### Biological Resources and Wetlands

#### MMRP1
- **Cognolato’s Tarplant**
  - **SEIR-2 B-1(a)**: VTA will design all facilities to avoid temporary and permanent impacts to Congdon’s tarplant to the maximum extent practicable. If avoidance is not feasible, a focused botanical survey will be conducted by a qualified botanical consultant to ascertain the presence or absence of the species. During construction, VTA will mitigate the permanent loss of Congdon’s tarplant at a minimum ratio of 1:1 replacement plants (live plants) or at a ratio determined in consultation with resource agency personnel. VTA will also mitigate in accordance with the California Native Plant Society’s recommended measures for mitigating impacts to Congdon’s tarplant, as described in mitigation measures B-1(b) through B-1(f).
- **Ref. Date**: 3Q 2011
- **P VTA COMPLETE**

#### MMRP2
- **Cognolato’s Tarplant**
  - **SEIR-2 B-1(b)**: To replace plants, seeds from plants within the area of impact will be collected and stored during the month of August or September prior to construction beginning. As the blooming period lasts until November, the seeds will be sown at the end of the blooming period and thereby lessen or avoid a temporal loss before Phase 1 work and reseeding occurs.
- **Ref. Date**: 3Q 2011
- **P VTA COMPLETE**

#### MMRP3
- **Cognolato’s Tarplant**
  - **SEIR-2 B-1(c)**: The seed will be applied as a component of the revegetation mix within the impact area for any temporary impacts and within a proposed replacement area for permanent impacts. The replacement area will be determined in consultation with resource agency personnel. Revegetation should be accomplished by hydro seeding prior to the start of the rainy season in areas.
- **Ref. Date**: 3Q 2011
- **P VTA COMPLETE**

#### MMRP4
- **Cognolato’s Tarplant**
  - **SEIR-2 B-1(d)**: The success of the reseeding will be monitored during the blooming period in the year following revegetation. The criteria for reseeding success will be that the species is found to be occurring throughout the treated areas. If unsuccessful, seed will be collected and sown in the unsuccessful areas prior to the rainy season of the following year.
- **Ref. Date**: 4Q 2012
- **P VTA COMPLETE**

### Implementation

#### Mitigation Monitoring and Reporting Program (MMRP)

**Responsible Party**: VTA, Contractor

**Verification**: COMPLETE

**In Progress**: No

**Non Applicable**: No

**BART Silicon Valley - Berryessa Extension Project**

**Environmental Compliance Matrix (Appendix A - Environmental Compliance Plan)**

**Sheet Identification**: VTA - MMRP Legend

- Indicates updates since last quarterly report
- State Env. Clearance/CEQA ONLY (i.e., SVBX FEIR/SEIR-1/SEIR-2 and/or Upper Penitencia (P-MND)
- Federal Env. Clearance (NEPA FEIS) and/or EIRs (FEIR/SEIR-1/SEIR-2) and/or Upper Penitencia (P-MND)
- Applies to Stations/Campus Contract (C720)
- Mitigation Measure Complete with date (or reference to quarterly report with information)
- Mitigation Measure no longer applies to the project.
- U.S. Fish and Wildlife Service Letter of Concurrence (FWS LOC), Reference No. 81420-2009-1-1296-1
- National Marine Fisheries Service Biological Opinion (NMFS BO) Reference No. 201110107H
- U.S. Army Corps of Engineers Section 404 Permit (404), File Number 28924SF
- 401 Water Quality Certification, Site No. 02-43-C0564 (bkw); CIWQS Place ID No. 768314
- Construction: In Progress
- Responsible Party: VTA (for construction)
- F (for Fully Complete), P (for in Progress), NA (for Non Applicable)
**MMRP5**

**Congdon's tarplant**  SEIR-2 B-1(a) The success of the revegetation will also be monitored during the blooming period in the second year following revegetation. If revegetation results in the successful covering of previously unoccupied habitat, mitigation will be deemed successful and no additional monitoring will be required. If unsuccessful, the area will be deemed an unsuitable habitat due to an apparent subtle difference in soil characteristics. This case, revegetation of additional areas, determination of consultation with resource agency personnel, and an additional two years of monitoring will be conducted.

**MMRP6**

**Congdon's tarplant**  SEIR-2 B-1(b) If very few or any revegetation areas are proposed, it should be conducted prior to May 15 in order to allow sufficient time for flowering and seed set. Moving should not be lower than six inches in order to minimize removal of beafolage prior to flowering.

**MMRP7**

**Wetlands and waters of the U.S.**  SEIR-2 B-2 1(b) VTA will design all Phase 1 facilities to avoid temporary and permanent impacts to wetlands and waters of the United States to the maximum extent practicable. If avoidance is not feasible, VTA will mitigate the permanent loss of wetlands at a minimum 2:1 ratio (replacement area:loss area) and the temporary loss of wetlands at a minimum 1:1 ratio, or at higher ratios determined in consultation with resource agency personnel. Permanent and temporary adverse effects to waters of the United States will be mitigated at minimum 1:1 ratios, or at higher ratios determined in consultation with resource agency personnel. Mitigation will be on-site and in-kind to the maximum extent practicable. If mitigation cannot be accommodated entirely on-site, VTA will investigate other mitigation opportunities in coordination with resource agency personnel within the affected watershed. If mitigation cannot be accommodated entirely on-site, VTA may purchase credits in an approved mitigation bank.

**MMRP8**

**Wetlands and waters of the U.S.**  FEIS BIO-3 Avoidance of Wetland Habitat. Design all project facilities to avoid temporary and permanent adverse effects to wetlands and waters of the U.S. to the maximum extent practicable. D Contractor COMPLETE

**MMRP9**

**Wetlands and waters of the U.S.**  FEIS BIO-4 Compensation for Adverse Effect to Wetland Habitat. If avoidance is not feasible, VTA will mitigate permanent loss of wetlands at a minimum 2:1 ratio (replacement area:loss area), or at higher ratios determined in consultation with resource agency personnel. Permanent and temporary adverse effects to wetlands and waters of the U.S. will be mitigated at minimum 1:1 ratios, or at higher ratios determined in consultation with resource agency personnel. Mitigation ratios will be agreed upon with appropriate resource agency personnel prior to certification of the Final ES. Mitigation will be on-site and in-kind to the maximum extent practicable. If mitigation cannot be accommodated entirely on-site, VTA will investigate other mitigation opportunities in coordination with resource agency personnel within the affected watershed. This plan will comply with the March 2008 Compensatory Mitigation Rule published by the United States Environmental Protection Agency (EPA) and Army Corps of Engineers (ACOE) and will include objectives, site selection criteria, site protection instruments (e.g., conservation easements), baseline information (for impact and mitigation sites), credit determination methodology, a mitigation work plan, a maintenance plan, ecological performance standards, monitoring requirements, a long-term management plan, and financial assurances. D VTA COMPLETE

**MMRP10**

**Riparian habitat**  SEIR-2 B-3 VTA will design all Phase 1 facilities to avoid temporary and permanent adverse impacts to riparian habitat to the maximum extent practicable. If avoidance is not feasible, permanent impacts to the riparian habitat will be mitigated at a ratio of 3:1. Mitigation will be on-site, except that non-native species will be replaced with native species common to the planting area and will be planted on-site to the maximum extent practicable. If mitigation cannot be accommodated entirely on-site, VTA will coordinate with CDFG to identify other potential riparian mitigation sites within the affected watershed. A qualified biologist, in coordination with resource agency personnel, will prepare a mitigation and monitoring plan for adverse impacts to riparian habitat resulting from Phase 1. This plan will provide for the replacement of lost acres as well as values and functions of riparian habitat, including shaded riverine aquatic cover vegetation. Temporary impacts will be mitigated by restoring the habitat onsite.

**MMRP11**

**Riparian habitat**  SEIR-2 B-4 Any permanent loss of riparian or aquatic habitat in the lower reaches, Coyote Creek, Upper Penitencia Creek, or Lower Silver Creek will be compensated through protection or enhancement of degraded riparian and aquatic habitat either at an on-site or an off-site location. The location and total amount of the compensation habitat will be determined by consultation with U.S. Fish and Wildlife Service (USFWS). D VTA COMPLETE
<table>
<thead>
<tr>
<th>MMRP12</th>
<th>Riparian habitat</th>
<th>B-5</th>
<th>1Q 2018</th>
<th>VTA will mitigate the impacts of temporary disturbance to Central Coast cottonwood-sycamore riparian forest at a ratio determined by the California Department of Fish and Game (CDFG).</th>
<th>D</th>
<th>VTA</th>
<th>COMPLETE</th>
</tr>
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<tbody>
<tr>
<td>MMRP13</td>
<td>Riparian habitat</td>
<td>B-6</td>
<td>1Q 2018</td>
<td>Mitigation of temporary adverse impacts to riparian vegetation will be assessed and confirmed with regulatory agencies. The size of the area and the quality of the resources affected will be determined by a mitigation and monitoring plan (MAMP) to develop the details of the compensatory mitigation to be carried out. The site-specific MAMP will ensure Replacement or enhancement of habitat values such as the density of the inventory vegetation, re-introduction of native species, and development of complex vegetation structure at the maximum extent practicable.</td>
<td>D</td>
<td>VTA</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>MMRP14</td>
<td>Riparian habitat</td>
<td>B-7</td>
<td>1Q 2018</td>
<td>A detailed Riparian Restoration Plan will also be prepared for the replacement of lost acreage, as well as values and functions of the riparian habitat including shaded riverine aquatic habitat. This plan will identify locations of restoration opportunities and describe a technical approach to create high-quality riparian and shaded riverine aquatic habitat.</td>
<td>D</td>
<td>VTA</td>
<td>COMPLETE</td>
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<tr>
<td>MMRP15</td>
<td>Riparian habitat</td>
<td>B-8</td>
<td>1Q 2018</td>
<td>Areas occupied by southwestern pond turtles will be avoided to the maximum extent practicable. If barrier fencing is installed, a qualified biologist will conduct relocation surveys for three subsequent, consecutive days to ensure that all animals are removed from the work area. (Also see Mitigation Measures C-14 and C-15.)</td>
<td>C</td>
<td>Contractor</td>
<td>COMPLETE</td>
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<tr>
<td>MMRP16</td>
<td>Riparian habitat</td>
<td>B-9</td>
<td>1Q 2018</td>
<td>Areas occupied by western burrowing owls or other special status species will be avoided to the maximum extent practicable.</td>
<td>C</td>
<td>Contractor</td>
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<tr>
<td>MMRP17</td>
<td>Riparian habitat</td>
<td>B-10</td>
<td>1Q 2018</td>
<td>During the breeding season (generally February through August), pre-construction surveys for nesting raptors will be conducted by a qualified biologist to ensure that raptor nests will not be disturbed by construction activities. During each survey, all new and suitable grassland habitat within 250 feet of the construction site will be inspected. If no nesting raptors are observed in the area surveyed, no further mitigation is required. (Also see Mitigation Measure C-17.)</td>
<td>C</td>
<td>VTA</td>
<td>COMPLETE</td>
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<tr>
<td>MMRP18</td>
<td>Riparian habitat</td>
<td>B-11</td>
<td>1Q 2018</td>
<td>If an active raptor nest were found close enough to the construction site to be disturbed, a qualified biologist, in consultation with USFWS and CDFG, would determine the extent of a construction-free buffer zone (typically 250 feet) to be established around the nest. VTA will require that no grading or other construction activities be allowed within this buffer during the nesting season or until the young have fledged, except as approved by USFWS or CDFG. (Also see Mitigation Measure C-18.)</td>
<td>C</td>
<td>VTA</td>
<td>COMPLETE</td>
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2Q 2011

<table>
<thead>
<tr>
<th>MMRP19</th>
<th>Riparian habitat</th>
<th>B-12</th>
<th>2Q 2011</th>
<th>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</th>
<th>COMPLETE</th>
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<tbody>
<tr>
<td>MMRP20</td>
<td>Riparian habitat</td>
<td>B-13</td>
<td>2Q 2011</td>
<td>No mitigation is required if construction activities occur during the non-breeding season of nesting raptors (generally September through January).</td>
<td>C</td>
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<tr>
<td>MMRP21</td>
<td>Riparian habitat</td>
<td>B-14</td>
<td>2Q 2011</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>COMPLETE</td>
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<tr>
<td>MMRP22</td>
<td>Riparian habitat</td>
<td>B-15</td>
<td>2Q 2011</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
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<tr>
<td>MMRP23</td>
<td>Riparian habitat</td>
<td>B-16</td>
<td>2Q 2011</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>COMPLETE</td>
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</tbody>
</table>

3Q 2011

| MMRP24 | Riparian habitat | B-17 | 3Q 2011 | VTA will design all project facilities to avoid temporary and permanent adverse effects to riparian habitat to the maximum extent practicable. Central Coast cottonwood-sycamore riparian forest areas identified along Upper Peninsular will be identified and marked with protective orange fencing to avoid disturbance or accidental intration by workers or equipment. | D | Contractor | COMPLETE |
|---|---|---|---|---|---|---|
| MMRP25 | Riparian habitat | B-18 | 3Q 2011 | This plan will identify locations of restoration opportunities and describe a technical approach to create high-quality riparian and shaded riverine aquatic habitat. Mitigation for adverse effects to riparian habitat will be in-kind, except that non-native species will be replaced with commercially available native species common in the planting area and on-site to the maximum extent practicable. If mitigation cannot be accomplished entirely on-site, VTA will coordinate with CDFG to identify other potential riparian mitigation sites within the affected watershed. A qualified biologist, in coordination with resource agency personnel will prepare a mitigation and monitoring plan for adverse effects to riparian habitat due to the project. | D | VTA | COMPLETE |
| MMRP26 | Riparian habitat | B-19 | 3Q 2011 | If barrier fencing is installed, a qualified biologist will conduct relocation surveys for three subsequent, consecutive days to ensure that all animals are removed from the work area. (Also see Mitigation Measures C-14 and C-15.) | C | Contractor | COMPLETE |
| MMRP27 | Riparian habitat | B-20 | 3Q 2011 | Areas occupied by southwestern pond turtles will be avoided to the maximum extent practicable. | C | Contractor | COMPLETE |
| MMRP28 | Riparian habitat | B-21 | 3Q 2011 | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. | COMPLETE |
| MMRP29 | Riparian habitat | B-22 | 3Q 2011 | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. | COMPLETE |

4Q 2012

| MMRP30 | Riparian habitat | B-23 | 4Q 2012 | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. | COMPLETE |
| MMRP31 | Riparian habitat | B-24 | 4Q 2012 | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. | COMPLETE |

Page 3 of 24
### MMRP22
**Protection of special status species – nesting swallows and other migratory birds**

| CS-1 | 3 | R-19 | If construction activities are scheduled to occur during the nesting season of swallows and other migratory birds (generally March through August), a pre-construction survey for nest activity will be conducted prior to construction. If active nests are identified in close proximity to construction work, a biological monitor will monitor the nests when work begins. If the biological monitor in consultation with CDFG, determines that construction activities are disturbing adults incubating eggs or young in the nest, then no work zone buffer will be established by the biological monitor around the nest until the young have fledged and the nest is no longer active. If the biological monitor, in consultation with CDFG, determines the construction occurring in proximity to active nests is not disturbing adults or young, then construction activities can continue. Nests that have been determined to be inactive (with no eggs or young) can be removed with CDFG approval. (Also see Mitigation Measures C-19 and C-22.) | C | VTA | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. |

A nesting bird survey was done on March 27th, 2018 for tree trimming adjacent to 1619 Rur Avati. These trees, which hung over the private residence soundwall onto the access road, were determined, by an ICF biologist, to have no nests or nesting birds present 24hrs prior to the tree trimming crew coming out.

### MMRP23
**Protection of special status species – roosting bats**

| CS-2 | 3 | R-14 | A qualified biologist will conduct pre-construction surveys in suitable areas to determine the presence of roosting bats. If bats are roosting within the project area beneath a bridge, in a building, or in riparian habitat, then appropriate modifications to construction time and method will be implemented in accordance with CDFG approval. Modifications may include timing construction activities to avoid breeding periods, establishment of buffer, or biological monitoring. In some cases, bats may be actively encouraged to avoid roosting in the area affected prior to the onset of construction activities. (Also see Mitigation Measures C-21 and C-22.) | C | VTA for preconstruction survey | The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements. |

### Community Services and Facilities

| MMRP24 | City of Milpitas parkland | CS-1 | Complete combination of the following measures will be implemented through coordination between VTA and the City of Milpitas to address parkland impact: acquire replacement park property immediately adjacent to the parkland site, expand a nearby park, provide additional amenities at the affected parkland site, and/or assess in funding a pedestrian crossing over the railroad corridor that would link and facilitate access to the affected park, possibly at Curtis Avenue. As an alternative to the above measures, VTA would pay an in-lieu fee to the City of Milpitas equivalent to the cost of the development of a replacement park. This was suggested by the City of Milpitas in their comments on the Draft EIR. | P | VTA | VTA has ongoing weekly coordination meetings with the City of Milpitas to discuss the SVBX project. | COMPLETE |

### Cultural and Historic Resources

| MMRP25 | Archaeological resources | CS-1 | Because it is reasonable to conclude that cultural resources are likely to be discovered as a result of implementation of the project, the process for addressing impacts and avoiding, minimizing or mitigating adverse effects on historic properties will be developed in advance and included in a Memorandum of Agreement (MOA) or Programmatic Agreement, if determined appropriate and supporting Cultural Resources Treatment Plan (CRTP). (Also see Mitigation Measure C-23.) | D | VTA | VTA | COMPLETE |

| MMRP26 | Archaeological resources | CS-2 | The MOA and CRTP will be developed in consultation with the Native American community, Hispanic historical organizations, appropriate city and county historic preservation bodies, State Historic Preservation Officer (SHPO), and Advisory Council on Historic Preservation (ACHIP). The Federal Transit Administration (FTA), VTA, SHPO, and ACHIP will be signatories to the agreement document. (Also see Mitigation Measure C-23.) | D | VTA | VTA | COMPLETE |
**Archaeological resources**

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|      |      |      | 19-01.2 | 1         | The CRTP will:  
|      |      |      |         |           | - specify the National Register of Historic Properties criteria that will be applicable, the procedures to be used to implement the Section 106 process in the field, and the standards of evaluation that will be appropriate given the locations and kinds of cultural properties predicted;  
|      |      |      |         |           | - present methods that combine pre-testing where possible (i.e., on open lots or on undeveloped lands) testing after denudation of soil structures but before new ground-disturbing construction begins; construction-phase monitoring where appropriate, and standards for data recovery.  
|      |      |      |         |           | - include a field investigation provision for areas within the Area of Potential Effect where potential resources may be identified, or that are designated as high or moderately sensitive. Field investigations will concentrate on, but will not be confined to, the area of direct impact.  
|      |      |      |         |           | **D** VTA | Programmatic Agreement with supporting CRTP was executed in March 2010. Archaeological pretesting occurred in the first three Prehistoric Archaeologically Sensitive Areas (PASA A) 1-3 in July, 2011, utilizing a geoprobe. No cultural resources were encountered.  
|      |      |      |         |           | No discoveries were encountered during 2Q 2012. |

**Archaeological resources**

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|      |      |      | 19-01.2 | 1         | By complying with the terms of the MOA and CRTP, the particular mitigation measures to be written into the MOA and CRTP will be determined in consultation among the signatories and may include:  
|      |      |      |         |           | - protecting sites or portions of sites from intrusion where practical and feasible, to minimize adverse effects;  
|      |      |      |         |           | - conducting on-site monitoring during surface-disturbing construction activities.  
|      |      |      |         |           | Publishing procedures established in the CRTP when human remains are encountered;  
|      |      |      |         |           | - reporting the discovery of artifacts and organic remains consistent with the procedures detailed in the CRTP;  
|      |      |      |         |           | - preparing and distributing reports and results of the technical studies, as detailed in the CRTP;  
|      |      |      |         |           | - conducting off-site monitoring during surface-disturbing construction activities;  
|      |      |      |         |           | - following the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (U.S. Department of the Interior, National Park Service, 1983, as amended and annotated).  
|      |      |      |         |           | **D** VTA | A Programmatic Agreement with supporting CRTP was executed in March 2010. Archaeological pretesting occurred in the first three Prehistoric Archaeologically Sensitive Areas (PASA A) 1-3 in July, 2011, utilizing a geoprobe. No cultural resources were encountered.  
|      |      |      |         |           | No discoveries were encountered during 2Q 2012. |

**Archaeological Archaeological properties**

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</table>
|      |      |      | 19-01.2 | 1         | Programmatic Agreements (PA) and Supporting Cultural Resources Treatment Plan (CRTP). A Programmatic Agreement (PA) and a Supporting Cultural Resources Treatment Plan (CRTP) were developed and executed by PTA, the State Historic Preservation Officer (SHPO), and VTA in consultation with the appropriate government and historic preservation bodies, and Native American community.  
|      |      |      |         |           | The CRTP specifies the National Register of Historic Places (NRHP) criteria that will be applicable, the procedures to be used to implement the Section 106 process in the field, and the standards of evaluation that will be appropriate given the locations and kinds of cultural properties predicted.  
|      |      |      |         |           | The CRTP also presents methods that combine pre-testing where possible (i.e., on open lots or on undeveloped lands) testing after denudation of soil structures but before new ground-disturbing construction begins; construction-phase monitoring where appropriate, and standards for data recovery.  
|      |      |      |         |           | In any event, areas within the Area of Potential Effect (APE) where potential resources may be identified, or that are designated as high or moderately sensitive, will be field investigated, concentrating on, but not confined to, the area of direct effect. The CRTP meets the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (U.S. Department of the Interior, National Park Service, 1983, as amended and annotated).  
|      |      |      |         |           | **D** VTA | Programmatic Agreement with supporting CRTP was executed in March 2010. Archaeological pretesting occurred in the first three Prehistoric Archaeologically Sensitive Areas (PASA A) 1-3 in July, 2011, utilizing a geoprobe. No cultural resources were encountered.  
|      |      |      |         |           | No discoveries were encountered during 2Q 2012. |

**Hazardous Materials**

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|      |      |      | 19-01.2 | 1         | Additional site-specific information will be collected and documented regarding hazardous materials use and hazardous waste generation for properties that would be acquired for ROW or support facilities. Collection of information will include visual inspections of properties or portions of properties that were inaccessible during preparation of this environmental document. Regulatory agency files will be reviewed for these properties to confirm whether they have been affected by any reported releases and/or whether the sites are within an area where excavation will occur during construction.  
|      |      |      |         |           | **D** VTA | Phase 1 and 2 site investigations continue, consistent with property acquisition. As of the 4Q 2013, Phase 1 investigations are 89% complete, and Phase 2 investigations are 71% complete.  
|      |      |      |         |           | COMPLETE | 4Q 2014 |

**Soil and groundwater contamination**

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|      |      |      | 19-01.2 | 1         | A Phase Two site investigation will be completed for properties that would be acquired for ROW or support facilities for the Project in areas where soil contamination is documented, as determined during soil sampling. Soil contamination is documented if there are releases of hazardous substances or if soil results indicate that contamination is in excess of regulatory guidelines. A Site Sampling Plan will be developed and implemented prior to any investigation. The plan will include a description of the work to be performed, the laboratory analytical methods to be used, and any specific requirements and quality control information.  
|      |      |      |         |           | **D** VTA | Phase 1 and 2 site investigations continue, consistent with property acquisition. As of the 4Q 2013, Phase 1 investigations are 89% complete, and Phase 2 investigations are 71% complete.  
|      |      |      |         |           | COMPLETE | 4Q 2014 |

**Soil and groundwater contamination**

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</table>
|      |      |      | 19-01.2 | 1         | Additional site-specific information will be collected and documented regarding hazardous materials use and hazardous waste generation for properties that would be acquired for ROW or support facilities for the Project. Regulatory agency files will be reviewed for these properties to confirm whether groundwater has been affected by any reported releases and/or whether the sites are within an area where excavation during construction would encounter groundwater.  
|      |      |      |         |           | **D** VTA | Phase 1 and 2 site investigations continue, consistent with property acquisition. As of the 4Q 2013, Phase 1 investigations are 89% complete, and Phase 2 investigations are 71% complete.  
|      |      |      |         |           | COMPLETE | 4Q 2014 |
Phase 1 and 2 site investigations will be completed for properties that would be acquired for ROW or support facilities for the Project in areas where groundwater contamination is documented, where contamination is near a property boundary, or where contamination may exist and an investigation is needed to confirm contamination. All investigations will include a site visit to be performed, the laboratory analytical methods to be used, and any specific requirements and quality control information.

Phase 1 and 2 site investigations continue, concurrent with property acquisition. As of the 4Q 2011, Phase 1 investigations are 89% complete, and Phase 2 investigations are 71% complete.

Noise and Vibration

Noise along the alignment

SEIR-2 NV-1
Noise mitigation includes sound walls, absorptive sound walls, absorptive materials for retaining walls, and track absorption. Table 4.13-3 in the SEIR-2 indicates the location of noise mitigation measures. At one location (STA 459+50 or STA 487+00), there is an option for either track level sound absorption panels or a mobile sound barrier that would be placed between the two BART alignment tracks. Approximately 1,000 to 1,500 linear feet of sound walls would be needed, depending on the mitigation option selected. Typically, the location of a sound wall is either 10 or 13 feet from the track centerline, depending on the track profile (10 feet for the retained open cut track portions and the arterial guideway, and 13 feet for the at grade and embankment track portions of the Phase 1 alignment). In areas where a sound wall is recommended on both sides of the alignment, absorptive sound walls are the recommended noise mitigation. The locations of the noise mitigation are depicted in Figures 4.13-3A through 4.13-36 in the SEIR-2. Figures 4.13-3E and Figures 4.13-3A show the location of the track level sound absorption panel noise mitigation option and Figures 4.13-35(a) and 4.13-35(b) shows the location of the middle sound barrier noise mitigation option.

D Contractor

Noise along the alignment

SEIR-2 NV-2
Approximately 2,500 feet of slab track acoustical absorption at track level shall be used to reduce adverse noise effects in the area of the alignment between Hostetter Road and Sierra Road. This mitigation shall occur between STA 459+50 and 487+00 as indicated in Table 4.13-6. Alternatively, a middle sound barrier could be installed between STA 459+50 and 487+00 and designed to achieve a similar reduction in noise levels. A two-sided, absorptive sound barrier in the middle of 51 and 52 tracks with a minimum height of 5 feet above the top of rail is an alternative to track level absorptive panels. In addition to the middle sound barrier, sound absorptive material would be required on both retaining walls of the alignment and to cover a minimum of four feet in vertical extent. The material should possess a minimum noise reduction coefficient of 0.5 and a minimum absorption coefficient of 0.60 at 500 Hz. Should an alternative noise mitigation measure be evaluated and selected, that mitigation measure would be required to provide a comparable noise reduction. Figures 4.13-31(a) and 4.13-31(b) in the SEIR-2 show the location of the noise mitigation options between Hostetter Road and Sierra Road.

D Contractor

Noise along the alignment

SEIR-2 NV-4
Noise insulation and other measures shall be provided for residences with second floors or higher that are exposed to noise levels in excess of the FTA criteria. The mitigation will be designed to achieve an interior noise level of 45 dBA or lower. In addition to the recommended sound walls and retrofitting of multi-story residences with improved exterior sound isolation, sound absorptive material on theasonry structure would be necessary. This mitigation would primarily be needed in areas where the alignment runs in a retained cut. To further reduce noise impacts to multi-story residences, a sound wall would be constructed on both sides of the track where the corridor is narrow (50 feet or less). Installation of sound absorptive material on the inside face of retaining walls and noise walls would further reduce sound levels by as much as 2 dBA. Otherwise, potentially significant noise impacts could result in noise levels in excess of the FTA criteria. Table 4.13-7 identifies the location and length of recommended sound wall absorptive material that are necessary in addition to the absorptive sound wall specified in Table 4.13-5 in the SEIR-2 as required by Mitigation Measure NV-1. Figures 4.13-3A through 4.13-36 of the SEIR-2 show the locations of the noise mitigation.

D VTA for work in private residences, Contractor for soundwall design

Noise and Vibration

Noise study update

4Q 2014

The VTA Noise Study update included sound walls, absorptive sound walls, absorptive materials for retaining walls (Sheets EN-005 through EN-012).

Noise studies were updated to reflect current design with ballast and tie tracks between STA 459+00 and STA 487+00 in April 2011. As a result, track level acoustic absorption is no longer required. Instead, noise requirements are met by applying spray acoustic absorption to the trench in this section.

COMPLETE

Noise along the alignment

SEIR-2 NV-3
During the project start-up phase and prior to revenue operations, VTA will carry out noise testing along the civil stations where slab track acoustical absorption is being used as a mitigation measure. The testing is to ensure that the sound absorber is adequately attenuating the increased noise from the slab track. VTA will deliver a technical memo to the FTA on the results of the testing. The testing will also serve to inform the need for additional wayside residential noise mitigation mentioned in Mitigation Measures NV-1 and NV-4.

C VTA

To be completed during the project start-up phase and prior to revenue operations.

3Q 2016 for Noise Study update.
### 1Q 2018

**MMRP38** Vibration along the alignment

SEIR-2 NV-5 Table 4.13-9 in the SEIR-2 summarizes the vibration mitigation necessary to achieve the F criterion. The proposed mitigation is tire derived aggregate and 8-Hz FST. The locations of the vibration mitigation are depicted on Figures 4.13-A through 4.13-3K in the SEIR-2.

<table>
<thead>
<tr>
<th>Location</th>
<th>Vibration Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Tire Derived Aggregate</td>
<td>D Contractor</td>
</tr>
<tr>
<td>D</td>
<td>8-Hz FST</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 3Q 2016

**MMRP39** Vibration along the alignment at the Vasona LRT line

SEIR-2 NV-6 Upon project start-up, VTA will perform further testing on tire derived aggregate underlayment at the Vasona LRT Line. The vibration testing should replicate the testing presented to the FTA in 2009. The technical evaluation will then be presented to the FTA for review and comment.

<table>
<thead>
<tr>
<th>Location</th>
<th>Vibration Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Tire Derived Aggregate</td>
<td>C VTA</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 1Q 2017

**MMRP40** Noise and Vibration

FEIS NV-1 A 1420-foot long, 4-foot high sound wall shall be installed along the west (S1) side of the track from STA 230+80 to STA 245+00.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 4Q 2014

**MMRP41** Noise and Vibration

FEIS NV-2 A 750-foot long, 4-foot high sound wall shall be installed along the west (S1) side of the track from STA 246+50 to STA 254+00.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 4Q 2014

**MMRP42** Noise and Vibration

FEIS NV-3 A 1250-foot long, 10-foot high absorptive sound wall shall be installed along the west (S1) side of the track from STA 493+50 to STA 506+00.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Absorptive Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 2Q 2016

**MMRP43** Noise and Vibration

FEIS NV-4 A 250-foot long, 9-foot high absorptive sound wall shall be installed along the west (S1) side of the track from STA 506+00 to STA 508+50.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Absorptive Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 2Q 2016

**MMRP44** Noise and Vibration

FEIS NV-5 A 4000-foot long, 10-foot high absorptive sound wall shall be installed along the west (S1) side of the track from STA 455+50 to STA 506+00.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Absorptive Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

### 2Q 2016

**MMRP45** Noise and Vibration

FEIS NV-6 A 4000-foot long, 10-foot high absorptive sound wall shall be installed along the west (S1) side of the track from STA 455+50 to STA 506+00.

<table>
<thead>
<tr>
<th>Location</th>
<th>Noise Mitigation</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Absorptive Sound Wall</td>
<td>D Contractor</td>
</tr>
</tbody>
</table>

**COMPLETE**

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**Page 7 of 24**

1Q 2018
1Q 2018

MMRP46 Noise and Vibration

FEIS NV-7 An 830-foot long, 14- to 15-foot high sound wall shall be installed along the east (S2) side of the track from STA 168+20 to STA 176+50.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP47 Noise and Vibration

FEIS NV-8 A 300-foot long, 8-foot high sound wall shall be installed along the east (S2) side of the track from STA 181+00 to STA 184+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP48 Noise and Vibration

FEIS NV-9 A 620-foot long, 8-foot high sound wall shall be installed along the east (S2) side of the track from STA 186+00 to STA 192+20.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP49 Noise and Vibration

FEIS NV-10 A 350-foot long, 7-foot high sound wall shall be installed along the east (S2) side of the track from STA 409+00 to STA 412+50.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP50 Noise and Vibration

FEIS NV-11 A 1050-foot long, 7-foot high sound wall shall be installed along the east (S2) side of the track from STA 412+50 to STA 423+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP51 Noise and Vibration

FEIS NV-12 A 1730-foot long, 9-foot high sound wall shall be installed along the east (S2) side of the track from STA 423+00 to STA 440+30.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP52 Noise and Vibration

FEIS NV-13 A 725-foot long, 8-foot high sound wall shall be installed along the east (S2) side of the track from STA 441+50 to STA 447+50.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP53 Noise and Vibration

FEIS NV-14 A 480-foot long, 10-foot high sound wall shall be installed along the east (S2) side of the track from STA 447+50 to STA 452+30.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP54 Noise and Vibration

FEIS NV-15 A 550-foot long, 10-foot high absorptive sound wall shall be installed along the east (S2) side of the track from STA 497+00 to STA 506+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP55 Noise and Vibration

FEIS NV-16 A 250-foot long, 10-foot high absorptive sound wall shall be installed along the east (S2) side of the track from STA 506+00 to STA 508+50.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP56 Noise and Vibration

FEIS NV-17 A 350-foot long, 6-foot high sound wall shall be installed along the east (S2) side of the track from STA 508+50 to STA 512+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP57 Noise and Vibration

FEIS NV-18 A 350-foot long, 4-foot high sound wall shall be installed along the east (S2) side of the track from STA 512+00 to STA 515+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP58 Noise and Vibration

FEIS NV-19 A 550-foot long, 4-foot high sound wall shall be installed along the east (S2) side of the track from STA 515+50 to STA 521+00.

D Contractor The SVBX C700 RFP includes sound walls (Sheets EN-005 through EN-062).

COMPLETE 2Q2016

2Q2016

MMRP59 Noise and Vibration

FEIS NV-20 Slab Track Acoustical Absorption.  2,000 alignment feet of slab track acoustical absorption at track level shall be used to reduce noise impacts in the area of the alignment between Hostetter Road and Sierra Road.  This mitigation shall occur on both sides of the track between civil station 459+50 and 486+50 as follows:

700-foot length from STA 459+50 to STA 466+50

200-foot length from STA 472+30 to STA 474+30

1100-foot length from STA 475+50 to STA 486+50

D Contractor Noise studies were updated to reflect current design with ballast and tie tracks between STA 459+00 and STA 487+00 in April 2011.  As a result, track level acoustic absorption is no longer required. Instead, noise requirements are met by applying spray acoustic absorption to the trench in this section.

COMPLETE 2Q2016

2Q2016
Testing to Confirm Slab Track Acoustical Absorption. During the project start-up phase and prior to revenue operations, VTA will carry out noise testing along the civil stations where slab track acoustical absorption is being used as a mitigation measure. The testing is to ensure that the sound absorber is adequately attenuating the increased noise from the slab track. VTA will deliver a technical memo to FTA on the results of the testing. The testing will also serve to inform the need for additional wayside residential noise mitigation mentioned in NV-1 and NV-21.

Noise studies were updated to reflect current design with ballast and tie tracks between STA 459+00 and STA 487+00 in April 2011. As a result, track level acoustic absorption is no longer required. Instead, noise requirements are met by applying spray acoustic absorption to the trench in this section.

After conducting a project site visit, staff added seven more residences to the 460 residences that have been identified as potential candidates for the additional mitigation based on the noise study criteria. VTA executed the contract with CSDA, the RNIP noise and architectural services consultant, on October 20, 2011. CSDA has completed noise testing in Fremont. CSDA began noise testing in Milpitas and anticipates starting noise testing in San Jose around mid-January 2012. Staff coordinated and provided progress updates to staff at the cities of Fremont, Milpitas, and San Jose; and with San Jose Councilmember Chu’s office. Staff continues to develop the RNIP Policies and Procedures manual, coordinate with three cities and outreach to the potential RNIP residences.

Tire-derived aggregate will be installed from:
- STA 167+00 to STA 169+79
- STA 172+80 (extent of crossover) to STA 177+00
- STA 264+00 TO STA 285+30 (implement TDA or comparable mitigation)
- STA 418+00 TO 432+00 (implement TDA or comparable mitigation)
- STA 432+00 TO 448+00 (implement TDA or comparable mitigation)

D Contractor TDA is included in the SVBX C700 RFP track charts (Sheets LS – Z101 through LS – Z118).

Dixon Landing Retained Cut Tire-Derived Aggregate Vibration Mitigation – install tire-derived aggregate from:
- STA 204+20 to 209+00 (implement TDA or comparable mitigation)

D Contractor TDA is included in the SVBX C700 RFP track charts (Sheets LS – Z101 through LS – Z118).

Dixon Landing Retained Cut Floating Slab Vibration Mitigation – install 8 Hz floating slab from:
- STA 181+50 to STA 183+60
- STA 197+50 to STA 204+20

D Contractor Floating slab track is included in the SVBX C700 RFP track charts (Sheets LS – Z201 through LS – Z214).

Floating slab vibration mitigation – implement floating slab from:
- STA 266+30 to STA 287+00 (implement TDA or comparable mitigation)
- STA 331+50 to STA 337+40
- STA 448+00 to STA 452+00
- STA 452+00 to STA 466+00
- STA 472+30 to STA 474+30
- STA 475+30 to STA 484+30
- STA 493+30 to STA 506+00
- STA 506+00 to STA 519+50 (north end of bridge over Berryessa Rd)

D Contractor Floating slab track is included in the SVBX C700 RFP track charts (Sheets LS – Z201 through LS – Z214).
| MMRP66 | Noise and Vibration | FEIS | NV-27 | Evaluation of installed Tire-Derived Aggregate. Upon project start-up, VTA will perform further testing on tire-derived aggregate underlayment at its Vasona LRT Line. The vibration testing should replicate the testing completed by Wilson, Ying & Associates and presented to FTA in 2009: Evaluation of the Derived Aggregate as Installed Beneath Ballast and Tie Light Rail Track, May 2006. The technical evaluation will then be presented to FTA. | P | VTA | To be completed during the project start-up phase and prior to revenue operations. |  |
| MMRP67 | Noise and Vibration | FEIS | NV-28 | Additional Sound Walls. In addition to those included in the table [5.10-6], a 12-ft. high soundwall will be designed at The Crossings at Montague apartments to ensure that FTA noise criteria will be achieved. | D | Contractor | The SVBX C700 RFP includes sound walls (Sheets EN-003 through EN-005). |  |
| MMRP68 | Noise and Vibration | FEIS | NV-29 | Community Wall at Berryessa Station. The Project includes an 8-foot high community wall along residential areas to the east. This community wall would reduce Severe Impacts to a Moderate or less Impact for the North Option except for the portion between Berryessa Road and the residential area to the north of Salomon Court. An 8-foot high noise barrier would need to continue northeast along the future transit facility surface parking lot and access road to Berryessa Road to reduce this noise impact to less than severe. With this community wall, the second story residences along Salomon Court and on the eastern boundary to Matery Road may still be impacted depending on the noise insulation reducing capability of existing residential construction. The need for additional noise insulation of the residences would need to be determined on a residence by residence basis. | D | Contractor | Community Wall design at Berryessa Station campus to be included in C720 Station Campus Design specifications and plan sheets. | COMPLETE. |
| MMRP69 | Visual Quality and Aesthetics | FEIS | VIS-1 | Replacement of Trees at Station Areas. Removed trees will be replaced at a 1:1 ratio within the relevant visual analysis area. | D | VTA | The SVBX C700 RFP includes this requirement in the design criteria as well as the specifications Section 013570, Environmental Requirements. |  |

**Completion Status**

| MMRP66 | Noise and Vibration | 4Q2017 | NV-27 | Evaluation of installed Tire-Derived Aggregate. Upon project start-up, VTA will perform further testing on tire-derived aggregate underlayment at its Vasona LRT Line. The vibration testing should replicate the testing completed by Wilson, Ying & Associates and presented to FTA in 2009: Evaluation of the Derived Aggregate as Installed Beneath Ballast and Tie Light Rail Track, May 2006. The technical evaluation will then be presented to FTA. | P | VTA | To be completed during the project start-up phase and prior to revenue operations. |  |
| MMRP67 | Noise and Vibration | 3Q2016 | NV-28 | Additional Sound Walls. In addition to those included in the table [5.10-6], electrical facilities south of Trade Zone Blvd. may need a sound barrier of no higher than 8 ft. (depending on final design) to achieve FTA noise criteria. | D | Contractor | The SVBX C700 RFP includes sound walls (Sheets EN-003 through EN-005). | COMPLETE. |
| MMRP68 | Noise and Vibration | 4Q2017 | NV-29 | Community Wall at Berryessa Station. The Project includes an 8-foot high community wall along residential areas to the east. This community wall would reduce Severe Impacts to a Moderate or less Impact for the North Option except for the portion between Berryessa Road and the residential area to the north of Salomon Court. An 8-foot high noise barrier would need to continue northeast along the future transit facility surface parking lot and access road to Berryessa Road to reduce this noise impact to less than severe. With this community wall, the second story residences along Salomon Court and on the eastern boundary to Matery Road may still be impacted depending on the noise insulation reducing capability of existing residential construction. The need for additional noise insulation of the residences would need to be determined on a residence by residence basis. | D | Contractor | Community Wall design at Berryessa Station campus to be included in C720 Station Campus Design specifications and plan sheets. | COMPLETE. |
| MMRP69 | Visual Quality and Aesthetics | 3Q2016 | VIS-1 | Replacement of Trees at Station Areas. Removed trees will be replaced at a 1:1 ratio within the relevant visual analysis area. | D | VTA | The SVBX C700 RFP includes this requirement in the design criteria as well as the specifications Section 013570, Environmental Requirements. |  |
### Water Resources, Water Quality, and Floodplains

<table>
<thead>
<tr>
<th>MMRP71</th>
<th>Flood-proof structures</th>
<th>SEIR-2</th>
<th>Ir-1</th>
<th>Contractor</th>
<th>Requirement in the design criteria as well as the specifications Section 01 35 10 - Environmental Requirements.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retained cut sections, retained fill sections, station entrances, and access points should maintain 6 inches to 1 foot of freeboard above the base 100-year flood elevation, as required.</td>
<td>D</td>
<td></td>
<td></td>
<td>THIS MITIGATION IS COMPLETE.</td>
</tr>
</tbody>
</table>

### Education and Outreach Plan

#### MMRP72

| FSIS 6 | SEIR-2 | 06-24-1 | Construction Outreach and Education Plan | A Construction Outreach and Education Plan will be developed by VTA prior to construction commencing to foster communication between VTA, various municipalities, and the public during the construction phase. The plan will include public outreach strategies, frequent updates to stakeholders, businesses, organizations, and municipalities; public work sessions and meetings with community members; distribution of project information and advanced construction notification via fliers, emails, mailers, and face-to-face visits; and continuous sharing of project information to websites. Media relations, i.e., news releases, news articles, interview, and online outreach coordinator/personnel. | D | VTA | The Project communications and outreach team conducted significant communications and project outreach activities during 4th Quarter 2011. Media outreach was conducted for the award of the $772 million Design Build Contract for the line, track, systems, and stations. Desk side briefings and interviews were conducted with media prior to the December 6th VTA Board vote to award the contract to Skanska-Shimmick-Herzog Joint Venture. A press release was issued on the procurement and evaluation process, ranking of selected firms, and jobs secured by project. The release prompted 45 broadcast segments on local television and radio stations and 14 print and online articles. BART Silicon Valley Communications and Outreach staff provided updates to the public, businesses, and local cities where corridor preparation activities continue to occur. Outreach inquiries/cases: 11 phone calls 1 phone call 1 phone call 1 phone call 0 door knocks 33 letters mailed Outreach attempts 244 (VTA Driven): 16 emails 113 phone calls 32 letters mailed Outreach inquiries/cases: 11 phone calls 1 phone call 0 door knocks 10 letters mailed Outreach attempts 244 (VTA Driven): 16 emails 113 phone calls 35 letters mailed |

During the period 1Q 2018 Community Outreach Public Engagement staff continued to respond to and track public inquiries related to the project, as well as through email and phone calls. Staff provided tours and site visits to the Acting Administrator of the Federal Transit Administration, the Action Project Manager for the City of San Jose, City of San Jose staff from the Department of Public Works, and the American Society of Civil Engineers. Public Engagement Staff continued developing community engagement action plans and advanced notice for the remaining impactful construction activities and testing operations throughout the project corridor, including Falcon Drive single lane closure; Paston and Watson Courts water shut down and reconstruction of two single-family homes encampments on or near the project. "No Trespassing" signs installed on VTA property near or along the alignment to discourage future homeless encampments; AARP tour; bus stop relocations; drafting a list of FAQs for new parking garage; and promoting the project to the public through online photos and social media posts.
<table>
<thead>
<tr>
<th>MMRP74 Construction Emissions</th>
<th>SEIR-2</th>
<th>COST-2</th>
<th>AQ-3</th>
<th>Contractor</th>
<th>C</th>
<th>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</th>
<th>See MMRP 73</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMRP 87 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>5. The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73</td>
</tr>
<tr>
<td>MMRP 88 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>6. All truck and equipment, including their tires, shall be washed off prior to leaving the site.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73/88</td>
</tr>
<tr>
<td>MMRP 89 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>7. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73/88</td>
</tr>
<tr>
<td>MMRP 90 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>8. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73</td>
</tr>
<tr>
<td>MMRP 91 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>9. Minimizing the idling time of diesel powered construction equipment to two minutes.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73</td>
</tr>
<tr>
<td>MMRP 92 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>10. Phase 1 shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 40 percent PM reduction compared to the most recent AB3 fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and on-deck devices such as particulate filters, and/or other options as such become available. For the Upper Penitencia Creek improvements (only), all diesel powered construction equipment shall install diesel particulate filters to achieve a 70% reduction in PM emissions, compared to the state-wide fleet average, on all construction equipment.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP 73</td>
</tr>
<tr>
<td>MMRP 93 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>11. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Ru 3: Architectural Coatings).</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>Sustainability Plan implementation in progress. Item is addressed in Sustainability Matrix Mandatory Item 107. Painting continued at Milpitas, and Berryessa stations 1Q 2018, using low VOC paints.</td>
</tr>
<tr>
<td>MMRP 94 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>12. Requiring that all construction equipment, diesel trucks, and generators be equipped with the Best Available Control Technology for emission reductions of NOx and PM.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP73 and MMRP32 Visual confirmation continued during 1Q 2018</td>
</tr>
<tr>
<td>MMRP 95 Construction Emissions</td>
<td>SEIR-2</td>
<td>AQ-21</td>
<td>13. Requiring all contractors use equipment that meets CARB’s most recent certification standard for off-road heavy duty diesel engines.</td>
<td>C</td>
<td>Contractor</td>
<td>The SVBX C700 RFP includes these mitigations in the specifications Section 01 35 70, Environmental Requirements.</td>
<td>see MMRP73 and MMRP32 Visual confirmation continued during 1Q 2018</td>
</tr>
</tbody>
</table>
Preconstruction Survey for Swallow / Migratory Bird Nesting. If construction activities are scheduled to occur during the nesting season of swallows and other migratory birds (generally March through August), a pre-construction survey for nesting activity will be conducted prior to commencement of construction. If no nesting swallows are found, then no further mitigation is warranted.

Preconstruction Survey for Roosting Bats. A qualified biologist will conduct pre-construction surveys in suitable habitat to determine the presence of roosting bats. If no roosting bats are found, then no further mitigation is warranted.

Modified Construction Activity Near Roosting Bats. If it is determined that bats are roosting beneath a bridge, in a building, or in adjacent riparian habitat, then appropriate modifications to construction time and method will be implemented in accordance with CDFG approval. Modifications may include timing construction activities to avoid breeding periods, establishment of buffers, or biological monitoring. In some cases bats may be actively encouraged to avoid roosting in the area affected prior to the onset of construction activities.

Avoidance of Construction Impacts to Aquatic / Riparian Habitat. To the maximum extent practicable throughout the project site, construction activities and facilities, including pilings and bridge footings, will be located outside of aquatic/riparian habitat, including installation of temporary stream diversion structures, will be restricted to the dry season, which generally extends from June 1 to October 15 depending on the species present. In some cases, construction may begin earlier than June 15 or continue past October 15, as specified in regulatory agency permits and agreements or any authorized extensions.

Fish-Friendly Channel Design Guidelines. Installation of falsework and stream diversions required in the course of bridge construction will be consistent with VTA’s Fish-Friendly Channel Design Guidelines to minimize effects to migrating anadromous fish and other in-stream species. These guidelines address concerns related to a number of issues including high-water velocities, jumps to channelized inlets or outlets, water depths, and resting pools.

California Red-Legged Frogs and California Tiger Salamanders – Water Quality Effects. The following recommendations by CDFG will be followed to address water quality affects:

- Construction within the channels that cross the alignment of the selected alternative, including installation of temporary stream diversion structures, will be restricted to the dry season, which generally extends from June 1 to October 15 depending on the species present. In some cases, construction may begin earlier than June 15 or continue past October 15, as specified in regulatory agency permits and agreements or any authorized extensions.

- No equipment will be operated in the live stream channel.

- When work in a flowing stream is unavoidable, any stream flow will be diverted around the work area by a barrier, temporary culvert, or a new channel capable of permitting upstream and downstream fish movement.

- Construction of the barrier or the new channel normally will begin in the downstream area, the SVBX stream diversion must be pumped around the work area. Fish friendly practices, such as fish screens and removal of trapped fish will be employed during construction.
| MMRP103 | Biological resources - California red-legged frog | FEIS | CNST-BO-16 | BIO-1 | P-MND | 4Q2017 | Assistance: Minimized Take of California Red-Legged Fros and California Tiger Salamanders. The following mitigation measures will be followed to avoid or minimize take.

- A qualified biologist will conduct pre-construction surveys for red-legged frogs and tiger salamanders within the vicinity of the project site no earlier than 2 days before ground-disturbing activities. The survey area will include 300 feet upstream and downstream from the project site.
- No activities will occur in suitable red-legged frog or tiger salamander habitat after October 15 or the onset of the rainy season, whichever occurs first, until May 1 except for during periods greater than 72 hours without precipitation. Activities can only resume after the 72 hours have elapsed.
- No construction activity will occur after the occurrence of a front that results in depositing 0.25 inches or more precipitation in one event.
- Construction activity within 200 feet of top of bank of Upper Penitencia Creek and Coyote Creek is restricted to the period between June 1 and October 15. Work in and adjacent to the site is prohibited during periods greater than 72 hours without precipitation defined [for purposes of this mitigation measure] as: a frontal system that results in depositing 0.25 inches or more precipitation in one event. Spill prevention and countermeasure plans shall also be implemented.

| MMRP103 | Biological resources - Western pond turtle | FEIS | CNST-BO-16 | BIO-17 | P-MND | 4Q2017 | Preconstruction Survey for Western Pond Turtles. A qualified biologist will conduct a pre-construction survey for western pond turtles in all suitable aquatic habitats. The survey area will include 300 feet upstream and downstream from the project site. This survey will be conducted no more than 24 hours prior to the onset of in-water construction activities. If individual pond turtles are located, they will be captured by a qualified biologist and relocated to the nearest suitable habitat upstream or downstream of the project site. If individuals are relocated, then the contractor will install barrier fencing along each side of the work area to prevent individual turtles from re-entering the water area. In the event barrier fencing is installed, the qualified biologist will conduct relocation surveys for three consecutive days to ensure that all animals are removed from the disturbance area.

| MMRP104 | Biological resources - general | FEIS | CNST-BO-10 | BIO-10 | P-MND | 3Q 2012 | Construction phase mitigation measures will be included in a Mitigation Monitoring and Reporting Program that will be incorporated in the project's plans and specifications. Furthermore, USFWS, National Oceanic and Atmospheric Administration (NOAA), Fisheries, ACOE, and CDFG will be consulted regarding potential impacts and appropriate construction phase mitigation measures.

| MMRP105 | Biological resources - general | SEIR-2 | CNST-BO-10 | BIO-11 | 3Q 2011 | Construction workers will be educated regarding the sensitive plant and wildlife species in the project vicinity, including methods to avoid or minimize impacts to biological resources.

| MMRP106 | Biological resources - Water education | SEIR-2 | CNST-BO-10 | BIO-12 | 4Q 2017 | REAP Training takes place on an as-needed basis for any new SSH-JV employees, subcontractors, and anyone needing refresher training.
<table>
<thead>
<tr>
<th>MMRP050</th>
<th>Biological resources - Special status plant species</th>
<th>SER1-2</th>
<th>CNST-2011</th>
<th>1Q 2018</th>
<th>VTA</th>
<th>COMPLETE</th>
<th>D</th>
<th>3Q 2011</th>
<th>Refer to MMRP (B-1a) and MMRP (B-1f) for monitoring and MMRP (B-1h) for mowing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-construction surveys for Congdon's tarplant will be conducted during the June to November flowering periods. Any identified areas will be marked as ESAs and protected with orange fencing until after seed-set to prevent accidental invasion by construction workers/equipment. Coordination of specific compensatory mitigation measures will be carried out with CDFG to address any unavoidable impacts.</td>
<td>VTA</td>
<td>COMPLETE</td>
<td>3Q 2011</td>
<td>Refer to MMRP (B-1a) and MMRP (B-1f) for monitoring and MMRP (B-1h) for mowing</td>
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<td>VTA will also mitigate in accordance with the California Native Plant Society's recommended measures for mitigating adverse effects to Congdon's tarplant, as follows:</td>
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<td>- To replace plants, seeds from plants within the affected area will be collected and stored during the month of August or September prior to construction beginning. As the blooming period lasts until November, the effect of pruning flowering heads to obtain seed will allow the plant to repeat flower and seed production before the end of the blooming period and thereby avoid or lessen a temporal loss before project work and reseeding occurs.</td>
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<td>- The seed will be applied as a component of the revegetation mix within the affected area for any temporary effects and within a proposed replacement area for permanent effects. The replacement area will be determined in consultation with resource agency personnel. Replanting should be accomplished by hydro seeding prior to the start of the rainy season in areas.</td>
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<td>- The success of the revegetation will be monitored during the blooming period in the year following revegetation. The criteria for measuring success will be that the species is found to be occurring throughout the revegetated areas.</td>
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<td>- If avoidance is not feasible, a focused botanical survey will be conducted by a qualified plant biologist to ascertain the presence or absence of the species in the vicinity of selected alternative during the blooming period (August) that occur prior to the construction.</td>
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<tr>
<td>MMRP113</td>
<td>Biological Resources – California red-legged frog</td>
<td>SEIR-2</td>
<td>CNST- BIO-18</td>
<td>P-MNC</td>
<td>Pre-construction surveys will be conducted for California red-legged frogs prior to any construction activities occurring at Guadalupe River, Coyote Creek, Upper Penitencia Creek and Lower Silver Creek. C VTA The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>4Q 2017</td>
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<tr>
<td>MMRP114</td>
<td>Biological Resources – southwestern pond turtle</td>
<td>SEIR-2</td>
<td>CNST- BIO-18</td>
<td>P-MNC</td>
<td>Pre-construction surveys will be conducted for southwestern pond turtles prior to any construction activities occurring at Guadalupe River, Coyote Creek, Upper Penitencia Creek and Lower Silver Creek. C VTA The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>2Q 2011</td>
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<tr>
<td>MMRP115</td>
<td>Biological Resources – southwestern pond turtle</td>
<td>SEIR-2</td>
<td>CNST- BIO-21</td>
<td>P-MNC</td>
<td>A qualified biologist will relocate southwestern pond turtles encountered from the work area and exclusionary fencing will be installed to prevent southwestern pond turtles from re-entering the work area. C VTA for preconstruction survey and fence relocation, Contractor for fencing The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>2Q 2011</td>
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<tr>
<td>MMRP116</td>
<td>Biological Resources - Burrowing Owls</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Pre-construction surveys for suitable habitat within 300 feet of construction areas (access permitting) will be conducted per California Department of Fish and Game (CDFG) guidelines to identify occupied burrows within 30 days prior to construction to determine the need for burrowing owl avoidance. If construction is delayed or suspended for more than 30 days after the precon construction survey, the site will be scoured. If no burrowing owls are found, then no further mitigation is warranted. If burrowing owls are found, additional mitigation will be implemented, as described in mitigation measures CNST-BIO-23 through CNST-BIO-28. C VTA The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP117</td>
<td>Biological Resources - Burrowing Owls</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Assistance of Burrowing Owl Surveys. If electronic or visual surveys determine that there is an occupied burrow in the vicinity, the preferred method of addressing potential adverse effects/impacts is to avoid disturbance. Assistance measures include establishment of a “no disturbance” construction-free buffer zone within 30 meters (approximately 105 feet) of all occupied burrows during the breeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the non-breeding season (February 1 through August 31). C Contractor The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP118</td>
<td>Biological Resources - Burrowing Owls</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Avoidance of Burrowing Owl Burrows. A qualified biologist, in consultation with CDFG, will assess burrowing owl habitat and implement avoidance of occupied burrows. If construction is delayed or suspended for more than 30 days after the preconstruction survey, the site will be scoured. If no burrowing owls are found, then no further mitigation is warranted. If burrowing owls are found, additional mitigation will be implemented, as described in mitigation measures CNST-BIO-23 through CNST-BIO-28. C VTA The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP119</td>
<td>Biological Resources - Burrowing Owls</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Burrowing Owl Habitat Conservation. If destruction of occupied burrows is unavoidable, the loss of foraging, nesting, and roosting habitat will be mitigated through placement of 6.5 acres of appropriate area to be disturbed by these activities. The surveys will be conducted no more than 14 days prior to the initiation of construction activities during the critical habitats preservation period (October 1 through March 31), or within 30 days after the initiation of construction activities during the non-breeding season (February 1 through August 31). C Contractor The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP120</td>
<td>Biological Resources - Nesting Raptors</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Avoidance of Nesting Season. To the extent feasible, construction activities, including tree and shrub removal, will be scheduled between September and December to avoid the nesting season for most raptors, as well as other bird species. C Contractor The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP121</td>
<td>Biological Resources - Nesting Raptors</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Pre-construction survey for nesting raptors. Pre-construction surveys for nesting raptors will be conducted by a qualified ornithologist during the nesting season (January through August) to ensure that no raptor nests will be disturbed during construction. The surveys will be conducted no more than 14 days prior to the initiation of construction activities during the early part of the nesting season (January through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). C VTA for buffer establishment, Contractor for fencing and avoiding area The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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<tr>
<td>MMRP122</td>
<td>Biological Resources - Nesting Raptors</td>
<td>SEIR-2</td>
<td>CNST- BIO-14</td>
<td>NP-VTA</td>
<td>Rapid Nest Buffer Zones. If active raptor nests are found close enough to the construction area to be disturbed by these activities, the ornithologist, in consultation with CDFG, will determine the extent of a construction-free buffer area, typically 200 feet, to be established around the nest until the chicks have fledged. C VTA for buffer establishment, Contractor for fencing and avoiding area The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements. COMPLETE</td>
<td>3Q 2012</td>
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</table>
Pre-construction surveys will be conducted for nesting swallows under bridge structures in riparian habitat located within the project area during the nesting season (generally March through August).

A survey was done on January 30th, 2018 for swallows on the BAS prior to the construction activities. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements.

A combination of avoidance, installation of exclusion devices, and monitoring will be implemented to assure protection of migratory birds and non-game mammals.

A comprehensive construction noise and vibration specification will be incorporated into all construction bid documents. The existence and importance of noise and vibration control specifications will be emphasized at pre-bid and pre-construction conferences.

Construction activities will be delayed within specified distances from occupied swallow nests if it is determined that construction would disrupt nesting behavior and until swallows are no longer nesting or the fledglings are self-sufficient.

A combination of avoidance, installation of exclusion devices, and monitoring will be implemented to assure protection of migratory birds and non-game mammals.

Implementation of the Contractor’s Contaminant Management and Design Plan approved by the RWQCB on October 21, 2008 and mitigation measures included in the Plan will be implemented during construction. The mitigation measures detail requirements for the management for soil and railroad ballast, groundwater as part of dewatering activities, and building materials. The Plan is included in Appendix 1 of the ES. Effects would not be substantial with the three mitigation measures incorporated; VTA shall ensure that mitigation measures identified in the Contaminant Management Plan are implemented during the construction of Phase 1.

The SVBX C700 RFP includes this mitigation in the specifications Section 01 74 25, Contaminant Management, and 01 35 29, Hazardous Materials Accident Prevention. Implementation of the Contractor’s Contaminant Management and Design Plan approved by the RWQCB on October 21, 2008 and mitigation measures included in the Plan will be implemented during construction. The SVBX C700 RFP includes this mitigation in the specifications Section 01 74 25, Contaminant Management, and 01 35 29, Hazardous Materials Accident Prevention.

The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements and Section 01 35 74 Sustainability Plan, as well as Section 01 74 21 Waste Management.

A survey was done on January 30th, 2018 for swallows on the BAS prior to the construction activities. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements.

A comprehensive construction noise and vibration specification will be incorporated into all construction bid documents. The existence and importance of noise and vibration control specifications will be emphasized at pre-bid and pre-construction conferences.

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A comprehensive construction noise and vibration specification will be incorporated into all construction bid documents. The existence and importance of noise and vibration control specifications will be emphasized at pre-bid and pre-construction conferences.

A comprehensiv
Temporary noise barriers or noise control curtains will be constructed in areas between noisy construction activity and sensitive receptors. Temporary noise barriers can reduce construction noise by 5 to 15 dB, depending on the height of the barrier and the placement of the barrier. To be most effective, the barrier will be placed as close as possible to the noise source or receptor. Temporary barriers tend to be particularly effective because they can be easily moved as work progresses to optimize performance. If temporary noise barriers and site noise do not result in compliance with the noise limit, retrofitting existing windows and doors with new acoustically rated units may be considered for the residential structures.

Temporary noise barriers or noise control curtains will be constructed in areas between noisy construction activity and sensitive receptors. Temporary noise barriers can reduce construction noise by 5 to 15 dB, depending on the height of the barrier and the placement of the barrier. To be most effective, the barrier will be placed as close as possible to the noise source or receptor. Temporary barriers tend to be particularly effective because they can be easily moved as work progresses to optimize performance. If temporary noise barriers and site noise do not result in compliance with the noise limit, retrofitting existing windows and doors with new acoustically rated units may be considered for the residential structures.

When feasible, the following equipment will be used: electric powered equipment instead of diesel-powered equipment, hydraulic tools instead of pneumatic impact tools and electric driven saws instead of air- or gasoline driven saws. When feasible, portable hand held electric generators are used as practicable.

Local jurisdiction construction time periods will be adhered to, to the extent feasible, recognizing that nighttime and weekend construction may be necessary and/or preferred by the local jurisdictions to reduce other related environmental effects such as traffic. Note that local jurisdictions typically prohibit construction operations between the hours of 7:00 PM and 7:00 AM. VTA will work with the local jurisdictions and the affected property owners to determine if the daily working hours may be extended until 9:00 or 10:00 pm without severely affecting the nearby residents.

The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements.

Open equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near residential areas during the nighttime hours. Operate equipment so as to minimize banging, clattering, buzzing, and other annoying types of noises, especially near residential areas during the nighttime hours.

Line or cover hoppers, conveyor transfer points, storage bins, and chutes with sound-deadening material. Line or cover hoppers, conveyor transfer points, storage bins, and chutes with sound-deadening material.

Line haul truck beds with rubber or sand to reduce noise, if needed and requested by the Resident Engineer. Line haul truck beds with rubber or sand to reduce noise, if needed and requested by the Resident Engineer.

Construction-related truck traffic, will be routed along roadways that would cause the least disturbance to residents. Loading and unloading zones will be laid out to minimize truck idling near sensitive receptors and to minimize truck reversing so back-up alarms do not affect residences.

Construction-related truck traffic, will be routed along roadways that would cause the least disturbance to residents. Loading and unloading zones will be laid out to minimize truck idling near sensitive receptors and to minimize truck reversing so back-up alarms do not affect residences.

At nighttime and weekends, use strobe warning lights and/or back-up observers during any back-up operations, where permitted by the local jurisdiction.

At nighttime and weekends, use strobe warning lights and/or back-up observers during any back-up operations, where permitted by the local jurisdiction.

Use back-up warning that are more intrusive in noise sensitive areas.

Seal and/or concrete plates over excavated holes and trenches will be secured to reduce rolling noise when vehicles pass over. Use of floor plates, steel beams beneath the plates, and rubber gaskets between the beams and plates will also reduce rolling noise.

Seal and/or concrete plates over excavated holes and trenches will be secured to reduce rolling noise when vehicles pass over. Use of floor plates, steel beams beneath the plates, and rubber gaskets between the beams and plates will also reduce rolling noise.

The contractor is required to use the best available practices to reduce the potential for excessive noise and vibration from construction activities. This may require the use of equipment with special exhaust silencers, construction of temporary enclosures or noise barriers around activities, and tracks for the tracked vehicles to be in good condition.
The contractor is required to perform preconstruction ambient noise measurements at or near representative aboveground noise-sensitive locations along the line portion of the alignment (Warm Springs to east end of the line) and at the seven street crossings during at-grade utilities modifications and at the three new bridge locations. These measurements will be performed continuously over a minimum of 10 days at the representative above locations. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls.

The contractor is required to perform a 30-minute Leq noise sampling at representative noise-sensitive locations within 250 feet of the construction at least once each week and after a change in construction activity or construction location. The measurements will be performed on both sides of the alignment. If required, additional noise monitoring(s) may be added by the Resident Engineer to address any specific situation and concern. Additional noise measurements will be performed during daytime and nighttime construction activities and concern. Additional noise measurement(s) may be added by the Resident Engineer to address any specific situation and concern. Additional noise measurements will be performed during daytime and nighttime construction activities. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls. See MMRP151

The contractor is required to perform preconstruction ambient noise measurements over a minimum of 10 days at the construction staging areas that include the east and west tunnel portal locations (Mabury Road/U.S. 101 construction staging area), station areas, and at the gap breaker station sites. This will serve to document the noise environment just prior to start of construction. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls.

The contractor is required to submit to the VTA a Noise Control Plan and a Noise Monitoring Plan, prepared by a qualified Acoustical Engineer. The qualifications and activities of the Acoustical Engineer will be subject to approval of the VTA. The Noise Control Plan will outline the equipment and procedures used by the contractor to perform noise measurements, and to identify noise sensitive structures in the immediate vicinity of construction operations, including details regarding the noise measurement locations. The results of noise monitoring will be documented and reported. In the event that levels exceed allowable limits, the VTA will ensure that contractually required corrective measures are implemented. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls. See MMRP151.

The contractor is required to not operate noise generating equipment at the construction site prior to acceptance of the Noise Monitoring Plan and the Noise Control Plan. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls. See MMRP151.

The minimum qualifications for the Acoustical Engineer will be a Bachelor of Science or Engineering degree, from a qualified program in engineering or physics offered by an accredited university or college, and five years in noise control engineering and construction noise analysis. The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls. See MMRP151.
### Noise/Vibration

<table>
<thead>
<tr>
<th>#</th>
<th>Description</th>
<th>Equipment Type and Typical Lmax Sound Level at 50 ft dBA</th>
<th>C</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major equipment to be used at the surface of the construction site for a total duration greater than five days will be pre-certified by the Acoustical Engineer during field measurements at a test site or guaranteed by the equipment vendor to meet the noise limits developed for construction equipment as shown below.</td>
<td>Excavators: 82</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Welding equipment: 73</td>
<td>C</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Compressors: 77</td>
<td>C</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concrete pumps: 77</td>
<td>C</td>
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</tr>
<tr>
<td></td>
<td></td>
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</tr>
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<td></td>
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<td></td>
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<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air compressors: 70a</td>
<td>C</td>
<td>Contractor</td>
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<td></td>
<td></td>
<td>Welding equipment: 73</td>
<td>C</td>
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<tr>
<td></td>
<td></td>
<td>Assumed acoustically treated</td>
<td>C</td>
<td>Contractor</td>
</tr>
</tbody>
</table>

**Note:**
- The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls.

**Impact pile driving** will be avoided near vibration-sensitive areas where possible. Drilled piles or the use of a sonic or vibratory pile driver, or other “quiet piling” techniques are quieter alternatives and may be used where geological conditions permit.

**Visual screening** will be erected at construction sites, as appropriate.

### Specifications

<table>
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**Note:**
- The SVBX C700 RFP includes this mitigation in the specifications Section 01 35 70, Environmental Requirements, and Section 01 57 00, Temporary Controls.

**Visual screening** will be erected at construction sites, as appropriate.
Transportation and Transit

1. All transportation and transit mitigation measures from the FEIR have been replaced with mitigation measures in the SEIR.

**MMRP159 Milpitas Station - Traffic**

FEIS & SEIR-2

TR-1 Great Mall Parkway and Montague Expressway - There are no other cost effective feasible improvements that can be made at this intersection beyond those identified under the 2030 No Build conditions. The necessary improvement to mitigate the Project's adverse effect at this intersection would require grade separation of the intersection. It should be noted that the grade separation of this intersection is included in the Valley Transportation Plan 2030 (VTP 2030) project list. However, this improvement was not included as part of the year 2030 roadway network since it was not included in the VTA 2030 (SVRTC) traffic model used for this analysis. Thus, as a conservative approach and in order to analyze the worst case scenario, this improvement was not considered to be implemented by the year 2030. Although the Project would adversely affect this intersection, grade separation of this intersection was identified as the needed improvement under 2030 No Build conditions. Therefore, since the Project would contribute to the need for grade separation of the Great Mall/Montague intersection, the Project will contribute a "fair share" amount toward the implementation of this improvement.

D VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

Based on the revised 2013 Traffic Impact Analysis, the project no longer adversely impacts this intersection; therefore, no mitigation is warranted.

**MMRP160 Milpitas Station - Traffic**

FEIS & SEIR-2

TR-2 Milpitas Boulevard and Montague Expressway - Possible improvements include a second westbound left-turn lane. Though intersection operations would slightly improve, the Project's adverse affect to this intersection would not be mitigated. Due to the relatively high projected volumes, there are no feasible grade improvements to mitigate adverse effects at this intersection. Because the Project would contribute to traffic congestion at this intersection, the Project will contribute a 'fair share' amount toward the implementation of this traffic improvement. Should a feasible improvement be determined, a 'fair share' contribution will be evaluated at that time.

D VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

**MMRP161 Milpitas Station - Traffic**

FEIS & SEIR-2

TR-3 Park Victoria Drive and Yosemite Drive - The necessary improvement to mitigate the Project's adverse affect to this intersection consists of the addition of a second northbound left-turn lane. The implementation of this improvement would improve intersection level of service to an acceptable Level of Service (LOS) D during the AM peak hour. It should be noted that changes to the signal timing at this location to accommodate future traffic volumes may improve intersection levels of operation without physical improvements. Since Phase 1 would contribute to the need for improvements at this intersection, Phase 1 would contribute a "fair share" amount toward the implementation of the traffic improvement.

D VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

Based on the revised 2013 Traffic Impact Analysis, the project no longer adversely impacts this intersection; therefore, no mitigation is warranted.

**MMRP162 Milpitas Station - Traffic**

FEIS & SEIR-2

TR-4 Old Oakland/Main Street and Montague Expressway - There are no further feasible improvements beyond the planned Montague widening assumed under No Action conditions (i.e. those identified under the 2030 No Project conditions) that can be implemented to improve intersection levels of service to acceptable levels. Because the project would contribute to traffic congestion at this intersection, the project will contribute a 'fair share' amount toward the implementation of the identified traffic improvement under 2030 No Action conditions. Should a feasible improvement be determined, a 'fair share' contribution will be evaluated at that time.

D VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

**MMRP163 Milpitas Station - Traffic**

FEIS & SEIR-3

TR-5 Trade Zone Boulevard and Montague Expressway - There are no other feasible improvements beyond the planned Montague widening assumed under No Action conditions (i.e., those identified under the 2030 No Project conditions) that can be implemented to improve intersection levels of service to acceptable levels. Because the project would contribute to traffic congestion at this intersection, the project will contribute a 'fair share' amount toward the implementation of the identified traffic improvement under 2030 No Action conditions. Should a feasible improvement be determined, a 'fair share' contribution will be evaluated at that time.

D VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

**Notes:**

- MMRP: Mitigation Measure Reference Number
- Milpitas Station: Location of mitigation measure
- Traffic: Type of mitigation measure
- FEIS & SEIR: Document type
- TR: Table row
- 1Q 2018: Time period
- VTA: Agency responsible for implementing mitigation measures
- Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.
<table>
<thead>
<tr>
<th>MMRP165 Berryessa Station - Traffic</th>
<th>FEIS &amp; SEIR-2</th>
<th>Q1-6</th>
<th>Berryessa Station - Traffic: There are no cost-effective feasible improvements that can be made beyond those described for 2030 No Build conditions to mitigate Project's adverse effects. The necessary improvement to mitigate the adverse effect at this intersection to an acceptable level consists of the addition of a second westbound left-turn lane. The implementation of this improvement would improve intersection level of service to an acceptable LOS D.</th>
<th>D</th>
<th>VTA</th>
<th>Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.</th>
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</table>
**Berryessa Station - Traffic**

### MMRP172

Capital Expressway and Capitol Avenue - There are no cost effective feasible improvements that can be made beyond those described for 2030 No Build conditions to mitigate the Project's adverse effects. With the newly constructed Capitol LRT line, Capitol Avenue has been upgraded to its extent to allow for the operation of the LRT in its median. Further improvement of the intersection would not be compatible with LRT operations. VTA proposes that the intersection be added to the city's list of Protected Intersections and adhere to the Protected Intersection Policy. The LOS policy specifies that Protected Intersections consist of locations that have been built to their planned maximum capacity and where expansion of the intersection would have an adverse effect upon other transportation facilities (such as pedestrian, bicycle, and transit systems). If a project has significant traffic impacts at a designated Protected Intersection, the project should provide offsetting Transportation System Improvements that enhance pedestrian, bicycle and transit facilities to the community near the Protected Intersection. VTA will comply with the Protected Intersection Policy as required including providing fair-share funding (amount to be negotiated) towards the construction of identified offsetting improvements.

**D**

VTA Off-site traffic mitigation design to be included in C720 Station Campus Design specifications and plan sheets.

Based on the revised 2013 Traffic Impact Analysis, the project no longer adversely impacts this intersection; therefore, no mitigation is warranted.

**MITIGATION N/A**

### MMRP173

**Groundborne noise along the tunnel alignment**

**SEIR-1 NV-6**

For residences and other sensitive uses impacted by groundborne noise along the tunnel alignment, mitigation includes approximately 5,500 linear feet of highly resilient direct fixation rail fasteners and 10,500 linear feet of rail suspension fasteners (RSF) to reduce groundborne noise impacts to meet FTA criteria.

**N/A for SVBX, Applies to SVRT Tunnel.**

**N/A for SVBX, Applies to BSV / Tunnel.**

### MMRP174

**Noise - noise measurements**

**SEIR-1 C-53**

The contractor will perform pre-construction ambient noise measurements at the construction staging areas that include the east and west tunnel portal locations (Mabury Road and US 101 CSA and I-880 CSA, respectively), at the station and vent shaft areas, and at the gap breaker station sites. This will serve to document the noise environment just prior to start of construction. These measurements will be performed over a minimum of ten days, except at the gap breaker sites, where measurements will be conducted for four days.

**N/A for SVBX - Applies to SVRT Tunnel.**

**N/A for SVBX, Applies to BSV / Tunnel.**

### MMRP175

**Noise at Dixon Landing Road**

**SEIR-1 NV-3**

For residences impacted by noise by the at grade alignment at Dixon Landing Road, approximately 720 linear feet of 7- to 8-foot-high sound walls and noise insulation for the second level and higher floors will be required to reduce noise impacts to meet FTA criteria.

**N/A - the Dixon Landing Road BART in Retained Cut Option was selected.**

### MMRP176

**Vibration at Dixon Landing Road**

**SEIR-1 NV-9**

For residences impacted by vibration by the at grade alignment at Dixon Landing Road, approximately 560 feet of floating slab track with a design frequency of 8 Hz and 2,230 linear feet of tire-derived aggregate, or equivalent measures, will be required to reduce vibration impacts to meet FTA criteria.

**N/A - the Dixon Landing Road BART in Retained Cut Option was selected.**

*Note: Responsibility assignments are preliminary based on the C700 contract and are to be customized for each contract.*