near the top of the trail. Due to the lack of emergent vegetation and deep water, the pond provides marginal or very low quality breeding habitat for California red-legged frogs. Although the project site is not located within designated California red-legged frog critical habitat, there are no physical barriers that separate the project site from the occupied critical habitat. Therefore, California red-legged frogs may breed in the human-made pond and cross through the riparian areas to migrate within the project area.

Implementation of the proposed project would not impact the pond; therefore, the proposed project would not impact any known or potential breeding habitat for California red-legged frog. Because the frogs typically stay close to water and primarily migrate at night, construction activities and recreational use are not expected to impact any migrating individuals as both activities would occur during daylight hours as described in Mitigation Measure BIO-8. Further, with implementation of Mitigation Measure BIO-1 through BIO-12, impacts to California red-legged frog would be less than significant.

California Tiger Salamander. California tiger salamander is a State- and federally threatened species. California tiger salamanders live underground for most of their life in burrows built by small mammals in close proximity to waterbodies, including vernal pools or stock ponds. Generally, the breeding ponds are turbid and have little to no emergent vegetation. The small human-made pond located near the north end of the trail could potentially be used for breeding. The pond had turbid water and lacked emergent vegetation when it was observed during the field survey in July 2017. The pond likely holds water long enough in most normal-rainfall years for California tiger salamander larvae to successfully metamorphose. The lack of large California ground squirrel burrow complexes near the pond reduces, but does not eliminate, its suitability for breeding. Numerous burrows near the bottom of the trail alignment are within a suitable distance (1.2 miles) of the pond.

The project will not impact any known or potential breeding habitat for the California tiger salamander. Because salamanders generally migrate at night during rain events and project activities will occur during daylight hours, no impact on migrating individuals is expected. There is only a negligible potential to affect salamanders that may be in deep burrows during the proposed trail construction. There will be no anticipated impacts to California tiger salamanders during operation of the trail, because the adults live deep underground and only come to the surface on rainy nights. Potential impacts will be further reduced to a less than significant level with the implementation of Mitigation Measures BIO-3 through BIO-14 described above.

Golden Eagle and American Peregrine Falcon. Golden eagle and American peregrine falcon are State Fully Protected species. In addition, Golden eagle is also federally protected under the Bald and Golden Eagle Protection Act. Golden eagles nest primarily in large trees and inhabit hilly and mountainous terrain in open areas, including Alameda County. American peregrine falcon was State and federally delisted in 1999. American peregrine falcons nest on cliff ledges and tall buildings and typically do not build nests, but rather scrape small depressions in the sand or gravel on the ledge or

use abandoned stick nests built by other raptors or birds. The project site provides open, hilly terrain ideal for golden eagles. Several large trees and electrical transmission towers are located within 1 mile of the project site and provide moderately suitable nesting habitat for golden eagles. Additionally, a large stick nest in a eucalyptus tree approximately 530 feet west of the EVMA road, observed during the July 2017 survey, may have been built by golden eagles and could be used by American peregrine falcons. No cliffs or buildings are located in close proximity to the project site; therefore, there is a low potential for American peregrine falcons to nest within close proximity to the project site.

Construction activities near active nests could disturb breeding golden eagles and American peregrine falcons by forcing them to fledge early. However, implementation of Mitigation Measure BIO-16, which requires pre-construction surveys for nests if construction activities are determined to take place during the raptor breeding season (January 1-August 31), would reduce impacts to golden eagles and American peregrine falcon nests. Therefore, with implementation of Mitigation Measure BIO-16, impacts to golden eagles and American peregrine falcons would be less than significant.

Mitigation Measure BIO-16: If construction activities take place during the raptor breeding season (January 1-August 31), a pre-construction survey for nests shall be conducted by a qualified biologist no more than 1 month in advance of construction to establish whether golden eagles or American peregrine falcons have occupied nests within a 0.5-mile buffer of the trail alignment. Pre-construction surveys shall include all potential nesting habitat within 0.5 mile of the project site and include observations of nests and golden eagle and peregrine falcon activity. If an occupied nest is documented during the survey, the following shall be implemented:

- No construction shall occur within 0.5 mile of an active nest until the young have fledged.
- A buffer verified by CDFW and USFWS shall be implemented. The size of the buffer may be decreased depending on site-specific conditions.
- The nests shall be monitored for activity and agitation by a qualified biologist. The monitoring schedule shall be determined and readjusted according to the level of activity within the nest and as agreed to by CDFW.

Burrowing Owl. Burrowing owl is a CDFW Species of Special Concern. Burrowing owls inhabit a variety of habitats, depending on the availability of burrows. While the majority of the project site supports tall vegetation that is unlikely suitable for burrowing owls, active ground squirrel burrow complexes located near the bottom of the trail, north of the railroad track, could provide potential habitat for burrowing owls to breed or occupy.

Construction activities near occupied burrows could disturb breeding burrowing owls and force them to fledge early. However, implementation of Mitigation Measure BIO-17, which requires pre-construction burrowing owl surveys, would reduce potential impacts to burrowing owls. Therefore, with implementation of Mitigation Measure BIO-17, impacts to burrowing owls would be less than significant.

Mitigation Measure BIO-17: No more than 14 days prior to ground disturbing activities, a qualified biologist shall conduct a pre-construction/take avoidance survey for burrowing owls using the methods described in Appendix D of the CDFW Staff Report on Burrowing Owl Mitigation (Staff Report). Pre-construction surveys shall be conducted in suitable habitat for this species within the trail alignment. If no burrowing owls are detected during the initial pre-construction/take avoidance survey, a final survey shall be conducted within 24 hours prior to ground disturbance to confirm that owls are still absent. If construction activities are delayed beyond 24 hours of the second take avoidance survey, an additional survey shall be required within 24 hours prior to the re-initiation of construction.

If burrowing owls are documented to occupy burrows within the project area either during the breeding season or overwintering, compensatory mitigation shall be required. Compensatory mitigation shall follow the guidelines outlined in the CDFW Staff Report. Occupied burrows shall be provided with protective buffers (year-round) within which construction activities shall be prohibited. Buffer sizes shall be determined by the qualified biologist in consultation with CDFW.

For burrows where avoidance is not feasible, owls shall be passively relocated. A Burrowing Owl Exclusion Plan shall be developed and approved by CDFW prior to the implementation of passive relocation. Any burrowing owls detected on site shall be monitored prior to, during, and after exclusion to ensure that substantial adverse effects are avoided. If burrow exclusion occurs immediately after the end of the breeding season, daily monitoring shall be conducted for 1 week prior to the exclusion to confirm that any young have fledged.

San Francisco Dusky-Footed Woodrat. The San Francisco dusky-footed woodrat is a CDFW Species of Special Concern. The species builds conspicuous houses out of sticks on the ground and also in large trees. The houses are generally located in areas with large amounts of trees and brush and are often in riparian areas. San Francisco dusky-footed woodrats are omnivorous and feed both on the ground and in trees. They are nocturnal, so they are rarely seen by people, even where their houses are numerous.

The CNDDDB contains one presumed extant San Francisco dusky-footed woodrat occurrence within 5 miles of the project site. The record is based on woodrat houses seen along Alameda Creek approximately 3.2 miles east of the project site.

No woodrat houses were seen anywhere near the trail alignment during the July 2017 field survey. The species likely occurs in the general area, so it is possible that a house could be built between the time of the surveys and the start of trail construction. However, no impacts to woodrat houses are anticipated to result from proposed construction, so impacts are considered less than significant.

(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 Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant with Mitigation. CDFW tracks the occurrence of natural plant communities that are of limited distribution Statewide or within a county or region where they are often

vulnerable to the effects of development projects. Two sensitive natural communities are present on the project site: California sycamore woodland, located at Vallejo Mill Historical Park, and purple needle grass grassland, located on both sides of the trail alignment in the higher elevations of the project site. No impacts would occur to the California sycamore woodland habitat as a result of the project because ground disturbing improvements are not proposed within Vallejo Mill Historical Park. Some needle grass grassland habitat would be impacted where the trail would be constructed across natural soils that have not previously been graded for existing ranch roads. Implementation of Mitigation Measure BIO-18 would reduce the identified impacts to purple needle grass grassland to a less than significant level.

Mitigation Measure BIO-18: The loss of purple needle grass grassland shall be mitigated by restoring an equivalent amount of purple needle grass grassland on site. The District will reseed areas of purple needle grass grassland habitat that are disturbed by trail construction with an appropriate weed-free native seed mix that contains purple needle grass seed.

(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?

Less Than Significant with Mitigation. Wetlands and drainages on the project site are likely subject to regulation under Section 404 of the federal Clean Water Act and California Porter-Cologne Water Quality Control Act. Trail construction activities could adversely affect these features through directly filling, or indirectly through increased erosion or sedimentation. Most of the drainage features have already been impacted through the installation of culverts, roads, and water troughs or cisterns associated with ranching operations on the project site. Dilapidated culverts that will be replaced with new culverts will not adversely affect the function or values of jurisdictional waters. Furthermore, daylighting some of the culverts within the trail alignment by constructing articulated fords would result in a beneficial effect on drainages. Therefore, project construction may result in a net positive impact on jurisdictional features. Due to the planned alterations to jurisdictional features, the District will be required to obtain required permits from regulatory agencies and implement the measures specified by the permits, as required by Mitigation Measure BIO-19.

Mitigation Measure BIO-19: The District shall obtain required permits to impact jurisdictional features from the relevant regulatory agencies, including the Corps, CDFW, and Regional Water Quality Control Board. These permits will include conditions and Best Management Practices that the District shall implement during construction. Through implementation of the measures, impacts to jurisdictional features will be less than significant. These permits may also specify mitigation, which the District shall provide as specified by the agencies.

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant with Mitigation. The project area consists of open space and provides habitat for local and regional wildlife movement. Implementation of the proposed project would not create any significant new permanent barriers to terrestrial or aquatic wildlife movement. Implementation

of Mitigation Measures BIO-1 through BIO-12 would ensure that temporary impacts to migrating special-status wildlife species, including California red-legged frogs and California tiger salamanders, would be less than significant.

The project area provides habitat for nesting raptors and other birds that are protected under the California Fish and Game Code. These birds could nest within or adjacent to the project area. Most existing vegetation within the project area, including trees, shrubs, grasses, and bare ground, has the potential to support breeding activities by native birds protected under the California Fish and Game Code. Construction of the proposed trail could impact nesting birds through increased activity and noise associated with construction activities. If disturbed, breeding birds may abandon nests early in the nest cycle. If the young birds are forced to fledge early, they could be subject to predation or starvation, which could result in reproductive failure. Implementation of Mitigation Measure BIO-20 would ensure that the proposed project would avoid direct impacts to nesting birds by requiring pre-construction nesting bird surveys. Therefore, with implementation of Mitigation Measure BIO-20, impacts to nesting birds would be less than significant.

Mitigation Measure BIO-20: If construction work occurs during the nesting bird season (March 1 through August 31), a qualified biologist shall conduct pre-construction surveys within 10 days prior to the start of construction. Pre-construction surveys shall include the areas within a 250-foot buffer for passerine species and a 500-foot buffer for raptor species other than golden eagles, American peregrine falcons, and burrowing owls. Nest surveys shall be repeated if construction lapses in a work area for 14 days between March and July. Nest surveys shall follow standard biological survey methods, and survey efforts shall be tailored to detect specific species, with visits planned at appropriate timeframes/intervals to detect nesting activity. If nests are found, a qualified biologist shall establish an appropriate buffer to be in compliance with the California Fish and Game Code 3503. A qualified biologist shall perform at least 2 hours of pre-construction baseline monitoring of the nest to characterize “normal” bird behavior. The biologist shall monitor the nesting birds and shall increase the buffer if the project biologist determines the birds are showing signs of unusual or distressed behavior from project activities. Abnormal nesting behaviors that may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed toward project personnel, standing up from a brooding position, and flying away from the nest. The biologist shall have authority to halt work activities if the nesting bird exhibits abnormal behavior that may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established. To prevent encroachment, the buffer shall be clearly marked for avoidance. The established buffer shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the biologist. Signs of nest abandonment, as determined by the biologist, shall be reported to CDFW within 72 hours. Active nests (defined as the presence of chicks and/or eggs) that occur in developed areas shall be considered in the context of the surrounding ongoing activities and access constraints.

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. No trees would be removed as part of the proposed project. Installation of the proposed trail would include tree trimming to ensure adequate horizontal and vertical clearance for all trail

users (hikers, bicyclists, and equestrians). Therefore, implementation of the proposed project would not conflict with any local biological protection policies or ordinances, including tree ordinances. No impact would occur, and no mitigation is required.

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project area is not subject to any adopted habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or State habitat conservation plan. No impact would occur, and no mitigation is required.

4.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.5.1 Affected Environment

LSA conducted a Cultural Resources Study of the project site.⁸ The study consisted of background research, including a records search and a literature review of the proposed Area of Potential Effects (APE), a pedestrian field survey, and a Sacred Lands File search request with the Native American Heritage Commission. These tasks were completed to identify historic properties/historical resources in the APE and to assess the potential for cultural resources that may qualify as historic properties and to address requirements of Section 106 of the National Historic Preservation Act and CEQA. The District also sent project notification letters to local historical organizations and California Native American tribes. Two previously recorded historic-period cultural resources were identified in the APE during background research: Vallejo Mill and the Niles Canyon Transcontinental Railroad Historic District. The field survey also identified one new cultural resource in the APE: a pair of historic-period livestock watering tanks situated within a drainage and fed by a natural spring. A brief history of the project vicinity, as described in the Cultural Resources Study, is summarized below.

4.5.1.1 Ethnography

Fremont is situated within a territory once occupied by the Costanoan (also commonly referred to as Ohlone) language group. Eight Ohlone languages were spoken in the area from the southern edge of the Carquinez Strait south to a portion of the Big Sur and Salinas Rivers and inland approximately 50 miles from the coast.

By the late 18th century, Spanish exploration and settlement of the Bay Area transformed Ohlone culture. Spanish settlers moved into northern California and established the mission system that exposed the Ohlone to diseases to which they had no immunity, and declining birth rates led to population decline.

⁸ LSA, 2018. Cultural Resources Study, Bay Area Ridge Trail - Fremont to Garin. January.

4.5.1.2 History

The project APE is located in the former lands of Mission San Jose, founded in 1797. By 1820, the Mission had vast tracts of land used to graze cattle and sheep, as well as to cultivate crops including wheat, corn, barley, peas, beans, and fruit.

Between 1834 and 1836, all of the California missions were secularized. Jose de Jesus Vallejo, brother of Mariano Vallejo, was appointed the comisionado in charge of the secularization of Mission San Jose until 1840. In his influential position, Jose de Jesus Vallejo was able to acquire approximately 17,000 acres of the former mission land, which became Rancho Arroyo de la Alameda. In 1841, he constructed a grist mill on a flat area of land north of Alameda Creek and within the southern portion of the current project APE.

Following the secularization of the missions between 1834 and 1836, many Ohlone worked as manual laborers and house servants on ranchos. Vallejo took advantage of the cheap labor source as his agricultural and mill operations grew, and in 1856, a larger, more efficient mill was constructed approximately 40 feet west of the original mill.

During the early American period (1848-1865), the village of Vallejo Mill continued to grow as gold miners who, upon becoming disillusioned with prospecting, returned to farming in the area and many squatted on Vallejo's land. By the 1850s, Vallejo Mill was the central gathering place for the agricultural community and consisted of stores, a hotel, and a restaurant. The hills and ridges above Vallejo Mill, which make up the majority of the APE, were utilized for grazing livestock. However, due to unwise investments and hefty property taxes, Vallejo was forced to sell off portions of the original rancho land. By the mid-1860s, the majority of the former rancho land, including the Vallejo Mill site, was sold.

In 1865, the Western Pacific Railroad Company began construction of an 11.6-mile-long segment of the transcontinental railroad through Niles Canyon. Completed in 1869, the rail line ran through the canyon to San Francisco and was the final segment of the First Transcontinental Railroad providing the first rail connection between the San Francisco Bay Area and the rest of the United States. During this time, the Central Pacific Railroad (CPRR) had acquired the Western Pacific Company.

The new railroad benefited the surrounding areas but led to the decline of the Vallejo Mill settlement. The railroad bypassed Vallejo Mill within the southern portion of the current project APE and established a station and facilities in Niles, 1,500 feet to the northwest of the mill site. As Niles continued to develop around the railroad operations, Vallejo Mill declined, and mill operations ceased in 1884.

In 1880, the rail line through Niles Canyon became secondary to a new main line constructed through the towns of Benicia and Martinez. In 1889, the CPRR became a subsidiary of the Southern Pacific Railway (SPRR), and the two merged in 1959. The tracks through Niles Canyon were in service until 1984 when SPRR deeded the section of the railroad and right-of-way from Sunol to Niles to Alameda County. Today, the Pacific Locomotive Association operates the Niles Canyon Railway for historical tours.

At the time the mill operations were terminated, the Vallejo Mill site was owned by the Spring Valley Water Company. The mill building eventually deteriorated and was demolished in 1910. The only above-ground remnants from the historic-period mill operations are the deteriorated remains of the 1856 mill foundation adjacent to the proposed trail corridor. Currently, the former mill site is owned by the City of Fremont and is managed as the Vallejo Mill Historical Park.

4.5.1.3 Paleontological Resources

Geologic maps of the project site and relevant geological and paleontological literature were reviewed to determine which geologic units are present within the project site and whether fossils have been recovered within those geologic units or from similar geologic units elsewhere in the region. In addition, a search for known fossil localities was conducted through the online collections database of the University of California Museum of Paleontology (UCMP) at the University of California, Berkeley to determine the status and extent of previously recorded paleontological resources within and surrounding the project site. A field survey of the project site was also conducted on September 9, 2017, to note the sediments at the surface; relocate any known paleontological localities, if present; and identify any unrecorded paleontological resources exposed on the surface of the project site.

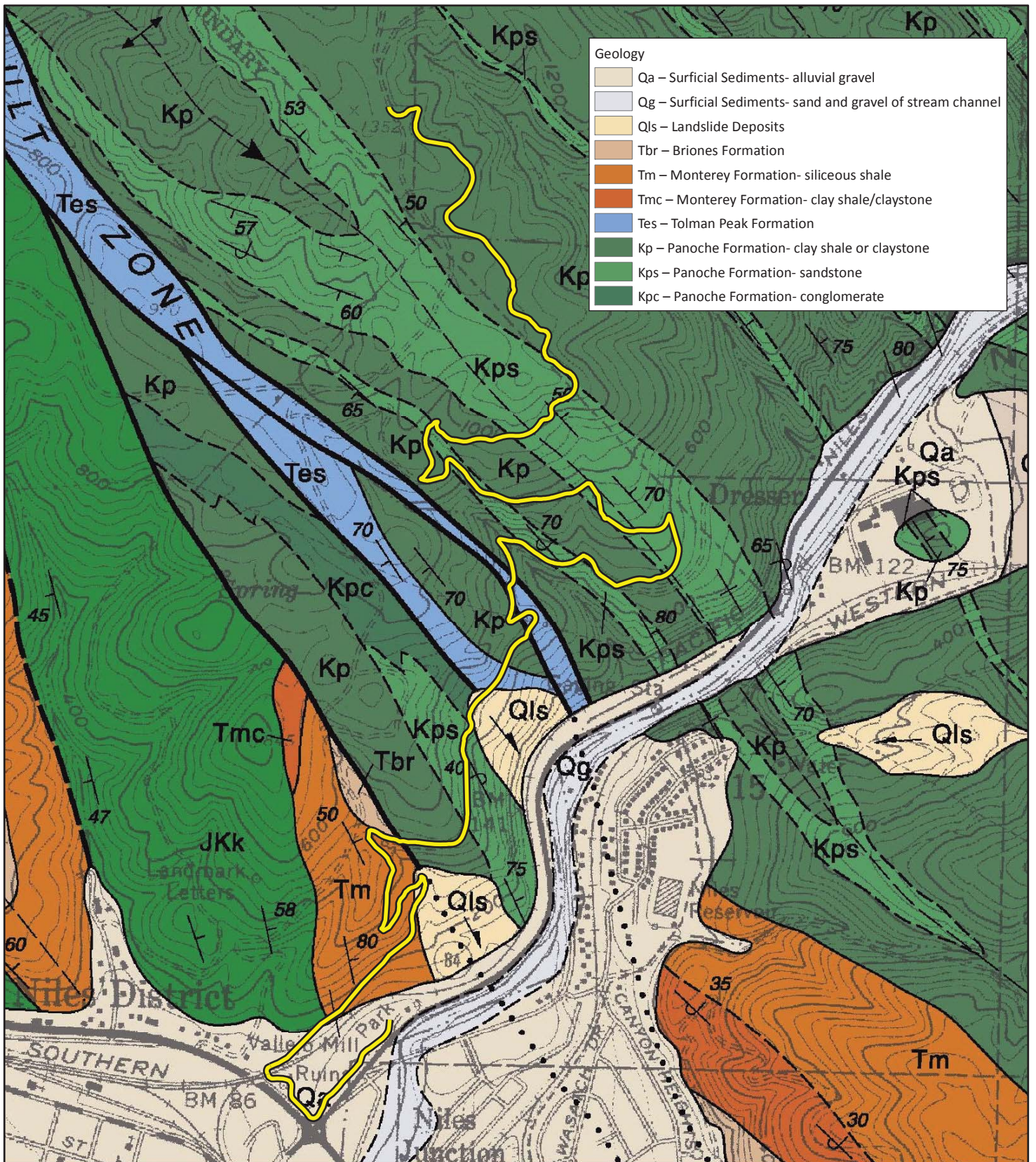
Geologic mapping by Dibblee⁹ indicates that the project site contains multiple geologic units, including Surficial Sediments, the Monterey Formation, the Tolman Peak Formation, the Panoche Formation, and the Knoxville Formation (Figure 10). In addition, the geotechnical report prepared for the project indicates some portions of the project area contain Artificial Fill.¹⁰ The geology and paleontological sensitivity of each of these geologic units is described in more detail below. Dates for the geologic epochs referenced are based on the International Chronostratigraphic Chart published by the International Commission on Stratigraphy.¹¹

Artificial Fill consists of sediments that have been removed from one location and transported to another location by human activity, rather than by natural means. Any fossils encountered in Artificial Fill have been removed from their original location and are thus out of stratigraphic context. Therefore, these fossils are not considered important for scientific study. As such, Artificial Fill has no paleontological sensitivity.

⁹ Dibblee, 2005. *Geologic Map of the Niles Quadrangle Alameda County, California*. Dibblee Geological Foundation, Dibblee Foundation Map DF-151, scale 1:24,000.

¹⁰ ENGEO, 2017. *Geological Constraints Report, EBRPD Ridge Trail - Fremont*. October 10.

¹¹ International Commission on Stratigraphy, 2018. *International Chronostratigraphic Chart*. Available online: <http://www.stratigraphy.org/index.php/ics-chart-timescale> (accessed September 4, 2018).



LSA

LEGEND

— Proposed Trail Alignment

FIGURE 10



SOURCE: USGS 7.5' Quad - Niles (1980), CA; Dibblee (2005)

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Surficial Sediments are Holocene to late Pleistocene (less than 126,000 years ago) in age, and consist of gravel, sand, and clay.¹² Although Holocene deposits can contain remains of plants and animals, only those from the middle to early Holocene (4,200 to 11,700 years ago) are considered scientifically important.¹³ Scientifically important fossils from middle to early Holocene deposits are not very common. The UCMP has 1 specimen from Holocene deposits within the County. Older, Pleistocene deposits, which may be reached below a depth of approximately 20 feet below ground surface, have produced scientifically important fossils elsewhere in the County and region.^{14,15} Moreover, the UCMP has records of 72 fossil localities that have produced over 1,200 specimens from Pleistocene deposits within the County. As such, scientifically important resources could be encountered in the older sediments of this geologic unit beginning at a depth of approximately 20 feet.

In the project area, the Miocene (5.333 to 23.03 million years ago) Monterey Formation consists of gray clay shale, siliceous shale, siltstone, and fine-grained sandstone deposited in a marine environment.¹⁶ Within the County, the UCMP has 1 locality that produced 10 specimens of vertebrates, including mastodon (*Mammuth americanum*), the type specimen of a toothed whale (*Kampholophos serrulus*), unidentified mammals, and bony fish. The Monterey Formation is widespread across California, and exposures around the State have produced a variety of specimens. Based on the abundance, diversity, and scientific significance of the fossils recovered from the Monterey Formation, this geologic unit is considered to have high paleontological sensitivity.

Dibblee attributed the marine, light gray to tan, massive to vaguely bedded sandstone within the Chabot Fault Zone to the Tolman Peak Formation, which is also referred to as the Tolman Formation.¹⁷ Geologists assigned an Eocene age (33.9 to 56.0 million years ago) to these rocks based on abundant specimens of fossil algae, but bryozoans, echinoids, bivalves, gastropods, and foraminifera were also observed. The geotechnical report prepared for this project followed Graymer et al.¹⁸ who mapped these rocks as belonging to an unnamed Paleocene (56.0 to 66.0 million years ago) shale and glauconite and the Miocene Claremont Shale. The UCMP has 9 fossil invertebrate specimens from 2 localities in the Tolman Formation in the County. From neighboring Contra Costa County, the UCMP has over 1,100 microfossil, invertebrate, and vertebrate specimens

¹² Dibblee, *Geologic Map of the Niles Quadrangle*.

¹³ 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. pp. 1–11.

¹⁴ Jefferson, George T., 1991a. *A Catalogue of Late Quaternary Vertebrates from California: Part One: Non-marine Lower Vertebrate and Avian Taxa*. Natural History Museum of Los Angeles County Technical Reports Number 5, Los Angeles.

¹⁵ Jefferson, George T., 1991b. *A Catalogue of Late Quaternary Vertebrates from California: Part Two: Mammals*. Natural History Museum of Los Angeles County Technical Reports Number 7, Los Angeles.

¹⁶ Dibblee, *Geologic Map of the Niles Quadrangle*.

¹⁷ Hall, Clarence A., Jr. 1958. *Geology and Paleontology of the Pleasanton Area, Alameda and Contra Costa Counties, California*. University of California Publications in Geological Sciences 34(1):1-89.

¹⁸ Graymer, R.W., D. L. Jones, and E.E. Brabb, 1996. *Preliminary Geologic Map Emphasizing Bedrock Formations in Alameda County, California: A Digital Database*. U.S. Geological Survey Open-File Report 96-252.

from 567 localities in marine Eocene deposits. The UCMP also has records of 222 localities in Paleocene deposits and 1,329 localities in Miocene deposits from Alameda and Contra Costa Counties. As such, Eocene, Paleocene, and Miocene deposits in this area are known to produce fossil remains. Therefore, the rocks mapped as Tolman Peak Formation are considered to have high paleontological sensitivity.

The Panoche Formation dates to the late Cretaceous (66.0 to 100.5 million years ago) and consists of clay shale, claystone, sandstone; and pebble- to boulder-size conglomerate.¹⁹ This formation has produced remains of numerous plants, invertebrates, and vertebrates. From the County, the UCMP has 4 invertebrate and plant localities from the Panoche Formation; however, a complete list of specimens from these localities is not available through the online collections database. From Contra Costa County, the UCMP has records of 8 plant, invertebrate, and vertebrate fossil localities. Given the abundance and wide variety of taxa that have been recovered, the Panoche Formation is considered to have high paleontological sensitivity.

The Knoxville Formation is an early Cretaceous to late Jurassic (100.5 to 163.5 million years ago) marine sedimentary rock unit that consists of layers of clay shale, claystone, sandstone, dolostone, and conglomerate.²⁰ The UCMP has recorded 32 localities in the Knoxville Formation in the County, but the museum only has 6 fossil specimens belonging to 2 different bivalve genera from those localities in its collections. Throughout the entire State, this formation has produced only 29 specimens of various invertebrates, including bivalves, gastropods, and cephalopods. Considering the scarcity of fossils produced, the Knoxville Formation is considered to have low paleontological sensitivity.

The findings of the field survey indicate the project is located in a relatively undisturbed area, with the exception of the existing ranching improvements, such as dirt roads, culverts, water tanks, and fencing. Outcrops of the Panoche Formation were seen within the project alignment near planned improvements No. 12 (Stabilize Turn), No. 13 (Culvert), and No. 15 (Gate). However, much of the project area is covered in vegetation and bedrock exposures could not be observed. No fossils were discovered during the survey.

4.5.2 Impact Analysis

(a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less Than Significant with Mitigation. CEQA defines a “historical resource” as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in California Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project’s Lead Agency (PRC Section 21084.1 and State

¹⁹ Dibblee, *Geologic Map of the Niles Quadrangle*.

²⁰ Dibblee, *Geologic Map of the Niles Quadrangle*.

CEQA Guidelines Section 15064.5(a)). The historical resources identified within the project alignment are described below.

4.5.2.1 Vallejo Mill Historical Park

Vallejo Mill, California Historical Landmark #46, consists of an archaeological site with precontact and historic-period components, including the exposed foundations of an 1856 mill. Although the remains of the Vallejo Mill are present and the area is sensitive for historic-period archaeological deposits, the native ground surface has been disturbed by roads, pathways, and landscaping. The portion of the proposed trail alignment within Vallejo Mill Historical Park would be constructed at-grade with gravel placed on the surface to delineate the route. Trail signage would be installed on existing posts, and embedded in the sidewalk at trail junctions to mark the trail route. Because trails will be constructed at-grade, no ground disturbance would be required for installation of trail signage, and the park has been subject to previous disturbance associated with grading, road/pathway cutting, and landscaping, there is a reduced potential to encounter significant archaeological deposits.

Despite prior disturbance, and due to the intensity of historic-period activity in the Vallejo Mill, there is the possibility that unidentified archaeological deposits associated with the Vallejo Mill may be encountered during project construction. Such deposits, if intact, could have archaeological value. Should these archaeological deposits qualify as significant, or should there be intact graves, disturbance of these materials/features during project construction may constitute a substantial adverse change in their significance, which would result in a significant impact under CEQA Guidelines §15064.5(b) and an adverse effect pursuant to 36 CFR Part 800.5. Therefore, monitoring of ground disturbing activities should occur within the boundaries of the Vallejo Mill Historical Park, as specified by Mitigation Measure CULT-1.

Mitigation Measure CULT-1: A qualified archaeologist and a Native American representative shall monitor all ground disturbing activities within the boundaries of Vallejo Mill Historical Park. If deposits of precontact or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery should be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel should not collect or move any archaeological materials. Archaeological materials can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, bones, and other cultural materials); and stone-milling equipment (e.g., mortars, pestles, and handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.

4.5.2.2 Niles Canyon Transcontinental Railroad Historic District

A portion of railroad track within the Niles Canyon Transcontinental Railroad Historic District bisects the southern portion of the project alignment on the north side of Vallejo Mill Historical Park. The project includes replacement of the existing tracks with a concrete grade panel and the installation

of gates and warning signs at the planned railroad crossing. However, the current track material was replaced after 1980 as it was in use by the SPRR and is not historic. The replacement of the track materials and other improvements for the crossing will not alter characteristics that qualify the historic district for inclusion in the National Register of Historic Places (NRHP). The crossing would be at-grade and would not introduce significant new visual elements other than gates and signs that are standard railroad crossing safety measures; therefore, implementation of the proposed project would have no adverse impacts to the Niles Canyon Transcontinental Railroad Historic District.

4.5.2.3 Livestock Watering Tanks

One new cultural resource was identified and documented within the project alignment as a result of the field survey (site of planned improvement No. 11-ford): a pair of adjacent historic-period livestock watering tanks situated within a drainage and fed by a natural spring. The two concrete livestock water tanks, which will continue to be utilized for cattle grazing and would not be directly affected by the project, would continue to serve their historical function as livestock watering features. An articulated ford crossing would be constructed for the trail adjacent to the water tanks to address the existing erosion of the dirt ranch road. Installation of the ford would not directly impact the water tanks and may serve to reduce the impacts of erosion on the tank structures. However, should it be determined that alteration or demolition of the water tanks is necessary to construct the proposed ford or other proposed improvements, the resource should be evaluated for NRHP and CRHR eligibility, as specified by Mitigation Measure CULT-2.

Mitigation Measure CULT-2: If the proposed ford or other proposed improvements require alteration or demolition of the water tanks, the water tanks should be evaluated for NRHP and CRHR eligibility. If the water tanks are determined to be a significant historical resource, the project should be modified to avoid or mitigate impacts to a less than significant level.

Implementation of Mitigation Measures CULT-1 and CULT-2 would prevent a substantial adverse change in the significance of a historical resource. Therefore, this impact would be less than significant.

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

Less Than Significant with Mitigation. As discussed above, the Vallejo Mill Historical Park consists of an archaeological site with precontact and historic-period components. During the field survey, additional archaeological material was encountered on the surface in a highly disturbed context within the boundaries of Vallejo Mill Historical Park. The portion of the proposed trail alignment within Vallejo Mill Historical Park would be constructed at-grade with gravel placed on the surface to delineate the route. Trail signage would be installed on existing posts, and embedded in the sidewalk at trail junctions to mark the trail route. Because trails will be constructed at-grade, no ground disturbance would be required for installation of trail signage, and the park has been subject to previous disturbance associated with grading, road/pathway cutting, and landscaping, there is a reduced potential to encounter significant archaeological deposits.

Despite prior disturbance, and due to the intensity of historic-period activity in the Vallejo Mill, there is the possibility that unidentified archaeological deposits associated with the Vallejo Mill may be encountered during project construction. Therefore, monitoring shall occur during any ground disturbing construction activities in the park, as required by Mitigation Measure CULT-1, above. Implementation of Mitigation Measure CULT-1 would prevent a substantial adverse change in the significance of an archaeological resource. Therefore, this impact would be less than significant.

(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation. No paleontological resources or unique geologic features are known to exist within the project site. The maximum depth of ground disturbance is not expected to extend below 20 feet (for culvert replacement). In areas of the project where Surficial Sediments are present, ground disturbing activities are not expected to extend deep enough to impact scientifically important paleontological resources, and paleontological resources are considered to be rare enough in the Knoxville Formation that potential impacts would be unlikely. However, ground disturbance associated with this project has the potential to impact scientifically important paleontological resources in areas mapped with the Monterey Formation, the Tolman Peak Formation, and the Panoche Formation. Therefore, Mitigation Measure CULT-3 is proposed and requires that a paleontological resources impact mitigation program be developed, that paleontological monitoring occur, and that a final report for findings be prepared documenting the results of paleontological monitoring. With implementation of Mitigation Measure CULT-3, impacts to paleontological resources would be reduced to a less than significant level.

Mitigation Measure CULT-3: A qualified paleontologist shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for this project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology and include the methods to be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. Excavation and grading activities in deposits with high paleontological sensitivity (e.g., Surficial Sediments below a depth of 20 feet, the Monterey Formation, the Tolman Peak Formation, and the Panoche Formation) shall be monitored by a paleontological monitor following the PRIMP. No paleontological monitoring is required for excavation in geologic units with no or low paleontological sensitivity (e.g., Artificial Fill, Surficial Sediments to a depth of 20 feet, and the Knoxville Formation).

If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction activities away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected, and a paleontologist contacted to assess the find for its significance. If determined to be significant, the fossil shall be collected from the field. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, catalogued, and curated into the permanent

collections of a museum repository. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.

Implementation of Mitigation Measure CULT-3 would mitigate direct or indirect impacts to unique paleontological resources or unique geologic features by allowing such features to be evaluated and curated for their scientific value. Therefore, this impact would be less than significant.

(d) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant with Mitigation. Ground disturbing activities associated with the proposed project have the potential to disturb previously unknown human remains. In the unlikely event that human remains are encountered during construction activities, the proper authorities shall be notified and standard procedures for the respectful handling of human remains during the earthmoving activities would be implemented, as specified by Mitigation Measure CULT-4. Therefore, implementation of Mitigation Measure CULT-4 would reduce potential project impacts related to unknown buried human remains to a less than significant level.

Mitigation Measure CULT-4: If human remains are encountered during project construction activities, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave materials.

The archaeologist shall prepare a report that provides recommendations for the treatment of the human remains and any associated cultural materials as well as proposed or implemented methods and results from excavation and analysis. Treatment of the remains and associated cultural materials shall be done in coordination with the recommendations of the MLD, Corps, City of Fremont, and District. The report should be submitted to the U.S. Army Corps of Engineers (Corps), the East Bay Regional Park District (District), and the State Historic Preservation Officer (SHPO) for review and comment. The final report should be submitted to the Northwest Information Center (NWIC).

Implementation of Mitigation Measure CULT-4 would properly treat human remains should they be encountered during construction activities. Therefore, this impact would be less than significant.

4.6 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.6.1 Affected Environment

A Geological Constraints Report²¹ was prepared for the project to identify the existing geological conditions and make recommendations for the proposed project. This section summarizes the report's findings and also references other sources. The project site is located within the California Coast Ranges Geomorphic province. The Coast Ranges are a result of movement along tectonic plate boundaries between the North American and Pacific Plates and are bounded by faults on either side. Movement along this plate boundary is concentrated along fault zones, most notably, the San Andreas, Hayward, and Calaveras Faults. Soils found on site include Holocene-era alluvial fan deposits. Artificial, undocumented fill is present along the existing EVMA road and the railway corridor.

²¹ ENGEO, *Geological Constraints Report*.

4.6.2 Impact Analysis

(a) *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Less Than Significant Impact. The project site is located in the San Francisco Bay Area, a seismically active region subject to strong seismic ground shaking activity resulting from earthquakes on nearby faults.

The State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972, requiring the State Geologist to delineate Earthquake Fault Zones (EFZ) along known active faults that have high potential for fault rupture. Active faults are defined as a fault that has surface displacement within the last 11,000 years.²² State regulations prohibit habitable structures from being sited within 50 feet of an active fault. Several faults are located within the City of Fremont, including the Hayward Fault, an officially designated EFZ. The Hayward Fault is part of the larger San Andreas Fault System and runs north and south through the City of Fremont approximately 1,000 feet west of the Fremont Hill Area and project location.

While the proposed trail alignment does not pass through an officially designated EFZ, it does cross the Chabot Fault. The Chabot Fault is not considered active due to the age of the last measurable surface displacement.²³ Because the fault is not considered active, risk of surface fault rupture is considered low. Further, the project would not construct any habitable structures that could be impacted by fault rupture. Impacts related to fault rupture would be less than significant, and no mitigation is required.

- ii) *Strong seismic ground shaking?*

Less Than Significant Impact. The project site is located within a seismically active region, subject to strong seismic ground shaking. Ground shaking refers to all aspects of motion of the earth's surface. The Safety Element of the City of Fremont General Plan²⁴ identifies the potential for ground shaking at the project site to be Very Strong to Violent due to the proximity of the Hayward Fault. The most significant adverse impact associated with strong seismic ground shaking is potential damage to structures and subsequent injury to people inside those structures. No habitable structures are proposed as part of this project. Drainage structures, trail gates, a pedestrian bridge, and a railroad crossing are proposed. All structures would be designed to conform with the Uniform Building Code

²² Ibid.

²³ Ibid.

²⁴ Fremont, City of, 2012. *2030 General Plan Safety Element*. Available online at: www.fremont.gov/398/General-Plan (accessed September 6, 2017).

(UBC) requirements in order to withstand shaking effects. Impacts related to seismic ground shaking would be less than significant, and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction occurs when loose, fine-grained soil temporarily transforms to a fluid-like state similar to quick sand. This phenomenon occurs due to strong seismic activity and lessens the soil's ability to support a structural foundation. According to both the California Geological Survey Earthquake Zones of Required Investigation²⁵ and the Association of Bay Area Government's liquefaction susceptibility online mapping website,²⁶ the proposed trailhead at 299 Niles Canyon Road at Vallejo Mill Historical Park has a moderate to high susceptibility for liquefaction due to the presence of alluvial fan deposits near Alameda Creek. The remainder of the proposed trail north of Vallejo Mill Historical Park is not located on a site with potential for liquefaction. No habitable structures are proposed as part of the project; therefore, impacts relating to this topic would be less than significant, and no mitigation is required.

iv) Landslides?

Less Than Significant Impact. The proposed project would be located on sloping hilly terrain. Seismically induced landslides and other slope failures are common during or soon after an earthquake in areas with significant ground slopes.

The Safety Element of the City of Fremont General Plan identifies landslides as being a significant hazard along the eastern boundary of Fremont in the Hill Area where the proposed project would be located. According to the General Plan, most sloping ground has the potential for landslides. Unstable slopes can be formed by natural processes such as erosion, water saturation, and destroyed vegetation due to wildfire and fault line displacements. Landslides may also induce flooding by damming creeks and streams with debris. Both the California Geological Survey and ABAG Earthquake Induced Landslide mapping²⁷ identify portions of the proposed trail alignment that would traverse sites of previous landslide movement and/or areas where local geologic conditions indicate potential for permanent ground displacement.

Undocumented fill is present at several locations along the proposed trail, including at the culvert crossings. Undocumented fill can be considered un-engineered fill, and the Geological Conditions Report prepared for the project recommends removing the existing fill down to the bedrock or other competent soil, and replacing with engineered fill at the planned locations of culvert replacement or articulated ford crossings. The report also recommends graded slopes less than 20 feet high should be no steeper than 2:1 (horizontal:vertical). Slopes higher than 20 feet are not

²⁵ California Department of Conservation, 2016. *Earthquake Zone of Required Investigation Niles Quadrangle*. Available online at: gmw.conservation.ca.gov/SHP/EZRIM/Maps/NILES_EZRIM.pdf (accessed September 6, 2017).

²⁶ Association of Bay Area Governments, 2016. *Liquefaction Susceptibility Map*. Available online at: resilience.abag.ca.gov/earthquakes (accessed September 6, 2017).

²⁷ Association of Bay Area Governments, 2016. *Earthquake Induced Landslide Study Zones Map*. Available online at: gis.abag.ca.gov/website/Hazards/?hlyr=cgsLndsldZones#nogo1 (accessed September 6, 2017).

planned for this project, but should they become necessary, these slopes should be no steeper than 3:1. Grading plans should also be reviewed by a geotechnical engineer before the construction phase begins to ensure slope stability. As is the case with most trails that are located on hilly terrain, the project site is prone to slope failure, and a number of landslides have been identified on the project alignment. Landslides can result in unstable ground conditions at the location of planned cut and fill sites. Portions of the proposed trail alignment cross previously mapped deep-seated landslides; however, these landslides do not show evidence of recent activity. Additionally, operation of the project (i.e., trail use) would not result in permanent human occupation of the project site. No habitable structures would be present, and users would be at the project site for limited durations of time. Due to the lack of proposed habitable improvements to the project site, impacts relating to landslides would be less than significant. Therefore, no mitigation is required.

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

Less Than Significant Impact. Construction activities have the potential to disrupt soil and cause erosion. Implementation of Mitigation Measure HYDR-2 (see Section 4.9.2 [a] in Hydrology and Water Quality) requiring the contractor to prepare a Storm Water Pollution Prevention Plan (SWPPP) would prevent significant erosion impacts at the project site. The SWPPP would outline BMPs that could include soil stabilization and water for dust control in order to prevent erosion. Therefore, with the implementation of Mitigation Measure HYDR-2, impacts related to soil erosion would be less than significant.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As discussed in 4.6.2 (a) (iii) and 4.6.2 (a) (iv), impacts related to landslides and liquefaction would be less than significant. The proposed project does not include a housing component or any other habitable structures, and trail users would be at the project site for limited periods of time. During trail construction, retaining walls would be constructed and undocumented fill would be removed, and engineered fill would be recompacted to ensure safety of drainage crossings. Therefore, impacts related to this topic would be less than significant, and no mitigation is required.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils shrink and swell due to moisture changes. This can cause cracking of slabs-on-grade, pavement, and structures with shallow foundations. Surface soils at the project site have cracking, indicating that the soil has moderate to high expansion potential. Construction on expansive soil can be performed by keeping exposed soil moist during grading activities.

No habitable structures are proposed as a part of the project. Water crossing structures would be constructed in accordance with the UBC requirements, and the recommendations found in the

Geological Constraints Report. Human occupation of the trail would not be permanent. Therefore, impacts related to this topic would be less than significant, and no mitigation is required.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project is a multi-use trail alignment and would not generate wastewater. No restrooms would be constructed as part of this project. No septic tanks or alternative wastewater disposal systems would be required for the proposed project. Therefore, no impact related to this topic would occur as a result of implementation of the proposed project.

4.7 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.7.1 Affected Environment

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur hexafluoride (SF₆).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While human-made GHGs include naturally occurring GHGs such as CO₂, methane, and N₂O, some gases, like HFCs, PFCs, and SF₆, are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e).

4.7.2 Impact Analysis

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

Less Than Significant Impact. The following section describes the proposed project's construction and operational related GHG emissions and contribution to global climate change. The BAAQMD has not addressed emission thresholds for construction in their CEQA Guidelines; however, the BAAQMD encourages quantification and disclosure. Thus, construction emissions are discussed in this section. As discussed below, the proposed project would not generate substantial GHG emissions that would have a significant effect on the environment and this impact would be less than significant.

4.7.2.1 Construction Emissions

Construction activities, such as site preparation, site grading, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew would produce combustion emissions from various sources. During construction of the proposed project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are encouraged to quantify and disclose GHG emissions that would occur during construction. Utilizing Roadmod, it is estimated that the project would generate approximately 193 metric tons of CO₂ during construction of the project. Implementation of Mitigation Measure AIR-1, as discussed in Section 4.3.2 (b), would further reduce construction GHG emissions by limiting construction idling emissions. Construction emissions associated with implementation of the proposed project would be considered less than significant.

4.7.2.2 Operational Emissions

The proposed project would open 5 miles of the Ridge Trail to the public between Vallejo Mill Historical Park and Garin Regional Park. Once completed, the proposed project would not generate substantial GHG emissions or result in substantial new vehicle trips that would contribute to an increase in GHG emissions. Therefore, GHG emissions generated by the proposed project would be less than significant. No mitigation is required.

(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The California Climate Action Team and the ARB have developed several reports to achieve the State's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. The ARB released the First Update to the Climate Change Scoping Plan. The report identifies

strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. ARB released a second update to the Scoping Plan, the Draft 2017 Scoping Plan, to reflect the target of 40 percent below 1990 levels by 2030, as set by Executive Order B-30-15 and codified by SB 32.

The adopted Scoping Plan includes proposed GHG reductions from direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as cap-and-trade systems.

The City of Union City Climate Action Plan (CAP)²⁸ was adopted in 2010. The City of Union City CAP includes goals, measures, and actions that relate to land use, transportation, buildings and energy, waste reduction, water conservation, and green infrastructure. These goals, measures, and actions set out strategies requiring the commitment and involvement of local residences and businesses to help the City move toward a lower carbon future. The City of Union City CAP presents a strategy to achieve the City's goal of reducing GHG emissions 20 percent below 2005 levels by the year 2020.

The City of Fremont CAP²⁹ adopted in 2012 also identifies specific and achievable actions for reducing greenhouse gas emissions in Fremont. The actions are organized within a three-tier implementation time frame: short term, medium term, and long term, consistent with the goals and policies outlined in the City's General Plan. The CAP goals and actions relate to land use and mobility, energy, solid waste, water, and municipal services and operations.

As discussed above, the proposed project would open approximately 5 miles of the Ridge Trail to the public between Vallejo Mill Historical Park and Garin Regional Park. The proposed project does not fall within or promote a specific measure within the City of Union City CAP or City of Fremont CAP to reduce greenhouse gases. However, the project is consistent with the goals of the City of Union City CAP and City of Fremont CAP as it would develop a new non-motorized trail and extend the existing trail, enhancing safety and efficiency of non-motorized travel.

The proposed project would not result in a substantial increase in GHG emissions and would not generate emissions that would exceed the project-level significance criteria established by the BAAQMD. The project would also be consistent with the strategies and policies included in the City of Union City CAP and City of Fremont CAP. Therefore, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions, and this impact would be less than significant.

²⁸ Union City, City of, 2010. *Union City Climate Action Plan*. November.

²⁹ Fremont, City of, 2012. *City of Fremont Climate Action Plan*. November.

4.8 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.8.1 Affected Environment

A review of potential environmental hazards was prepared for the project and is summarized below.³⁰ A railway is located near the proposed trailhead at Vallejo Mill Historical Park and has been operational since the early 20th Century. Hazardous materials or chemicals associated with railways, including gasoline, motor oil, or volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), may be present in shallow soils within and adjacent to the railroad right-of-way.

The remainder of the project site is undeveloped ranch land. There is no evidence of intensive agriculture use on site (i.e., use that could involve application of pesticides or herbicides).

³⁰ ENGEQ, 2017. *Environmental Review, EBRPD Ridge Trail - Fremont*. October 6.

4.8.2 Impact Analysis

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

Less Than Significant Impact. Hazardous substances include chemicals regulated under both the United States Department of Transportation³¹ and the U.S. Environmental Protection Agency (USEPA)³² “Hazardous Materials” regulations. Hazardous waste requires specific handling and disposal procedures because of potential damage to public health and the environment. Small quantities of commercially available hazardous materials could be used by construction vehicles (e.g., oil, gasoline); BMPs would be utilized to ensure that no construction-related fuel hazards occur. Routine transport, use, or disposal of hazardous materials would not occur as a result of the proposed project. Therefore, implementation of the proposed project would result in less than significant impacts related to this topic, and no mitigation is required.

(b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. Construction activities may involve the use of commercially available hazardous materials. Use of such materials would be in compliance with all applicable local, State, and federal regulations. Operation of the proposed project (i.e., use of the proposed trail by equestrians, bicyclists, and pedestrians) would not involve routine transport, use, or disposal of hazardous materials. Therefore, implementation of the proposed project would result in less than significant impacts related to this topic, and no mitigation is required.

(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less Than Significant Impact. The closest school to the project site is Niles Elementary school, located at 37141 2nd Street in Fremont, approximately 1 mile west of the proposed trailhead at Vallejo Mill Historical Park. The remainder of the proposed trail alignment would cross through undeveloped ranch lands and is not within 0.25 mile of an existing or proposed school. Therefore, implementation of the proposed project would result in less than significant impacts relating to this topic, and no mitigation is required.

³¹ United States Department of Transportation. *Regulations*. Available online at: phmsa.dot.gov/regulations (accessed September 6, 2017).

³² U.S. Environmental Protection Agency, 2012. *Hazardous Waste Regulations*. Available online at: www.epa.gov/osw/lawsregs/regs-haz.htm (accessed September 6, 2017).

(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?

Less Than Significant with Mitigation. The California State Water Resources Control Board (SWRCB) GeoTracker website³³ identifies one closed cleanup site at the southeast corner of Niles Canyon Road and Mission Boulevard:

- Super 7 No. 18908 38010 Mission Boulevard Fremont, California 94536

Cleanup of the site, a former automobile service station, was necessary due to a Leaking Underground Storage Tank (LUST), and the site was reported as ‘Closed’ in 1996. A “closed” site designation indicates that regulatory requirements for response actions such as site remediation have been completed and therefore potential migration of residual contaminants within the project site (if any) does not likely pose a risk to human health or the environment.

Additionally, the California Department of Toxic Substances Control (DTSC) EnviroStor website³⁴ does not identify any listed hazardous sites within 1,000 feet of any portion of the project site.

The project scope includes an at-grade railway crossing of Niles Canyon Railroad. Railways have high potential for the unintentional release of hazardous materials due to transportation and accidental spills. Construction of the at-grade railroad crossing, which would involve the disturbance and excavation of existing soils, could encounter or release hazardous materials.

The environmental review conducted by ENGEO recommends a limited subsurface investigation of the railroad crossing site to determine if hazards are present that would require remediation. Mitigation Measure HAZ-1 outlines the procedure for the investigation.

Mitigation Measure HAZ-1: Prior to construction of the railroad crossing, the District shall conduct a limited subsurface investigation of the railroad crossing site, which would include soil sampling of surficial soils and/or ballast. The samples shall be analyzed for contaminants of potential concern (COPCs), including metallic constituents including arsenic from pesticides, petroleum hydrocarbons (gasoline, diesel, and motor oil), organochlorine pesticides (OCP), volatile organic compounds (VOCs), and SVOC. The soil sampling report indicating the results of the sampling shall be submitted to the County of Alameda Department of Environmental Health for review and approval.

If soil testing results exceed Regional Water Quality Control Board environmental screening levels (ESLs) for the proposed recreational use, a Site Management Plan (SMP) shall be prepared by a qualified hazardous materials consultant to establish management practices for handling contaminated soil or other materials encountered during construction activities.

³³ State Water Resources Control Board, 2014. GeoTracker. Available online at: geotracker.waterboards.ca.gov (accessed September 1, 2017).

³⁴ Department of Toxic Substances Control, 2007. EnviroStor. Available online at: www.envirostor.dtsc.ca.gov/public (accessed September 1, 2017).

Appropriate soil testing, characterization, storage, transportation, and disposal procedures shall be specified in the SMP. The sampling results shall be compared to appropriate risk based screening levels in the SMP. The SMP shall identify potential health, safety, and environmental exposure considerations associated with redevelopment activities and shall identify appropriate mitigation measures.

The SMP shall be submitted to the County for review and approval. The SMP shall include, but is not limited to, the following:

- A detailed discussion of the site background;
- Management of stockpiles, including sampling, disposal, and dust and runoff control including implementation of a Storm Water Pollution Prevention Plan;
- Procedures to follow if evidence of an unknown historic release of hazardous materials (underground storage tanks, polychlorinated biphenyls [PCBs], asbestos containing materials, lead-based paint, etc.) is discovered during excavation or demolition activities; and
- A health and safety plan (HSP) for each contractor working at the site that addresses the safety and health hazards of each site operation phase, including the requirements and procedures for employee protection. The HSP shall outline proper soil handling procedures and health and safety requirements to minimize work and public exposure to hazardous materials during construction.

Implementation of Mitigation Measure HAZ-1 would identify and mitigate hazardous materials that may be encountered through construction of the railroad crossing, reducing potential impacts to a less than significant level.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within an airport use plan or within 2 miles of a public airport or public use airport. The closest airport to the project site is the Hayward Executive Airport located approximately 11.5 miles northwest of the project site. Therefore, implementation of the proposed project would not result in an airport-related safety hazard for people working in the project area, and no impacts related to this topic would occur.

(f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. Two heliports are located within 3 miles of the project site. The First Interstate Bank Operations Center Heliport is located approximately 2.5 miles south, and the Washington Hospital Heliport is located approximately 2 miles south. The project site is not within the vicinity of a private airstrip. The proposed project is a recreational trail and does not include any habitable structures

and would not induce population growth in the area. Therefore, no impact related to this topic would occur as a result of implementation of the proposed project, and no mitigation is required.

(g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The proposed project includes construction of a multi-use trail and would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Therefore, no impact related to this topic would occur as a result of implementation of the proposed project, and no mitigation is required.

(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less Than Significant Impact. A wildland fire is a fire occurring in a suburban or rural area which contains uncultivated lands, timber, range, watershed, brush, or grasslands. This includes areas where there is a mix of developed and undeveloped lands. Wildland fires are primarily a concern in the underdeveloped Hill Area of Fremont, including the site of the proposed project.

A small segment of the proposed trail would be within an area identified by the California Department of Forestry and Fire Protection as a community at risk for wildland fire.³⁵ Additionally, the Safety Element of the City of Fremont General Plan identifies the project area as a Fire Hazard Severity Zone, indicating this area is prone to a higher exposure to wildfires and has limited Fire Department access. The proposed project does not involve construction of residential or commercial structures or any other structures for human occupation, and people would use the trail for a limited duration of time. Construction of the trail would follow the District's best management practices to minimize fire danger in fire-prone wildlands (e.g., prohibiting work on red flag days, warning the public of fire danger on high fire days, establishing pump truck requirements). Implementation of the proposed project would not expose people or structures to significant loss, injury, or death from wildfires beyond the existing condition. Therefore, impacts related to this topic would be less than significant.

³⁵ California Department of Forestry, 2003. State Responsibility Areas. Available as part of the Association of Bay Area Government Earthquake and Hazards Program. Website: resilience.abag.ca.gov/wildfires (accessed September 1, 2017).

4.9 HYDROLOGY AND WATER QUALITY

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

4.9.1 Affected Environment

The proposed trail alignment is located within the Alameda Creek Watershed. The Alameda Creek watershed is 660 square miles, including 41 square miles within Alameda County, and is the largest watershed in the San Francisco Bay Area. Alameda Creek is a major creek within the watershed. The Creek’s tributaries originate at Mount Hamilton to the south, the Diablo Range to the north, and Altamont Pass in the east. Alameda Creek enters Niles Canyon in Sunol and flows 12 miles through the Alameda County Flood Control (ACFC) Channel. Upon entering the City of Fremont some of the water is diverted to the Alameda County Water District’s Quarry Lakes facility to recharge the

groundwater basin. The remainder of the water empties into San Francisco Bay near the Fremont/Union City boundary, approximately 9 miles west of the project site.^{36,37}

According to the San Francisco Bay RWQCB 2016 Integrated Report (Clean Water Act Section 303(d) List 305(b) Report),³⁸ Alameda Creek is listed as an impaired water body, contaminated for approximately 41 miles with diazinon from urban runoff and storm sewers. A waterbody listed as impaired triggers development standards and implementation plans known as Total Maximum Daily Loads (TMDLs) for each water quality pollutant, and these standards and implementation plans are ultimately codified in amendments to the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.

4.9.2 Impact Analysis

(a) Violate any water quality standards or waste discharge requirements?

Less Than Significant with Mitigation. Runoff water quality is regulated by the federal National Pollutant Discharge Elimination System (NPDES) Program administered by the RWQCB. The project site would be under the jurisdiction of the San Francisco RWQCB, and the Alameda Countywide Clean Water Program (ACCWP), of which both the Cities of Fremont and Union City are participants. ACCWP is a group of local government agencies that operate under one common NPDES Municipal Regional Stormwater Discharge Permit. Compliance with the Municipal NPDES Permit is required by State and federal law, and new construction projects must comply with the NPDES Construction General Permit.

Pollutants of concern during project construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and transport of sediment downstream compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. In addition, construction-related pollutants such as chemicals, liquid and petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste could be spilled, leaked, or transported via storm runoff into adjacent drainages and into downstream receiving waters. Any of these pollutants has the potential to be transported via stormwater runoff into receiving waters.

³⁶ Alameda County Flood Control and Water Conservation District, 2017. Alameda Creek Watershed. Available online at: www.acfloodcontrol.org/resources/explore-watersheds/alameda-creek-watershed (accessed September 7, 2017).

³⁷ Fremont, City of, 2011. *2030 General Plan Conservation Element*. Available online at: www.fremont.gov/398/General-Plan (accessed September 8, 2017).

³⁸ Regional Water Quality Control Board, 2016. *Clean Water Act Sections 303(d) and 305(b) 2016 Integrated for the San Francisco Bay Region*. Available online at: www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/303dlist.shtml (accessed September 8, 2017).

Construction activities associated with the proposed project (trail grading, drainage crossing improvements, and construction of the railroad crossing) would disturb soils and could cause erosion and sedimentation if not properly managed.

The NPDES General Permit (GP) for Construction (Order 2009-0009-DWQ) requires construction sites over 1 acre to prepare and implement a SWPPP, and implement construction Best Management Practices (BMPs) during the construction phase. Construction activities have the potential to disturb soil and cause erosion, increasing sediment runoff. Additionally, oil and other products used for maintenance and operation of construction equipment could accidentally be released. Construction BMPs would include but would not be limited to erosion and sediment control and inspection and maintenance of construction equipment to prevent spills or leaks of fuel or motor oil into receiving waters. Adherence to Mitigation Measures HYDR-1 and HYDR-2 below would ensure that the construction of the project would result in a less than significant impact associated with the violation of water quality standards or waste discharge requirements.

Mitigation Measure HYDR-1: The contractor shall file a Notice of Intent (NOI) with the RWQCB to be covered under the Statewide General Permit for Discharges of Stormwater Runoff Associated with Construction Activity and proposed control measures that are consistent with the State General Permit.

Mitigation Measure HYDR-2: A Stormwater Pollution Prevention Plan (SWPPP) shall be developed and implemented by the construction contractor in consultation with the City of Fremont, RWQCB, and other regulatory agencies. It shall include BMPs to reduce potential impacts to surface water quality through the construction and life of the project. The SWPPP shall adhere to the following requirements:

- The SWPPP shall include measures to avoid creating contaminants and to minimize the release of contaminants from entering surface water or percolating into the ground.
- The water quality control measures shall address both construction and operation periods.
- Fluvial erosion and water pollution related to construction shall be controlled by a construction water pollution control program that shall be available on site and kept current throughout any site development phase.
- The water pollution prevention program shall include BMPs as appropriate given the specific circumstance of the site and project.
- The SWPPP shall be available for on-site review by the RWQCB.
- A spill prevention and countermeasure plan shall be incorporated into the SWPPP.

Implementation of Mitigation Measures HYDR-1 and HYDR-2 would reduce impacts related to this issue to a less than significant level.

(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. Fremont is underlain by the Niles Cone Groundwater Basin, a sub-basin of the larger Santa Clara Valley groundwater basin. The Basin is intersected by the Hayward Fault, separating the basin into two zones, one above the Fault and one below it. This separation results in significantly higher groundwater levels above and east of the fault where the project site is located.

The proposed project would not result in the construction of large areas of impervious surfaces that would prevent groundwater from infiltrating into the groundwater basin, nor would the project result in direct additions to or withdrawal of existing groundwater. Grading and construction activities would compact soil, which can decrease infiltration to the groundwater basin during construction. However, construction activities would be temporary, and the reduction in infiltration would not be substantial. Therefore, impacts relating to this topic would be less than significant and no mitigation is required.

(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site?

Less Than Significant Impact. Erosion is common on steep slopes, making any soil disturbance or grading on slopes likely to cause erosion. Post-construction erosion can occur from poorly designed or maintained drainage structures such as culverts. The project proposes a total of seven stream and/or drainage crossings in the form of culverts, articulated fords, and a bridge. Five of these drainage crossings would be at locations where existing culverts have failed and are in need of replacement/repair. The articulated fords and bridge would provide a crossing for trail users while simultaneously providing more effective drainage of the project area when compared to current conditions. These improvements would prevent concentration of surface runoff that could cause erosion or siltation on or off site and would avoid causing significant alterations to existing drainage patterns at the project site.

During construction activities soil would be exposed and disturbed and drainage patterns would be temporarily altered during grading and other construction activities resulting in increased potential for soil erosion and siltation compared to existing conditions. During a storm event, soil erosion could occur at an accelerated rate. As discussed above in Response 4.9.2 (a), the Construction General Permit requires preparation of a SWPPP and implementation of BMPs to reduce adverse impacts to water quality during construction, including impacts associated with soil erosion and siltation. Compliance with Mitigation Measures HYDR-1 and HYDR-2 would ensure that implementation of the proposed project would result in a less than significant impact related to this topic. No additional mitigation is required.

(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. The proposed project would consist of an unpaved, multi-use trail, which may result in minor alterations to the existing drainage pattern of the project site. Continued use of the trail over time would compact soil, necessitating installation of the proposed drainage structures to prevent runoff. Construction activities including grading and excavation of the trail would compact the soil, which may decrease infiltration of water into the soil, creating an increase in surface runoff. This nominal increase in runoff is not expected to substantially increase the volume of runoff during a storm event. The proposed trail would not substantially change drainage patterns, absorption rates, or the amount of surface runoff. The trail would consist of pervious dirt material that would continue to absorb water and discharge excess water into the adjacent landscape. Additionally, the trail would be small in surface area, and ongoing and effective trail maintenance by District staff and volunteers would take place.

As described in Response 4.9.2 (c), modifications to existing drainage structures, including replacement and repair of existing failed culverts at the project site, would reduce the amount of surface runoff created by compaction of the soil along the proposed trail. Therefore, the existing drainage pattern would be maintained and improved and storm water would be allowed to flow southeast eventually draining to the San Francisco Bay. Because the existing drainage pattern would be maintained and the proposed project includes drainage upgrades and improvements, implementation of the proposed project would result in a less than significant impact related to this topic. No mitigation is required.

(e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Refer to Responses 4.9.2 (a), (c), and (d) above.

(f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Refer to Response 4.9.2 (a) above.

(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed project would consist of a multi-use trail, and the proposed project does not include a housing component. The project is not located within a 100-year flood hazard area as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map,³⁹ and

³⁹ Federal Emergency Management Agency, 2009. Digital Flood Insurance Rate Maps. Available as part of the Association of Bay Area Government Resilience Program. Website: resilience.abag.ca.gov/floods (accessed September 5, 2017).

implementation of the project would not result in the placement of housing in a flood hazard area. There would be no impact relating to this topic and no mitigation is required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The project site is not located within a 100-year flood hazard area, and the proposed project would not include any structures that would impede or redirect flood flows. Therefore, the proposed project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows. There would be no impact relating to this topic and no mitigation is required.

(i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. Dam failure is the structural collapse of a dam that releases the water stored in a reservoir behind the dam. Dam failure can result from an earthquake, making dam failure a concern in Fremont due to the history of seismic activity in the project area. Three large dams are located in eastern Alameda County: Del Valle, Calaveras, and James H. Turner Dam. These dams control water flow into the Alameda County Flood Control and Water Conservation District (ACFC/WCD) channel.

According to the Safety Element of the City of Fremont General Plan,⁴⁰ the proposed railroad crossing and trailhead at Vallejo Mill Historical Park are within a dam failure inundation area, as is almost all of the developed land in the City of Fremont. However, the majority of the proposed trail alignment is not within a dam failure inundation area due to the elevation of the proposed trail. Implementation of the proposed project would increase use of the project area; however, such use would be intermittent and of short duration consisting of recreational trail use.

Two primary levees are located within the City of Fremont. One levee is located along Alameda Creek, the other is located along Coyote Creek south of the project site. As part of the National Flood Insurance Program, the ACFC/WCD pursued FEMA accreditation of each levee system to demonstrate the safety of these levees. In 2007, FEMA designated both levees as provisionally accredited levees (PALs), and as of 2011, both the City of Fremont and ACFC/WCD were pursuing certification of each levee. Due to the elevation of the majority of the proposed project site, flooding as a result of levee failure is unlikely. Additionally, no habitable structures are proposed as part of the project.

For the reasons described above, the proposed project would not expose people or structures to significant risk of loss, injury, or death involving flooding, as a result of the failure of a levee or dam. This impact would be less than significant and no mitigation is required.

⁴⁰ Fremont, City of, 2011. *2030 City of Fremont General Plan Safety Element* Diagram 10-6 Dam Failure Inundation Areas. Available online at: www.fremont.gov/398/General-Plan (accessed September 7, 2017).

(j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. Seiche is characterized by waves created on closed bodies of water such as reservoirs or lakes from seismic activity. The City of Fremont General Plan states that seiche could affect the City by causing the Del Valle and Turner Reservoir to spill over their dams and inundate areas such as Niles Canyon. The project location is north of and uphill from Alameda Creek, making inundation from seiche unlikely for much of the project area. Additionally, the project area is not mapped as a flood prone area of Fremont.

Tsunamis are large destructive ocean waves caused by off-shore earthquakes. The project site is not subject to inundation from a tsunami given its distance of approximately 7 miles from the coast.⁴¹

A mudflow is the rapid movement of a large mass of mud from loose soil and water which generally occurs during strong storm events. Mudslides or flows are a type of slope failure which are triggered by shallow subsurface saturation, and typically occur over mountainous or hilly terrain. As discussed in Section 4.6, Geology and Soils, the project alignment includes slopes subject to landslides. Construction of the proposed improvements would not increase the potential for landslides or mudflows. As such, no mitigation is warranted.

⁴¹ California Emergency Management Agency, 2009. California Geologic Survey, University of Southern California. Alameda County Tsunami Inundation Mapping website: www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Alameda (accessed September 5, 2017).

4.10 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.10.1 Affected Environment

The proposed trail would cross through both the Cities of Fremont and Union City jurisdictions. The majority of the proposed trail alignment lies within the City of Fremont with a small portion of the north end of the trail entering Union City. According to the Land Use Element of the City of Fremont General Plan,⁴² land uses along the proposed trail alignment are designated for: Residential-Hillside (RES HR), and Open Space (OS PK, OS HL, and OS HF). Corresponding zoning designations identified in the City of Fremont Zoning Ordinance⁴³ include: Open Space (OS), Single-Family Residential, Hillside Overlay (R-1-6 [H-1]), and Railroad Corridor Right-of-Way (RRCOR, ROW). The residential designation corresponds to a very small percentage of the overall project area and is limited to areas adjacent to Vallejo Mill Historical Park and Mission Boulevard.

According to the Land Use Element of the City of Union City General Plan,⁴⁴ land use along the proposed trail alignment is designated Agriculture. The corresponding zoning designation⁴⁵ is Agriculture (A). These designations are intended for agricultural use including but not limited to farming, dairies, and viticulture. The current use for land in the project vicinity is grazing land. Land west of Mission Boulevard is a developed urban area.

4.10.2 Impact Analysis

(a) Physically divide an established community?

No Impact. Physically dividing an established community generally refers to installation of physically obstructive infrastructure such as an interstate highway or railroad tracks, or removal of access such

⁴² Fremont, City of, 2011. *2030 City of Fremont General Plan, Land Use Element*. Available online at: www.fremont.gov/398/General-Plan (accessed September 8, 2017).

⁴³ Fremont, City of, 2017. *Fremont Municipal Code, Title 18-Planning and Zoning*. Available online at: fremont.gov/400/Zoning (accessed September 8, 2017).

⁴⁴ Union City, City of, 2002. *2020 Union City General Plan, Land Use Element*. Available online at: www.ci.union-city.ca.us/departments/economic-community-development/general-plan (accessed September 8, 2017).

⁴⁵ Union City, City of, 2017. *Union City Municipal Code, Title 18-Zoning*. Available online at: gcode.us/codes/unioncity (accessed September 8, 2017).

as a bridge or local road that would impair mobility within an existing community or between a community and outlying areas. The proposed trail alignment would be located within undeveloped open space and would not pass through a residential or commercial area. The proposed railroad crossing would traverse existing railroad tracks, which do not currently divide an established community. The proposed project would create a connection between the undeveloped open space land on the north side of the tracks and Vallejo Mill Historical Park on the south side. Therefore, the proposed project would not physically divide an established community. There would be no impact relating to this topic.

(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The Plan Policies and regulations applicable to the proposed project include: the City of Fremont General Plan, the City of Union City General Plan, the Union City Hillside Area Plan, the Fremont Municipal Code, the Union City Municipal Code, and the East Bay Regional Park District 2013 Master Plan (District Master Plan).

The District Master Plan contains policies and goals pertaining to parks and trails within the District. This Plan establishes policies to expand the District's unpaved multi-use trail system to link parks within the East Bay. The Plan also prioritizes completing missing East Bay Sections of the Bay Area Ridge Trail. Completion of the proposed project would implement both of these policies.⁴⁶

Generally, the proposed project is in direct support of many applicable plans and policies. These plans contain goals and policies which support working with the District to ensure recreational opportunities by expanding District parklands. The applicable plans and policies also support completion of Bay Area Ridge Trail segments in the East Bay. Additional relevant policies relate to the protection of natural resources, water quality, and provision of public services. Many project impacts related to these topics are less than significant or limited to the short-term construction phase of the project described in relevant sections of this IS/MND. With mitigation measures contained in this IS/MND, the proposed project is consistent with all the relevant regulations and policies contained in these documents. Therefore, implementation of the proposed project would result in less than significant impacts related to this topic.

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site is not subject to a habitat conservation plan or natural community conservation plan. There would be no impact relating to this topic and no mitigation is required.

⁴⁶ East Bay Regional Park District, 2013. *2013 Master Plan*. Available online at: www.ebparks.org/Page50.aspx (accessed September 5, 2017).

4.11 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.11.1 Affected Environment

Mineral resources are an important part of the City of Fremont’s land resources. The City of Fremont has a long history of quarrying; however, such practices stopped in 2007 and the City does not anticipate any future quarry operations. Mineral resources that exist within the city limits include construction aggregate (sand, gravel), salt, and limestone⁴⁷.

4.11.2 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?

No Impact. The State Mining Reclamation Act of 1975 (SMARA) identifies and protects California’s mineral resources. Six State-designated mineral resources sectors are located within the City of Fremont, containing regionally significant mineral resources. Sector H, a State-designated mineral resource sector containing construction aggregate, is located northwest of the project site⁴⁸. Several non-operational quarries are also located within the project vicinity: Quarry Lakes Quarry approximately 1 mile southwest of the proposed trailhead at Vallejo Mill Historical Park, Mission Clay Products Quarry approximately 1.5 miles northeast of the proposed trailhead at Vallejo Mill Historical Park, and Bellini Quarry⁴⁹ approximately 0.65 mile northwest of the proposed trailhead at Vallejo Mill Historical Park. No active mining or extraction operations currently occur within the City of Fremont, and the project would not impact any non-operational quarry sites or State-designated mineral resource sectors. Implementation of the project would not 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. There would be no impact related to this topic and no mitigation is required.

⁴⁷ Fremont, City of, 2011. *2030 General Plan, Conservation Element*. Available online at: www.fremont.gov/398/General-Plan (accessed September 7, 2017).

⁴⁸ California Department of Conservation, Division of Mines and Geology, 1987. *Mineral Resource Zones and Resource Sectors, Alameda County*. Available online at: ftp.consrv.ca.gov/pub/dmg/pubs/sr/SR_146-2/SR-146_Plate_2.1.pdf (accessed September 5, 2017).

⁴⁹ California Department of Conservation, Division of Mines and Geology, 1987. *Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area. Special Report 146 Part II*.

(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Refer to Response 4.11.2 (a). The proposed project would not 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. The proposed project would have no impact related to this topic.

4.12 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.12.1 Affected Environment

A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the project site are the criteria in the City of Union City General Plan Health and Safety Element and City of Fremont General Plan Safety Element. Noise impacts can be described in three categories. The first is audible impacts that increase noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 decibels (dB) or greater since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, is the change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant. For the purpose of this analysis, the proposed project would result in a significant noise impact if the project-related noise increase at an existing sensitive receptor exceeds 3 dB and the resulting noise level is greater than the standards cited below, or if the project-related increase in noise is greater than 5 A-weighted decibels (dBA), yet the resulting noise levels are within the applicable land use compatibility standards for the sensitive use.

The City of Union City addresses Noise in the Health and Safety Element of the General Plan.⁵⁰ The Health and Safety Element contains goals, policies, and implementation programs that aim to protect public health and welfare by minimizing excessive noise. Policy HS-C.1.7 of the Health and Safety Element and Section 9.40.053 of the City of Union City Municipal Code⁵¹ limits construction activities to between the hours of 8:00 a.m. and 8:00 p.m. Monday through Friday, between the hours of 9:00 a.m. and 8:00 p.m. on Saturdays, and between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays.

The City of Fremont also addresses noise in the Safety Element.⁵² The Safety Element includes goals, polices, and implementation measures that work to minimize impacts to residents and property due to noise and ground vibration sources. In addition, the City of Fremont Zoning Code⁵³ sets allowable hours for construction activity for development projects in a zoning district on any property within 500 feet of one or more residences, lodging facilities, nursing homes, or inpatient hospitals to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 6:00 p.m. on Saturdays and holidays. No construction is allowed on Sundays.

The primary existing noise sources contributing to ambient noise within the vicinity of the project site are traffic associated with Mission Boulevard and Niles Canyon Road along with other noise from motor vehicles generated by engine vibrations, the interaction between the tires and the road, and vehicle exhaust systems.

In addition, the Niles Canyon Railway, owned by Alameda County and operated by the Pacific Locomotive Association (PLA), is a source of noise within the project site vicinity. The Niles Canyon Railway operates only on Sundays from February to December, and operates Wednesdays and Fridays through Sundays during late November and December for holiday events. The Niles Canyon Railway operates about 51 days per year with about 205 train trips, not including maintenance, giving tours between the district of Niles in Fremont and the town of Sunol in Alameda County. The current schedule has passengers departing the Niles Station on scheduled Sundays at 11:30 a.m. and 1:20 p.m. and the Sunol station at 10:30 a.m., 12:30 p.m., and 2:30 p.m. The PLA operates both historic diesel and steam locomotives along the corridor at approximately 20 mph. Total operations occur about 51 days out of the year with approximately 205 train trips. On days of operation, the Niles Canyon Railway would pass five times on a schedule traveling between Niles and Sunol.

Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. As noted above, the project site is located within the City of Union City and within the City of Fremont. The project site is surrounded by a mix of uses, including recreational, commercial, and residential uses. The closest sensitive receptors include the single-family residential uses located approximately 200 feet southwest of the proposed railway crossing and 300 feet south of the proposed trailhead.

⁵⁰ Union City, City of, 2002. *2002 General Plan Policy Document*.

⁵¹ Union City, City of, 2016. *Union City Municipal Code*.

⁵² Fremont, City of, 2011. *City of Fremont General Plan*. December.

⁵³ Fremont, City of, 2014. *Municipal Code, Title 18 Planning and Zoning*. November.

To assess existing noise levels, LSA conducted three short-term noise measurements near the project site on December 21, 2017. The short-term 15-minute noise measurements were recorded at different locations on site between 10:03 a.m. and 11:47 a.m. Noise measurement data collected during the short-term noise monitoring are summarized in Table D. The meteorological data conditions at the time of the short-term noise monitoring are shown in Table E. Noise measurement sheets are provided in Appendix A.

As shown in Table D, the short-term noise measurements indicate that ambient noise in the project vicinity ranges from approximately 57.8 dBA to 67.2 dBA L_{eq} . Traffic on Mission Boulevard was reported as the primary noise source.

Table D: Ambient Noise Monitoring Results, dBA

Location Number	Location Description	Start Time	L_{eq} ^a	L_{max} ^b	L_{min} ^c	Primary Noise Sources
ST-1	Peggy Wright Way/Base of EVMA road	10:03 a.m.	60.7	70.5	46.3	Traffic from Mission Boulevard and the Niles Canyon Railway (runs parallel to, and crosses over Mission Boulevard)
ST-2	37706 Peggy Wright Way	11:31 a.m.	67.2	74.8	49.5	Traffic from Mission Boulevard
ST-3	In front of 37781 Essanay Place, Fremont, CA	10:32 a.m.	57.8	62.6	38.3	Traffic from Mission Boulevard

Source: LSA (December 2017).

^a L_{eq} represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements.

^b L_{max} is the highest sound level measured during the measurement time period.

^c L_{min} is the lowest sound level measured during the measurement time period.

Table E: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Average Wind Speed (mph)	Maximum Wind Speed (mph)	Temperature (°F)	Relative Humidity (%)
ST-1	0.9	3.5	54.0	30
ST-2	1.5	5.2	56.9	17
ST-3	0.9	4.1	57.4	19

Source: LSA (December 2017).

4.12.2 Impact Analysis

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant with Mitigation Incorporated. The following section addresses the short-term construction and long-term operational noise impacts of the proposed project.

4.12.2.1 Short-Term (Construction) Noise Impacts

Project construction would result in short-term noise impacts on the closest sensitive residential land uses, located approximately 200 feet southwest of the proposed railroad crossing. Construction elsewhere on the trail would be more distant and would not impact sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from 1 day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table F lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site for the proposed project, which would incrementally increase noise levels on roads leading to the site. As shown in Table F, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table F lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

Table F: Noise Emission Reference Levels and Usage Factors

Equipment Description	Acoustical Usage Factor ¹	Predicted L _{max} at 50 feet (dBA, slow) ²	Actual Measured L _{max} at 50 feet (dBA, slow) ³
All Other Equipment > 5 HP	50	85	N/A ⁴
Auger Drill Rig	20	85	84
Backhoe	40	80	78
Chain Saw	20	85	84
Compactor (ground)	20	80	83
Compressor (air)	40	80	78
Dozer	40	85	82
Drill Rig Truck	20	84	79
Dump Truck	40	84	76
Excavator	40	85	81
Flat Bed Truck	40	84	74
Front-End Loader	40	80	79
Generator	50	82	81
Grader	40	85	N/A
Grapple (on backhoe)	40	85	87
Paver	50	85	77
Pickup Truck	40	55	75
Pneumatic Tools	50	85	85
Pumps	50	77	81
Roller	20	85	80
Scraper	40	85	84
Soil Mix Drill Rig	50	80	N/A
Tractor	40	84	N/A
Vacuum Excavator (Vac-Truck)	40	85	85
Vacuum Street Sweeper	10	80	82
Vibratory Concrete Mixer	20	80	80
Welder/Torch	40	73	74

Source: FHWA Highway Construction Noise Handbook, Table 9.1 (FHWA 2006).

Note: Noise levels reported in this table are rounded to the nearest whole number.

¹ Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

² Maximum noise levels were developed based on Specification (Spec.) 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston’s Noise Code for the “Big Dig” project.

³ The maximum noise level was developed based on the average noise level measured for each piece of equipment during the CA/T program in Boston, Massachusetts.

⁴ Since the maximum noise level based on the average noise level measured for this piece of equipment was not available, the maximum noise level developed based on Spec 721.560 would be used.

dBA = A-weighted decibels

HP = horsepower

L_{max} = maximum instantaneous noise level

kVA = kilovolt-amperes

N/A = not applicable

RCNM = Roadway Construction Noise Model

VMS = variable message sign

The nearest sensitive receptors include single-family residences located approximately 200 feet southwest of the proposed railway crossing (where a substantial construction element would occur) and 300 feet south of the proposed trailhead. At 200 feet, there would be a decrease of approximately 12 dBA from the increased distance from the active construction area. Therefore, the closest off-site sensitive receptors may be subject to short-term construction noise reaching 75 dBA L_{max} when construction is occurring at the project site boundary. Based on this maximum noise level,

if heavy equipment was operating at full power for 2 minutes every 4 minutes, construction of the proposed project would result in hourly noise levels of 70 dBA L_{eq} . This exposure would only occur when construction is taking place at the project site boundary as construction of the trail farther to the northeast would increase the distance between operating construction equipment and sensitive receptors.

As discussed above, construction noise would result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the proposed project. Construction noise is permitted by the City of Union City Municipal Code when activities occur between the hours of 8:00 a.m. and 8:00 p.m. Monday through Friday, between the hours of 9:00 a.m. and 8:00 p.m. on Saturdays, and between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays. In addition, construction noise is permitted by the City of Fremont when activities occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 6:00 p.m. on Saturdays and holidays. No construction is allowed on Sundays in Fremont.

Implementation of the following mitigation measure for project construction would reduce potential construction period noise impacts for the indicated sensitive receptors to less than significant levels.

Mitigation Measure NOI-1: The project contractor shall implement the following measures during construction of the project:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
- Prohibit extended idling time of internal combustion engines.
- All noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 8:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 6:00 p.m. on Saturdays and holidays. No construction shall be permitted on Sundays.
- Designate a "disturbance coordinator" at the East Bay Regional Park District who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Implementation of these measures would limit construction activities to the less noise-sensitive periods of the day and would reduce construction impacts to a less than significant level.

4.12.2.2 Operational Noise Impacts

Operation of the at-grade train crossing could impact noise-sensitive receptors in the project area due to the use of train horns. The maximum noise level from train horn noise is expected to be approximately 100 dBA L_{max} . Maximum noise levels at the residence closest to the train crossing would be 74 dBA L_{max} . However, train horn noise is very short in duration, lasting approximately 1 to 2 seconds per event, with multiple horns per train passby. As discussed above, there would be a maximum of five train passbys occurring about 51 days out of the year that produce intermittent train horn noise during the day for periods of less than 1 minute. Due to the intermittent nature of these train passbys, the proposed project would not result in an overall increase in noise.

In addition, operation of the proposed trail would not result in the generation of new noise levels in excess of standards in the local general plan, since the project is not expected to generate substantial vehicular traffic or other operational noise. Pedestrians, bicyclists, or horseback riders may converse, resulting in intermittent noise while using the trail; however, this noise level would be similar to existing conditions and would not generate noise levels that would exceed the applicable standards. Therefore, the proposed project would not expose persons to noise levels in excess of local standards. This impact would be considered less than significant.

(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception of 67 VdB by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

A significant vibration impact would occur if the project would expose persons to or generate excessive groundborne vibration or noise levels. Common sources of groundborne vibration and noise include trains and construction activities such as blasting, pile driving, and operating heavy earthmoving equipment. Construction of the proposed project would involve grading, site preparation, and construction activities but would not involve the use of construction equipment that would result in substantial groundborne vibration or groundborne noise on properties adjacent to the project site. No pile driving, blasting, or substantial grading activities are proposed. Furthermore, operation of the proposed project would not generate substantial groundborne noise and vibration.

On days of operation, the Niles Canyon Railway would pass five times on a schedule traveling between Niles and Sunol. The existing groundborne vibrations caused by the Railway would expose potential trail users at the at-grade railway crossing to groundborne vibrations for a brief moment

while the train passes. However, the crossing would include a chain link fence and pedestrian swing gates compliant with published standards, including those of the Federal Railroad Administration and the California Public Utilities Commission, to ensure all trail goers remain a safe distance while the train passes. In addition, the proposed crossing would be paved, smooth, and unlikely to result in significant groundborne vibration or noise. Furthermore, implementation of the proposed project would not result in new buildings or sensitive receptors; therefore, the proposed project would not result in the exposure of persons to or generation of excessive groundborne noise and vibration. This impact would be less than significant.

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. The long-term use of the project is for a multi-use trail. As discussed in Section 4.12.2 (a), above, this land use would not generate increased ambient noise levels. No substantial long-term increase in ambient noise levels is expected as a result of project implementation. This impact would be less than significant.

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Although there would be temporary high intermittent construction noise at times in the project area during project construction, implementation of Mitigation Measure NOI-1 would ensure that construction of the proposed project would not significantly affect land uses adjacent to the project sites. Therefore, the project would not result in a substantial temporary or periodic increase in ambient noise levels. This impact would be less than significant.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is not located within 2 miles of a public airport or public use airport. The closest airports to the project site include the Hayward Executive Airport, located approximately 9 miles northwest of the project site; and the Palo Alto Airport, located approximately 11 miles southwest of the project site. Aircraft flyover noise is occasionally audible at the project site; however, no portion of the project site lies within the 65 dBA CNEL noise contours of any public airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels.

(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. Two private heliports are located in the City of Fremont and within 3 miles of the project site: Washington Hospital Heliport and First Interstate Bank Operations Center Heliport. These heliports are used infrequently and would not expose the project area to excessive noise levels. Therefore, no impact related to a private airstrip would occur.

4.13 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.13.1 Affected Environment

The proposed trail alignment project crosses through multiple parcels of land designated Open Space or Agriculture. One parcel within the City of Fremont (APN 507-70-1-4) has multiple zoning designations, including both Open Space (OS) (99.6 percent of the parcel) and Single Family Residential (R-1-6 [H-1]) (0.4 percent of the parcel)⁵⁴. The proposed trail would be established within the portion of the parcel zoned for Open Space.

4.13.2 Impact Analysis

(a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project is a multi-use trail for pedestrians, bicyclists, and equestrians and would not induce substantial growth in the area either directly or indirectly. The proposed project would not provide additional vehicle access or additional major infrastructure to the project site. Additionally, the proposed project would not facilitate development of any dwelling units or commercial or industrial structures. No impact related to this topic would occur as a result of implementation of the proposed project, and no mitigation is required.

(b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. No housing currently exists along the proposed trail alignment, and no residential property would be acquired for the implementation of the proposed project. No existing housing would be removed or displaced as a result of the project, and construction of replacement housing would not be required. No impact related to housing would occur, and no mitigation is required.

⁵⁴ Southern Alameda County GIS Authority, 2017. SACGISA website. Available online at: egis.fremont.gov/apps/public/default.htm (accessed September 6, 2017).

(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. Refer to Response 4.13.2 (b) above. The project would not displace any people necessitating the construction of replacement housing elsewhere. There would be no impact related to this topic.

4.14 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.14.1 Affected Environment

The following services are provided in the surrounding project area:

Fire Protection: Fire protection for the entire Hillside Area for both the City of Fremont and Union City has been consolidated and is provided by the Fremont Fire Department. The closest fire station to the project site is Fire Station 2 located at 37299 Niles Boulevard in Fremont, approximately 1 mile southeast of the Niles Canyon/Mission Boulevard Intersection.

Police Protection: The City of Fremont Police Department and the Union City Police Department provide law enforcement to the project site. The closest Fremont police station to the project location is 2000 Stevenson Boulevard in Fremont, approximately 2 miles south of the Niles Canyon/Mission Boulevard Intersection. The nearest Union City police station to the project site is located at 34009 Alvarado-Niles Road in Union City, approximately 3.5 miles southwest of the Union City portion of the proposed trail.

Additionally, the District Public Safety Division provides fire and police services for its parks and trails. During the peak summer season, the Public Safety Division is staffed with approximately 500 personnel including 40 industrial firefighters, 71 sworn police officers providing law enforcement through policing contracts, as well as approximately 200 members in the Volunteer Trail Safety Patrol. Emergency services including fire suppression, search and rescue, and pre-hospital emergency medical care are provided by the District’s Fire Department. The District’s Police Department headquarters are in Lake Chabot in Castro Valley, and law enforcement services are provided 24 hours per day.

Schools: The project area is served by the Fremont Unified School District, and New Haven Unified School District in Union City.

Parks: Refer to Section 4.15, Recreation, for information regarding parks and recreation facilities.

Other Public Facilities. Other public facilities would include facilities such as libraries, post offices, meeting rooms, or hospitals.

4.14.2 Impact Analysis

(a) Would the project result in substantial adverse physical impacts associated with the provision of or 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?

No Impact. The proposed project would not result in an increase in population or facilities that would require fire or police services, schools, parks, or other public facilities, or result in the need for physically altered facilities. The demand for public services would be similar to existing conditions and after the construction of the proposed project. Emergency service needs along the trail would be addressed by the local first responder in coordination with the District's Public Safety Department. Therefore, no impacts to public services would occur and no mitigation is required.

4.15 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.15.1 Affected Environment

The Bay Area Ridge Trail is a planned 550-mile multi-use loop trail that follows the ridgeline around San Francisco Bay. There are currently 370 miles of the trail open to hikers, bicyclists, and equestrians. When complete, the Ridge Trail will cross through all nine Bay Area counties and connect more than 75 parks and open space areas.⁵⁵

The proposed trail alignment would serve as a connection for two existing sections of the Ridge Trail at Garin Regional Park and Vargas Plateau Regional Park. Vargas Plateau is a 1,249-acre park located approximately 3 miles east of the proposed trailhead at Vallejo Mill Historical Park. Vargas Plateau overlooks Niles Canyon, Fremont, Union City, Newark, and the San Francisco Bay, and provides 6 miles of multi-use trails. The park also acts as a link between Garin Regional Park, Pleasanton Ridge, Mission Peak, and Sunol Park. The proposed trail alignment would connect Vallejo Mill Historical Park with Garin Regional Park by constructing portions of new trail and improving sections of the existing ranch roads, to connect to the existing EVMA road, which extends south from Garin Regional Park.

The proposed trail would be managed by the East Bay Regional Park District (District), a special district operating a system of parks in Alameda and Contra Costa Counties in the East Bay area of the San Francisco Bay Area. The District manages the largest regional park system in the United States, with over 65 regional parks and recreation areas, as well as 31 inter-park trails⁵⁶.

4.15.2 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?

Less Than Significant Impact. The proposed project is a recreational trail alignment that is partially developed but has many incomplete segments. Completion of the project would enhance public accessibility to Vallejo Mill Historical Park and Garin Regional Park, as well as provide an additional

⁵⁵ Bay Area Ridge Trail Council, 2017. Bay Area Ridge Trail. Website: ridgetrail.org (accessed September 6, 2017).

⁵⁶ East Bay Regional Park District, 2017. Website: www.ebparcs.org (accessed September 1, 2017).

segment of the Bay Area Ridge Trail connecting these open space areas. The proposed project would not result in a corresponding increase in the use of existing recreational facilities within the Cities of Fremont and Union City, with the exception of Vallejo Mill Historical Park, which would function as a trailhead for accessing the new trail segment. The park is currently underutilized by the public, and increased access for the trail would be accommodated by the existing parking lot. The Ridge Trail would be delineated by a gravel or mulch path from the parking lot to the railroad crossing. Increased use of the park for trail access is not anticipated to result in physical deterioration of the park facilities. Therefore, the proposed project would have a less than significant impact on existing neighborhood and regional parks and other recreational facilities.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less Than Significant Impact. The trailhead for the proposed project would begin at Vallejo Mill Historical Park and parking lot at 299 Niles Canyon Road. No recreational facilities such as restrooms or drinking fountains are currently available at Vallejo Mill Historical Park, nor are any proposed as part of the trail project. Potential adverse effects of the proposed project (a recreational trail facility) on the environment have been addressed in this Initial Study. With implementation of the mitigation measures identified in this Initial Study, all impacts associated with construction and operation of the proposed trail would be reduced to less than significant.

4.16 TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.16.1 Affected Environment

The proposed connection of the Ridge Trail between Garin Regional Park and Vallejo Mill Historical Park at the mouth of Niles Canyon in Fremont will provide access for hikers, runners, mountain bicyclists, and equestrians, as well as ATVs for emergency and maintenance purposes. The proposed trail will include an at-grade crossing of a County-owned railroad and construction of a new multi-use trail partially using existing maintained dirt roads. The proposed trail would be under the jurisdiction of the District as well as the cities of Fremont and Union City, and Alameda County.

Primary vehicle access to the existing Vallejo Mill Historical Park parking lot at the south end of the trail is provided on Niles Canyon Road just north of Mission Boulevard in the City of Fremont. No trailhead improvements are proposed within Garin Regional Park at the north end of the trail; however, the EVMA road and other connecting ranch roads would be used by construction crews to access the trail alignment.

4.16.2 Impact Analysis

(a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. The Alameda County Transportation Commission (ACTC), the County of Alameda's (County) Congestion Management Agency (CMA), has established a 100 peak hour trip threshold for requiring preparation of a traffic impact analysis. LSA has examined the peak trip generation potential during the operational and construction periods below.

4.16.2.1 Long-Term Operational Impacts

The proposed project consists of approximately 5 miles of new multi-use recreational trail, which will connect Garin Regional Park and Vallejo Mill Historical Park. Although construction of the proposed trail segment may increase recreational use in this area, the potential for increased traffic during the peak hours of a typical weekday will be limited by the existing parking spaces at the park, which will not be expanded by the proposed project. The addition of a new trail may add nominal trips to the surrounding circulation system, but the quantity of additional traffic would likely be within the daily variation in traffic and not distinguishable. Weekend traffic to the trailhead at Vallejo Mill Historical Park may be increased; however, this traffic would occur outside of the weekday a.m. and p.m. peak hours that are measured against the performance criteria. Therefore, it is expected that the operation of the new trail will not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system for all modes of transportation.

4.16.2.2 Short-Term Construction Impacts

As discussed in the project description, the construction of the proposed project includes creation of a trail and an at-grade crossing of the recreational Niles Canyon Railway. Short-term construction impacts are determined below using the trip generation from each of these projects.

The trip generation for each construction phase is based on the daily trips and equipment deliveries. Construction of the project is anticipated to start as early as May 2019 and would extend for approximately 6 months. Construction activities are assumed to occur during daylight hours, between 8:00 a.m. and 5:00 p.m.

The daily trips include employee commutes, water trucks, and utility trucks. The project description includes 4 to 5 employees per day; in order to present the worst-case trip generation, no carpooling was assumed for construction employees and all morning trips are assumed to arrive before 8:00 a.m. (during the a.m. peak hour) and leave after 5 p.m. each day (during the p.m. peak hour). It is assumed that there will be 1 water truck and 2 utility trucks on site at all times; these trucks will arrive during the a.m. peak hour and leave during the p.m. peak hour.

It is noted that Vallejo Mill Historical Park is anticipated to be the primary staging area for construction equipment for construction of the railroad crossing. Construction of the majority of other trail improvements will be staged from the EVMA dirt road between Mission Boulevard and Garin Regional Park. Therefore, equipment will likely be delivered when the project begins and removed when the project ends. Construction start and end days will represent the highest trip generation since they include both daily and delivery trips.

Because large trucks utilize more roadway capacity than passenger vehicles, passenger car equivalent (PCE) factors were applied to account for the difference in operational characteristics of heavy vehicles. PCEs for construction-related vehicles were determined using the Highway Capacity Manual adjustments for heavy vehicles. The HCM recommends PCE conversion factors ranging from 1.0 to 2.0 depending on the size of the truck. To present a conservative analysis, LSA used a PCE conversion factor of 2.0.

Based on the project description, the project trip generation has been estimated and summarized in Table G below.

Table G: Bay Area Ridge Trail Construction Trip Generation

Construction Vehicles				Vehicle Trip Generation							PCE Trip Generation						
Vehicle/Equipment	Quantity	Type	PCE ²	ADT	AM Peak Hour			PM Peak Hour ¹			ADT	AM Peak Hour			PM Peak Hour ¹		
					In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total
Daily Trips																	
Employee Commute	5	Passenger Car	1.0	10	5	0	5	0	5	5	10	5	0	5	0	5	5
Water Truck	1	Medium Truck	1.5	2	1	0	1	0	1	1	3	2	0	2	0	2	2
Utility Trucks	2	Medium Truck	1.5	4	2	0	2	0	2	2	6	3	0	3	0	3	3
<i>Subtotal</i>				16	8	0	8	0	8	8	19	10	0	10	0	10	10
Equipment Delivery																	
Excavator	1	Large Truck	2.0	2	1	0	1	0	1	1	4	2	0	2	0	2	2
Backhoe	1	Large Truck	2.0	2	1	0	1	0	1	1	4	2	0	2	0	2	2
D4 Dozer	1	Large Truck	2.0	2	1	0	1	0	1	1	4	2	0	2	0	2	2
Soil Compactor	1	Large Truck	2.0	2	1	0	1	0	1	1	4	2	0	2	0	2	2
<i>Subtotal</i>				8	4	0	4	0	4	4	16	8	0	8	0	8	8
Peak Trip Generation Phase (Daily+Equipment Delivery Trips)				24	12	0	12	0	12	12	35	18	0	18	0	18	18

Source: LSA 2018

Note:

¹ This study presents a worst case analysis, assuming trips occur during the PM Peak Hour.

² Passenger car equivalent factors are 1.5 PCE for medium trucks and 2.0 PCE for large trucks.

ADT = average daily traffic

PCE = passenger car equivalent

The peak trip generation phase (daily and equipment delivery trips) is expected to generate 35 average daily trips (ADT), 18 inbound trips during the a.m. peak hour, and 18 outbound trips during the p.m. peak hour. On a recurring basis, the trip generation for every project phase is expected to be less than 100 peak hour trips, which is below the threshold for providing traffic impact analysis according to City of Fremont, Union City, and Alameda County guidelines. Because the trip generation is less than 100 peak hour trips, the construction project is not expected to conflict with any applicable plans, ordinances, or policies.

(b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. As the CMA for Alameda County, the ACTC is responsible for establishing, implementing, and monitoring the County's Congestion Management Program (CMP). Through its implementation of the CMP, the ACTC works to ensure that roadways operate at acceptable LOS and reviews development proposals to ensure that transportation impacts are minimized.

Niles Canyon Road (State Route 84), located east of the project site, and Mission Boulevard (State Route 238), located south of the project site, are identified as CMP roadways. As described in Response 4.16.2 (a), the trips generated by the project do not exceed the threshold set by the ACTC. Therefore, the project is not expected to conflict with the applicable congestion management program.

(c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location which results in substantial safety risks?

No Impact. The proposed project does not include any structures that would interfere with air traffic patterns, nor would it increase traffic levels. There would be no impacts related to air traffic.

(d) Substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. The proposed project would not change the existing roadway design. During construction, construction vehicles would be staged within the off-roadway construction site. Additional heavy vehicles may travel along major arterials during construction. Any lane closures or traffic control measures would be consistent with those published in the California Joint Utility Traffic Control Manual, but no lane closures are anticipated for project construction. Implementing measures contained within the California Joint Utility Traffic Control Manual would facilitate safe passage of both construction vehicles and private vehicles. As a result, the proposed project would not substantially increase hazards for vehicles due to a design feature or incompatible uses.

(e) Result in inadequate emergency access?

Less Than Significant Impact. Trails will be constructed to allow for ATV access for emergency and maintenance situations. Emergency access will still be possible along all roadways during and after

construction of the proposed project. Additional traffic due to the operations or construction of the project is not expected to significantly impact any of the surrounding roadways or intersections. Therefore, the proposed project would not result in inadequate emergency access.

(f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Less Than Significant Impact. According to the City of Fremont’s General Plan Mobility Element, improving trail connections is a key City objective. The addition of a connection between two regional parks and stepping closer to completing the Ridge Trail, which is planned to encircle the San Francisco Bay region, is in line with municipal and countywide goals. Public transit, bicycle, and pedestrian facilities in the study area are not expected to be affected by the operation or construction of the proposed project. Once the project opens, pedestrians, bicyclists, and equestrians will have increased access to regional recreation destinations.

The project includes an at-grade railroad crossing for trail users approximately 1,000 feet from the trailhead at Vallejo Mill Historical Park. This railroad is used exclusively by the Niles Canyon Railway, operated by the Pacific Locomotive Association, Inc. for recreational purposes only. According to the current schedule, the railway operates primarily on Sundays. During late November and December, the railway hosts a holiday event with trains operating on Wednesday and Friday to Sunday. Thus, the Niles Canyon Railway is active about 51 days per year. Construction may temporarily disrupt the operation of the railroad; however, it is possible for construction of the crossing to occur outside of the 51 operating days per year. The operation of the project will not affect the railroad as chain link fencing and pedestrian swing gates would be installed to prevent trail users from crossing when trains are passing. Therefore, implementation of the proposed project would not conflict with any adopted policies, plans, or programs regarding bicycle or pedestrian facilities, and no mitigation is required.

4.17 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.17.1 Affected Environment

LSA conducted a Cultural Resources Study of the project site,⁵⁷ which consisted of background research, a pedestrian field survey, and a Sacred Lands File search request with the Native American Heritage Commission. The District also sent project notification letters to local historical organizations and California Native American tribes. Two previously recorded historic-period cultural resources were identified in the APE during background research: Vallejo Mill and the Niles Canyon Transcontinental Railroad Historic District. The field survey also identified one new cultural resource in the APE: a pair of historic-period livestock watering tanks situated within a drainage and fed by a natural spring.

As described in Section 1.0, Introduction, the District has notified California Native American tribes of the proposed project. Two tribes responded to the District’s request, and the results of the consultation outreach are summarized in Table A.

Ms. Katherine Erolinda Perez, Chairperson of the North Valley Yokuts Tribe, responded via email on January 23, 2018, requesting consultation with the District. The District responded via email to Chairperson Perez requesting a date and time to meet. No response from Chairperson Perez to the District’s email has been received to date.

In March 2018, the District consulted with Mr. Andrew Galvan of the Ohlone Indian Tribe regarding the Native American human remains discovered at the Vallejo Mill Historical Park. In lieu of testing,

⁵⁷ LSA, 2018. Cultural Resources Study, Bay Area Ridge Trail - Fremont to Garin. January.

the District will require full-time monitoring of trail implementation in the park by both an archaeologist and a Native American monitor appointed by the Most Likely Descendant. On July 27, 2018, Mr. Galvan sent an email accepting the District's recommendations.

The Tribes have not identified any other tribal cultural resources at the project site, and the District has not determined there to be any other significant tribal cultural resources at the project site.

4.17.2 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Less Than Significant with Mitigation. As described above, the District has notified California Native American tribes of the proposed project and consulted with the Ohlone Indian Tribe regarding the Native American human remains discovered at Vallejo Mill Historical Park outside of the APE. The City of Fremont, who is the underlying landowner of Vallejo Mill Historical Park, and the District agreed on appropriate measures (e.g., monitoring) to protect the Native American human remains at Vallejo Mill Historical Park during trail construction, that were recommended by the Ohlone Indian Tribe during this consultation. These measures have been incorporated into Mitigation Measure CULT-1, described in Section 4.5. Implementation of these measures would satisfy the agreement between the City, the District and tribal representatives under AB 52, and ensure potential impacts from the proposed project would be less than significant.

In the unlikely event that previously unidentified archaeological resources or human remains are discovered during construction of proposed improvements, implementation of Mitigation Measures CULT-1 and CULT-4 would be required. Compliance with existing regulations as specified in Mitigation Measures CULT-1 and CULT-4 would reduce the potential for impacts to unidentified archaeological resources to a less than significant level. Refer to Section 4.5, Cultural Resources, for measures pertaining to unidentified archaeological, historical, or paleontological resources, or discovery of human remains.

4.18 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.18.1 Affected Environment

The following utilities are provided in the surrounding project area:

Water: The Alameda County Water District (ACWD) provides water to customers in urbanized areas of Fremont and Union City. The project site is on designated Open Space and Agriculture land, outside of the ACWD boundary. The project site is within the ACWD sphere of influence (SOI) or an area within the probable boundary of the service area at some point in the future.

Gas and Electric: These services are provided to the City of Fremont and Union City by Pacific Gas and Electric (PG&E). Power is generated by fossil fuel-burning plants, hydroelectric facilities, nuclear generating plants, wind farms, and geothermal plants serving the large Northern California electrical grid. Electricity is then delivered on overhead transmission lines. The main gas transmission line parallels Interstate 880, with distribution lines branching off the main line.

Solid Waste and Recycling: Republic Services provides curbside collection of recycling and solid waste in Fremont and Union City through franchise contracts. Materials are then transported to the Fremont Recycling and Transfer Station at 41149 Boyce Road and later transported to Altamont Landfill, northeast of the project site in the City of Livermore. Trash collection at Vallejo Mill would continue to be done by Republic Services.

Sewer: Union Sanitary District (USD) provides wastewater collection, treatment, and disposal services to customers in urban areas of Fremont and Union City. USD is a member of the East Bay Dischargers Authority, an agency which plans, constructs, and operates facilities under a regional water quality management program. The service area for USD does not include a large portion of the Hill Area, including the project site. No restrooms are located at Vallejo Mill Historical Park or along the alignment.

Additional Utilities: Telephone land lines are maintained by American Telephone and Telegraph (AT&T), and cable service is provided by Comcast.

4.18.2 Impact Analysis

(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The proposed project is a multi-use trail alignment for use by bicyclists, pedestrians, and equestrians. Restrooms are not proposed as part of the project, so no wastewater would be generated and the proposed project would therefore not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB). No impact related to this topic would occur and no mitigation is required.

(b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed project would not require water or wastewater treatment as no potable water and/or toilets would be provided as part of the proposed project. Implementation of the proposed project would not require or result in construction of new water or wastewater treatment, or collection facilities or require the expansion of existing facilities, which could cause significant environmental effects. Therefore, construction of the proposed project would not result in any impacts related to this topic and no mitigation is required.

(c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. Stormwater runoff from the project site currently flows southeast toward Niles Canyon Road and Alameda Creek. Runoff from Vallejo Mill Historical Park drains to the municipal stormwater system, which is piped into Alameda Creek. The proposed project would replace, repair or abandon existing culverts that have failed at the project site with new culverts or articulate fords.

Short-term construction impacts to storm water quality are addressed in Section 4.9, Hydrology and Water Quality. The proposed project would not generate a significant increase in storm water runoff such that new storm water drainage facilities or expansion of existing facilities would be necessary. A less than significant impact would occur related to this impact, and no mitigation is required.

(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. Construction of the proposed project would temporarily require small amounts of water for cleanup activities. During trail construction, water would be provided via a water truck as no utility lines exist along the proposed trail alignment. Use of water would cease when construction is complete. Sufficient water supplies are available to provide for the project's minimal water needs during the construction phase of the project. Water would not be required for long-term operation of the project as no potable or non-potable water facilities are proposed. Therefore, the proposed project would not require construction of new entitlements for water supplies or expansion of existing entitlements. This impact would be less than significant.

(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The proposed project does not include restrooms and would not require wastewater facilities or wastewater treatment services. There would be no impact related to this topic and no mitigation is required.

(f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Construction of the proposed project could generate a small amount of solid waste. The majority of the construction waste would be organic materials such as cleared vegetation and dirt, as well as waste generated by construction workers. The generation of such solid waste would be temporary, and non-hazardous waste would be hauled to the Fremont Recycling and Transfer Station. Waste from this transfer station is then disposed of at the Altamont Landfill east of Livermore. The Altamont Landfill has an expected disposal capacity through 2045 and is permitted to receive 11,150 tons of solid waste per day. In 2013, the landfill received 4,531 tons per day, well below the allowable daily intake amount⁵⁸. These facilities have the capacity to handle the small amount of waste that would be generated by the proposed project.

Operation of the proposed project would not generate solid waste. The amount of construction waste would not be substantial and would not result in substantial reduction in the capacity of the landfill. Therefore, impacts related to this topic would be less than significant. No mitigation is required.

⁵⁸ Alameda County Waste Management Authority, 2015. *Alameda County Integrated Waste Management Plan Countywide Element*. Available online at: www.stopwaste.org/resource/reports/countywide-integrated-waste-management-plan-coiwmp (accessed September 14, 2017).

(g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The California Integrated Waste Management Act of 1989 (AB 939) reorganized solid waste disposal planning within the State of California. The legislation required every county to adopt a Countywide Integrated Waste Management Plan (ColWMP) describing local waste diversion and disposal conditions as well as create programs to meet State goals for diverting waste from landfills. A mandatory diversion goal was established diverting 25 percent of waste from landfills by 1995 and 50 percent by 2000, and maintaining 50 percent thereafter. The Cities of Fremont and Union City are member agencies of the Alameda County Waste Management Authority Board, a public agency that is responsible for preparation of the Alameda County ColWMP. The ColWMP was first adopted in 1997 and established a countywide goal of 75 percent waste diversion.⁵⁹ The proposed project would comply with all regulations outlined in the ColWMP, as well as any other federal, State, and local statutes and regulations related to solid wastes, including waste diversion programs. No impact related to this topic would occur as a result of implementation of the proposed project.

⁵⁹ Alameda County Waste Management Authority, 2017. *Alameda County Integrated Waste Management Plan*. Available online at: www.stopwaste.org/resource/reports/countywide-integrated-waste-management-plan-coiwmp (accessed September 8, 2017).

4.19 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.19.1 Impact Analysis

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

Less Than Significant with Mitigation. The project would not result in any significant impacts to natural resources or cultural resources with implementation of the recommended mitigation measures discussed in Section 4.4, Biological Resources, and 4.5, Cultural Resources. Therefore potential impacts to these resources would be less than significant.

(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)

Less Than Significant with Mitigation. The project would not result in cumulatively considerable impacts with the incorporation of mitigation measures identified in this IS/MND. Many mitigation measures identified in the document, such as those for Air Quality, Biological Resources, Cultural Resources, and Hydrology and Water Quality, would address both the impacts of the project as well as cumulative impacts resulting from the effects of other projects in lands managed by the District, or cumulative development in the region.

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

Less Than Significant with Mitigation. Implementation of the project would not result in substantial adverse effects on human beings. Mitigation Measure HAZ-1 would address potential hazardous materials that could be encountered during construction of the railroad crossing. Construction of the railroad crossing with pedestrian gates would protect trail users from trains using the railroad right-of-way.

5.0 MITIGATION MONITORING AND REPORTING PROGRAM

Section 21081.6 of CEQA requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program (MMRP) whenever it approves a project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the MMRP is to ensure compliance with the measures during project implementation. This MMRP addresses how the measures will be implemented and includes a table that will be utilized by the District to document compliance.

Table H below identifies the impacts and mitigation measures, as well as standard compliance measures identified for the project. The information in this table is organized to correspond with environmental issues discussed in the Draft IS/MND. Information in this table is provided in four columns: 1) Mitigation Measure, 2) Implementation Action, 3) Responsible Party, and 4) Timing for Compliance. For a complete description of potential impacts and recommended measures, please refer to the specific discussions in the Draft IS/MND.

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Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
4.1 Aesthetics			
<i>No mitigation measures related to Aesthetics are required.</i>			
4.2 Agricultural and Forest Resources			
<i>No mitigation measures related to Agricultural and Forest Resources are required.</i>			
4.3 Air Quality			
<p>AIR-1: Consistent with the Basic Construction Mitigation Measures required by the BAAQMD, the following actions shall be incorporated into construction contracts and specifications for the project:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) within the immediate working area shall be watered as needed with reclaimed water, if available. • All haul trucks transporting soil, sand, or other loose material off site shall be covered. • All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • Structural pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). • All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • A publicly visible sign shall be posted with the telephone number and person to contact at Alameda County regarding dust 	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • East Bay Regional Park District (District) is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.</p>			
<p>4.4 Biological Resources</p>			
<p>BIO-1: Prior to the initiation of construction activities (including staging of equipment and clearing of vegetation) all personnel associated with project construction shall attend an Environmental Awareness Training. The training shall be prepared and conducted by a qualified biologist to aid workers in recognizing special-status resources that may occur in the project area. The specifics of this program shall include identification of the special-status species and habitats, a description of the regulatory status, and review of the measures required to reduce impacts to biological resources on the project site. Each worker shall be given a handout with key points. At the end of the training, all workers shall sign a document verifying their participation in the program and acknowledging their understanding of the measures.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • A qualified biologist is responsible for providing training to construction personnel. 	<p>Prior to commencement of construction activities.</p>
<p>BIO-2: During construction of the trail, no pets or firearms shall be allowed at the project site, with the exception of those associated with authorized law enforcement personnel.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-3: All refueling, maintenance, and staging of equipment and vehicles shall occur at least 100 feet from any wetlands or waterbodies. Secondary containment shall be used during refueling.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-4: All vehicles and equipment shall be maintained in good working condition and free of leaks.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-5: Standard Best Management Practices (BMPs) shall be employed as necessary to avoid degradation of aquatic habitat by maintaining water quality and controlling erosion and sedimentation during construction.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-6: To prevent the entanglement of wildlife, no erosion control devices containing plastic monofilament netting shall be used or stored on site.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-7: Construction personnel shall not feed or otherwise attract wildlife in the project area. All food-related trash and garbage shall be placed in animal-proof containers that shall be emptied or removed from the construction site on a regular basis.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
		<ul style="list-style-type: none"> The construction contractor is responsible for implementing this mitigation measure. 	
<p>BIO-8: Construction activities shall be restricted to the daytime hours, from 30 minutes after sunrise to 30 minutes before sunset.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-9: To reduce the potential for vehicle strikes, all construction-related traffic shall not exceed 15 miles per hour on unpaved roads.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-10: All burrows shall be avoided to the maximum extent possible. If a burrow has to be impacted, a qualified biologist shall use hand tools to excavate the burrow to inspect it for special-status species. If any special-status species are seen, work shall stop in the immediate area and the animal shall not be further disturbed. The species occupying the burrow shall either be protected in place or relocated, consistent with established protocol for the species.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • A qualified biologist is responsible for excavating and inspecting burrows to be impacted and protecting or relocating the species, as appropriate. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-11: In the unlikely event that a special-status species is inadvertently killed or injured or if a special-status species is observed to be injured, dead, or entrapped, the construction crew will stop work and notify the USFWS and CDFW.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>
<p>BIO-12: Upon completion of trail construction, temporarily impacted areas, alongside the trail bench, will be restored to pre-project grades and contours and stabilized to prevent erosion. A seed mix of native grass and forb species will be applied to all of the grassland areas, alongside the trail bench, disturbed by the project. The seed will be from sources that are regionally appropriate for the site.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Following completion of construction activities.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-13: If vegetation removal or construction activities occur outside of the breeding season for ring-tailed cat (February 1 through May 1), no mitigation is necessary. If the breeding season cannot be completely avoided, a qualified biologist shall conduct a pre-construction survey within 2 weeks prior to commencement of construction for potential natal or maternity den trees. If an active den is found, a qualified biologist, in consultation with CDFW, will determine a construction-free buffer zone to be established around the den until the young have left the den.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. A qualified biologist is responsible for conducting a pre-construction survey and establishing a construction-free buffer zone around any identified dens. 	<p>Within 2 weeks prior to construction activities that occur during the breeding season (February 1 through May 1).</p>
<p>BIO-14: To reduce the potential of impacting Alameda striped racers, the proposed trail shall be routed to avoid rock outcroppings and chaparral or scrub vegetation to the maximum extent practical.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for routing the trail to avoid rock outcroppings and chaparral or scrub habitat to the extent practicable. 	<p>Prior to construction.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-15: If it is necessary to remove rock outcroppings or chaparral or scrub vegetation, only hand tools shall be used. A qualified biologist shall monitor these activities.</p>	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. A qualified biologist is responsible for monitoring compliance during construction. The construction contractor is responsible for implementing this mitigation measure. 	<p>During removal of rock outcroppings or chaparral/scrub vegetation.</p>
<p>BIO-16: If construction activities take place during the raptor breeding season (January 1-August 31), a pre-construction survey for nests shall be conducted by a qualified biologist no more than 1 month in advance of construction to establish whether golden eagles or American peregrine falcons have occupied nests within a 0.5-mile buffer of the trail alignment. Pre-construction surveys shall include all potential nesting habitat within 0.5 mile of the project site and include observations of nests and golden eagle and peregrine falcon activity. If an occupied nest is documented during the survey, the following shall be implemented:</p> <ul style="list-style-type: none"> No construction shall occur within 0.5 mile of an active nest until the young have fledged. A buffer verified by CDFW and USFWS shall be implemented. The size of the buffer may be decreased depending on site-specific conditions. The nests shall be monitored for activity and agitation by a qualified biologist. The monitoring schedule shall be determined and readjusted according to the level of activity within the nest and as agreed to by CDFW. 	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. A qualified biologist is responsible for conducting a pre-construction survey of the site, determining an appropriate buffer zone, and monitoring the nest activity during construction. The construction contractor is responsible for keeping work out of the buffer zone. 	<p>Within 1 month prior to construction activities that occur during the raptor breeding season (January 1 through August 31) and throughout the construction period, if occupied nests are identified.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-17: No more than 14 days prior to ground disturbing activities, a qualified biologist shall conduct a pre-construction/take avoidance survey for burrowing owls using the methods described in Appendix D of the CDFW Staff Report on Burrowing Owl Mitigation (Staff Report). Pre-construction surveys shall be conducted in suitable habitat for this species within the trail alignment. If no burrowing owls are detected during the initial pre-construction/take avoidance survey, a final survey shall be conducted within 24 hours prior to ground disturbance to confirm that owls are still absent. If construction activities are delayed beyond 24 hours of the second take avoidance survey, an additional survey shall be required within 24 hours prior to the re-initiation of construction.</p> <p>If burrowing owls are documented to occupy burrows within the project area either during the breeding season or overwintering, compensatory mitigation shall be required. Compensatory mitigation shall follow the guidelines outlined in the CDFW Staff Report. Occupied burrows shall be provided with protective buffers (year-round) within which construction activities shall be prohibited. Buffer sizes shall be determined by the qualified biologist in consultation with CDFW.</p> <p>For burrows where avoidance is not feasible, owls shall be passively relocated. A Burrowing Owl Exclusion Plan shall be developed and approved by CDFW prior to the implementation of passive relocation. Any burrowing owls detected on site shall be monitored prior to, during, and after exclusion to ensure that substantial adverse effects are avoided. If burrow exclusion occurs immediately after the end of the breeding season, daily monitoring shall be conducted for 1 week prior to the exclusion to confirm that any young have fledged.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • A qualified biologist is responsible for conducting pre-construction surveys of the site, determining an appropriate buffer zone, and relocating owls, if needed. • The construction contractor is responsible for keeping work out of the buffer zone, if established. 	<p>Surveys shall be conducted no more than 14 days prior to construction and then 24 hours prior to construction, if no nests are identified in the initial survey.</p> <p>If needed, buffer zones would be established prior to construction and monitored throughout the construction period.</p>
<p>BIO-18: The loss of purple needle grass grassland shall be mitigated by restoring an equivalent amount of purple needle grass grassland on site. The District will reseed areas of purple needle grass grassland habitat that are disturbed by trail construction with an appropriate weed-free native seed mix that contains purple needle grass seed.</p>	<ul style="list-style-type: none"> • Include measure as Condition of Approval. 	<ul style="list-style-type: none"> • The District is responsible for re-seeding areas of purple needle grass following construction. 	<p>Following completion of construction activities.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>BIO-19: The District shall obtain required permits to impact jurisdictional features from the relevant regulatory agencies, including the Corps, CDFW, and Regional Water Quality Control Board. These permits will include conditions and Best Management Practices that the District shall implement during construction. Through implementation of the measures, impacts to jurisdictional features will be less than significant. These permits may also specify mitigation, which the District shall provide as specified by the agencies.</p>	<ul style="list-style-type: none"> • Include measure as Condition of Approval. 	<ul style="list-style-type: none"> • The District is responsible for obtaining necessary regulatory permits prior to construction. 	<p>Prior to construction.</p>
<p>BIO-20: If construction work occurs during the nesting bird season (March 1 through August 31), a qualified biologist shall conduct pre-construction surveys within 10 days prior to the start of construction. Pre-construction surveys shall include the areas within a 250-foot buffer for passerine species and a 500-foot buffer for raptor species other than golden eagles, American peregrine falcons, and burrowing owls. Nest surveys shall be repeated if construction lapses in a work area for 14 days between March and July. Nest surveys shall follow standard biological survey methods, and survey efforts shall be tailored to detect specific species, with visits planned at appropriate timeframes/intervals to detect nesting activity. If nests are found, a qualified biologist shall establish an appropriate buffer to be in compliance with the California Fish and Game Code 3503. A qualified biologist shall perform at least 2 hours of pre-construction baseline monitoring of the nest to characterize “normal” bird behavior. The biologist shall monitor the nesting birds and shall increase the buffer if the project biologist determines the birds are showing signs of unusual or distressed behavior from project activities. Abnormal nesting behaviors that may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed toward project personnel, standing up from a brooding position, and flying away from the nest. The biologist shall have authority to halt work activities if the nesting bird exhibits abnormal behavior that may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established. To prevent encroachment, the buffer shall be clearly marked for avoidance. The established buffer shall</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • A qualified biologist is responsible for conducting pre-construction surveys of the site, determining an appropriate buffer zone, and monitoring nests during construction, if needed. • The construction contractor is responsible for keeping work out of the buffer zone, if established. 	<p>Within 10 days prior to construction activities that occur during the nesting bird season (March 1 through August 31). Surveys would be repeated if work lapses for 14 days between March and July.</p> <p>If needed, buffer zones would be established prior to construction and monitored throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>remain in effect until the young have fledged or the nest has been abandoned as confirmed by the biologist. Signs of nest abandonment, as determined by the biologist, shall be reported to CDFW within 72 hours. Active nests (defined as the presence of chicks and/or eggs) that occur in developed areas shall be considered in the context of the surrounding ongoing activities and access constraints.</p>			
<p>4.5 Cultural Resources</p>			
<p>CULT-1: A qualified archaeologist and a Native American representative shall monitor all ground disturbing activities within the boundaries of Vallejo Mill Historical Park. If deposits of precontact or historical archaeological materials are encountered during project activities, all work within 25 feet of the discovery should be redirected and a qualified archaeologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel should not collect or move any archaeological materials. Archaeological materials can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, basalt, or quartzite toolmaking debris; bone tools; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash and charcoal, shellfish remains, bones, and other cultural materials); and stone-milling equipment (e.g., mortars, pestles, and handstones). Prehistoric archaeological sites often contain human remains. Historical materials can include wood, stone, concrete, or adobe footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, metal, and other refuse.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction, and hiring a qualified archaeologist. • A qualified archaeologist is responsible for conducting monitoring during work at Vallejo Mill Historical Park; evaluating any resources inadvertently found during construction; and identifying appropriate mitigation measures. • The construction contractor is responsible for coordinating and cooperating with the qualified archaeologist and with any stop-work orders, if resources are discovered. 	<p>Throughout the construction period.</p>
<p>CULT-2: If the proposed ford or other proposed improvements require alteration or demolition of the water tanks, the water tanks should be evaluated for NRHP and CRHR eligibility. If the water tanks are determined to be a significant historical resource, the project should be modified to avoid or mitigate impacts to a less than significant level.</p>	<ul style="list-style-type: none"> • Include measure as Condition of Approval. 	<ul style="list-style-type: none"> • The District is responsible for identifying potential alteration or demolition of the water tanks. • A qualified archaeologist is responsible for evaluating the water tanks for NRHP and CRHR eligibility and identifying appropriate mitigation. 	<p>Prior to construction.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>CULT-3: A qualified paleontologist shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for this project. The PRIMP shall be consistent with the guidelines of the Society of Vertebrate Paleontology and include the methods to be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading. Excavation and grading activities in deposits with high paleontological sensitivity (e.g., Surficial Sediments below a depth of 20 feet, the Monterey Formation, the Tolman Peak Formation, and the Panoche Formation) shall be monitored by a paleontological monitor following the PRIMP. No paleontological monitoring is required for excavation in geologic units with no or low paleontological sensitivity (e.g., Artificial Fill, Surficial Sediments to a depth of 20 feet, and the Knoxville Formation).</p> <p>If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction activities away from the area of the find in order to assess its significance. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected, and a paleontologist contacted to assess the find for its significance. If determined to be significant, the fossil shall be collected from the field. Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, catalogued, and curated into the permanent collections of a museum repository. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction and hiring a qualified paleontological monitor. • The qualified paleontological monitor is responsible for monitoring the site, identifying mitigation measures if resources are found, and documenting the findings. • The construction contractor is responsible for coordinating and cooperating with the qualified paleontological monitor or contacting the monitor if resources are found when the paleontological monitor is not on site. 	<p>Throughout the construction period.</p>
<p>Mitigation Measure CULT-4: If human remains are encountered during project construction activities, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>assess the situation and consult with agencies as appropriate. Project personnel shall not collect or move any human remains and associated materials. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave materials.</p>		<p>ensuring compliance during construction.</p> <ul style="list-style-type: none"> • A qualified archaeologist is responsible for consulting with agencies and assisting in identifying appropriate treatment of remains. • The construction contractor is responsible for coordinating and cooperating with the qualified archaeologist and with any stop-work orders if human remains are discovered. 	
<p>4.6 Geology and Soils</p>			
<p><i>No mitigation measures related to Geology and Soils are required.</i></p>			
<p>4.7 Greenhouse Gas Emissions</p>			
<p><i>No mitigation measures related to Greenhouse Gas Emissions are required.</i></p>			
<p>4.8 Hazards and Hazardous Materials</p>			
<p>HAZ-1: Prior to construction of the railroad crossing, the District shall conduct a limited subsurface investigation of the railroad crossing site, which would include soil sampling of surficial soils and/or ballast. The samples shall be analyzed for contaminants of potential concern (COPCs), including metallic constituents including arsenic from pesticides, petroleum hydrocarbons (gasoline, diesel, and motor oil), organochlorine pesticides (OCP), volatile organic compounds (VOCs), and SVOC. The soil sampling report indicating the results of the sampling shall be submitted to the County of Alameda Department of Environmental Health for review and approval.</p> <p>If soil testing results exceed Regional Water Quality Control Board environmental screening levels (ESLs) for the proposed recreational use, a Site Management Plan (SMP) shall be prepared by a qualified hazardous materials consultant to establish management practices for handling contaminated soil or other materials encountered during</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications, conducting a limited subsurface investigation of the railroad crossing site and ensuring compliance during construction. • A qualified hazardous materials consultant is responsible for preparing a Site Management Plan (SMP) if necessary. • The construction contractor is responsible for complying with the requirements of the SMP. 	<p>Prior to and throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
<p>construction activities. Appropriate soil testing, characterization, storage, transportation, and disposal procedures shall be specified in the SMP. The sampling results shall be compared to appropriate risk based screening levels in the SMP. The SMP shall identify potential health, safety, and environmental exposure considerations associated with redevelopment activities and shall identify appropriate mitigation measures.</p> <p>The SMP shall be submitted to the County for review and approval. The SMP shall include, but is not limited to, the following:</p> <ul style="list-style-type: none"> • A detailed discussion of the site background; • Management of stockpiles, including sampling, disposal, and dust and runoff control including implementation of a Storm Water Pollution Prevention Plan; • Procedures to follow if evidence of an unknown historic release of hazardous materials (underground storage tanks, polychlorinated biphenyls [PCBs], asbestos containing materials, lead-based paint, etc.) is discovered during excavation or demolition activities; and • A health and safety plan (HSP) for each contractor working at the site that addresses the safety and health hazards of each site operation phase, including the requirements and procedures for employee protection. The HSP shall outline proper soil handling procedures and health and safety requirements to minimize work and public exposure to hazardous materials during construction. 			
4.9 Hydrology and Water Quality			
<p>HYDR-1: The contractor shall file a Notice of Intent (NOI) with the RWQCB to be covered under the Statewide General Permit for Discharges of Stormwater Runoff Associated with Construction Activity and proposed control measures that are consistent with the State General Permit.</p>	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for complying with the Construction General Permit during construction. 	<p>Prior to and throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
		<ul style="list-style-type: none"> The construction contractor is responsible for implementing this measure. 	
<p>HYDR-2: A Stormwater Pollution Prevention Plan (SWPPP) shall be developed and implemented by the construction contractor in consultation with the City of Fremont, RWQCB, and other regulatory agencies. It shall include BMPs to reduce potential impacts to surface water quality through the construction and life of the project. The SWPPP shall adhere to the following requirements:</p> <ul style="list-style-type: none"> The SWPPP shall include measures to avoid creating contaminants, and to minimize the release of contaminants from entering surface water or percolating into the ground. The water quality control measures shall address both construction and operation periods. Fluvial erosion and water pollution related to construction shall be controlled by a construction water pollution control program that shall be available on site and kept current throughout any site development phase. The water pollution prevention program shall include BMPs as appropriate given the specific circumstance of the site and project. The SWPPP shall be available for on-site review by the RWQCB. A spill prevention and countermeasure plan shall be incorporated into the SWPPP. 	<ul style="list-style-type: none"> Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> The District is responsible for incorporating this measure into contract specifications and for complying with the Construction General Permit during construction. The construction contractor is responsible for implementing this measure. 	<p>Prior to and throughout the construction period.</p>
4.10 Land Use/Planning			
<i>No mitigation measures related to Land Use/Planning are required.</i>			
4.11 Mineral Resources			
<i>No mitigation measures related to Mineral Resources are required.</i>			

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
4.12 Noise			
<p>NOI-1: The project contractor shall implement the following measures during construction of the project:</p> <ul style="list-style-type: none"> • Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. • Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site. • Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction. • Prohibit extended idling time of internal combustion engines. • All noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 8:00 a.m. and 7:00 p.m. on weekdays and between 9:00 a.m. and 6:00 p.m. on Saturdays and holidays. No construction shall be permitted on Sundays. • Designate a “disturbance coordinator” at the East Bay Regional Park District who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem. 	<ul style="list-style-type: none"> • Incorporate measure as part of construction specifications. 	<ul style="list-style-type: none"> • The District is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. • The construction contractor is responsible for implementing this mitigation measure. 	<p>Throughout the construction period.</p>

Table H: Mitigation and Monitoring Reporting Program

Mitigation Measures	Implementation Actions	Mitigation/Monitoring Responsible Party	Timing for Compliance Measure or Mitigation Measure
4.13 Population and Housing			
<i>No mitigation measures related to Population and Housing are required.</i>			
4.14 Public Services			
<i>No mitigation measures related to Public Services are required.</i>			
4.15 Recreation			
<i>No mitigation measures related to Recreation are required.</i>			
4.16 Transportation/Traffic			
<i>No mitigation measures related to Transportation/Traffic are required.</i>			
4.17 Tribal Cultural Resources			
<i>No mitigation measures related to Tribal Cultural Resources are required.</i>			
4.18 Utilities/Service Systems			
<i>No mitigation measures related to Utilities/Service Systems are required.</i>			

Source: LSA 2018.

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APPENDIX A

CONSTRUCTION EMISSIONS CALCULATIONS

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Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for -> Bay Area Ridge Trail														
Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.00	7.20	11.80	1.52	0.52	1.00	0.66	0.45	0.21	0.02	1,767.80	0.42	0.02	1,784.59
Grading/Excavation	2.73	19.77	26.65	2.59	1.59	1.00	1.62	1.41	0.21	0.04	3,633.68	0.87	0.04	3,667.66
Drainage/Utilities/Sub-Grade	3.28	24.97	30.15	2.76	1.76	1.00	1.82	1.61	0.21	0.04	3,681.87	0.68	0.04	3,710.52
Paving	0.94	9.71	9.14	0.56	0.56	0.00	0.48	0.48	0.00	0.02	1,848.47	0.38	0.02	1,865.10
Maximum (pounds/day)	3.28	24.97	30.15	2.76	1.76	1.00	1.82	1.61	0.21	0.04	3,681.87	0.87	0.04	3,710.52
Total (tons/construction project)	0.16	1.23	1.56	0.15	0.09	0.06	0.09	0.08	0.01	0.00	210.79	0.05	0.00	212.64

Notes: Project Start Year -> 2018
 Project Length (months) -> 6
 Total Project Area (acres) -> 2
 Maximum Area Disturbed/Day (acres) -> 0
 Water Truck Used? -> Yes

Phase	Total Material Imported/Exported Volume (yd ³ /day)		Daily VMT (miles/day)			
	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	360	40
Grading/Excavation	0	0	0	0	880	40
Drainage/Utilities/Sub-Grade	0	0	0	0	760	40
Paving	0	0	0	0	600	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Bay Area Ridge Trail														
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.05	0.08	0.01	0.00	0.01	0.00	0.00	0.00	0.00	11.67	0.00	0.00	10.69
Grading/Excavation	0.08	0.59	0.79	0.08	0.05	0.03	0.05	0.04	0.01	0.00	107.92	0.03	0.00	98.82
Drainage/Utilities/Sub-Grade	0.06	0.49	0.60	0.05	0.03	0.02	0.04	0.03	0.00	0.00	72.90	0.01	0.00	66.65
Paving	0.01	0.10	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	18.30	0.00	0.00	16.75
Maximum (tons/phase)	0.08	0.59	0.79	0.08	0.05	0.03	0.05	0.04	0.01	0.00	107.92	0.03	0.00	98.82
Total (tons/construction project)	0.16	1.23	1.56	0.15	0.09	0.06	0.09	0.08	0.01	0.00	210.79	0.05	0.00	192.91

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.