Chapter 1
Executive Summary

Section 1.1 Prior Environmental Documentation

The federal and state environmental process for the approved project was initiated in September 2001 with the publication of a Notice of Intent to prepare an Environmental Impact Statement (EIS) in the federal register and the filing of the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) with the State Clearinghouse. A Draft EIS/EIR was circulated in April 2004, but only a Final EIR was completed as a result of limited opportunities for securing federal funds.

In May 2005, the VTA Board of Directors certified the Final EIR (hereafter referred to as the "2005 Final EIR") and approved the Light Rail Alternative. As a result of preliminary engineering, the Light Rail Alternative was modified to address agency comments, improve operations, minimize right-of-way acquisition, and lower costs. To address these modifications, the VTA Board of Directors prepared and certified a Final Supplemental EIR (Final SEIR) and approved the modifications in August 2007 (hereafter referred to as the "2007 Final SEIR").

Due to unprecedented declines in revenues beginning in 2008, the implementation plan for the Light Rail Alternative was modified to construct the project in phases. An Addendum to the Final SEIR was approved in June 2010 that included the installation of pedestrian and bus improvements as Phase 1 and the extension of light rail along Capitol Expressway as Phase 2.

In addition to the state environmental process, VTA reinitiated the federal environmental process on September 9, 2009, with a Notice of Intent to prepare a Supplemental Draft EIS. The Supplemental Draft EIS was circulated on May 18, 2012, for 45 days with comments due on July 3, 2012. The federal environmental process under the National Environmental Policy Act (NEPA) was suspended in 2017 as a result of limited opportunities for securing federal funds.

A Subsequent Initial Study (IS)/Mitigated Negative Declaration (MND) was approved in March 2014 (hereafter referred to as the "2014 Subsequent IS/MND") that eliminated the

Ocala Station, eliminated sidewalk widening and sound wall relocation north of Ocala Avenue, and expanded the Eastridge Park-and-Ride lot.

This Second Supplemental EIR (SEIR-2) and the Second Subsequent IS (included in Attachment G of the SEIR-2 and discussed in Section 1.4, *Explanation for a Subsequent Initial Study and Second Supplemental EIR*) address changes to the project as well as incorporate changed circumstances and new information.

Section 1.2 Explanation for a Second Subsequent IS and Second Supplemental EIR

The California Environmental Quality Act (CEQA) recognizes that between the date projects are approved and the date they are constructed one or more of the following changes may occur: 1) the scope of the project may change, 2) the environmental setting in which the project is located may change, 3) certain environmental laws, regulations, or policies may change, and 4) previously unknown information can come to light. CEQA requires that lead agencies evaluate these changes to determine whether they are significant.

The mechanism for assessing the significance of these changes is found in CEQA Guidelines Sections 15162 to 15164. If the changes involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects, further environmental review (in the form of a Subsequent or Supplemental EIR or IS/MND) would be warranted per CEQA Guidelines Section 15162 and 15163. If the changes do not meet these criteria, then an Addendum is prepared to document a decision that no subsequent or supplemental review is required.

The proposed changes to the approved project would result in new or more significant environmental impacts compared to what was disclosed in the 2005 Final EIR, the 2007 Final SEIR, and the 2014 Subsequent IS/MND. Thus, it has been determined through the analysis in the Second Subsequent IS that a SEIR-2 should be prepared for the proposed changes to the approved project.

The Second Subsequent IS serves to focus the analysis in the SEIR-2 on changes to the environmental impacts identified in the prior environmental documentation that would result from the proposed changes to the approved project. As such, the potential transportation, environmental justice, noise and vibration, air quality and climate change, and construction impacts associated with the proposed changes to the approved project require analysis in the SEIR-2. Other environmental resource areas, where there are no impacts or where impacts can be mitigated to a less than significant level, are analyzed in the Second Subsequent IS. These resource areas analyzed in the Second Subsequent IS include Biological Resources, Community Services, Cultural Resources, Electromagnetic Fields, Energy, Geology/Soils/Seismicity, Hazardous Materials, Hydrology & Water Quality, Land Use, Safety & Security, Socioeconomics, Utilities, and Visual Quality. Thus, the SEIR-2 is focused on the potential for new significant impacts or a substantial increase in the severity of previously identified significant effects related to transportation, environmental justice, noise and vibration, air quality, and construction.

Section 1.3 Approved Project

The approved project would consist of the extension of light rail along Capitol Expressway between the existing Alum Rock Light Rail Station and Eastridge Transit Center, a distance of approximately 2.4 miles. Light rail would operate primarily in the median of Capitol Expressway within exclusive and semi-exclusive rights-of-way. To provide the additional right-of-way to accommodate light rail, high-occupancy vehicle lanes would be removed between Capitol Avenue and Tully Road. The alignment would include an elevated section that would extend north of Capitol Avenue to south of Story Road, and an elevated crossing of Tully Road. The approved project would include new light rail stations at Story Road (aerial) and Eastridge Transit Center (at-grade). At Eastridge Mall, the Park-and-Ride lot would be expanded to accommodate the project. The approved project would also include traction power substations at Ocala Avenue and Eastridge Transit Center. Five 115-kilovolt electrical transmission towers and two tubular steel poles would require relocation from the median of Capitol Expressway to the east side of Capitol Expressway in order to accommodate the approved project.

Section 1.4 Proposed Changes to the Approved Project

As discussed in more detail in Chapter 3, *Changes to the Approved Project, Changes in Circumstances, and Introduction of New Information*, VTA is proposing changes to certain elements of the approved project, including the:

- Extension of the aerial guideway to grade-separate the Ocala Avenue and Cunningham Avenue intersections
- Revisions to Capitol Expressway roadway lane configurations (including the conversion of the existing high-occupancy vehicle lanes to general purpose traffic lanes and maintaining eight lanes between Story Road and Capitol Avenue);
- Modifications to Eastridge Station platforms and track;
- Reduction in parking spaces at Eastridge Park-and-Ride lot;
- Minor shift in the location and straightening of the Story Station pedestrian overcrossing;
- Modification to Story Station pedestrian access;
- Relocation of a construction staging area;
- Relocation of Pacific Gas and Electric (PG&E) electrical transmission facilities; and
- Extension of construction duration and modification to the construction scenario.

Section 1.5 Project Ridership, Travel Time, Capital Costs and Funding, and Construction Schedule

The approved project with the proposed changes is anticipated to have 2,980 boardings in 2023 and 4,534 boardings in 2043. Travel time for the Light Rail Alternative between Alum Rock Station and Eastridge Transit Center is estimated to be 4.3 minutes. The capital cost of the approved project with the proposed changes is projected to be $453

million and will be funded by the 2000 Measure A, Regional Measure 3, and the Senate Bill 1 funds. Construction would begin in 2019 with utility relocation and end in 2024 or 2025 (depending on the construction methodology) with the beginning of revenue service.

Section 1.6 Summary of Environmental Impacts

Table 1-1 includes a summary of the significant environmental impacts resulting from the proposed changes to the approved project as compared to the 2005 Final EIR, 2007 Final SEIR, and 2014 Subsequent IS/MND. Table 1-1 also includes the mitigation measures to reduce the impacts and the level of significance if mitigation is reasonable and feasible.

Section 1.7 New and More Severe Significant and Unavoidable Impacts

In this SEIR-2, the following new significant and unavoidable impacts associated with the proposed changes to the approved project were identified:

Air Quality and Climate Change (Construction)

- **Cumulative air quality impacts during construction.** Cumulative PM2.5 concentrations would be elevated at the receptors located near the corners of Ocala Avenue and Capitol Expressway and Cunningham Avenue and Capitol Expressway due to substantial sources of pollutant concentrations that currently exist in the area where the approved project plus the proposed changes to the approved project would occur. Even without the contribution of emissions from construction, existing PM2.5 concentrations near these sensitive receptors are at or exceed the BAAQMD's threshold because Capitol Expressway and its cross streets are heavily traveled roadways, with residences located in close proximity to the roadway edge. The approved project plus the proposed changes to the approved project would cause further exceedances of existing pollutant concentrations, worsening the cumulative exposure of sensitive receptors to toxic air contaminant concentrations. Although the contribution of the approved project plus the proposed changes to the approved project to existing concentrations would not be substantial (approximately 6% at the locations where concentrations are at or exceed 0.8 µg/m^3), there would nevertheless be a worsening of an already cumulatively significant impact. The following mitigation measures identified in the 2005 Final EIR would still apply to the proposed changes to the approved project: AQ (CON)-1 (BAAQMD's BMPs to reduce particulate matter emissions from construction activities) and AQ (CON)-2 (BAAQMD's BMPs to reduce GHG emissions from construction equipment). Even with inclusion of these mitigation measures, this impact would be "Significant and Unavoidable."

Environmental Justice

- The proposed changes to the approved project would result in new disproportionate and adverse impacts or a substantial increase in the severity of previously identified disproportionate and adverse impacts related to environmental justice. Thus, this impact would be "Significant and Unavoidable."

In this SEIR-2, the following significant and unavoidable impacts with increased severity associated with the proposed changes were identified:

Transportation (Operation and Construction)

- **Capitol Expressway and Story Road intersection.** The proposed changes to the approved project would result in a significant impact under existing (2017), year 2023, and year 2043 conditions, caused by the removal of the high-occupancy vehicle (HOV) lanes and the addition of HOV lane traffic into the remaining mixed flow lanes. No feasible mitigation was identified for these impacts.

- **Capitol Expressway and Ocala Avenue intersection.** The proposed changes to the approved project would result in a significant impact at this intersection under existing (2017), year 2023, and year 2043 conditions, caused by the removal of the HOV lanes, the removal of a northbound left-turn lane on Capitol Expressway, and the addition of HOV lane traffic into the remaining mixed flow lanes. No feasible mitigation was identified for these impacts.

- **Transportation impacts during construction.** The proposed changes to the approved project would require lane reductions on Capitol Expressway during construction, which may cause study intersections to temporarily operate at LOS F, impacting passenger vehicles, buses, and trucks. The proposed changes to the approved project may also result in the temporary closures of bikeways, bus stops, and sidewalks in the corridor during construction. The duration, times, and locations of temporary closures during construction cannot be predicted with certainty.

Noise and Vibration (Operation and Construction)

- **Nighttime exceedance (10:00 pm to 7:00 am) of the FTA vibration levels from light rail operations at homes within 100 feet of the proposed aerial guideway.** The proposed aerial guideway (direct fixation fasteners) and ballasted track on embankment sections would cause an exceedance of the nighttime impact criteria at 73 sensitive receiver locations during light rail operations. VTA identified tire derived aggregate (TDA), 5-Hertz floating slab track (FST) or bridge bearing vibration isolation system, and speed reductions from 55 mph to 35 mph as potential mitigation measures. VTA is recommending to include TDA

on embankment sections to mitigate one impact. However, VTA is not recommending to include FST, bridge bearing vibration isolation, or implement nighttime speed restrictions to eliminate the other 72 impacts.

VTA is not recommending to include FST or bridge bearing isolation systems as mitigation for several reasons. Future vibration levels, which include a +3 VdB safety factor, are at or slightly above the nighttime vibration impact criteria at many impacted locations, and may not actually exceed the threshold in operation. Many impacted locations are up to 100 feet from the aerial guideway, which is much farther than the typical distance at which nighttime vibration impacts are experienced. Most of the impacts are anticipated to occur between 6:00 am and 7:00 am when VTA would be operating at peak service levels.

In addition, it is VTA's understanding that FST has not been installed on any aerial guideways in the United States and bridge bearing isolations have only been recently installed on one aerial structure in the United States. VTA is only aware of one example of FST installed on an aerial guideway: Hong Kong's KCRC West Rail and of one example of a bridge bearing vibration isolation system installed on an aerial structure at Miami Central Station, on the All Aboard Florida-Brightline network. Thus, additional analysis of the effectiveness of FST and bridge bearing isolation systems on aerial structures would be needed to confirm the level of vibration reduction that would be achieved.

VTA is not recommending to reduce train speeds from 55 mph to 35 mph between 10:00 pm and 7:00 am because it would negatively affect travel time and operations during these time periods.

By not including FST, bridge bearing vibration isolation systems, or speed reductions as mitigation measures, this impact would be "Significant and Unavoidable."

- **Daytime exceedance of the Federal Transit Administration (FTA) noise levels from pile driving activity at unobstructed homes and businesses that are within 300 feet of pile driving activity.** The noise impacts would have a duration of 8 to 15 days per sensitive receiver. Pile driving would exceed the construction noise impact criteria of 80 Leq at residences and 85 Leq at commercial properties at 156 sensitive receiver locations. With inclusion of impact cushions, pile driving would exceed the construction noise impact criteria at 135 sensitive receiver locations. With inclusion of impact cushions and pre-drilling, pile driving would exceed the construction noise impact criteria at 80 sensitive receiver locations. With inclusion of impact cushions and noise shields around the pile equipment, pile driving would exceed the construction noise impact criteria at 2 sensitive receiver locations. VTA is recommending to mitigate this impact with noise cushions and temporary noise barriers. Thus, even with inclusion of mitigation

measures, this impact would be "Significant and Unavoidable" at two sensitive receiver locations.

- **Homes within 100 feet of impact piling activity may exceed FTA construction vibration criteria.** There are 64 predicted unmitigated construction vibration impacts, and 0 impacts with the use of non-impact piling methods. However, VTA is not recommending the use of non-impact piling methods at any locations for a couple of reasons. Most locations are only slightly above the FTA Damage Criteria, and therefore may not experience any actual impacts due to the +3 VdB safety factor included to estimate construction vibration levels. At the locations with the highest construction vibration levels, structural damage is not anticipated to occur. Non-impact piling methods are not recommended at any locations. Thus, this impact would be "Significant and Unavoidable."

Section 1.8 New or Revised Mitigation Measures

In this SEIR-2 and the Second Supplemental IS, the following new or revised mitigation measures were identified:

The new or revised mitigation measures for Biological Resources can be found in Section 3.3 of the Second Subsequent IS, which is located in Volume III.

Mitigation Measure BIO-7: Conduct Preconstruction Surveys for Nesting and Wintering Western Burrowing Owls and Implement Measures to Avoid or Minimize Adverse Effects if Owls are Present

Preconstruction surveys for Western burrowing owls shall be conducted by a qualified ornithologist before any development within the habitat identified in Figure 3.3-1. These surveys, which shall include any potentially suitable habitat within 250 feet of construction areas, shall be conducted no more than 30 days before the start of site grading, regardless of the time of year in which grading occurs. If breeding owls are located on or immediately adjacent to the site, a construction-free buffer zone (typically 250 feet) around the active burrow must be established as determined by the ornithologist in consultation with CDFW. No activities, including grading or other construction work or relocation of owls, would proceed that may disturb breeding owls. If owls are resident within 250 feet of the Project Area during the nonbreeding season a qualified ornithologist, in consultation with CDFW, shall passively relocate (evict) the owls to avoid the loss of any individuals if the owls are close enough that they or their burrows could potentially be harmed by associated activities.

Mitigation Measure BIO-12: Conduct Preconstruction Surveys for Western Pond Turtles and Implement Measures to Avoid or Minimize Adverse Effects if Turtles are Present

Preconstruction surveys for western pond turtles shall be conducted by a qualified biologist just prior to (i.e., the day of) initiation of any construction in non-developed habitat that occurs within 100 feet of Thompson Creek. If any individual western pond turtles are detected within the project's impact areas, the individuals will be moved to suitable habitat within the nearest creek, at least 300 feet outside the project area.

Mitigation Measure BIO-14a: Conduct a Preconstruction Survey for Nesting Raptors and BIO -14b: Avoid Active Raptor Nests during the Nesting Season

Preconstruction surveys for nesting raptors will be conducted by a qualified ornithologist to ensure that no raptor nests will be disturbed during implementation of the light rail alternative. This survey shall be conducted within 48 hours of construction activity regardless of the timing of the breeding season. During this survey, the ornithologist would inspect all trees and suitable grassland habitat in and immediately adjacent to the affected areas for raptor nests. If the survey does not identify any nesting special-status raptor species in the area potentially affected by the proposed activity, no further mitigation is required.

Mitigation Measure BIO-15: Conduct Preconstruction Surveys for Nesting Migratory Birds

If construction activities are scheduled to occur during the migratory bird breeding season (February 1-August 31), a preconstruction survey for nesting migratory birds shall be conducted prior to commencement of construction activities. If an active nest is identified within the study area, construction activities will stop (only where a nest is located) until the young fledge or the nest is removed in accordance with CDFW approval.

The revised mitigation measures for Air Quality can be found in Section 5.4, Air Quality and Climate Change, and Section 5.5, Construction, of this SEIR-2, which is located in Volume I.

Mitigation Measure AQ (CON)-1

In accordance with the BAAQMD's current CEQA guidelines (2017), the project applicant shall implement the following BAAQMD-recommended basic control measures to reduce particulate matter emissions from construction activities. Additional control measures (including watering, washing, and other control measures) as detailed in the 2017 BAAQMD CEQA guidelines (see Additional Construction Mitigation Measures), would further reduce particulate matter emissions and should be implemented when feasible.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ (CON)-2

The project applicant will implement, to the extent feasible, the BAAQMD's BMPs to reduce GHG emissions from construction equipment. These BMPs are outlined in their 2010 CEQA Guidelines.

- Alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet;
- Local building materials of at least 10 percent; and
- Recycle at least 50 percent of construction waste or demolition materials.

The new or revised mitigation measures for Noise and Vibration can be found in Section 5.3, Noise and Vibration, and Chapter 5.5, Construction, of this SEIR-2, which is located in Volume I.

Mitigation Measure NV (CON)-2

A combination of the following measures should be considered if reasonable and feasible to reduce noise and vibration impacts from pile driving:

1. Noise Shield: A pile driving noise shield could be effective at reducing the pile driving noise by a minimum 5 dBA, depending on the size of the shield

and how well it surrounds the pile and hammer. A portable shield/barrier could be implemented to provide a nominal 10 dBA noise reduction.

2. Pre-Drilling Piles: Pre-drilling a portion of the hole may provide a means to reduce the duration of impact pile driving, and should be explored. Reducing the total impact time to an aggregate duration of no more than 2 hours per day will reduce the equivalent noise level by 6 dBA to a range of 80 to 90 dBA (L_{eq}) at a distance of 100ft.
3. Non-Impact Piles or Cast in Drilled Hole (CIDH) piles: Using the Soil-Mix or CIDH method would reduce the vibration below the FTA Criteria. This method is recommended for homes which would be within 75 ft of pile driving.
4. Reduced Impact Pile Driving Time: Limiting the hours per day of impact pile driving would reduce the equivalent noise level and would reduce potential work interference.
5. Excessive Vibration: If pile driving amplitudes exceed the building threshold criteria, cosmetic repair work may be required at nearby buildings. A detailed preconstruction crack survey will be conducted at homes and businesses where these criteria are expected to be exceeded. Vibration monitoring, crack monitors and photo documentation will be employed at these locations during pile driving activity.
6. Relocating Items on Shelves: Since items on shelves and walls may move during pile driving activity, nearby residents will be advised through the community outreach process that they should move fragile and precious items off of shelves and walls for the duration of the impact pile driving. Achievement of standards for building damage would not eliminate annoyance, since the vibration would still be quite perceptible.
7. Advance Notification (Work Interference): The impact pile driving vibration may cause interference with persons working at home or the office on their computers. Nearby residents and businesses will be advised in advance of times when piles would be driven, particularly piles within 160 ft of any occupied building, so that they may plan accordingly, if possible.
8. Notification of Pile Driving Schedule: Nearby residents and businesses will be notified of the expected pile driving schedule. In particular, these notifications should be made with home-bound residents, homes where there is day-time occupancy (e.g., work at home, stay-at-home parents) and offices/commercial businesses where extensive computer/video monitor work is conducted.
9. Hotel Accommodations: Residents at 660 South Capitol Avenue will be provided with hotel accommodations while pile driving activities occur adjacent to the residence.

Contractor Controls

In addition to the above list of specific noise and vibration control measures, the following are recommended for inclusion in the Contractor specifications for the Indicator and Production pile driving programs if reasonable and feasible:

- Comply with the equivalent noise levels (L_{eq}) limits specified on page 12-8 of FTA 2006 and a maximum noise level limits of 90 dBA (slow) or 125 dBC (fast) for residential buildings,
- Comply with the maximum vibration limits specified in Table 12-3 of FTA 2006,
- Perform a detailed survey and photo documentation prior to construction of all potentially affected wood-frame buildings within 135 ft of the piling activity,
- Coordinate and perform noise and vibration monitoring at a representative sampling of potentially affected buildings along the Project corridor,
- Install crack monitors where appropriate and provide photo documentation at all potentially affected buildings during pile driving activity and through construction,
- Community Notification and Involvement:
  - provide a minimum four-week advance notice of the start of piling operations to all affected receptors (e.g., internet, phone and fax), and regular, up-to-date communications. This includes education of the public on the expected noise and vibration,
  - provide a knowledgeable Community Liaison to respond to questions and complaints regarding pile driving noise and vibration, and
  - provide assistance as needed to nearby residents or offices who may require help relocating valuable items off shelves.

Mitigation Measure NV (CON)-1h: Use Impact Cushions

A suitable pile cap cushion could be effective at reducing the pile driving noise by up to 5 dB. The construction crew will initially use only burlap bags to reduce noise and then will also use the wood block when pile driving becomes more difficult**.**

Section 1.9 Areas of Controversy

VTA issued a NOP for the Draft SEIR-2 on May 29, 2018 and held a scoping meeting on June 14, 2018. Pursuant to CEQA Guidelines 15123, this SEIR-2 acknowledges the areas of controversy that are known to VTA and/or were raised during the scoping process for the SEIR-2. The six comment letters received on the scope and content of SEIR-2 are included in Attachment A of the SEIR-2.

Comments regarding environmental impacts focused on the following areas:

- Planned construction scope.
- Disruption to nearby schools.
- Contribution to traffic.
- Commission rules and regulations in regards to rail safety.
- Consultation with California Native American tribes.
- Driveways, parking, bicycle parking.
- Motor vehicle, bicycle, and pedestrian transportation design and circulation.
- Bicycle lane design and improvement.
- Bus stop improvements.
- Emergency access.
- Travel time analysis.
- Complete street design for the roadway.
- Coordination with the Tully Road Vision Zero Safety Improvement Project.
- Right-of-way.
- Access to stations for pedestrians, and bicycles.
- Providing closed-circuit televisions.

Table 1-1 Summary of Significant Environmental Impacts and Mitigation Measures

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
Transportation (SEIR-2)					
Impact TRN-2a (Traffic Impact at Capitol Expressway/ Story Road in 2018 (now 2023))	No mitigation is feasible	**Significant and Unavoidable**	**Significant and Unavoidable**	Less than Significant with Mitigation	**Significant and Unavoidable**
Impact TRN-2b (Traffic Impact at Capitol Expressway/Ocala Avenue in 2018 (now 2023))	No mitigation is feasible	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**
Impact TRN-2c (Traffic Impact at Capitol Expressway/ Tully Road in 2018 (now 2023))	Mitigation Measure TRN-2c (Maintain eight lanes on Capitol Expressway at Tully Road Intersection	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	Not evaluated
Impact TRN-8b (Traffic Impact at Capitol Expressway/ Story road in 2025 (now 2043))	No mitigation is feasible	**Significant and Unavoidable**	**Significant and Unavoidable**	N/A	**Significant and Unavoidable**
Impact TRN-8c (Traffic Impact at Capitol Expressway/ Ocala Avenue in 2025 (now 2043))	No mitigation is feasible	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	**2007 SEIR**	**2014 Subsequent IS/MND**	**SEIR-2 or Second Subsequent IS**
Impact TRN-8d (Traffic Impact at Capitol Expressway/Tully Road in 2025 (now 2043))	Mitigation Measure TRN-2c (Maintain eight lanes on Capitol Expressway at Tully Road Intersection)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	Not evaluated
Impact TRN (CON) -1 (Long-Term Street or Lane Closure)	Mitigation Measures TRN (CON)-2a (Prepare Traffic Management Plan), TRN (CON)-2b (Inform Public of Traffic Detours), and TRN (CON)-2c (Inform Public of Transit Service Changes)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	**Significant and Unavoidable**
Impact TRN (CON)-2 (Long-Term Loss of Parking or Access Essential for Business Operations)	Mitigation Measures TRN (CON)-2a (Prepare Traffic Management Plan), TRN (CON)-2b (Inform Public of Traffic Detours), and TRN (CON)-2c (Inform Public of Transit Service Changes)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Air Quality and Climate Change (SEIR-2)					
Impact AQ (CON)-1 (Temporary Increase in Construction-Related Emissions during Grading and Construction Activities)	Mitigation Measures AQ (CON)-1 (BAAQMD's BMPs to reduce particulate matter emissions from construction activities) and AQ (CON)-2 (BAAQMD's BMPs to reduce GHG emissions from construction equipment).	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Cumulative PM2.5 Concentrations During Construction	Mitigation Measures CON-1 (AQ) (BAAQMD's BMPs to reduce particulate matter	Not evaluated	Not evaluated	Not evaluated	Significant and Unavoidable

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
	emissions from construction activities) and CON-2 (AQ) (BAAQMD's BMPs to reduce GHG emissions from construction equipment)				
Biological Resources (Second Subsequent IS)					
Impact BIO-7 (Permanent Loss of Habitat and Disturbance to Species)	Mitigation Measure BIO-7 (Conduct Preconstruction Surveys for Western Burrowing Owls and Implement Measures to Avoid or Minimize Adverse Effects if Owls are Present)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact BIO-8 (Temporary Disturbance of Riparian Forest)	Mitigation Measures BIO-8a Conduct Preconstruction Surveys to Identify Environmentally Sensitive habitat areas) and BIO-8b (Compensate for Disturbed Riparian Forest)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	N/A
Impact BIO-10 (Temporary Degradation of Water Quality)	Mitigation Measure BIO-10 (Implement Water Quality Measures)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	N/A
Impact BIO-11 (Loss or Disturbance of California Red-Legged Frog Habitat)	Mitigation Measures BIO-11a (Avoid and Minimize Effects to California Red- Legged Frog) and BIO-11b (Compensate for Loss of Aquatic Habitat for California Red-Legged Frog)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	N/A
Impact BIO-12 (Permanent Loss of Aquatic Habitat,	Mitigation Measure BIO-12 (Conduct Preconstruction Surveys for and Implement	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
Temporary Disturbance of Riparian Habitat, and Temporary Disturbance of Southwestern Pond Turtle)	Measures to Avoid or Minimize Adverse Effects to Southwestern Pond Turtles if Present)				
Impact BIO-14 (Temporary Disturbance of Nesting Raptors)	Mitigation Measures BIO-14a (Conduct a Preconstruction Survey for Nesting Raptors) and BIO-14b (Avoid Active Raptor Nests)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact BIO-15 (Temporary Disturbance to Nesting Habitat for Migratory Birds)	Mitigation Measure BIO-15 (Conduct Preconstruction Surveys for Nesting Migratory Birds and Stop Construction until the Young have Fledged or the Nest is Removed in Accordance with CDFG)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact BIO-18 (Loss of Trees)	Mitigation Measure BIO-18a (Conduct a Tree Survey) and BIO-18b (Replace Trees)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Cultural Resources (Second Subsequent IS)					
Impact CR-5 (Direct or Indirect Impacts to an Archaeological Resource)	Mitigation Measure CR-5a (Develop and Implement a Historic Properties Treatment Plan Prior to Construction Activities)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	No Impact (with inclusion of standard practice procedures)
Energy (Second Subsequent IS)					
Impact E (CON)-1 (Consumption of Nonrenewable Energy	Mitigation Measure E (CON)-1 (Adopt Energy Conservation Measures)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
Resources in a Wasteful, Inefficient, and/or Unnecessary Manner from Project Construction)					
Environmental Justice (SEIR-2)					
Impact EJ-1 (Environmental Justice)	No mitigation is feasible	No Impact	Significant and Unavoidable	N/A	**Significant and Unavoidable**
Geology, Soils, and Seismicity (Second Subsequent IS)					
Impact GEO-4 (Risk Caused by Strong Seismic Ground Shaking)	Mitigation Measure GEO-4 (Incorporate Caltrans Seismic Design Criteria)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact GEO-5 (Risk Caused by Seismic-Related Ground Failure, Including Liquefaction)	Mitigation Measure GEO-5 (Incorporate Liquefaction Minimization Methods	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact GEO-6 (Risks from Lateral Spreading, Subsidence, and Collapse)	Mitigation Measure GEO-6 (Minimize Risk of Lateral Spreading, Subsidence, and Collapse)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact GEO-7 (Risk Caused by Expansive Soil)	Mitigation Measure GEO-7 (Minimize Risk of Soil Expansivity)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Hazardous Materials (Second Subsequent IS)					
Impact HAZ-9 (Hazard to the Public or Environment through Reasonable	Mitigation Measures HAZ-9a (Conduct Subsurface Investigations in Areas of the Corridor That May Be Underlain	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
Foreseeable Upset and Accident Conditions Caused by the Release of Hazardous Materials)	by Contaminated Soil or Groundwater) and HAZ-9b (Control Contamination Resulting from Previously Unidentified Hazardous Waste Materials)				
Impact HAZ (CON)-1 (Release of Hazardous materials into the Environment)	Mitigation Measures HAZ (CON)-1a (Conduct subsurface Investigations), HAZ (CON)-1b (Control Contamination), and HAZ (CON)-1c (Conduct Lead and Asbestos Surveys Prior to Building Demolition or Renovation),	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Hydrology and Water Quality (Second Subsequent IS)					
Impact HYD-11 (Violation of Water Quality Standards or Waste Discharge Requirements)	Mitigation Measure HYD-11 (Comply with Water Quality Control Regulations and Permit Programs)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A
Impact HYD-12 (Creation of Additional Runoff)	Mitigation Measure HYD-12 (Maintain Operational Water Quality)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	Less than Significant with Mitigation
Impact HYD-13 (Alterations in Existing Drainage Patterns)	Mitigation Measures HYD-11 (Comply with All Applicable Regulations and Subsequent Permit Programs Related to Water Quality Control) and HYD-14 (Construct Facilities to Minimize Flood Impacts)	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
Impact HYD-14 (Exposure to Flood Hazards)	Mitigation Measure HYD-14 (Minimize Flood Impacts)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A
Impact HYD (CON)-1 (Impair Water Quality)	Mitigation Measure HYD (CON)-1 (Implement Water Quality Control Measures)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact HYD (CON)-2 (Depletion of Groundwater Supplies)	Mitigation Measure HYD (CON)-2 (Use Non-Potable Water)	N/A	N/A	Less than Significant with Mitigation	Less than Significant with Mitigation
Noise and Vibration (SEIR-2)					
Impact NV-1 (Noise Levels from Transit Operations That Would Be Considered a Severe Impact by Federal Transit Administration Criteria)	Mitigation Measures NV-1a (Construct Soundwalls) and NV-1c (Provide Quiet Pavement)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact NV-4 (Vibration Levels in Buildings from Transit Operations That Exceed Federal Transit Administration Criteria)	No mitigation is recommended	Less than Significant with Mitigation	**Significant and Unavoidable**	Less than Significant with Mitigation	**Significant and Unavoidable**
Impact NV (CON)-1: (Generation of Noise or Vibration That Substantially Affects Nearby Sensitive Receptors) (Noise)	Mitigation Measures NV (CON)-1a (Notify Residents of Construction Activities), NV (CON)-1b (Construct Temporary Noise Barriers During Construction), NV (CON)-1c (Restrict Pile Driving), NV	Less than Significant with Mitigation	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	**2007 SEIR**	**2014 Subsequent IS/MND**	**SEIR-2 or Second Subsequent IS**
	(CON)-1d (Use Noise Suppression Devices), NV (CON)-1e (Locate Stationary Construction Equipment as Far as Possible from Sensitive Receptors), NV (CON)-1f (Reroute Construction-Related Truck Traffic), and NV (CON)-1g (Develop Construction Noise Mitigation Plan), NV (CON)-2, and NV (CON)-1h (Use Impact Cushions)				
Impact NV (CON)-1: (Generation of Noise or Vibration That Substantially Affects Nearby Sensitive Receptors) (Vibration)	Mitigation Measures NV (CON)-1a (Notify Residents of Construction Activities), NV (CON)-1c (Restrict Pile Driving), NV (CON)-1e (Locate Stationary Construction Equipment as Far as Possible from Sensitive Receptors), and NV (CON)-2	Less than Significant with Mitigation	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**
Safety and Security (Second Subsequent IS)					
Impact SS-3 (Pedestrian and/or Bicycle Safety Risks at Gated Crossings)	Mitigation Measure SS-3 (Incorporate Pedestrian Friendly Features)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	N/A
Impact SS-4 (Inadequate Lighting or Visual Obstructions at Park-and-Ride Lots)	Mitigation Measures SS-4a (Implement Measures to Deter Crime), SS-4b (Use Lighting, Cameras, and Security Patrols to Enhance Safety), and SS-4c (Define Fire and Life Safety	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	2007 SEIR	2014 Subsequent IS/MND	SEIR-2 or Second Subsequent IS
	Procedures and Develop Evacuation Plans)				
Impact SS (CON)-1 (Potential for Safety Risks during Construction)	Mitigation Measure SS (CON)-1 (Implement Construction BMPs to Protect Workers and the Public)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Socioeconomics (Second Subsequent IS)					
Impact SOC-16 (Displacement of Existing Businesses or Housing)	Mitigation Measures SOC-16a (Comply with Legislation for Acquisition and Relocation) and SOC-16b (Inform Residents and Businesses of Project Status)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Utilities (Second Subsequent IS)					
Impact UTL-3 (Require Construction of New Stormwater Drainage Facilities or Expansion of Existing Facilities)	Mitigation Measure HYD-14 (Maintain Operational Water Quality)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact UTL (CON)-1 (Disrupt a Utility Service for a Period of 24 Hours or More)	Mitigation Measure UTL (CON)-1 (Coordinate with Utility Service Providers Prior to Construction of Light Rail Facilities)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Visual Quality (Second Subsequent IS)					
Impact VQ (CON)-1 (Creation of a New Source of Substantial Light or Glare	Mitigation Measure VQ (CON)-1 (Direct Lighting toward Construction Areas)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation

Significant Impact[1]	Mitigation Measures	Level of Significance[2]			
		2005 Final EIR	**2007 SEIR**	**2014 Subsequent IS/MND**	**SEIR-2 or Second Subsequent IS**
Impact VQ-1 (Creation of Substantial Light or Glare)	Mitigation Measure VQ-1 (Minimize Light and Glare)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Impact VQ-3 (Degradation of Existing Visual Quality)	Mitigation Measures VQ-3 (Involve Public in Station Design) and VQ-4 (Incorporate Landscaping)	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation	Less than Significant with Mitigation
Construction (SEIR-2)					
See construction-related impacts in the resource areas identified above.					
Cumulative Effects (SEIR-2)					
See Transportation, Air Quality and Climate Change, Environmental Justice, and Noise and Vibration.					
Impact E-Cum-9 (Increase Demand on Electricity Transmission Infrastructure)	No mitigation is feasible	No Impact	**Significant and Unavoidable**	N/A	N/A
Impacts NV-Cum-2 (Generate Noise from Pile Driving) and NV-Cum-3 (Generate Vibration from Pile Driving)	Mitigation Measures NV-Cum-2 and NV-Cum-3 (Coordinate activities with other construction projects where feasible and reasonable)	No Impact	Less than Significant with Mitigation	N/A	N/A

Notes:

[1] If an impact is not listed in this table, the approved project and the proposed changes to the approved project would result in no impact or a less-than-significant impact.

[2] Not Applicable = N/A. The mitigation measure is either not applicable (i.e., not required because there were no significant impacts identified for the approved project for the topic in the relevant environmental document) or the potential impact of the approved project was not analyzed in the relevant environmental document.

Source: ICF 2018.