Draft Environmental Impact Report

Charcot Avenue Extension Project

Prepared by

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CAPITAL OF SILICON VALLEY

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SUMMARY OF THE EIR

PROPOSED PROJECT

The City of San José proposes to extend Charcot Avenue from its eastern boundary at Paragon Drive, over Interstate 880 (I-880), to Oakland Road in the North San José area. The proposed two-lane extension is approximately 0.6-mile long and includes an overcrossing of O'Toole Avenue and I-880 that would be approximately 720 feet in length. Sidewalks and Class IV bikeways are proposed along the extension. In addition, the proposed project includes intersection modifications at Charcot Avenue/Paragon Drive, Charcot Avenue/O'Toole Avenue, Charcot Avenue/Silk Wood Lane, and Charcot Avenue/Oakland Road. A detailed description of the proposed improvements can be found in Section 2.3 of this document.

The City has planned the Charcot Avenue Extension for over 25 years, as identified in the *San José Focus on the Future 2020 General Plan* (approved in 1994), the *Envision San José 2040 General Plan* (approved in 2011), the *North San José Deficiency Plan*, and the *North San José Area Development Policy* (approved in 2005) as a programmed roadway network changes to improve transportation connectivity in the North San José Area.

The objectives for the proposed project are as follows:

- Improve connectivity between the east side of I-880 and the west side of I-880;
- Increase the capacity for east/west travel across the I-880 corridor;
- Provide a safe bicycle/pedestrian facility over I-880, in compliance with San José's Complete Streets Policy;
- Implement a programmed roadway network improvement project identified in the *Envision San José 2040 General Plan;* and
- Implement a planned major roadway improvement project, as set forth in the *North San José Area Development Policy* and the *North San José Deficiency Plan*.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table S-1 presents the impact conclusions for each of the subject areas evaluated in this EIR. Table S-2 includes a summary of the significant impacts discussed within the body of this EIR and identifies mitigation measures to avoid or reduce those impacts. For a complete description of impacts and mitigation measures, refer to the text in Section 3 of the EIR.

Table S-1: Summary of Environmental Impacts of the Proposed Project				
Impact Category	**No Impact**	**Less Than Significant Impact**	**Less Than Significant Impact with Mitigation**	**Significant Unavoidable Impact**
Aesthetics				◙
Air Quality		◙		
Agriculture and Forestry Resources	◙			
Biological Resources			◙	
Cultural Resources			◙	
Energy		◙		
Geology and Soils		◙		
Greenhouse Gas Emissions		◙		
Hazards and Hazardous Materials			◙	
Hydrology and Water Quality		◙		
Land Use and Planning	◙			
Mineral Resources	◙			
Noise			◙	
Population and Housing	◙			
Public Services	◙			
Recreation				◙
Transportation		◙		
Tribal Cultural Resources	◙			
Utilities and Service Systems		◙		
Wildfire	◙			
Growth Inducement		◙		

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
AESTHETIC IMPACTS	
Impact AES-3: The project would substantially alter the visual character along Charcot Avenue between Paragon Drive and O'Toole Avenue by removing approximately 37 mature trees. The trees and adjacent raised berms dominate the existing setting and screen views of the office buildings and associated parking from the road, and vice-versa. This segment of Charcot Avenue is designated as a "Gateway" in the *Envision San José 2040 General Plan*.	Due to the constraints posed by the presence of existing utility lines and the adjacent business parks, the planting of replacement trees as mitigation for this visual/aesthetic impact is not feasible. **Conclusion: Significant Unavoidable Impact**
Impact AES-3: Based on the resource change and viewer response at the outdoor recreational	**MM AES-3.1:** As described under mitigation measure MM NOI-1.2 in Section 3.13, *Noise*, the proposed project shall construct a six-foot noise barrier in this segment along the

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
areas, the proposed roadway extension would result in a significant visual change and impact along the Silk Wood Lane segment.	Orchard School project frontage. The noise barrier will also provide a visual barrier between the proposed roadway extension and Orchard School outdoor recreation areas. **MM AES-3.2:** Any noise barrier constructed as part of the project will include aesthetic treatment (e.g., color, texture, etc.) that are compatible with the surroundings. **Conclusion: Less than Significant Impact with Mitigation Incorporated**
BIOLOGICAL IMPACTS	
Impact BIO-1: The project could impact protected nesting birds during the construction phase.	**MM BIO-1.1:** Avoidance and Inhibit Nesting. Construction and tree removal/pruning activities shall be scheduled to avoid the nesting season. Tree removal and/or pruning shall be completed before the start of the nesting season to help preclude nesting. The nesting season for most birds and raptors in the San Francisco Bay Area extends from February 1st through August 31st (inclusive). **MM BIO-1.2:** Preconstruction Survey(s). If it is not possible to schedule construction activities from September 1st through January 31st (inclusive), then a qualified ornithologist shall conduct a preconstruction survey for nesting raptors and other migratory birds within on-site trees as well as all trees within 250 feet of the site to identify active bird nests that may be disturbed during project construction. This survey shall be completed no more than fourteen (14) days prior to the initiation of demolition/construction activities (including tree removal and pruning). During this survey, the ornithologist shall inspect all trees and other possible nesting habitats in and immediately adjacent to the construction areas for nests. If the survey does not identify any nesting birds that would be affected by construction activities, no further mitigation is required. If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist (in consultation with the CDFW) shall designate a construction-free buffer zone to be established around the nest to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during construction activities. The buffer shall remain in place until a qualified ornithologist has determined that the nest is no longer active. **MM BIO-1.3:** Reporting. A final report on nesting birds and raptors, including survey methodology, survey date(s), map of identified active nests (if any), and protection measures (if required), shall be completed to the satisfaction of the Director

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
	of Planning, Building, and Code Enforcement prior to the start of grading. **Conclusion: Less than Significant Impact with Mitigation Incorporated**
CULTURAL RESOURCES	
Impact CUL-2: The project corridor is considered archaeologically sensitive and therefore the construction of the project could impact buried archaeological resources. **Impact CUL-3:** Directly related to impact CUL-2, above, if any buried archaeological resources are impacted by the project, such resources could contain human remains.	**MM CUL-2.1:** Avoid trenching, digging, and grading below eight (8) feet. **MM CUL-2.2:** If trenching, digging, or grading below eight (8) feet is needed, archaeological monitoring shall be performed by a qualified archaeologist during such excavation and ground-disturbing activities. **MM CUL-2.3:** In the event prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director of the City's Department of Planning, Building and Code Enforcement or his/her designee will be notified, and a qualified archaeologist will examine the find. The archaeologist will 1) evaluate the find(s) to determine if they meet the definition of a historical or archaeological resource; and (2) make appropriate recommendations regarding the disposition of such finds. If the finds do not meet the definition of historical or archaeological resources, no further study or protection is necessary prior to project implementation. If the find(s) does meet the definition of a historical or archaeological resource, then it shall be avoided by project activities. Project personnel shall not collect or move any cultural material. Fill soils used for construction purposes shall not contain archaeological materials. **MM CUL-2.4:** If the resource cannot be avoided, adverse effects to such resources shall be mitigated in accordance with the recommendations of the archaeologist. Recommendations may include, but are not limited to, collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director of the City's Department of Planning, Building and Code Enforcement or his/her designee and Historic Preservation Officer of the City's Department of Planning, Building and Code Enforcement and the Northwest Information Center, Sonoma. **MM CUL-2.5:** If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
	through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The contractor shall immediately notify the Director of the City's Department of Planning, Building, and Code Enforcement or his/her designee and the qualified archaeologist, who will then notify the Santa Clara County Coroner. The Coroner will determine if the remains are Native American. **MM CUL-2.6:** If the remains are believed to be Native American, the Coroner will contact the NAHC within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts. **MM CUL-2.7:** If one of the following conditions occurs, the Director of the City's Department of Planning, Building, and Code Enforcement or his/her designee shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance: 1) The NAHC is unable to identify a MLD; or 2) The MLD failed to make a recommendation within 24 hours after being notified by the NAHC; or 3) The landowner or his authorized representative rejects the recommendation of the MLD, and the mediation by the NAHC fails to provide measures acceptable to the landowner. **Conclusion: Less than Significant Impact with Mitigation Incorporated**
HAZARDS AND HAZARDOUS MATERIALS	
Impact HAZ-2: The project could create a significant risk if hazardous materials in sufficient concentrations are present in soils and those materials are, in turn, released into the environment during construction. .	**MM HAZ-2.1:** Prior to demolition, grading, and excavation for the proposed road extension, soil within the project alignment shall be sampled and tested for organochlorine pesticides and lead to determine if soil contamination from previous agricultural use are above established RWQCB Environmental Screening Levels (ESLs) for construction worker safety and commercial/industrial standards. The result of soil sampling and testing will be provided to the Director of the City of San José Planning, Building, and Code Enforcement, or his/her designee, and the City's Environmental Compliance Officer for review. If contaminated soils are found in concentrations above regulatory thresholds the project sponsor shall obtain regulatory oversight from the SCCDEH or DTSC. The SCCDEH or DTSC

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
	will determine next steps including which documents are required such as a Site Management Plan (SMP), Removal Action Plan (RAP), or equivalent document which must prepared by a qualified hazardous materials consultant. The plan must establish remedial measures and/or soil management practices to ensure construction worker safety and the health and safety of future workers and site users. The Plan and evidence of regulatory oversight shall be provided to the Director of the City of San José Planning, Building, and Code Enforcement or his/her designee, and the Environmental Compliance Officer in the City of San José's Environmental Services Department.
NOISE	
Impact NOI-1: Over the long-term, the operational phase of the project would result in noise levels in the vicinity of the project in excess of standards established by San José.	**MM NOI-1.1:** At the start of project construction on the east side of I-880, the City shall replace the existing 5-foot high barrier along the north side of Silk Wood Lane with a 10-foot high noise barrier. The replacement barrier will be constructed at the side yard property line of 1820 Silk Wood Lane; at the rear yard property lines of 1052, 1058, 1064, 1070, and 1076 Bright Willow Lane; and at the rear property lines of 1931, 1937, and 1943 Bright Willow Circle. Per FHWA's Traffic Noise Model, this 10-foot high barrier, which is shown on Figure 3.13 3, will reduce noise levels at these residences to acceptable levels of 60 dBA DNL or less. **MM NOI-1.2:** At the start of project construction on the east side of I-880, the City shall construct a 10-foot high barrier at the side yard property line of 1813 Silk Wood Lane. In addition, the City shall construct an 8-foot high barrier at the rear property lines of 1813 and 1819 Silk Wood Lane. Per FHWA's Traffic Noise Model, these barriers, which are shown on Figure 3.13 3, will reduce noise levels at these two residences to acceptable levels of 60 dBA DNL or less. **MM NOI-1.3:** At the start of project construction on the east side of I-880, the City shall construct a 6-foot high barrier at the proposed right-of-way line on the southern side of Charcot Avenue along the Orchard School frontage. Per FHWA's Traffic Noise Model, this barrier, which is shown on Figure 3.13 3, would reduce noise levels on the Orchard School outdoor field area and playground to 65 dBA DNL and exterior levels at the primary classrooms to 60 dBA DNL **Conclusion: Less than Significant Impact with Mitigation Incorporated**
Impact NOI-C: The project would result in a cumulatively considerable contribution to a significant noise impact.	**MM NOI-C.1:** The project shall implement MM NOI-1.1, MM NOI-1.2, and MM NOI-1.3, which consists of the construction of noise barriers adjacent to residences and Orchard School. These noise barriers would not only mitigate the significant noise impacts of the project but would also mitigate the significant cumulative noise impacts of the project.

Table S-2: Summary of Significant Environmental Impacts and Mitigation Measures	
Significant Impact	**Mitigation and Avoidance Measures**
	Conclusion: Less than Significant Cumulative Impact with Mitigation Incorporated
RECREATIONAL IMPACTS	
Impact REC-2: The right-of-way required for the project would directly impact recreational facilities at Orchard Elementary School and reduce the area available for recreation by 0.44 acre.	**MM REC-2.1:** The City will work with Orchard School District to determine the appropriate amount of compensation for the approximate 0.44 acre required for the project. If an amount is not agreed upon, the City will follow local, state and federal laws to determine the appropriate compensation amount to the Orchard School District. The amount of compensation may include reimbursement to the Orchard School District the cost to reconfigure/reconstruct the existing recreational facilities affected by the project. This could involve shifting and reconstructing the affected facilities to the south of their current locations. The intent of this measure is that the replacement facilities would be comparable to the existing facilities in size, function, and quality. While the implementation of MM REC-2.1 would mitigate the project's impact on the school's recreational facilities, it would not replace the lost parkland/recreational acreage. Further, there is no vacant land available contiguous to Orchard School that could be purchased and added to the school. Therefore, the loss of 0.44 acre of recreational land would constitute an unavoidable effect of the project **Conclusion: Significant Unavoidable Impact**
TRIBAL CULTURAL RESOURCES	
Impact TCR-1: The project may impact buried archaeological resources, such resources that may be determined to be tribal cultural resources eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k). **Impact TCR-2:** The project may impact buried archaeological resources, such resources that may be tribal cultural resources that are determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1.	**MM CUL-2.1** through **MM CUL-2.7**, that are listed above for Cultural Resources, will also serve as mitigation for impacts to tribal cultural resources. **Conclusion: Less than Significant Impact with Mitigation Incorporated**

SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

The California Environmental Quality Act (CEQA) requires that an EIR identify alternatives to the project as proposed. The CEQA Guidelines state that an EIR must identify alternatives that would feasibly attain the most basic objectives of the project, but avoid or substantially lessen significant environmental effects, or further reduce impacts that are considered less than significant with the incorporation of mitigation. Table S-3 lists the eight alternatives that were evaluated in this EIR.

Table S-3: List of Alternatives Evaluated

Alternative Designation	Alternative Name	Feasible? [a]
A	Fox Lane Alignment	No
B	Widen Montague Expressway and/or Brokaw Road	No
C	New I-880 Overcrossing South of Brokaw Road	No
D	No Project	Yes
E	New Overcrossing for Bicycles and Pedestrians Only	Yes
F	Single Left-Turn Lane from Oakland Road to Charcot Avenue	Yes
G	Single Turn Lane on Charcot Avenue at Oakland Road	Yes
H	Single Turn Lanes on Both Charcot Avenue and Oakland Road	Yes

[a] Under CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. [CEQA Guidelines §15364]

A summary of project alternatives follows. A full analysis of project alternatives is provided in Section 7, *Alternatives*.

Alternative A: Fox Lane Alignment

Under the Fox Lane Alignment Alternative, the alignment for the Charcot Avenue Extension on the east side of I-880 would utilize Fox Lane instead of Silk Wood Lane. On the west side of I-880, this alternative would be identical to the proposed project. The Fox Lane Alternative would meet the five objectives of the project to the same degree as the proposed design:

The Fox Lane alignment would require acquisition of right-of way and elimination of property access along the north side of Fox Lane. In addition, the Fox Lane alignment would require the removal of one or two buildings on the Super Micro campus on the east side of I-880 to accommodate the alignment alternative. Further, the use of Fox Lane for the Charcot Avenue Extension would result in increased traffic volumes along the Orchard School frontage, which provides access to the school's designated student drop-off/pick-up area.

The Fox Lane alignment also would result in a connection to Oakland Road that would be in proximity to the Union Pacific Railroad (UPRR) tracks that cross Oakland Road approximately 240 feet south of Fox Lane. Increased demand at the northbound left-turn movement from northbound Oakland Road to westbound Fox Lane (to the planned Charcot Extension) could result in vehicle queues that extend back from the Oakland Road/Fox Lane intersection and through the UPRR tracks.

On the west side of I-880, the Fox Lane Alternative would have the same environmental impacts as the proposed project design. However, this alternative would avoid the noise and tree removal impacts of the proposed alignment along Silk Wood Lane. No right-of-way from the Orchard School playground/ball field would be needed. Further, there would also be no increased traffic on Silk Wood Lane and no potential traffic diversion through the Silk Wood Lane/Rock Avenue neighborhood.

Alternative A was determined to be infeasible for the following reasons:

- From an economic/funding perspective, there would be significant right-of-way costs associated with direct impacts to the Super Micro campus, and
- From an environmental perspective, there would be significant impacts to Orchard School's designated student drop-off/pick-up area on Fox Lane.

Alternative B: Widen Montague Expressway and/or Brokaw Road

Instead of constructing the Charcot Avenue Extension, Alternative B would widen Montague Expressway and/or Brokaw Road to improve east-west connectivity across I-880, which is one of the project objectives.

Montague Expressway has already been widened to eight lanes west of I-880, as identified in the North San José Area Development Policy. Additional widening to ten lanes west of I-880 to increase east-east capacity into the North San José area would require significant right-of-way and the acquisition of numerous businesses that are adjacent to the expressway.

Brokaw Road is already widened to its maximum within the physical limitations of its right-of-way. Additional widening to increase east-east capacity would require significant right-of-way and the acquisition of numerous businesses that are adjacent to this roadway.

Further, even if Alternative B could be implemented without the need to purchase significant right-of-way, the widening of Montague Expressway and Brokaw Road also may not improve the east-west travel due to capacity constraints at their connections to major regional freeways including their interchanges with I-880. It is likely that the capacity constraints (ramp meters) at freeway ramps and congestion on the freeway mainline could result in blockage of travel lanes on both roadways even with widening. The improvement of access to and from I-880 also would provide minimal benefit to operations along Brokaw Road and Montague Expressway due to congestion on the freeway mainline that restricts flow onto the freeway.

Alternative B was determined to be infeasible for the following reason:

- From an economic/funding perspective, there would be significant right-of-way costs associated with the widening of Montague Expressway or Brokaw Road.

Alternative C: New I-880 Overcrossing South of Brokaw Road

Instead of constructing the Charcot Avenue Extension, Alternative C would construct a new I-880 overcrossing near Brokaw Road to improve east-west connectivity across I-880, which is one of the

project objectives. On the east side of I-880, the overcrossing would utilize Ridder Park Drive along the south side of Lowe's. On the west side of I-880, the overcrossing would connect to Junction Avenue utilizing an existing access point and parking area for a business park.

Alternative C would require significant right-of-way and the acquisition of multiple businesses located along the east side of Junction Avenue. It would also sever access to Lowe's and an adjacent building that contains multiple businesses.

Further, even if Alternative C could be implemented without the need to purchase significant right-of-way its usefulness as an east-west route would be substantially less than with the Charcot Avenue Extension. Specifically, unlike the Charcot Avenue alignment, there would be no direct connection to major North San José roadways such as Zanker Road, North First Street, and SR 87.

Alternative C was determined to be infeasible for the following reason:

- From an economic/funding perspective, there would be significant right-of-way costs associated with a new I-880 overcrossing south of Brokaw Road.

Alternative D: No Project Alternative

Under the No Project Alternative, the proposed Charcot Avenue Extension would not be constructed. No new vehicular, bicycle, and pedestrian crossing of I-880 in the Charcot Corridor would be built. None of the project components described in Section 2.3 of the EIR would be constructed.

The No Project Alternative would avoid all the identified significant impacts of the project, namely aesthetics/visual, biological, cultural (archaeological), hazardous materials, noise, and recreational.

The No Project Alternative would not, however, meet any of the project objectives. It would also be inconsistent with 1) Policy TR-5.6 of the *Envision San José 2040 General Plan*, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994; 2) the San José Bike Plan 2020, which designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes; and 3) the *North San José Area Development Policy*, which identifies the Charcot Avenue Extension as a key roadway improvement project needed to serve the planned development of North San José.

Alternative E: New Overcrossing for Bicycles and Pedestrians Only

Alternative E would consist of constructing a new bicycle/pedestrian overcrossing of I-880/O'Toole Avenue on the same alignment as that proposed for the Charcot Avenue Extension. The overcrossing would connect to the existing bike lanes and sidewalks along Charcot Avenue west of O'Toole Avenue. On the east side of I-880, the overcrossing would connect to Silk Wood Lane.

Since this alternative would not include any travel lanes for motor vehicles, its cross-section/footprint would be much smaller than that of the proposed project. On the west side of I-880, this alternative would not require the elevation of Charcot Avenue between Paragon Drive and O'Toole Avenue and access to properties along this segment of Charcot Avenue would be maintained. Unlike the proposed

project, this alternative would also not require the removal of most of the trees that line both sides of Charcot Avenue between Paragon Drive and O'Toole Avenue.

On the east side of I-880, the footprint of Alternative E would fit within the right-of-way reserved by Super Micro for the Charcot Avenue Extension and within the existing Silk Wood Lane right-of-way. No right-of-way from Orchard School would be required and there would be no direct impacts to the school's playground and playing field. The noise and air quality impacts of the project to the residences located on the north side of Silk Wood Lane and the school located on the south side of Silk Wood Lane would not occur under this alternative since there would be no increase in traffic. Finally, tree removal along Silk Wood Lane would be minimal, if any.

Alternative E would meet the following objective of the project to the same degree as the proposed design:

- Provide a safe bicycle/pedestrian facility over I-880, in compliance with San José's Complete Streets Policy.

Alternative E would not, however, meet the remaining four objectives of the project: 1) Improve connectivity between the east side of I-880 and the west side of I-880; 2) Increase the capacity for east/west travel across the I-880 corridor; 3) Implement a programmed roadway network improvement project identified in the Envision San José 2040 General Plan; and 4) Implement a planned major roadway improvement project, as set forth in the *North San José Area Development Policy* and the *North San José Deficiency Plan*.

Alternative F: Single Left-Turn Lane from Oakland Road to Charcot Avenue

Alternative F would be the same as the proposed project except that it would eliminate one of two proposed left-turn lanes from northbound Oakland Road to westbound Charcot Avenue, which in turn would allow for a reduction in westbound lanes on Charcot Avenue from two to one. Therefore, the cross-section of Charcot Avenue at Oakland Road under Alternative F would be three lanes, as compared to the four lanes contemplated under the proposed project.

Alternative F would still require right-of-way from Orchard School but to a lesser extent than for the proposed project. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities.

When Alternative F is compared to the proposed project design, the northbound left-turn queue at the Charcot Avenue/Oakland Road intersection is projected to increase from 325 feet to 575 feet because only a single left-turn lane would be provided. The projected queue would not extend back to the Fox Lane intersection with Oakland Road that is located approximately 900 feet south of Charcot Avenue. However, peak-hour delays will increase slightly on all approaches due to the additional green time that must be allocated to the northbound left-turn movement.

For noise, the DNL under Alternative F would be two decibels lower at one receiver, one decibel lower at four receivers, one decibel higher at one receiver, and the same at nine receivers, as compared to the proposed design.

For air quality, the health risks from TAC and PM2.5 emissions would be slightly less under Alternative F, as compared to the proposed design.

Similar to the proposed project design, Alternative F would meet all five project objectives, recognizing the following differences:

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative F would be less efficient due to the elimination of a turning lane; levels of service would, however, remain at an acceptable LOS C.
- Under Alternative F, left turns from northbound Oakland Road into the Orchard School Event Center driveway would be prohibited. Those motorists would need to make a U-turn at the Oakland Road/Charcot Avenue intersection to access the Event Center driveway.

Alternative F would be consistent with the *Envision San José 2040 General Plan*, the *San José Bike Plan 2020*, and the *North San José Area Development Policy*.

Alternative G: Single Turn Lane on Charcot Avenue at Oakland Road

Alternative G would be the same as the proposed project except that it would eliminate the exclusive left-turn lane from eastbound Charcot Avenue to northbound Oakland Road; instead there would be only one eastbound lane from which both left-turns and right-turns would be made. Therefore, the cross-section of Charcot Avenue at Oakland Road under Alternative G would be three lanes, as compared to the four lanes contemplated under the proposed project.

Alternative G would still require right-of-way from Orchard School but to a lesser extent than for the proposed project. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities.

When Alternative G is compared to the proposed project design, the eastbound queue on Charcot Avenue at Oakland Road would increase from 675 feet to 850 feet and the PM peak-hour LOS would degrade to LOS D should the planned exclusive left-turn lane not be provided. The extended queue along eastbound Charcot Avenue may not be clearly visible to drivers travelling eastbound along Charcot Avenue due to the vertical alignment of the Charcot Avenue overcrossing of I-880.

For noise, when compared to the proposed design, the DNL under Alternative G would be two decibels lower at one receiver, one decibel lower at four receivers, one decibel higher at one receiver, and the same at nine receivers.

For air quality, the health risks from TAC and PM2.5 emissions would be slightly less under Alternative G, as compared to the proposed design.

Similar to the proposed project design, Alternative G would meet all five project objectives, recognizing the following difference:

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative G would be less efficient due to the elimination of a turning lane; levels of service would, however, remain at an acceptable LOS D.

Alternative G would be consistent with the *Envision San José 2040 General Plan*, the *San José Bike Plan 2020*, and the *North San José Area Development Policy*.

Alternative H: Single Turn Lanes on Both Charcot Avenue and Oakland Road

Alternative H would be the same as the proposed project except that it would 1) eliminate one of two proposed left-turn lanes from northbound Oakland Road to westbound Charcot Avenue and 2) would eliminate the exclusive left-turn lane from eastbound Charcot Avenue to northbound Oakland Road. Instead, there would be only one eastbound lane from which both left-turns and right-turns would be made and only one northbound left-turn lane. Therefore, the cross-section of Charcot Avenue at Oakland Road under Alternative H would be two lanes, as compared to the four lanes contemplated under the proposed project.

Alternative H would still require right-of-way from Orchard School but to a lesser extent than for the proposed project or Alternatives F and G. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities.

For traffic operations, Alternative H would differ from the proposed project design in the following ways:

- The eastbound queue on Charcot Avenue on Oakland Road would increase from 675 feet to 850 feet and the PM peak-hour LOS would degrade to LOS D should the planned exclusive left-turn lane not be provided. The extended queue along eastbound Charcot Avenue may not be clearly visible to drivers travelling eastbound along Charcot Avenue due to the vertical alignment of the Charcot Avenue overcrossing of I-880.
- The northbound left-turn queue at the Charcot Avenue/Oakland Road intersection is projected to increase from 325 feet to 575 feet because only a single left-turn lane would be provided. The projected queue would not extend back to the Fox Lane intersection with Oakland Road that is located approximately 900 feet south of Charcot Avenue. However, peak-hour delays will increase slightly on all approaches due to the additional green time that must be allocated to the northbound left-turn movement.

For noise, when compared to the proposed design, the DNL under Alternative H would be one decibel lower at two receivers, one decibel higher at two receivers, and the same at 11 receivers.

For air quality, the health risks from TAC and PM2.5 emissions would be slightly less under Alternative H, as compared to the proposed design.

Similar to the proposed project design, Alternative H would meet all five project objectives, recognizing the following differences:

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative H would be less efficient due to the elimination of two turning lanes; levels of service would, however, remain at an acceptable LOS D.

- Left turns from northbound Oakland Road into the Orchard School Event Center driveway would be prohibited. Those motorists would need to make a U-turn at the Oakland Road/Charcot Avenue intersection to access the Event Center driveway.

Alternative H would be consistent with the *Envision San José 2040 General Plan*, the *San José Bike Plan 2020*, and the *North San José Area Development Policy*.

For the reasons described in Section 7.5, **Alternative H is the environmentally superior alternative**.

AREAS OF PUBLIC CONTROVERSY

As described in Section 8, *Scoping and Coordination*, the City has engaged in extensive public outreach regarding the proposed project. The outreach included a Community Meeting in 2017 and two EIR Scoping Meetings in 2018, each of which was well-attended. During the EIR scoping process, members of the public provided substantial oral and written comments to the City. A copy of each written comment is contained in Appendix C and the City's responses to each written comment are provided in Appendix B.

Most of the public input on the project has come from the Orchard Elementary School community (including parents, teachers, and administrators), nearby residents, and nearby business owners. Most of the input received was opposition to, and/or concerns regarding, various aspects of the Extension. Specific areas of concern/controversy include the following:

- The purpose for the project.
- Project location adjacent to an elementary school, including concerns related to increases in traffic, leading to safety, noise, and air pollution impacts.
- Project design that requires right-of-way from the school and directly impacts some of the school's existing recreational facilities.
- Project location adjacent to residences located on the north side of Silk Wood Lane.
- The severing of direct access from Charcot Avenue to the business parks located between Paragon Drive and O'Toole Avenue.

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The City of San José, as the Lead Agency, has prepared this Draft Environmental Impact Report (Draft EIR) for the Charcot Avenue Extension project in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121(a)). As the CEQA Lead Agency for this project, the City of San José is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, cumulative impacts, alternatives, and growth-inducing impacts. It is not the intent of an EIR to recommend either approval or denial of a project.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Sections 15063 and 15082 of the CEQA Guidelines, the City of San José prepared and circulated a Notice of Preparation (NOP) for this EIR, a copy of which is contained in Appendix A. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project.

NOP was circulated to the local, state, and federal agencies on April 30, 2018. The City also held two public scoping meetings on May 17 and 21, 2018 to discuss the project and solicit public input as to the scope and contents of this EIR. For further details, please see Section 8.0 of this EIR.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 45-day public review and comment period. During this period, the Draft EIR will be available to the local, state, and federal agencies and to interested organizations and individuals for review. Notice of the availability of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP. Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

Meenaxi Raval, AICP
Supervising Environmental Planner, Planning Division
San José Department of Planning, Building & Code Enforcement
200 East Santa Clara Street, T3, San José, CA 95113
meenaxi.raval@sanjoseca.gov

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 45-day public review period, the City of San José will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary;
- List of individuals and agencies commenting on the Draft EIR;
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines (Section 15088);
- Copies of letters received on the Draft EIR.

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the City of San José will file a Notice of Determination (NOD), which will be available for public inspection and posted at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094(g)).

1.4 RESPONSIBLE AGENCIES

The California Department of Transportation (Caltrans) will approve the portion of the project within its right-of-way, namely the I-880 overcrossing structure for issuance of the Encroachment Permit.

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT OVERVIEW AND LOCATION

The project proposes to extend Charcot Avenue from its eastern boundary at Paragon Drive, over Interstate 880 (I-880), to Oakland Road in the North San José area. The proposed two-lane extension is approximately 0.6-mile long and includes an overcrossing of O'Toole Avenue and I-880 that would be approximately 720 feet in length. Sidewalks and Class IV bikeways are proposed along the extension. In addition, the proposed project includes intersection modifications at Charcot Avenue/Paragon Drive, Charcot Avenue/O'Toole Avenue, Charcot Avenue/Silk Wood Lane, and Charcot Avenue/Oakland Road. Regional and vicinity maps of the project area are shown on Figures 2.1-1 and 2.1-2, respectively. An aerial photograph of the project area and surrounding land uses is shown on Figure 2.1-3. The alignment of the proposed project is depicted on Figure 2.1-4.

2.2 PROJECT BACKGROUND

2.2.1 Overview of Planning Process

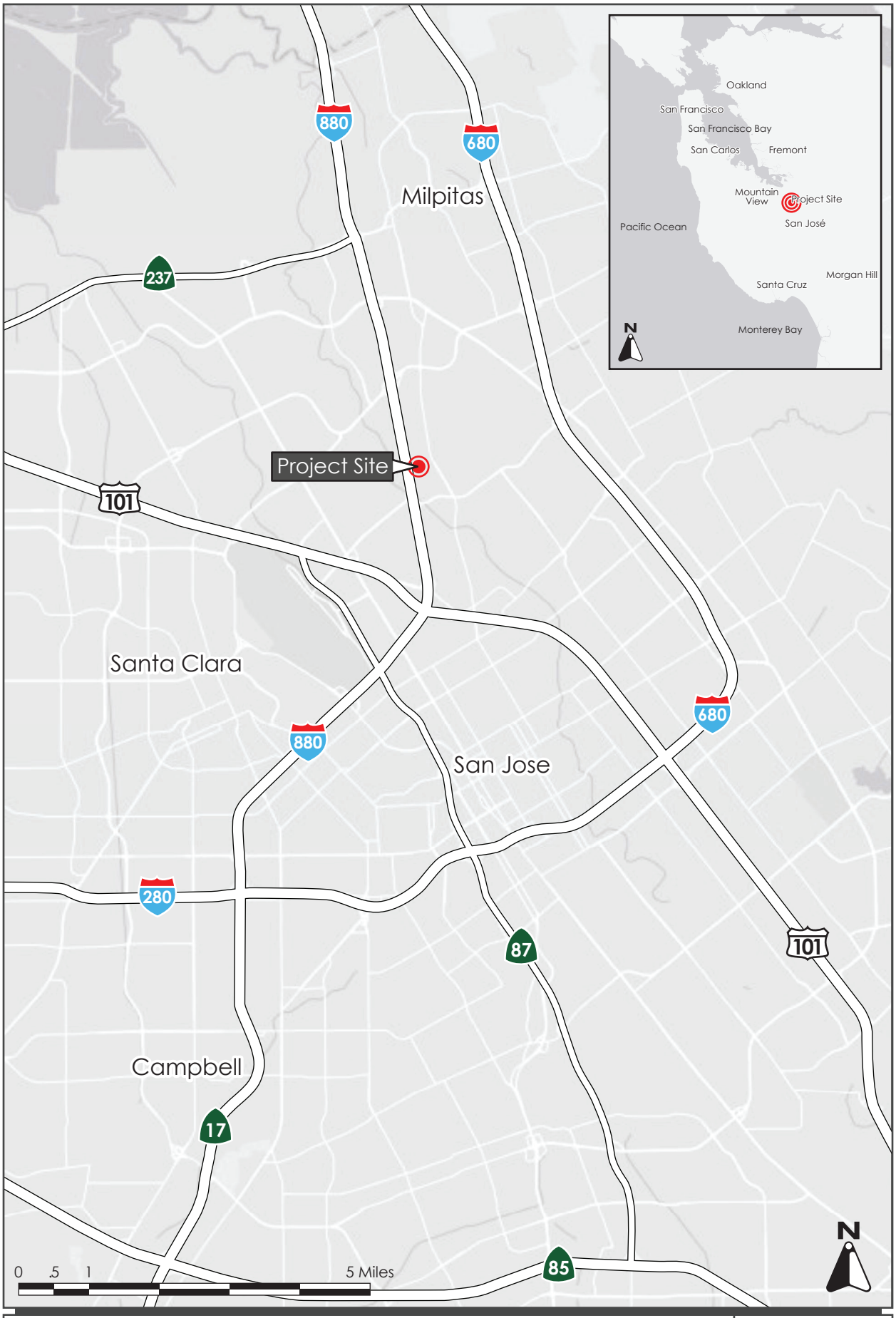
State law requires every city and county in California to prepare a general plan that set forth the vision, goals, and policies for development within their respective jurisdictions. Each general plan must address certain topics, including land use, housing, and circulation.

The City of San José updates its general plan on a regular basis, including comprehensive updates as needed to ensure that the plan reflects the latest vision of the community as well as economic and demographic trends. The comprehensive updates involve multi-year planning processes that include substantial community input. A key element is determining the location, type, and amount of development (i.e., future jobs and housing) that will be allowed within the City's limits. Equally as important is planning for the locations of commercial uses, as well as the infrastructure (i.e., roads, utilities, parks, police, fire, libraries, transit, airports, etc.) that will be needed to serve to serve that planned development.

The City has also prepared and adopted specific plans and area development policies that are part of the general plan, but which contain objectives, development standards, and infrastructure requirements that are focused on distinct geographic areas. Examples include the North San José Area Development Policy, Evergreen-East Hills Development Policy, Midtown Specific Plan, Diridon Station Area Plan, and Communications Hill Specific Plan.

2.2.2 Planning for the Charcot Avenue Extension

The City has planned the Charcot Avenue Extension for over 25 years. The Extension was first identified as an infrastructure improvement project needed to serve the planned growth in the North San José area in the *San José Focus on the Future 2020 General Plan*, which was approved in 1994. The environmental impacts of the Extension and other planned transportation improvements were evaluated at a program level in the San José Focus on the Future 2020 General Plan EIR (1994).



REGIONAL MAP | FIGURE 2.1-1

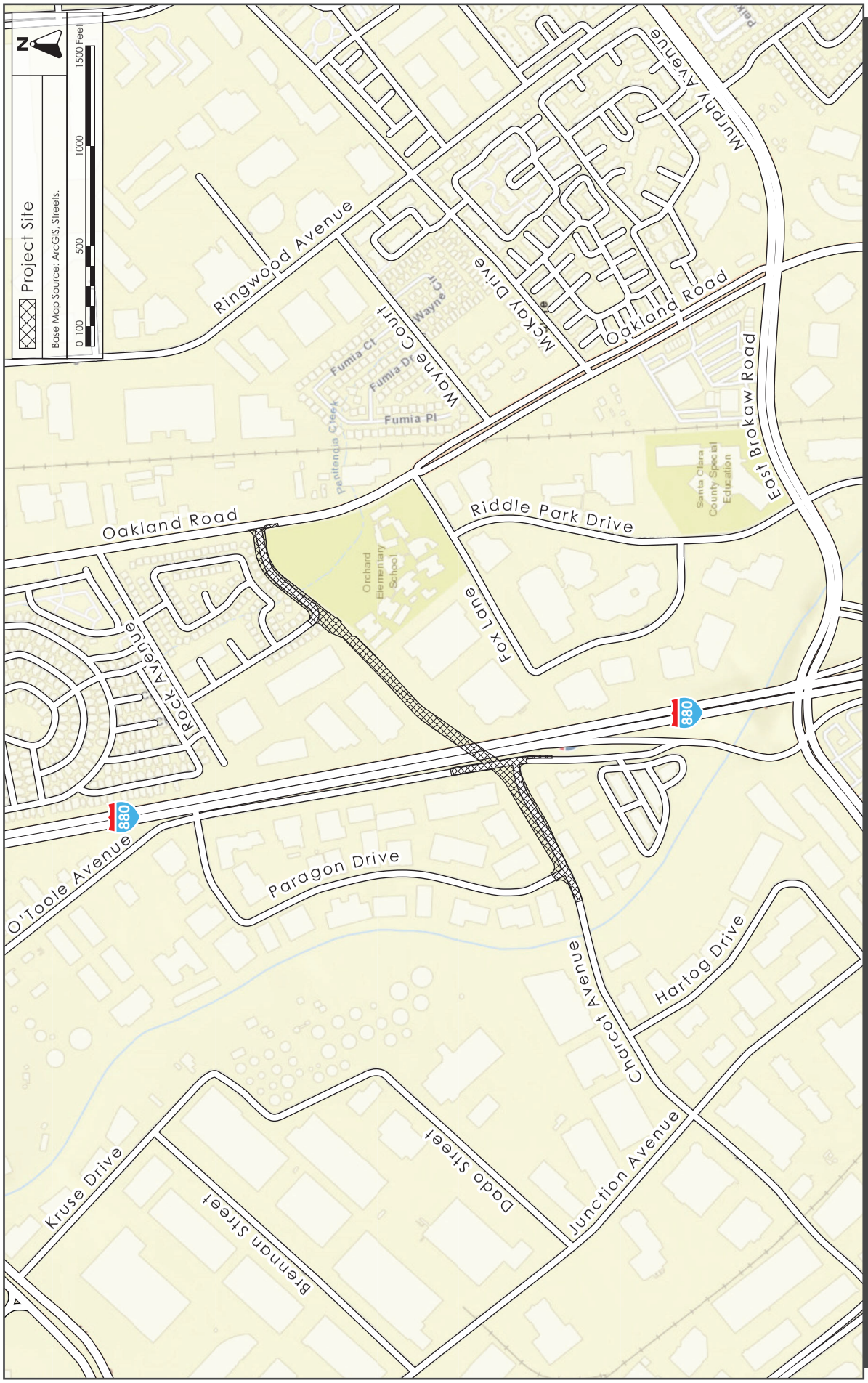
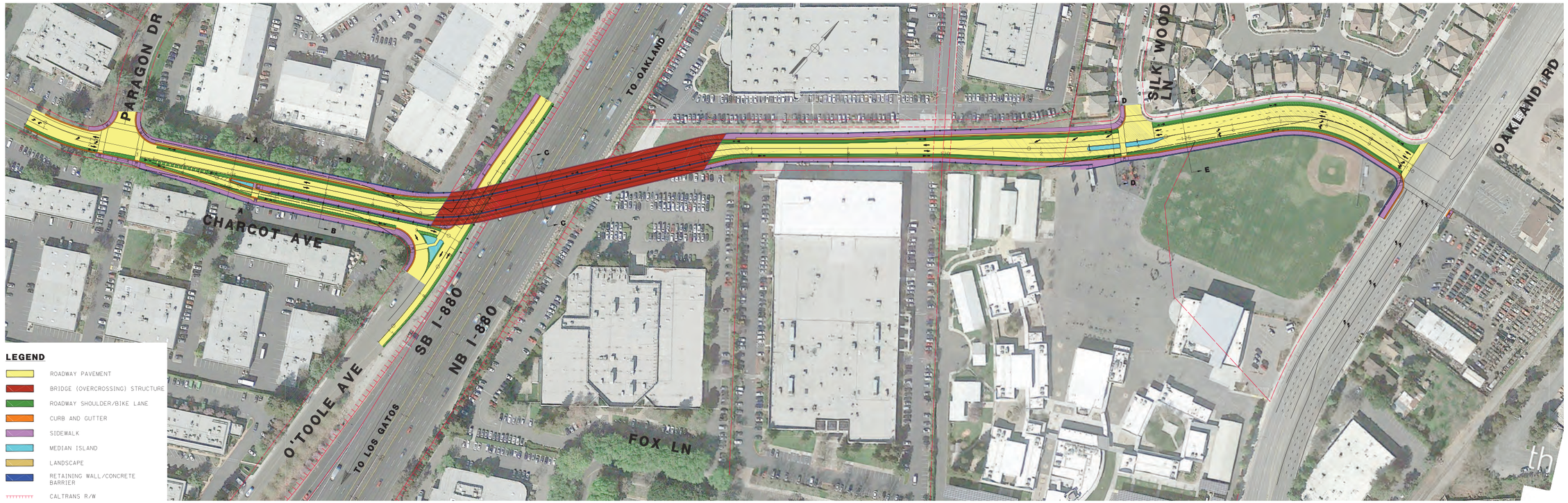
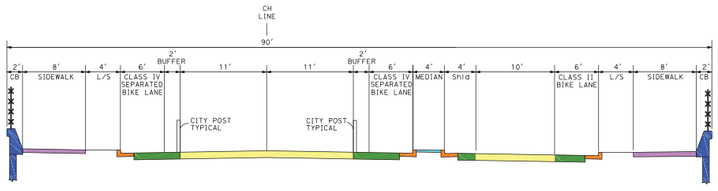


FIGURE 2.1-2

VICINITY MAP

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 2.1-3





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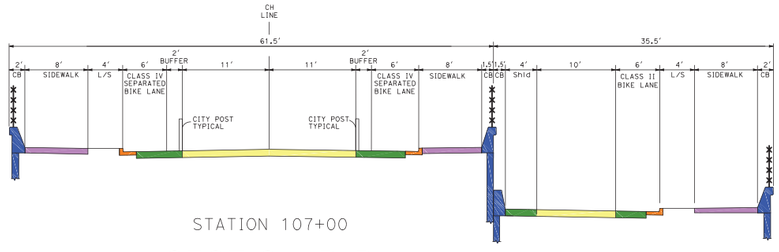
SECTION A-A



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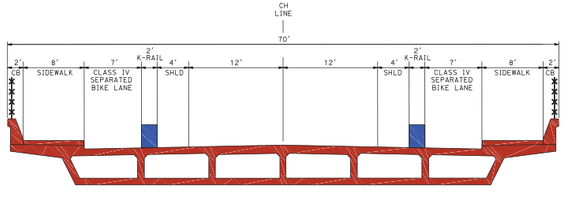
SECTION B-B



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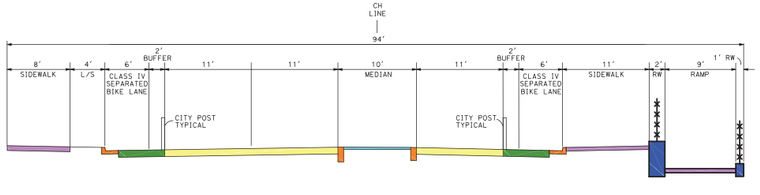
SECTION C-C



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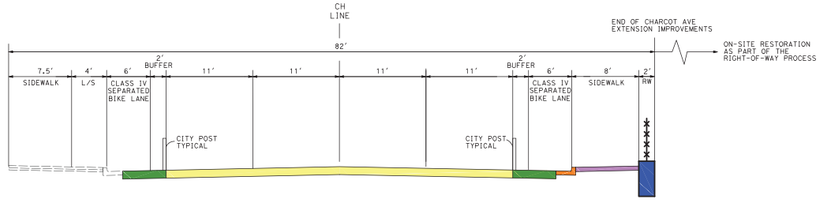
SECTION D-D



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SECTION E-E

PROPOSED SITE PLAN | FIGURE 2.1-4

In 2005, the City adopted a new *North San José Area Development Policy* (NSJADP), which establishes a policy framework to guide the ongoing development of the North San José area as an important employment center for San José.[1] The new NSJADP, which replaced a 1988 version of the Policy, provides for the development of 26,700,000 square feet of industrial uses, 300,000 square feet of commercial uses, and 32,000 residential dwelling units in North San José.

Chapter 5 of the NSJADP identifies the infrastructure improvements needed to serve the planned development. The Charcot Avenue Extension is listed as one of nine Major Roadway Projects, which the NSJADP defines as projects that "generally serve as gateways and/or major arterials to and within North San José and serve the North San José area as a whole" (NSJADP, page 29). The environmental impacts of the nine Major Roadway Projects were evaluated at a program level in the North San José Development Policies Update EIR (2005).

The NSJADP has been amended several times since its initial adoption in 2005, the latest on December 12, 2017. The Charcot Avenue Extension has been included in each version of the NSPADP in 2005.

The City adopted the *North San José Deficiency Plan* in July 2005 to identify and implement a set of measures that will improve transportation conditions and air quality in North San José. Charcot Avenue Extension was identified as one of the projects on the Action List in the *North San José Deficiency Plan*.

In 2011, the City adopted a comprehensive update to its general plan known as the *Envision San José 2040 General Plan*. The Charcot Avenue Extension is included in the General Plan's Transportation Network Diagram. The environmental impacts of the Extension and other planned transportation network improvements were evaluated at a program level in the Envision San José 2040 General Plan EIR (2011).

2.3 PROJECT DESCRIPTION

The City of San José proposes to construct a two-lane extension of Charcot Avenue from Paragon Drive on the west to Oakland Road on the east, a distance of approximately 0.6-mile. The extension includes construction of an overcrossing across O'Toole Avenue and I-880 and improvements to Silk Wood Lane. The extension would also construct bicycle/pedestrian facilities on Charcot Avenue, including sidewalks and Class IV bikeways[2], between Paragon Drive and Oakland Road.

2.3.1 Traffic Improvements

- Charcot Avenue would be extended as a 2-lane roadway from Paragon Drive on the west to Oakland Road on the east. [Note: Although Charcot Avenue presently exists between

[1] The boundaries of the NSJADP include "the area within San José north and west of Interstate 880 or the Coyote Creek, east of the Guadalupe River and south of State Route 237. The Policy area also includes an area east of Interstate 880 along Murphy Avenue as far as Lundy Avenue." (NSJADP, page 5)

[2] A Class IV Bikeway, which is also known as a protected bike lane or separated bikeway, is one that is physically separated from the vehicle travel lane by more than the white stripe. This can entail flexible bollards, permanent barriers, and/or vertical separation.

Paragon Drive and O'Toole Avenue, that segment will be reconstructed and widened, as described below. Hence, the Paragon Drive/Charcot Avenue intersection is designated as the westerly project limit.]

- The Charcot Avenue/Paragon Drive intersection would be reconstructed with single eastbound and westbound through lanes and an eastbound left turn-lane. A traffic signal would also be installed at this intersection.
- The existing Charcot Avenue/O'Toole Avenue intersection would be eliminated. Access to O'Toole Avenue from eastbound Charcot Avenue would be maintained via a new slip ramp along the south side of Charcot Avenue. Access to Charcot Avenue from O'Toole Avenue would not, however, be provided. Instead, access from O'Toole Avenue to Charcot Avenue would be provided via Paragon Drive and its new signalized intersection with Charcot Avenue.
- A segment of O'Toole Avenue under the proposed Charcot Avenue overcrossing would be reconstructed and reconfigured to accommodate bridge columns for the overcrossing to have single northbound and southbound lanes, and sidewalk on the southbound direction.
- A new overcrossing structure, approximately 70 feet in width and 720 feet in length, would be constructed over O'Toole Avenue and I-880. The bridge columns would be supported on large diameter cast-in-drilled-hole (CIDH) pilings. Pile driving will not be required for bridge construction. The bridge would accommodate one lane of traffic, one shoulder, one Class IV Bikeway, and one sidewalk in each direction.
- On the east side of I-880, Charcot Avenue would utilize the swath of land between the Super Micro Computer Inc. office buildings that has been set aside for the Charcot Avenue extension. At the easterly end of the proposed extension, the roadway would utilize the current alignment of Silk Wood Lane between Oakland Road and Silk Wood Lane.
- A new pedestrian-only signal such as a High-Intensity Activated Crosswalk (HAWK) beacon would be installed along Charcot Avenue at Silk Wood Lane. A median would be constructed along Charcot Avenue at Silk Wood Lane to restrict left-turn movements.
- The existing unsignalized Charcot Avenue/Oakland Road intersection would be replaced by a new signalized intersection. The proposed lane configurations at that intersection would consist of one left-turn and one shared left-right-turn lane on eastbound Charcot Avenue, and two northbound left-turn lanes and six through lanes on Oakland Road. To receive the traffic turning left from northbound Oakland Road, the segment of Charcot Avenue between Silk Wood Lane and Oakland Road would have two westbound through lanes, which would merge into one lane after the Silk Wood Lane intersection.
- Between Paragon Drive and O'Toole Avenue, access to adjacent commercial properties from Charcot Avenue would not be provided. Access would be via other existing streets. There is no existing access to properties along Silk Wood Lane from the segment of Silk Wood Lane that will become Charcot Avenue.

2.3.2 Bicycle Improvements

The project proposes to construct 6-foot wide Class IV bikeways along the Charcot Avenue extension between Paragon Drive and Oakland Road. The bikeways would be separated from the vehicular roadways by 2-foot wide buffers containing posts or K-rail and would include the following features:

- The separated bikeways would be on both sides of the single eastbound and westbound through lanes between Paragon Drive and Oakland Road.
- The bikeways on the Charcot Avenue overcrossing structure would be 7-foot wide.
- An additional Class II bike lane would extend on the south side of the existing Charcot Avenue along the new slip ramp right-turn lane to O'Toole Avenue.[3]

The separated bikeways would connect to the existing bike lanes on Charcot Avenue to the west of the project limits, as well as to the existing bike lanes on Oakland Road. The existing and new bicycle facilities associated with this Project would also provide a connection opportunity to the planned pedestrian/bicycle trail along Coyote Creek, which crosses under Charcot Avenue just west of Paragon Drive.

2.3.3 Pedestrian Improvements

The project would include sidewalks along both sides of the Charcot Avenue extension between Paragon Drive and Oakland Road. The sidewalks would connect to existing sidewalks at the intersections on Silk Wood Lane and Oakland Road. There are currently no sidewalks along Paragon Drive, Charcot Avenue, and O'Toole Avenue. The sidewalks proposed as part of the project include the following features:

- An additional sidewalk would extend along the south side of the eastbound slip-ramp right turn lane from Charcot Avenue to O'Toole Avenue. There would also be a segment of sidewalk on the west side of O'Toole Avenue under the Charcot Avenue overcrossing.
- As noted above, to facilitate the crossing of Charcot Avenue, a new pedestrian-only signal such as a HAWK beacon, would be installed along Charcot Avenue at Silk Wood Lane.
- To enhance pedestrian access to/from Orchard Elementary School, the width of the sidewalk on the south side of Charcot Avenue at Silk Wood Lane would widen to 11 feet. In addition, a 9-foot wide paved pedestrian path would be constructed next to the 11-foot wide sidewalk to connect to a gate at the school playground.
- The 11-foot wide sidewalk would narrow back to an 8-foot width along the segment of Charcot Avenue between Silk Wood Lane and Oakland Road and extend around the northeastern corner of the existing Orchard School ball field.

2.3.4 Retaining Walls

The project would require the installation of retaining walls at various locations along the proposed Charcot Avenue extension:

- Since Charcot Avenue would be elevated over O'Toole Avenue and I-880, the profile of the roadway would be raised on both sides of the overcrossing. Traveling from west to east, the profile would begin to rise just east of Paragon Drive, would reach its highest point over I-880, and would descend back to the existing grade just west of Silk Wood Lane. This would require retaining walls on both sides of Charcot Avenue ranging in height from

[3] A Class II bike lane a striped lane for one-way bike travel on a street or highway adjacent to auto travel lanes.

approximately 3 feet to up to approximately 18 feet to the west of the overcrossing and from approximately 3 feet up to approximately 19 feet to the east of the overcrossing.

- An additional retaining wall would extend along the south side of the proposed slip ramp right-turn lane from Charcot Avenue to O'Toole Avenue.
- The retaining wall on the south side of the extension would extend to Oakland Road around the northeast corner of the Orchard School Ball Field along the proposed sidewalk.

2.3.5 Utility Relocation

There are existing utility lines within the footprint of the proposed Charcot Avenue extension, the majority of which are underground. These include water, storm drain, sanitary sewer, gas, electric, and communication facilities. These utilities would be relocated along the alignment, as necessary, to accommodate the construction of the project.

2.3.6 Right-of-Way Requirements

The proposed project would largely be constructed within the existing City-owned right-of-way both west and east of I-880. The project, however, would require additional right-of-way from a number of parcels located along the proposed alignment. In addition, temporary easements for construction and permanent easements for utilities and retaining walls would also be required. The right-of-way and easement requirements are summarized in Table 2.2-1 and are shown on Figure 2.1-5.

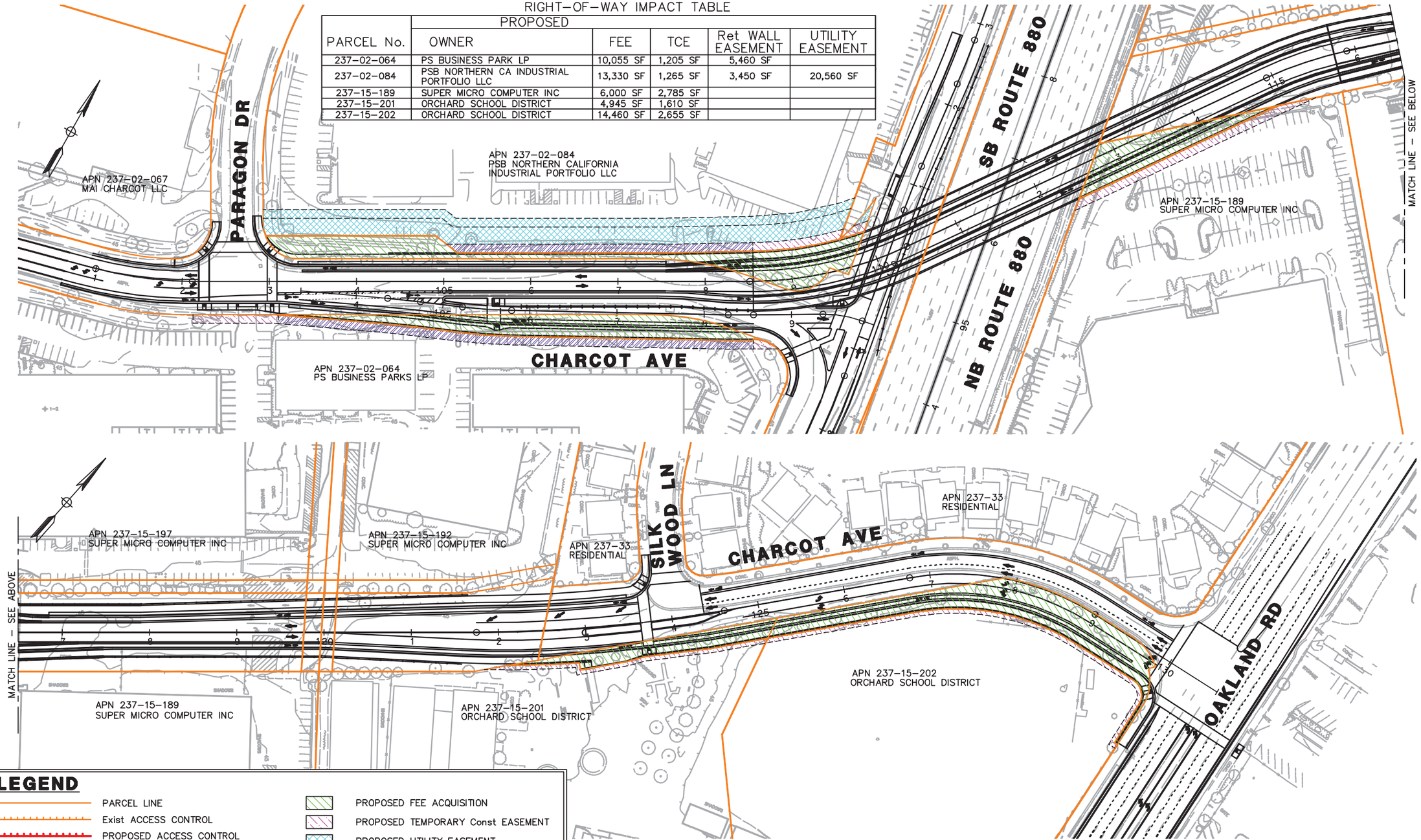
Table 2.3-1: Right-Of-Way and Easement Requirements

Assessor's Parcel Number	Owner/Parcel Address	Right of Way	Temporary Construction Easement	Retaining Wall Easement	Utility Easement
237-02-064	PS Business Park, LP 832 Charcot Avenue	9,400	1,000	5,600	--
237-02-084	PSB No. CA Industrial Portfolio, LLC 2033 O'Toole Avenue	13,200	--	4,500	20,500
237-15-189	Super Micro Computer, Inc. 980 Rock Avenue	6,000	2,800	--	--
237-15-201	Orchard School District 921 Fox Lane	4,950	1,610	--	--
237-15-202	Orchard School District 921 Fox Lane	14,460	2,660	--	--

- All numbers are rounded up to the nearest 100 and are expressed in square feet.
- Numbers are preliminary and are subject to change during final design.

RIGHT–OF–WAY IMPACT TABLE

PARCEL No.	PROPOSED OWNER	FEE	TCE	Ret WALL EASEMENT	UTILITY EASEMENT
237–02–064	PS BUSINESS PARK LP	10,055 SF	1,205 SF	5,460 SF	
237–02–084	PSB NORTHERN CA INDUSTRIAL PORTFOLIO LLC	13,330 SF	1,265 SF	3,450 SF	20,560 SF
237–15–189	SUPER MICRO COMPUTER INC	6,000 SF	2,785 SF		
237–15–201	ORCHARD SCHOOL DISTRICT	4,945 SF	1,610 SF		
237–15–202	ORCHARD SCHOOL DISTRICT	14,460 SF	2,655 SF		



RIGHT-OF-WAY REQUIREMENTS | FIGURE 2.1-5

2.4 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15124, an EIR must include a statement of objectives, including the underlying purpose of the proposed project.

Currently, all east-west through traffic crossing between both sides of I-880 in the North San José Area travel on the Tasman Drive overcrossing, the Montague Expressway overcrossing, or the Brokaw Road undercrossing, all of which experience congested conditions during commute periods. The three existing crossings also interchange with I-880, resulting in mass access points of regional traffic that make crossings for local traffic, bicycles, and pedestrians less ideal.

The purpose of extending Charcot Avenue across I-880 is to provide a safe multi-modal facility, improve connectivity for vehicular, bicycle, and pedestrian travel routes, provide the opportunity to utilize alternative travel modes, and reduce travel time for the east-west travelers in the North San José Area.

The objectives for the proposed project are as follows:

- ► Improve connectivity between the east side of I-880 and the west side of I-880;
- ► Increase the capacity for east/west travel across the I-880 corridor;
- ► Provide a safe bicycle/pedestrian facility over I-880, in compliance with San José's Complete Streets Policy;
- ► Implement a programmed roadway network improvement project identified in the *Envision San José 2040 General Plan;* and
- ► Implement a planned major roadway improvement project, as set forth in the *North San José Area Development Policy* and the *North San José Deficiency Plan*.

2.5 USES OF THE EIR

This EIR will provide decision makers in the City of San José and general public with relevant environmental information to use in considering the proposed project.

The EIR will also be used by Caltrans as part of their process to issue an Encroachment Permit for the I-880 overcrossing structure.

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

3.1	Aesthetics	3.11	Land Use and Planning
3.2	Agriculture and Forestry Resources	3.12	Mineral Resources
3.3	Air Quality	3.13	Noise
3.4	Biological Resources	3.14	Population and Housing
3.5	Cultural Resources	3.15	Public Services
3.6	Energy	3.16	Recreation
3.7	Geology and Soils	3.17	Transportation
3.8	Greenhouse Gas Emissions	3.18	Tribal Cultural Resources
3.9	Hazards and Hazardous Materials	3.19	Utilities and Service Systems
3.10	Hydrology and Water Quality	3.20	Wildfire

The discussion for each environmental subject includes the following subsections:

Environmental Setting – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.

Impact Discussion – This subsection includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts.

- **Project Impacts** – This subsection discusses the project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact [CEQA Guidelines Section 15370]. Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.

- **Cumulative Impacts** – This subsection discusses the project's cumulative impact on the environmental subject. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively

considerable." The discussion does not need to be in as great detail as is necessary for project impacts but is to be "guided by the standards of practicality and reasonableness." The purpose of the cumulative analysis is to allow decision makers to better understand the impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence [CEQA Guidelines Section 15130(b)]. To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document [CEQA Guidelines Section 15130(b)(1)]. This EIR uses a hybrid approach: both projects in the vicinity and projections from the adopted *Envision San José 2040 General Plan*.

The analysis must determine whether the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3). he cumulative impacts discussion for each environmental issue accordingly addresses the following issues: 1) would the effects of all of past, present, and probable future (pending) development result in a significant cumulative impact on the resource in question; and, if that cumulative impact is likely to be significant, 2) would the contribution from the proposed project to that significant cumulative impact be cumulatively considerable? If the project has no impact on a given resource, then by definition there would be no cumulative impact [CEQA Guidelines Section 15130(a)(1)].

For each environmental issue, cumulative impacts may occur within different geographic areas. For example, the project effects on air quality would combine with the effects of projects in the entire air basin, whereas noise impacts would primarily be localized to the surrounding area.

Cumulative air quality, energy, greenhouse gas, and noise and vibration analysis were evaluated in relation to pending and approved projects in the larger project area. These cumulative projects were accounted in the traffic modeling used for this project, which was used to derive traffic volumes in the larger project area.

Important Note to the Reader

The California Supreme Court in a December 2015 opinion in California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369 (BIA v. BAAQMD) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, the evaluation of the significance of project impacts under CEQA in the following sections focuses on impacts of the project on the environment, including whether a project may exacerbate existing environmental hazards.

The City of San José has policies that address existing conditions affecting a proposed project, which are also discussed in this EIR. This is consistent with one of the primary objectives of CEQA, which is to provide objective information to decision-makers and the public. The CEQA Guidelines and the courts are clear that a CEQA can include information of interest even if such information is not an environmental impact as defined by CEQA.

Therefore, in addition to describing the impacts of the project on the environment, this EIR will discuss operational issues as they relate to City policies. Such examples include, but are not limited to, locating a project near sources of air emissions that can pose a health risk, in a floodplain, geologic hazard zone, high noise environment, or on/adjacent to sites involving hazardous substances.

3.1 AESTHETICS

The following discussion is based on a Visual Impact Assessment prepared by William Kanemoto & Associates in December 2018. The report is attached as Appendix D of this EIR.

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Scenic Highways Program

The California Scenic Highway Program is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. State laws governing the Scenic Highway Program are found in the Streets and Highway Code, Sections 260 through 263. There are no state-designated scenic highways in San José. Interstate 280 from the San Mateo County line to State Route 17, which includes segments in San José, is an eligible, but not officially designated, State Scenic Highway.[4]

Local

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.1-1 are specific to aesthetics and are applicable to the proposed project.

Table 3.1-1: Applicable General Plan Policies – Aesthetics

Policy	Description
CD-1.17	Minimize the footprint and visibility of parking areas. […] screen parked vehicles from view from the public realm.
CD-1.23	Further the Community Forest Goals and Policies in this Plan by requiring new development to plant and maintain trees at appropriate locations on private property and along public street frontages. Use trees to help soften the appearance of the built environment, help provide transitions between land uses, and shade pedestrian and bicycle areas.
CD-1.24	Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Avoid any adverse effect on the health and longevity of such trees through design measures, construction, and best maintenance practices. When tree preservation is not feasible, include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.
CD-10.1	Recognize the importance of Gateways in shaping perceptions of San José.
CD-10.2	Require that new public and private development adjacent to Gateways, freeways […] and Grand Boulevards consists of high-quality architecture, use high-quality materials, and contribute to a positive image of San José.

[4] California Department of Transportation. "Scenic Highways." Accessed: December 19, 2018. Available at: http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html.

City Council Policy 4-2: Lighting

Council Policy 4-2 requires dimmable, programmable lighting for new streetlights, which would control the amount and color of light shining on streets and sidewalks. Light is to be directed downward and outward. New and replacement streetlights should also offer the ability to change the color of the light from full spectrum (appearing white or near white) in the early evening to a monochromatic light in the later hours of the night and early morning. At a minimum, full-spectrum lights should be able to be dimmed by at least 50 percent in late night hours.

3.1.1.2 *Existing Conditions*

Visual Setting

The 0.6-mile project alignment is located in the North San José area within the northern Santa Clara Valley. The project area is highly urbanized, dominated by low-rise industrial/office parks, I-880, single-family residences, and an elementary school. The project alignment consists of the existing Charcot Avenue between Paragon Drive and O'Toole Avenue, over Interstate 880 (I-880) to undeveloped City right-of-way bisecting the Super Micro Campus, and the southern leg of Silk Wood Lane connecting to Oakland Road.

Visual Character

Visual character is a description of the landscape's formal visual features. Within the western and eastern segment of the alignment, the project can be further divided into four distinct visual segments: 1) western segment surrounded by office park on the existing Charcot Avenue west of I-880; 2) overcrossing segment within the I-880 right-of-way; 3) eastern segment bisecting the Super Micro campus immediate east of I-880; and 4) easternmost segment surrounded by single-family residences to the north and Orchard School to the south on Silk Wood Lane (refer to Figure 2.1-3). The visual characteristics of these segments are described below.

Charcot Avenue: Visual character of the western segment of the project corridor is defined by one-story industrial/office parks and is visually dominated by tall street trees (up to 90 feet in height) planted in raised landscaped berms that partly screen parking and buildings from the street, and create a tall, enclosing canopy. According to the *Envision San José 2040 General Plan*, the western alignment between Paragon Drive and O'Toole Avenue is designated as a "Gateway."[5] As stated in the General Plan, Gateways are locations which announce a visitor or resident that they are entering the City, or a unique neighborhood.

Views from the western segment are limited to the surrounding area, mainly the mature trees along the northern and southern side of the roadway (See Photo 1).

[5] City of San José. *Envision San José 2040 General Plan Integrated Final Program Environmental Impact Report*. September 2011. Figure 3.12-1.

I-880: In the segment of the proposed I-880 overcrossing, visual character is dominated by the existing eight-lane freeway corridor, which is moderated to a degree by tall tree plantings on each side of the freeway. Typical of a freeway environment, the segment is characterized by a large expanse of paving, very high concentrations of vehicles, and a center concrete safety barrier, forming a wide linear corridor punctuated by periodic overcrossing structures (See Photo 2).

Super Micro Campus: In the segment immediately east of the freeway, the visual character is dominated by an approximately 100-foot-wide City right-of-way between office park buildings occupied by Super Micro Inc., including a paved truck loading area. [Note: As part of the site development permit for the Super Micro campus, a condition of approval was included that allowed the temporary use of Charcot Avenue right-of-way for a truck loading area. The condition required that the loading area be removed when the City constructs the Charcot Avenue extension.] The portions of the right-of-way outside of the loading area are currently undeveloped and unused, with tree plantings lining the right-of-way on each side which define the limits of the office park and visually screen the right-of-way. East of the loading area, the right-of-way adjoins more offices and parking to the north, and three single-story school buildings to the south. These buildings are currently screened by dense tree plantings, and do not have views to the right-of-way (See Photo 3).

Silk Wood Lane: In the easternmost project segment on Silk Wood Lane connecting to Oakland Road, the visual character consists of several single-family residences in the Silkwood residence neighborhood to the north, and Orchard Elementary School's outdoor play field and ball field to the south. The eastern Diablo Range foothills, a key scenic feature, is visible at distances of three to four miles from this easternmost segment (See Photo 4).

There are no state-designated scenic highways in San José. The nearest state-designated scenic highway is Interstate 680 (I-680) at Mission Boulevard in the City of Fremont, approximately 7.3 miles northeast of the project alignment.

Visual quality is a rating of the scenic value of the landscape, expressed in terms of its *vividness, intactness, and unity* in accordance with the Federal Highway Administration's Visual Impact Assessment method. Visual quality before and after the project is rated on a 5-point scale from l*ow, moderately low, moderate, moderately high*, to *high*. The visual quality of the project segments is described below.

Photo 1: View of Charcot Avenue looking east from Paragon Drive.

Photo 2: View of I-880 looking north.

PHOTOS	1 & 2

Photo 3: View of Super Micro loading area looking east.

Photo 4: View of Silk Wood Lane looking east.

PHOTOS	3 & 4

Visual Quality

Charcot Avenue Visual quality of the western project segment on existing Charcot Avenue between Coyote Creek and O'Toole Lane is moderate to moderately high. Though lacking distinctive long-distance views or highly scenic features, the substantial mature tree canopy of this segment contributes considerable vividness. These mature trees and the raised landscaped berms on which they are planted visually screen adjacent parking and buildings, contributing to moderate visual unity and intactness.

I-880 The central I-880 segment is dominated entirely by the existing eight-lane freeway. Tall trees line portions of the right-of-way, contributing some vividness to an otherwise low-quality visual setting. Views to the Diablo Range from the freeway are largely blocked by intervening industrial buildings in the foreground. Vividness, intactness, unity, and overall visual quality of the freeway corridor are thus moderately low.

Super Micro Campus The undeveloped portion of the right-of-way directly east of I-880 is comprised of undeveloped open areas and a paved loading dock area. Views from within this segment are dominated and blocked by adjoining two-story office buildings and parking of the Super Micro campus. Vividness, intactness, unity, and overall visual quality of this area is moderate to moderately low. Except for loading dock activities, views and use of this area are minimal.

Silk Wood Lane Silk Wood Lane, the easternmost project segment, has moderate visual quality. Recent, landscaped urban residential development adjoins the right-of-way to the north, and a hedgerow of 15 to 20-foot tall plane trees adjoins the right-of-way to the south screening the outdoor play field and ball field. The trees provide a vivid element seen from the ball field and roadway that also provides screening of the roadway for viewers within the school grounds. Vividness, intactness, unity, and overall visual quality are moderate.

Lighting and Glare

Sources of light and glare are abundant in the urban environment of the project area, including, but not limited to, streetlights, parking lot lights, security lights, vehicular headlights, internal building lights, and reflective building surfaces and windows.

3.1.2 Discussion of Aesthetic Impacts

For the purpose of determining the significance of the project's aesthetic and visual impacts, would the project:

1) Have a substantial adverse effect on a scenic vista?
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

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

3.1.2.1 *Impacts on a Scenic Vista*

Impact AES-1:	**The project would not have a substantial adverse effect on a scenic vista. (No Impact)**

A scenic vista is generally defined as an expanded view of an area that is visually and aesthetically pleasing. The project alignment is not located within a designated scenic vista, nor is it located on a hill or along a ridgeline. Due to the flat topography, adjacent development limits views of the project alignment to the immediate area. For these reasons, the proposed roadway extension project would not have a substantial adverse effect on a scenic vista. **(No Impact)**

3.1.2.2 *Impacts to Scenic or Historic Resources within a State Scenic Highway*

Impact AES-2:	**The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)**

As described above, the project alignment is not located along, or in proximity to an officially designated state scenic highway. For this reason, the proposed project would not damage scenic resources within a state scenic highway. **(No Impact)**

3.1.2.3 *Degradation of Existing Visual Character*

Impact AES-3:	**The project would substantially change the visual character along existing Silk Wood Lane, for which mitigation is included in the project. In contrast, the project would substantially alter the visual character along Charcot Avenue between Paragon Drive and O'Toole Avenue by removing mature trees, for which mitigation is not feasible. (Significant Unavoidable Impact)**

The courts have ruled that under CEQA, "the question is whether a project would affect the environment of persons in general, not whether a project would affect particular persons" (Mira Mar, supra, 119 Cal.App.4th at p. 492; see also Pocket Protectors, supra, 124 Cal.App.4th at p. 929.). This ruling is relevant to the visual impacts of the proposed Charcot Avenue Extension project, because the proposed project would affect private views from the offices and residences immediately adjacent to the proposed extension to a much greater degree than the surrounding area in general; however, based on the court ruling, the visual impact analysis is based on how the proposed project would impact public views.

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. Under the Federal Highway Administration (FHWA) methodology, high levels of adverse change to visual resource (visual quality and visual character) in combination with

high levels of anticipated viewer response (viewer sensitivity and exposure), are likely to result in high levels of adverse visual impact.

Charcot Avenue

Resource Change

As described above, the western segment of the project alignment, between Paragon Drive and O'Toole Avenue, is a designated Gateway in the *Envision San José 2040 General Plan*.

The proposed project would require removal of approximately 37 trees and raised berms along the existing Charcot Avenue, between Paragon Drive and O'Toole Avenue, in order to connect this segment to the proposed overcrossing. The trees to be removed are shown on Figure 3.1-1. The trees and raised berms dominate the existing setting and screen views of the office buildings and associated parking from the road, and vice-versa.

The proposed overcrossing approach would be elevated by retaining walls up to 18-foot in height. The elevated overcrossing approach and retaining walls would replace the existing views of earth berms and trees, and the overall change to existing visual vividness, intactness, and unity would each be moderately high. These changes, which are shown on Figure 3.1-2, represent a moderately high level of decline in visual quality and overall resource change in a designated Gateway, which is considered a significant visual quality impact. General Plan Policies CD-1.17, 1.23, and 1.24 require projects to include tree replacement for trees removed, and Policy CD-10.2 requires public development adjacent to Gateways contain high-quality architecture, use high-quality material, and contribute to a positive image of the City.

Standard Conditions

- The proposed roadway extension, including the retaining wall and overcrossing shall be reviewed by the City to ensure the design incorporates high-quality architecture and materials, and meets the City's design standard.
- The proposed project shall plant replacement trees along the proposed roadway alignment to the extent feasible.

While the project shall include replacement trees along the proposed alignment to the extent feasible, the project alignment is located adjacent to a major utility corridor. This physical constraint prevents the project from planting trees along the northern and southern boundary of Charcot Avenue between Paragon Drive and O'Toole Avenue. Substantial additional rights-of-way would need to be purchased from the properties on the north and south sides of the alignment to accommodate the trees outside of the utility corridor. In some locations, parking for the adjacent businesses would be lost in order to accommodate the trees. For these reasons, the planting of replacement trees between Paragon Drive and O'Toole Avenue is considered infeasible.

Viewer Response

In the western segment of the proposed roadway alignment, motorist viewer numbers are low and exposure to the short length of the roadway segment (less than one block) is brief and fleeting. Since

views are primarily workers traveling to and from jobs, viewer sensitivity is considered less than average, and overall viewer response of motorists in this segment is considered moderately low

While the viewer response would be considered moderately low, resource change at this segment, a Gateway, is considered moderately high due to the removal of mature trees. As stated above, the replacement of trees at the western project alignment is considered infeasible. For these reasons, the proposed project would result in a significant unavoidable aesthetic impact at a City-designated Gateway. **(Significant Unavoidable Impact)**

I-880

Resource Change

Freeway overcrossings are relatively common along freeway corridors, and the proposed overcrossing would be characteristic of the existing freeway corridor. As shown on Figure 3.1-3, resource change from the proposed project on I-880 would primarily be the addition of the proposed freeway overcrossing. For these reasons, the project would not substantially alter the overall visual character or quality of the I-880 corridor.

Viewer Response

Visual response from motorists on I-880 would be moderately low. While viewer numbers from the freeway are high, view duration at average travel speeds is fleeting. No scenic views would be blocked by the overcrossing. Since expectations of freeway motorists in this highly urban commuter setting are considered moderately low or low, overall viewer response of motorists in this segment is moderately low. For these reasons, the proposed project would not result in a significant visual impact on I-880. **(Less Than Significant Impact)**

Super Micro Campus

Resource Change

This vacant segment bisecting the Super Micro Campus is located within the City right-of-way and was set aside by the City for the proposed project when the Super Micro Campus was approved for development. The project alignment in this segment is screened by trees along the edges of the right-of-way, and a row of bamboo in the middle of the right-of-way. As shown on Figure 3.1-1, the project alignment would require removal of approximately 15 trees within the right-of-way along the Super Micro Campus.

Viewer Response

There are currently no motorists on this undeveloped segment. Views of this segment are mostly limited to the existing surrounding development in the immediate vicinity. For these reasons, the change to viewer response would be minimal.

As described under Standard Conditions, the project shall include replacement trees to screen the proposed roadway extension and Super Micro building and associated parking. For these reasons, the

proposed roadway extension along this segment would not result in a significant visual change or impact. **(Less Than Significant Impact)**

Silk Wood Lane

Resource Change

Residents and Orchard School are located to the north and south of this segment. As shown in Figure 2.1-4, the project would require additional right-of-way from Orchard School, impacting the school's outdoor recreational area. As shown on Figure 3.1-1, the proposed project would require removal of approximately one tree along the northern side and 18 trees on the southern side of the roadway alignment in this segment. As shown on Figure 3.1-4, the removal of the trees would increase visibility, prominence, and awareness of the roadway. The change from views of Silk Wood Lane to a continuous roadway extension would be considered a substantial impact

Viewer Response

Public views of the easternmost segment of the project alignment would be primarily from the Orchard School outdoor recreational areas. Viewers would include Orchard School students and employees, and the general public using the school's outdoor facilities. Viewers would also include motorists, pedestrians, and bicyclists, and private views from the residences to the north.

Orchard School's outdoor recreational areas would be located the closest to the project alignment. With the proposed roadway extension in place, viewer exposure and response from the recreational areas would be high.

Based on the resource change and viewer response at the outdoor recreational areas, the proposed roadway extension would result in a significant visual change and impact along the Silk Wood Lane segment. **(Significant Impact)**

The following measure would be implemented as part of the project to reduce aesthetic impacts at the Orchard School outdoor play area and ball field to a less than significant level.

MM AES-3.1: As described in greater detail under mitigation measure MM NOI-1.2 in Section 3.13, *Noise*, and as shown on Figure 3.13.3, the City shall construct a six-foot noise barrier along the Orchard School frontage of Silk Wood Lane. The noise barrier will also provide a visual barrier between the proposed roadway extension and Orchard School outdoor recreation areas.

MM AES-3.2: Any noise barrier constructed as part of the project shall include aesthetic treatment (e.g., color, texture, plantings, etc.) that are compatible with the surroundings.

Implementation of mitigation measure MM AES-1 and MM AES-3.2 would reduce visual impacts at Orchard School to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

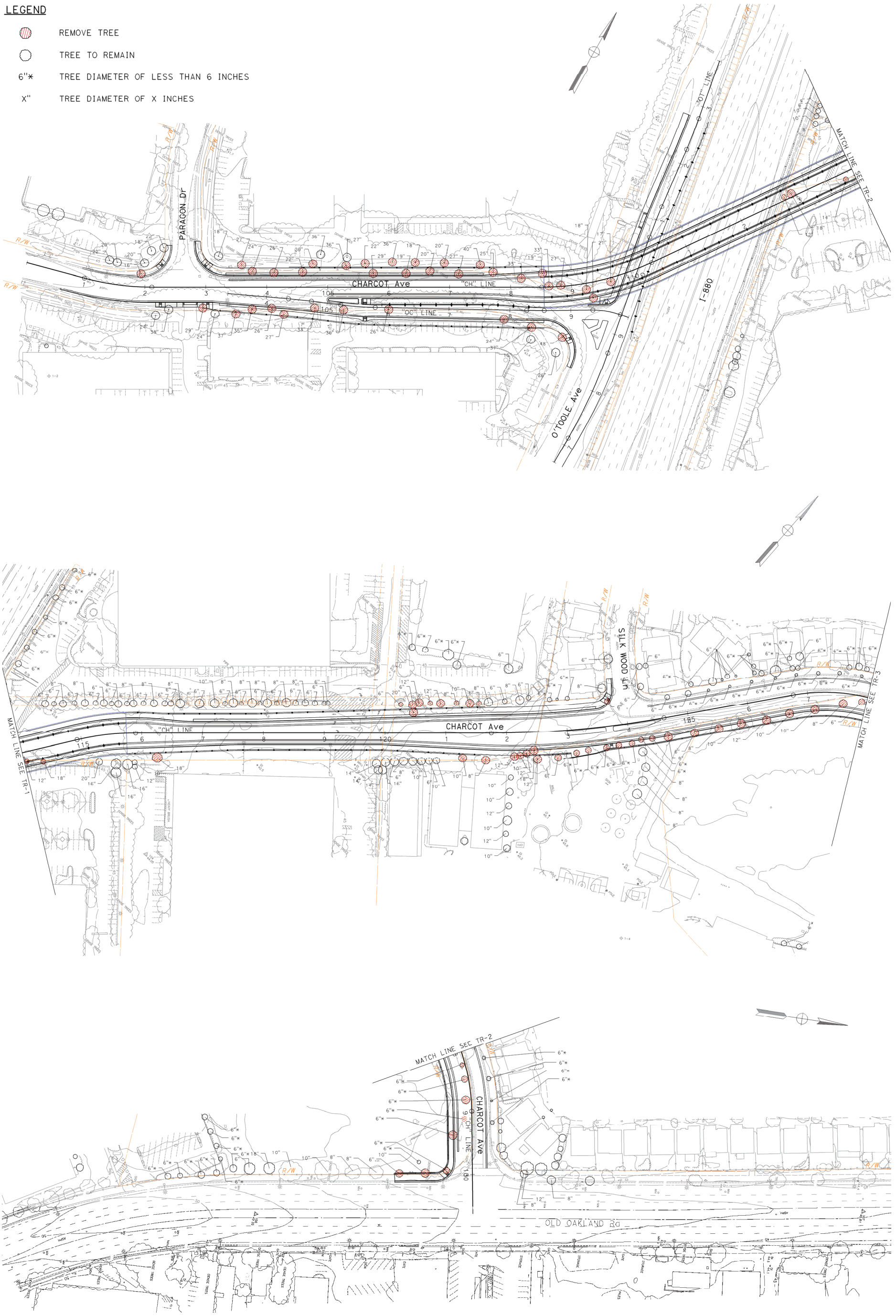
LEGEND

REMOVE TREE

TREE TO REMAIN

6"* TREE DIAMETER OF LESS THAN 6 INCHES

X" TREE DIAMETER OF X INCHES



TREE REMOVAL EXHIBIT

FIGURE 3.1-1

Existing

Proposed

PHOTO SIMULATION OF THE PROPOSED PROJECT FROM CHARCOT AVENUE NEAR PARAGON DRIVE, LOOKING EAST | FIGURE 3.1-2

Existing

Proposed

PHOTO SIMULATION OF THE PROPOSED PROJECT FROM I-880 LOOKING NORTH | FIGURE 3.1-3

Existing

Proposed

PHOTO SIMULATION OF THE PROPOSED PROJECT FROM SILK WOOD LANE LOOKING EAST

FIGURE 3.1-4

3.1.2.4 *Light and Glare Impacts*

Impact AES-4:	**The project would not create a new source of light and glare that would adversely affect day or nighttime views in the area. (Less than Significant Impact)**

The proposed roadway alignment is located within an urban area with existing sources of light and glare (e.g., security, street, and parking lot lights and window glare). While the project would construct new street lights and introduce vehicles driving along the new roadway, creating additional light and glare, the project shall go through a design review and be in compliance with the City's Lighting Policy (City Council Policy 4-2), which requires lights to be dimmable, programmable, and directed downward and outward. With compliance of the Lighting Policy, lighting impacts would be less than significant.

3.1.2.5 *Cumulative Impacts*

Impact AES-C:	**The project would not result in a cumulatively considerable contribution to a significant cumulative aesthetics impact. (Less than Significant Cumulative Impact)**

As discussed above, due to the substantial resource change from the removal of mature trees at a designated Gateway, the proposed project would result in a significant unavoidable visual impact along Charcot Avenue between Paragon Drive and O'Toole Avenue. At all other locations, including from I-880 and from areas east of I-880, the visual/aesthetic impacts of the project would be less-than-significant or less-than-significant with mitigation.

The project alignment is surrounded by adjacent development, and views of the project alignment from that development are limited to the immediate area. Therefore, the geographic area for cumulative aesthetic impacts is defined as the immediate project vicinity consisting of locations from which the Charcot Avenue Extension would be visible. Within this immediate vicinity, one recent project resulted in a visual change that would contribute to the cumulative visual effect resulting from construction of the Charcot Avenue Extension. That project was the widening of the same section of I-880 where the Charcot Avenue overcrossing would be located.

The visual effects of both the I-880 Widening project and the Charcot Avenue Extension project would be visible to motorists on I-880, the former due to the removal of trees along the freeway and the latter due to the introduction of a new structure into motorists' viewshed. However, the combined aesthetic impact of the widening of the freeway and the Charcot Avenue overcrossing would not be significant because, as shown on Figure 3.1-3, no scenic vistas would be blocked. Further, I-880 is not a designated scenic highway.

Based on the above, the project would not result in a significant cumulative aesthetic impact. **(Less than Significant Cumulative Impact)**

3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Environmental Setting

The Santa Clara County Important Farmland 2016 Map designates the project alignment as *Urban and Built-Up Land*.[6] *Urban and Built-Up Land, which* is defined as land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. The project alignment is currently developed with roadways, outdoor recreational areas, and office facilities and also includes landscaped/undeveloped right-of-way for the proposed overcrossing and extension. There is no forest land or land subject to a Williamson Act contract located on or adjacent to the project alignment.[7]

3.2.2 Discussion of Impacts to Agriculture and Forestry Resources

For the purpose of determining the significance of the project's impacts on agriculture and forestry resources, would the project:

1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
4) Result in a loss of forest land or conversion of forest land to non-forest use?
5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

3.2.2.1 *Project Impacts*

Impact AG-1:	**The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (No Impact)**

Impact AG-2:	**The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (No Impact)**

[6] California Department of Conservation. *Santa Clara County Important Farmland 2016*. September 2018.
[7] County of Santa Clara Department of Planning and Development. "Williamson Act and Open Space Easement." Accessed: January 22, 2019. Available at: https://www.sccgov.org/sites/dpd/Programs/WA/Pages/WA.aspx.

Impact AG-3:	**The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. (No Impact)**

Impact AG-4:	**The project would not result in a loss of forest land or conversion of forest land to non-forest use. (No Impact)**

Impact AG-5:	**The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (No Impact)**

The project alignment is located in a developed urban area in North San José. There are no agricultural uses, forest land, or land subject to a Williamson Act contract within or adjacent to the project alignment. For these reasons, the project would not convert farmland to non-agricultural uses, conflict with a Williamson Act contract or existing zoning for agricultural operations, facilitate the unplanned conversion of farmland to non-agricultural uses, or result in the loss of forest lands. **(No Impact)**

3.2.2.2 *Cumulative Impacts*

Impact AG-C:	**The project would not result in a cumulatively considerable contribution to a significant agricultural and forestry resources impact. (No Cumulative Impact)**

As described above, the project would not impact agricultural or forestry resources. Therefore, per CEQA Guidelines Section 15130(a)(1), the project would not contribute to a cumulative agricultural and forestry resources impact. **(No Cumulative Impact)**

3.3 AIR QUALITY

The following discussion is based on an Air Quality and Greenhouse Gas Emissions Assessment prepared by Illingworth & Rodkin, Inc. in June 2019. The report is included as Appendix E to this EIR.

3.3.1 Environmental Setting

3.3.1.1 *Regulatory Framework*

Federal and State

Air Quality Overview

Federal, state, and regional agencies regulate air quality in the San Francisco Bay Area Air Basin, within which the proposed project is located. At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The California Air Resources Board (CARB) is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act.

Regional and Local Criteria Pollutants

The federal Clean Air Act requires the EPA to set national ambient air quality standards for six common air pollutants (referred to as "criteria pollutants"): particulate matter (PM), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate.

Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. "Attainment" status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB. The Bay Area, as a whole, does not meet state or federal ambient air quality standards for ground level ozone and fine particulate matter ($PM_{2.5}$), nor does it meet state standards for respirable particulate matter (PM_{10}). The Bay Area is considered in attainment or unclassified for all other pollutants.

Toxic Air Contaminants and Fine Particulate Matter (Local Community Risks)

Besides criteria pollutants, there is another group of substances found in ambient air referred to as Toxic Air Contaminants (TACs). These contaminants tend to be localized and are found in relatively low concentrations in ambient air; however, exposure to low concentrations over long periods can result in increased risk of cancer and/or other adverse health effects. TACs are primarily regulated through state and local risk management programs. These programs are designed to eliminate, avoid, or minimize the risk of adverse health effects from exposures to TACs. A chemical becomes a regulated TAC in California based on designation by the California Office of Environmental Health Hazard Assessment (OEHHA). Diesel exhaust, in the form of diesel particulate matter (DPM), is the

predominant TAC in urban air and accounts for roughly 60 percent of the total cancer risk associated with TACs in the Bay Area. Other TACs found in urban air include lead, benzene and formaldehyde.

$PM_{2.5}$ is a complex mixture of substances that includes elements such as carbon and metals, compounds such as nitrates, organics, and sulfates, and mixtures such as diesel exhaust and wood smoke. Because of their small size (particles are less than 2.5 micrometers in diameter), $PM_{2.5}$ can lodge deeply into the lungs. According to the Bay Area Air Quality Management District (BAAQMD), $PM_{2.5}$ is the air pollutant most harmful to the health of Bay Area residents.

Common stationary sources of TACs and $PM_{2.5}$ include gasoline stations, dry cleaners, and diesel backup generators. The other more significant, common mobile source is motor vehicles on roadways and freeways. Unlike regional criteria pollutants, local risks associated with TACs and $PM_{2.5}$ are evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Regional

Bay Area Air Quality Management District (BAAQMD)

BAAQMD is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and develops regulations that must be consistent with or more stringent than, federal and state air quality laws and regulations.

Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state air quality standards would be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two closely related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how the BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities.

The 2017 CAP includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Local

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* includes policies for the purpose of reducing or avoiding impacts related to air quality resulting from planned development projects with the City. The policies listed in Table 3.3-1 are specific to air quality and are applicable to the proposed project.

Table 3.3-1: Applicable General Plan Policies – Air Quality	
Policy	**Description**
MS-10.1	Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
MS-11.2	For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
MS-13.1	Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

3.3.1.2 *Existing Conditions*

Sensitive receptors are groups of people more affected by air pollution than others. As identified in the California Health and Safety Code § 42705.5(a)(5), the following people are most likely to be affected by air pollution: children under 16, adults over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. The nearest existing sensitive receptors to the proposed Charcot Avenue Extension include residents on Silk Wood Lane and students at Orchard School.

Silk Wood Lane currently makes up the eastern alignment of the Charcot Avenue extension. Traffic volumes along Silk Wood Lane are approximately 700 average daily trips (ADT). Traffic volumes on Charcot Avenue, east of Junction Avenue, are approximately 8,100 ADT.

3.3.2 Discussion of Air Quality Impacts

For the purpose of determining the significance of the project's impacts on air quality, would the project:

1) Conflict with or obstruct implementation of the applicable air quality plan?
2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
3) Expose sensitive receptors to substantial pollutant concentrations?
4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the Lead

Agency and must be based to the extent possible on scientific and factual data. The City of San José has carefully considered the thresholds updated by BAAQMD in May 2017 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. The BAAQMD CEQA Air Quality thresholds used in this analysis are identified below in Table 3.3-2.

Table 3.3-2: Thresholds of Significance Used in Air Quality Analyses

Pollutant	Construction	Operation	
	Average Daily Emissions (pounds)	Average Daily Emissions (pounds)	Maximum Annual Emissions (tons)
ROG, NO_x	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust (PM_{10}/$PM_{2.5}$)	Implement Best Management Practices	None	None
CO	None	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Risk and Hazards for New Sources and Receptors (Project)	Same as operational threshold	• Increased cancer risk of >10.0 in one million • Increased non-cancer risk of > 1.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.3 μ/m^3 (Zone of influence: 1,000-foot radius from property line of source or receptor)	
Risk and Hazards for New Sources and Receptors (Cumulative)	Same as operational threshold	• Increased cancer risk of >100 in one million • Increased non-cancer risk of > 10.0 Hazard Index (chronic or acute) • Ambient $PM_{2.5}$ increase: > 0.8 μ/m^3 (Zone of influence: 1,000-foot radius from property line of source or receptor)	

Sources: *BAAQMD CEQA Thresholds Options and Justification Report* (2009) and *BAAQMD CEQA Air Quality Guidelines* (May 2017).
ROG = Reactive Organic Gases
NO_x = Nitrogen Oxides
CO = Carbon Monoxide
ppm = parts per million
μ/m^3 = micrograms per cubic meter

3.3.2.1 *Conflicts with Air Quality Plans*

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. (No Impact)

The applicable air quality plan is the Bay Area 2017 CAP. The project would not conflict with the 2017 CAP, because project construction and operation criteria pollutant emissions would be below the BAAQMD criteria pollutant thresholds, as further discussed below under Impact AIR-2.

In addition, the extension of Charcot Avenue is identified as part of the City's planned roadway network in the *Envision San José 2040 General Plan,* the *North San José Deficiency Plan,* and the *North San José Area Development Policy*. Therefore, the project would be consistent with these plans because it would implement one of the projects identified therein.

Based on the above, the project would not conflict with or obstruct implementation of the applicable air quality plan.

3.3.2.2 *Net Increase in Emissions of Criteria Air Pollutants*

Impact AIR-2:	**The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Less than Significant Impact)**

Construction Criteria Pollutant Emissions

Average daily exhaust emissions during project construction were estimated, based on the construction year, total expected duration, proposed equipment usage, soil import and export, concrete truck trips, and asphalt truck trips. Construction of the proposed roadway extension would take approximately 10 months to complete. Average daily emissions during construction were computed by dividing the total construction emissions by the number of construction days.

Table 3.3-3: Construction Period Emissions

	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total Construction Emissions (tons)	0.2	4.88	0.18	0.14
Average daily emissions (pounds)[1]	2.4	44.3	1.6	1.2
BAAQMD Thresholds (pounds per day)	54	54	82	54
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes: [1] Assumes 220 working days [10 months]
ROG = reactive organic gases NOx = nitrogen oxides PM = particulate matter

Source: Illingworth & Rodkin, 2019.

As shown in Table 3.3-3, projected construction emissions would not exceed the BAAQMD significance thresholds. Therefore, criteria pollutant emissions during project construction activities would not result in a significant impact. **(Less Than Significant Impact)**

Construction Dust Emissions

Construction activities (e.g., roadway grading and preparation) associated with the proposed project, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust could include wind blowing over exposed dry soil at the construction site and trucks hauling soil and gravel to/from the construction site. Unless properly controlled, vehicles leaving the site could

deposit mud on local streets, which could be a source of airborne dust after it dries. For these reasons, project construction activities have the potential to generate dust that could pose health and nuisance impacts if uncontrolled.

The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices (BMPs) are implemented to reduce these emissions.

Standard Conditions

The project contractor shall implement the following standard BAAQMD BMPs during all phases of project construction to reduce dust emissions:

- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. 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.
- A publicly visible sign with the telephone number and person to contact at the City of San José regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Project construction activities, with the implementation of the above Standard Conditions, which are BAAQMD's BMPs, would not result in significant fugitive dust. **(Less Than Significant Impact)**

Operational Criteria Pollutant Emissions – Regional Air Quality

Operational criteria pollutant emission impacts could result from changes in traffic patterns and traffic conditions (e.g., speed). Projected traffic conditions (as discussed in Section 3.17, *Transportation*) along with vehicle emission rates were modeled to predict annual criteria air pollutant emissions under the proposed project for existing conditions, 2025, and 2040 (buildout of General Plan), and are shown in Table 3.3-4.

As shown in Table 3.3-4, when compared to No Project conditions, average daily operational ROG, NOx, PM_{10}, and $PM_{2.5}$ emissions during the operational phase of the project would not exceed the BAAQMD significance thresholds. In most cases, as shown in Table 3.3-4, emissions under Project conditions would be slightly lower than under No Project conditions because of the efficiencies in travel that would result from the Charcot Avenue Extension. Specifically, the project would provide an additional east-west access point to/from the North San José area, which would benefit the

network. For these reasons, operation of the proposed project would not result in a significant regional criteria pollutant emissions impact. **(Less Than Significant Impact)**

Table 3.3-4: Daily Operational Criteria Pollutant Emissions (pounds per day)					
Scenario	**ROG**	**NO_x**	**CO**	**PM_{10} Total**	**$PM_{2.5}$ Total**
Existing					
No Project	752	2,249	8,505	1,660	377
Project	728	2,209	8,349	1,655	375
Increase	-25	-40	-156	-5	-2
BAAQMD Thresholds	54	54	n/a	82	54
Exceed Threshold?	**No**	**No**	**n/a**	**No**	**No**
Year 2025					
No Project	1,023	2,234	8,935	2,026	506
Project	1,002	2,172	8,851	2,024	505
Increase	-21	-61	-84	-2	-1
BAAQMD Thresholds	54	54	n/a	82	54
Exceed Threshold?	**No**	**No**	**n/a**	**No**	**No**
Year 2040					
No Project	1,102	3,365	8,065	2,553	567
Project	1,088	3,302	8,030	2,558	568
Increase	-14	-63	-35	+5	+1
BAAQMD Thresholds	54	54	n/a	82	54
Exceed Threshold?	**No**	**No**	**n/a**	**No**	**No**

Note: CO impacts, which are expressed in parts-per-million, are described subsequently in this report.
ROG = reactive organic gases NOx = nitrogen oxides PM = particulate matter CO = carbon monoxide
Source: Illingworth & Rodkin, 2019.

Operational Criteria Air Pollutants – Local Air Quality

Congested intersections with large traffic volumes have the greatest potential to cause high localized concentrations of CO. To determine the significance of CO emissions under the project, such emissions were quantified and compared to those that would occur under No Project conditions. As shown in Table 3.3-4, the proposed project, when compared to the No Project scenario, would decrease CO emissions under existing, 2025, and 2040 conditions. This decrease is the result of the reductions in congestion and improvements in operations that are associated with the project. In addition, the project would provide an additional east-west access point to/from the North San José area, which would be beneficial because it would reduce out-of-direction travel for destinations near Charcot Avenue. For this reason, operation of the proposed project would not result in a significant local criteria pollutant emissions impact. **(Less Than Significant Impact)**

3.3.2.3 *Exposure of Sensitive Receptors to Substantial Pollutant Concentrations*

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant Impact)

Exposure to Toxic Air Contaminants and Fine Particulate Matter

As described previously in Section 3.3.1.1, human exposure to TACs and $PM_{2.5}$ can result in adverse health effects including cancers. These pollutants would be emitted during both the construction and operational phases of the project. The following discussion describes the risk assessment undertaken to quantify the effects of exposure during both phases.

Construction equipment and associated heavy-duty truck traffic during construction of the proposed Charcot Avenue Extension would generate diesel exhaust in the form of DPM, which is a known TAC. Construction activities would also generate dust, including $PM_{2.5}$. During the operational phase of the project, TACs would be emitted in the exhaust from vehicles using Charcot Avenue and Oakland Road.

The nearest sensitive receptors that could potentially be affected during construction and operation of the proposed roadway extension include Orchard School and residences along Silk Wood Lane. Dispersion modeling was used to predict DPM and $PM_{2.5}$ concentrations at these receptors, taking emissions from traffic on Oakland Road into account. Based upon the projected concentrations and durations of exposure, community risk impacts were assessed by calculating cancer risk, non-cancer hazards, and the chronic hazard index at the locations of the Maximally Exposed Individual (MEI), which are shown on Figure 3.3-1.[8] The results were compared to BAAQMD's thresholds of significance listed in Table 3.3-2.

Table 3.3-5: Lifetime Maximum Community Risks from the Project (Construction & Operation)

Location and Exposure Type	Lifetime Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)[1]	Chronic Hazard Index
Maximum Residential (Infant)	8.1	0.19	<0.1
Orchard School (Child)	1.6	0.26	<0.1
BAAQMD Significance Threshold	>10.0	>0.3	>0.1
Exceed Threshold?	**No**	**No**	**No**

[1]The annual $PM_{2.5}$ concentration is the sum of the DPM and fugitive $PM_{2.5}$ concentrations.
The numbers in this table include the effect of both the construction and operational phases of the project.

Source: Illingworth & Rodkin, 2019.

The results of the community risk assessment for the project for both the school and residential MEI are shown in Table 3.3-5. Note that for residences, the MEI is an infant and for the school the MEI is a child. This distinction is important because the risks of adverse health effects are greater for an infant than for a child. See Appendix E for details.

[8] Note that the locations of the school and residential MEIs for the project's construction phase are different from the locations of the school and residential MEIs for the project's operational phase. This arises because the location of the most intense construction activity isn't the same as the location most exposed to vehicular traffic over the long-term. To be conservative, this EIR reports the location where the combination of construction and operational effects are the highest.

RESIDENTIAL AND SCHOOL CONSTRUCTION AND OPERATION MEIs | FIGURE 3.3-1

As shown in Table 3.3-5, the maximum increased lifetime cancer risk, annual $PM_{2.5}$, and hazard index (HI) both for the residential MEI and school MEI would be below the BAAQMD significance thresholds **(Less Than Significant Impact)**

3.3.2.4 *Impacts due to Other Emissions*

Impact AIR-4:	**The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less than Significant Impact)**

Certain uses (e.g., restaurants and bakeries) have the potential to generate noticeable odors. Operation of the proposed Charcot Avenue Extension is not, however, expected to produce odors. Project construction activities are likely to generate odors (e.g., construction equipment exhaust) in the project area; however, such odors would be intermittent and transitory. Idling of trucks and equipment will be limited to a maximum of five minutes; see Section 3.6.2, *Energy Impacts*, for further detail.

For these reasons, the proposed extension of Charcot Avenue would not result in other emissions affecting a substantial number of people. **(Less than Significant)**

3.3.2.5 *Cumulative Impacts*

Impact AIR-C:	**The project would not result in a cumulatively considerable contribution to a significant air quality impact. (Less than Significant Cumulative Impact)**

The geographic study area for cumulative air quality impacts is defined as the San Francisco Bay Air Basin for criteria pollutants and the Charcot Avenue alignment and adjacent land uses for toxic air contaminants. As noted previously, the air quality analysis accounts for the emissions from increased traffic due to planned growth under the *Envision San José 2040 General Plan*. The cumulative effects, which includes planned growth, are quantified for two horizon years, 2025 and 2040.

Criteria Air Pollutants

As described in Section 3.3.2.2, BAAQMD has established thresholds for the emission of criteria air pollutants from a given project. The purpose of the thresholds is to determine if a given project's emissions would constitute a cumulatively considerable contribution to emissions from all sources. These thresholds, along with the emissions associated with the Charcot Avenue Extension, are listed in Table 3.3-4. The data in Table 3.3-4 indicate that emissions from the project would not exceed any of BAAQMD's thresholds. Therefore, the emissions associated with the Charcot Avenue Extension would not constitute a cumulatively considerable contribution to criteria impact pollutant impacts. **(Less Than Significant Cumulative Impact)**

Toxic Air Contaminants

In addition to the project's community risk impacts described above, cumulative community risk impacts were assessed by predicting and combining community risk impacts from project construction, project operation, and other existing TAC sources near the school MEI and the residential MEI.

Additionally, the air quality analysis evaluated the overall community risk impacts to the project, based on the exposure that children of preschool to middle school age may have while attending the on-site preschool (Champions) and elementary/middle school (Orchard School). The preschool serves children aged three to four years old and elementary/middle school serves children who are five to 13 years old. Typically, cancer risk and annual $PM_{2.5}$ assessments assume almost continuous exposure to TAC sources. However, a school is different in that the sensitive receptors, children, do not reside at the project site. The predicted cancer risk accounts for the exposure duration that users of the childcare center would experience. Students attending the project are assumed to be exposed for up to 10 hours per day, 5 days per week, 252 days per year and 9 years during a lifetime.[9] Since the students are only present at the school for a portion of their life, lifetime and annual exposures were adjusted.

The maximum combined cancer risk, annual $PM_{2.5}$ concentrations, and non-cancer HI at the MEIs are shown in Table 3.3-6.

As shown in Table 3.3-6, the combined lifetime cancer risk, annual $PM_{2.5}$ concentrations, and non-cancer HI from project construction, project operation, and other nearby existing TAC sources at the MEI would be below applicable significance thresholds. Therefore, the cumulative toxic air contaminant impact would not be significant. **(Less Than Significant Cumulative Impact)**

[9] Cancer risk computations take into account these exposure parameters, along with a higher breathing rate for infants and children (based on weight) and an age sensitivity factor (ASF) based on 2 years at ASF of 10 and 4 years at an ASF of 3, rather than a lifetime average that is 1.7. ASF accounts for the greater sensitivity of infants and children to cancer causing TACs.

Table 3.3-6: Cumulative Community Risk Impacts at Project MEIs			
Source	**Lifetime Maximum Cancer Risk (per million)**	**Maximum Annual $PM_{2.5}$* ($\mu g/m^3$)**	**Maximum Hazard Index**
Project Impacts to Off-Site Receptors (at MEI)			
Residential	8.1 (Infant)	0.19	<0.1
Champions/Orchard School	1.6 (child)	0.26	<0.1
Roadways			
Oakland Road (ADT 41,450)			
At 500-ft West for Residential MEI	2.3	0.06	<0.03
At 400-ft West for School MEI	0.5	0.07	<0.03
Interstate 880 (Highway Screening Calculator)			
At 1,000-ft East for Residential MEI	19.9	0.12	0.01
At 800-ft East for School MEI	2.8	0.12	0.01
Stationary Sources			
Plant #20285 (Southwest Offset Printing Co, Inc)	-	-	0.07
Plant #6919 (Applied Anodize, Inc)	<0.1	0.01	<0.01
Plant #20442 (Epiphotonics Corporation)	-	<0.01	<0.01
Plant #1618 (Sanmina Corporation)	-	-	0.20
Plant #4020 (SFPP, Oil & Natural Gas Source)	1.5	-	0.75
Cumulative Totals			
Residential MEI	**31.9**	**0.39**	**<1.18**
School MEI	**6.5**	**0.47**	**<1.18**
BAAQMD Threshold – Cumulative Sources	*>100*	*>0.8*	*>10.0*
Exceed Threshold?	***No***	***No***	***No***

Notes

* $PM_{2.5}$ from construction and operation are not additive

Source: Illingworth & Rodkin, 2019.

3.4 BIOLOGICAL RESOURCES

The following discussion is based on a Biological Resources Report prepared by *H.T. Harvey & Associates* in April 2019, and a tree survey conducted by *HortScience* in February 2018. The report and tree survey are attached as Appendix F and Appendix G of this EIR.

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Special-Status Species

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered 'special-status species.' Federal and state "endangered species" legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project will result in the take of a species listed as threatened or endangered. To "take" a listed species, as defined by the State of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" said species. "Take" is more broadly defined by the federal Endangered Species Act to include "harm" of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Section 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, are considered for environmental review per the CEQA Guidelines. These may include plant species of concern in California listed by the California Native Plant Society and CDFW listed "Species of Special Concern."

Migratory Bird and Birds of Prey Protections

Federal and state laws also protect most bird species. The federal Migratory Bird Treaty Act prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of prey, such as owls and hawks, are protected in California under provisions of the State Fish and Game Code. The code states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

Sensitive Habitats

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation, protection, or consideration by the US Army Corps of Engineers, Regional Water Quality Control Board, CDFW, and/or the USFWS under provisions of the federal Clean Water Act and State of California Porter-Cologne Water Quality Control Act. US Environmental Protection Agency (EPA) regulations, called for under Section 402 of the Clean Water Act, also include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge into waters of the United States (e.g., streams, lakes, bays, etc.).

Regional

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan covers an area of 519,506 acres, or approximately 62% of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (Valley Water), Santa Clara Valley Transportation Authority (VTA), USFWS, and CDFW. The Plan, which is administered by the Santa Clara Valley Habitat Agency, is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in approximately 500,000 acres of Santa Clara County.

Local

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* includes policies for avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.4-1 are specific to biological resources and are applicable to the proposed project.

City of San José Tree Policies

The City of San José maintains the urban landscape partly by promoting the health, safety, and welfare of the City by regulating the removal of trees along the public rights-of-way (i.e., "street" trees) and on private property. Tree regulations are found in Chapter 13 of the San José Municipal Code.

Street streets of any size can only be removed upon issuance of a tree removal permit from the City. For trees on private property, a tree removal permit is required for the removal of "ordinance" trees. Ordinance trees are defined as trees over 38 inches in circumference, or approximately 12 inches in diameter, at a height of 4.5 feet above natural grade. Ordinance trees are generally mature trees that help beautify the City, slow erosion of topsoil, minimize flood hazards, minimize the risk of landslides, increase property values, and improve local air quality.

In addition, any tree found by the City Council to have special significance based on factors including, but not limited to, its history, girth, height, species, or unique quality, can be designated as a "Heritage tree" (San José Municipal Code Section 13.28.330 and 13.32.090). It is unlawful to

vandalize, mutilate, remove, or destroy such heritage trees. There are no heritage trees on or adjacent to the alignment of the Charcot Avenue Extension.

Table 3.4-1: Applicable General Plan Policies – Biological Resources	
Policy	**Description**
ER-5.1	Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance of activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
ER-5.2	Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
MS-21.4	Encourage the maintenance of mature trees, especially natives, on public and private property as an integral part of the community forest. Prior to allowing the removal of any mature tree, pursue all reasonable measures to preserve it.
MS-21.5	As part of the development review process, preserve protected trees (as defined by the Municipal Code), and other significant trees. Avoid any adverse effect on the health and longevity of protected or other significant trees through appropriate design measures and construction practices. Special priority should be given to the preservation of native oaks and native sycamores. When tree preservation is not feasible, include appropriate tree replacement, both in number and spread of canopy.
MS-21.6	As a condition of new development, require, where appropriate, the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies, or guidelines.
CD-1.24	Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Any adverse effect on the health and longevity of such trees should be avoided through design measures, construction, and best maintenance practices. When tree preservation is not feasible include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.

City of San José Riparian Corridor Protection and Bird Safe Design Policy [Policy 6-34]

The Riparian Corridor Policy sets guidelines on how areas along natural streams should be treated and establishes development guidelines for general site design, as well as guidance for the design of buildings, landscaping, and public recreation facilities related to their interference with riparian corridors. It also provides guidelines for operational activities within natural stream areas, such as vegetation removal, erosion control, flood control, and construction.

The riparian policy indicates that "all buildings, other structures (with the exception of bridges and minor interpretive structures that provide information to visitors), impervious surfaces, outdoor activity areas (except for passive or intermittent activities) and ornamental landscaped areas should be separated a minimum of 100 feet from the edge of the riparian corridor (or top of bank whichever is greater)." The policy also states that roads (2 lanes; 2 lane collectors or arterials; and 4 lanes and greater) are subject to the 100-foot separation requirement. The City's policy allows for exceptions based on adjacent land uses and setbacks, existing setbacks, and other factors. The setback for a particular project is typically determined on a case-by-case basis.

3.4.1.2 *Existing Conditions*

The proposed roadway alignment is located in an urban area and is surrounded by development. A reconnaissance-level field survey completed for the project identified the habitat on the proposed roadway alignment as developed/landscaped. Currently, the proposed alignment consists of existing roads, sidewalks, a parking lot, landscaped lawns and planting beds and vacant land. The roadway alignment is mostly lined by non-native mature trees. In general, street trees along the eastern segment of the alignment are less mature than the ones along the western segment.

Wildlife expected to be on-site are those that are tolerant of periodic human disturbances, including introduced species such as the European starling, rock pigeon, eastern gray squirrel, house mouse, and Norway rat. Numerous common, native species are also able to utilize these habitats, especially the buildings and landscaped areas, including the western fence lizard, striped skunk, and a variety of birds such as the Anna's hummingbird, American crow, bushtit, and chestnut-backed chickadee, which were observed foraging on the proposed roadway alignment during the reconnaissance survey. The mature trees along the roadway alignment also provide food and nesting opportunities for a variety of native and non-native species, including the fox squirrel, Anna's hummingbird, lesser goldfinch, California scrub-jay, and American brow. The mature trees could also provide potential nesting habitat for raptors such as the Cooper's hawk; however, no old nests of raptors were observed onsite during the reconnaissance survey.

Foliage and furrows in the bark of mature trees could attract small number of individual bats, but an examination of the trees on the site did not find any large cavities that might provide suitable habitat for a large roosting or maternity colony of bats.

Special-Status Plants

A list of special-status plants with some potential for occurrence in the San José vicinity was compiled using the California Native Plant Society (CNPS) lists and California Natural Diversity Database (CNDDB) and reviewed for their potential to occur on the project site. Based on an analysis of the documented habitat requirements and occurrence records associated with these species, all were determined to be absent from the proposed alignment because of its entirely developed and landscaped condition, which does not support any natural habitat types.

Special-Status Animals

Based on review of current CNDDB records and other data sources, several special-status animal species are known to occur in the project region; however, all were determined to be absent from the proposed alignment because of a lack of suitable habitat, or evidence that species does not occur in the vicinity. These species that occur in the project region are primarily associated with marsh, Bay shoreline, or aquatic habitat, or open habitat that could be used for foraging. Refer to Appendix F for additional details.

Sensitive Habitat

The project alignment does not contain jurisdictional or regulated waters or aquatic habitats. Coyote Creek is located approximately 330 feet west and outside of the project alignment. Steelhead, a

federally threatened species and western pond turtle, a California species of concern, are known to occur in Coyote Creek. A CNDDP search was made to identify other potentially occurring natural communities of special concern. The CNDDB identified two sensitive habitats as occurring within the project area, including the northern coastal salt marsh and sycamore alluvial woodland. Since the proposed road alignment is entirely outside of Coyote Creek, has been developed with attendant landscaping, and none of the dominant species that form these habitat types are present, none of the sensitive habitats tracked by CNDDB occur on the proposed roadway alignment.

Trees

The primary biological resources in the proposed road alignment are trees. The proposed roadway alignment contains 202 trees within the project boundary. These trees include coast redwood, raywood ash, tarata, coast live oak, evergreen ash, London plane, glossy privet, Chinese flame tree, Mexican fan palm, crape myrtle, gallery pear, crape myrtle, trident maple, holly oak, canary date palm, peach, cork oak, grecian laurel, purpleleaf plum, and more. Of the 202 trees, 99 are ordinance-sized, as defined by the City of San José Tree Ordinance. For more detail regarding the size, location, and species of the trees located within the project alignment, refer to Appendix G of this EIR.

3.4.2 Discussion of Biological Impacts

For the purpose of determining the significance of the project's impacts on biological resources, would the project:

1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.2.1 *Impacts on Special Status or Protected Species*

Impact BIO-1:	**The project could significantly impact protected nesting birds during the construction phase. Mitigation to avoid impacts to nesting birds is included in the project. (Less than Significant Impact with Mitigation Incorporated)**

Special-status Plant and Wildlife Species

As described above, no special-status plant and wildlife species are present on or immediately adjacent the project alignment, nor are they considered to have potential to occur on the project alignment. Therefore, the proposed overcrossing and extension would not impact special-status plants and wildlife species **(No Impact)**.

Nesting Birds

The trees within and adjacent to the project alignment provide nesting habitat for migratory birds and raptors. While not considered a substantial loss of breeding habitat due to the urban development and absence of special-status species within and adjacent to the project alignment, construction disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW and would constitute a significant impact. **(Significant Impact)**

The following measures would be implemented as part of the project to reduce potential construction-related impacts to nesting birds to a less than significant level.

MM BIO-1.1: Avoidance and Inhibit Nesting. Construction and tree removal/pruning activities shall be scheduled to avoid the nesting season. Tree removal and/or pruning shall be completed before the start of the nesting season to help preclude nesting. The nesting season for most birds and raptors in the San Francisco Bay Area extends from February 1st through August 31st (inclusive).

MM BIO-1.2: Preconstruction Survey(s). If construction activities cannot be scheduled from September 1st through January 31st (inclusive), then a qualified ornithologist shall conduct a preconstruction survey for nesting raptors and other migratory birds within on-site trees as well as all trees within 250 feet of the site to identify active bird nests that may be disturbed during project construction. This survey shall be completed no more than fourteen (14) days prior to the initiation of demolition/construction activities (including tree removal and pruning). During this survey, the ornithologist shall inspect all trees and other possible nesting habitats in and immediately adjacent to the construction areas for nests.

If the survey does not identify any nesting birds that would be affected by construction activities, no further mitigation is required.

If an active nest is found sufficiently close to work areas to be disturbed by these activities, the ornithologist (in consultation with the CDFW) shall designate a construction-free buffer zone to be established around the nest to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during construction activities. The buffer shall remain in place until a qualified ornithologist has determined that the nest is no longer active.

MM BIO-1.3: Reporting. A final report on nesting birds and raptors, including survey methodology, survey date(s), map of identified active nests (if any), and protection measures (if required), shall be completed to the satisfaction of the Director of Planning, Building, and Code Enforcement or the designee prior to the start of grading.

The project, with implementation of mitigation measures MM BIO-1.1 through 1.3, would not result in significant impacts to nesting birds by avoiding construction activities during the nesting season, inhibiting nesting, and conducting preconstruction surveys in order to avoid disturbance of active nests that may be affected by project construction. **(Less Than Significant Impact with Mitigation Incorporated)**

3.4.2.2 *Impacts on Riparian Habitat and Wetlands*

Impact BIO-2:	**The project would not have an adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. (No Impact)**

Impact BIO-3:	**The project would not have an adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. (No Impact)**

There are no wetlands, streams, or other waterways within or immediately adjacent to the project alignment. The nearest waterway is Coyote Creek, which is located approximately 330 feet west from the western end of proposed alignment. No work would occur within or adjacent to the riparian habitat of the Creek. **(No Impact)**

3.4.2.3 *Impacts to Wildlife Movement*

Impact BIO-4:	**The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. (Less than Significant Impact)**

Roadways have the potential to limit wildlife movement. However, given the extent and density of urban development along the project alignment, as well as associated nighttime lighting, noise, and human disturbance, the project area does not function as a wildlife or habitat corridor. For this reason, the proposed Charcot Avenue Extension would not result in a significant impact to wildlife movement. **(Less Than Significant Impact)**

3.4.2.4 *Conflicts with Local Plans and Policies that Protect Biological Resources*

Impact BIO-5:	**While the project would result in tree removal, it would not conflict with the City's tree protection policies because it would implement the standard conditions. (Less than Significant Impact)**

City of San José Riparian Corridor Protection and Bird Safe Design Policy (6-34)

As noted previously in Section 3.4.1.1, San José's Riparian Corridor Protection and Bird Safe Design Policy protects riparian habitat by requiring a 100-foot setback from riparian corridors, measured from the outside edges of riparian habitat or the top of bank, whichever is greater. The Coyote Creek riparian corridor is located approximately 330 feet west of the proposed project. No roadway improvements or construction work associated with the proposed project would occur within 100 feet of the riparian corridor. Therefore, the project would not conflict with the City's riparian habitat policy. **(No Impact)**

City of San José Tree Protection Policies

As described previously in Section 3.4.1.1, Chapter 13 of the San José Municipal Code sets forth policies designed to protect street trees and ordinance trees, the latter defined as trees measuring 38 inches or greater in circumference on private property.

The proposed Charcot Avenue Extension would result in the removal of approximately 85 trees, 56 of which are ordinance-sized. Most of the ordinance trees to be removed are located along the north and south sides on Charcot Avenue, between Paragon Drive and O'Toole Avenue. A tree report detailing the size, location, and species of the trees that would be removed by the project is included in Appendix G of this EIR. In accordance with the provisions of the San José Municipal Code, the Standard Conditions listed below would be implemented by the project.

Standard Conditions

- The project shall be required to replace the trees identified in the arborist report prepared for this project in accordance with all applicable laws, policies or guidelines, including Chapter 13 of the San José Municipal Code, General Plan policies MS-21.4, MS-21.5, MS-21.6, and CD-1.24, and City tree replacement ratios outlined in Table 3.4-2.

- The project shall also implement a Tree Protection Plan and include measures to be implemented during project construction to minimize impacts to trees that are to remain. The measures include marking all trees to remain in place in project plans and have tree protection zones established around the canopy drip line zone to avoid serious injury or loss.

- Table 3.4-2 shows tree replacement ratios required by the City. The species of trees to be planted shall be determined in consultation with the City Arborist and the Department of Planning, Building and Code Enforcement.

Table 3.4-2: City of San José Standard Tree Replacement Ratios				
Diameter of Tree to Be Removed	**Type of Tree to be Removed**			**Minimum Size of Each Replacement Tree**
	Native	**Non-Native**	**Orchard**	
18 inches or greater	5:1	4:1	3:1	24-inch box
12-18 inches	3:1	2:1	none	24-inch box
Less than 12 inches	1:1	1:1	none	15-gallon container
Notes: x:x = tree replacement to tree loss ratio; Trees greater than 18" diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.				

In the event the project site does not have sufficient area to accommodate the required tree replacements, one or more of the following measures would be implemented during the final design phase, to the satisfaction of the City Arborist and the Director of Planning, Building and Code Enforcement:

- During the final design phase, the size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees to be planted on the project site.

- Pay Off-Site Tree Replacement Fee(s) to the City, prior to the issuance of Public Works grading permit(s), in accordance to the City Council approved Fee Resolution. The City will use the off-site tree replacement fee(s) to plant trees at alternative sites.

The proposed project, with implementation of the above standard conditions, would not conflict with the City of San José Riparian Corridor Protection and Bird Safe Design Policy 6-34 and the City's Tree Protection Policies (Chapter 13 of the San José Municipal Code). **(Less Than Significant Impact)**

3.4.2.5 *Conflicts with Habitat Conservation Plans*

Impact BIO-6:	**The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)**

As noted previously in Section 3.4.1.1, the proposed roadway alignment is located within the boundary of the SCVHP. The SCVHP provides avoidance, minimization, and compensation (i.e., conservations) to covered activities and projects that would impact species and natural communities. Under the SCVHP, "activities" are actions that occur repeatedly in one location or throughout the permit area, and "projects" are well-defined actions that occur once in a discrete location. Together, these activities and projects are the covered activities for which incidental take authorization from the USFWS or CDFW would be obtained. While the project alignment is within SCVHP's boundary, the proposed roadway alignment would not impact habitat (including Coyote Creek riparian habitat) or species covered by the SCVHP. The project is also not located within any special status plant or animal survey areas, as delineated by the SCVHP. For these reasons, the proposed project is not a covered activity that is subject to the SCVHP and therefore, would not conflict with the SCVHP. **(No Impact)**

3.4.2.6 *Cumulative Impacts*

Impact BIO-C:	**There are no proposed or approved projects within the study area for cumulative biological impacts that would combine with the impacts of the Charcot Avenue Extension to result in a cumulative impact. (No Cumulative Impact)**

The proposed project would result in the loss of 85 trees, including 56 ordinance sized trees, and could impact nesting birds and raptors. The project includes standard conditions and mitigation measures MM BIO-1.1 through 1.3 to reduce and/or avoid these impacts to a less than significant level. These mitigation measures and standard conditions are typical and would be required for other projects that would impact trees and/or nesting birds and raptors.

The study area for cumulative biological impacts is defined as all locations within 1,000 feet of the alignment of the Charcot Avenue Extension. This study area is appropriate for this resource because the biological impacts of the project are limited to its footprint and adjacent area. Based on a review of proposed and approved development permits[10], there are no projects located in the study area that would combine with the biological impacts of the Charcot Avenue Extension to create a significant cumulative biological impact.

Even if there were other projects in the area that would result in the same biological impacts as those from the Charcot Avenue Extension, namely the removal of trees, each of those projects would be required to mitigate for those impacts. The result would be no net loss of trees as tree replacement in accordance with Table 3.4-2 would be implemented by every project as standard conditions of approval. **(No Cumulative Impact)**

[10] Source: www.sjpermits.org, accessed March 2019.

3.5 CULTURAL RESOURCES

The following discussion is based on an Archaeological Survey and Extended Phase I Report prepared by *Far Western Anthropological Research Group, Inc*. (Far Western) in May 2018. Due to the sensitive information contained in the report, it is on file with the City of San José Planning Department. This report can be viewed by qualified personnel during normal business hours.

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal

National Historic Preservation Act

The National Register of Historic Places (NRHP), established under the National Historic Preservation Act, is a comprehensive inventory of known historic resources throughout the United States. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological or cultural significance. For a resource to be eligible for listing, it also must retain integrity of those features necessary to convey its significance in terms of 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association. CEQA requires evaluation of project effects on properties that are listed in or eligible for listing in the National Register.

State

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The CRHR aids government agencies in identifying, evaluating, and protecting California's historical resources, and indicates which properties are to be protected from substantial adverse change (Public Resources Code, Section 5024.1(a)). The CRHR is administered through the State Office of Historic Preservation (SHPO), which is part of the California State Parks system. A historic resource listed in, or formally determined to be eligible for listing in, the National Register is, by definition, included in the California Register (Public Resources Code Section 5024.1(d)(1)).[11]

State Regulations Regarding Cultural Resources

Archaeological and historical sites are protected by several State policies and regulations under the California Public Resources Code, California Code of Regulations (Title 14 Section 1427), and California Health and Safety Code. California Public Resources Code Sections 5097.9-5097.991 require notification of discoveries of Native American remains and provides for the treatment and disposition of human remains and associated grave goods.

[11] Refer to Public Resources Code Section 5024.1(d)(1)

Both State law and County of Santa Clara County Code (Sections B6-19 and B6-20) require that the Santa Clara County Coroner be notified if cultural remains are found on a site. If the Coroner determines the remains are those of Native Americans, the Native American Heritage Commission (NAHC) and a "most likely descendant" must also be notified.

Assembly Bill 52- Tribal Cultural Resources

A tribal cultural resource can be a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. It also must be either on or eligible for the CRHR, a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource. Assembly Bill 52 (AB 52), which amendment the Public Resources Code, requires lead agencies to participate in formal consultations with California Native American tribes during the CEQA process, if requested by any tribe, to identify tribal cultural resources that may be subject to significant impacts by a project. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. Consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

Local

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned projects with the City. The policies listed in Table 3.5-1 are specific to cultural resources and are applicable to the proposed project.

3.5.1.2 *Existing Conditions*

An archival records search was completed in January 2018 at the Northwest Information Center of the California Historical Resources Information System to review archaeological resources, non-archaeological resources (i.e., built environment), and reports recorded within one-quarter mile of the proposed alignment, also defined as the Area of Potential Effect (APE). Forty-eight previous studies were identified within one-quarter mile of the project alignment, with 17 of the studies intersecting the project alignment.

Table 3.5-1: Applicable General Plan Policies – Cultural Resources

Policy	Description
ER-10.2	Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.
ER-10.3	Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

Historic Resources

A review of historic photographs and the City's permit database shows none of the buildings surrounding the project alignment, including the office building in the western alignment, Super Micro buildings, Orchard School, and Silk Wood residences in the eastern alignment are over 50 years old. The oldest of these buildings date to the mid-1970s.

There are however, two structures identified near the project alignment that are over 50 years old: 1) Resource P-43-002926 is the O'Toole/Coyote Creek Bridge (approximately 1,120 feet south of the alignment) constructed in 1952; and 2) Resource P-43-000927 is the Charcot Avenue/Coyote Creek Bridge (approximately 330 feet west of the alignment) constructed in 1971. The California Department of Transportation evaluated both bridges in 2017 and determined both were not eligible for listing on the *National Register of Historic Places*.[12]

Archaeological Resources

In addition to the archival records search, a pedestrian survey, a site sensitivity study, and subsurface testing for buried sites was conducted to assess the likelihood of encountering subsurface archaeological resources during construction.

Site Sensitivity Study: The potential for encountering prehistoric archaeological sites within the project area was estimated based on the age and distribution of deposits on the historic-era ground surface combined with the proximity to stream channels (i.e., distance to water). The highest potential occurs where young deposits (late Holocene age or younger) occur within 150 meters of a water source, with potential diminishing with greater distance from active or formerly active sources of fresh water and increasing landform age. The project alignment is located on the floor of Santa Clara Valley between the parallel drainages of Coyote Creek and historic flow of the Penitencia Creek Slough Basin and contains mostly of late Holocene soil in age. The entire project alignment has a high to highest potential for buried prehistoric archaeological deposits, with the highest being at the eastern and western ends of the project alignment.

Pedestrian Survey: No native soils and cultural resources were observed during an intensive pedestrian survey of the APE, which is an area heavily developed with various land uses with limited ground visibility.

Subsurface Investigation: An Extended Phase 1 included excavation of eight exploratory trenches and six exploratory cores at 14 different locations within the project alignment. The subsurface investigation identified a cultural feature at a depth of approximately 10-12 feet below ground surface in one of the trenches. The age, nature, and depth of materials found in this feature suggests that a potentially important prehistoric archaeological site is buried in the general vicinity of the trenching location where this feature was identified. Charcoal was also identified in another trench. No other archaeological materials were identified.

[12] Source: Caltrans Historic Bridge Inventory; http://www.dot.ca.gov/hq/structur/strmaint/hs_local.pdf

3.5.2 Discussion of Cultural Resources Impacts

For the purpose of determining the significance of the project's impacts on cultural resources, would the project:

1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
3) Disturb any human remains, including those interred outside of dedicated cemeteries?

3.5.2.1 *Impacts to Historic Resources*

Impact CUL-1:	**The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. (No Impact)**

As described in Section 3.5.1.2, there are no historical resources on or adjacent to the project alignment. For this reason, the proposed project would not impact historic resources. **(No Impact)**

3.5.2.2 *Impacts to Archaeological Resources*

Impact CUL-2:	**The project corridor is considered archaeologically sensitive. Therefore, the construction of the project has the potential to impact undiscovered buried archaeological resources. Mitigation for this impact is included in the project. (Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-3:	**Directly related to impact CUL-2, above, if any buried archaeological resources are impacted by the project, such resources could contain human remains. Mitigation for this impact is included in the project. (Less than Significant Impact with Mitigation Incorporated)**

Based on the findings of the Archaeological Survey and Extended Phase 1 Report, soils within the alignment most sensitive to contain archaeological resources varies in depth ranging from eight (8) to 17 feet. Specifically, archaeological resources were identified at a depth of 10-12 feet near the location of the proposed sound wall along the Orchard School campus. Based on the current design of the sound wall, excavation for the foundation of the sound wall would be less than eight feet and, therefore, would not damage these known archaeological resources.

The proposed project also includes excavation work for the utility relocation, installation of traffic signals, lighting pole foundations, slip ramp envelope, and the overcrossing over I-880. The bridge bents/columns for the overcrossing would be supported on cast-in-drilled-hole concrete piling, extending to a depth of up to approximately 120 feet. Excavations into native soil for the embankments, utilities, and signal and lighting pole foundations would range from two (2) to 13 feet.

Based on the high to highest potential for buried prehistoric archaeological deposits, project construction activities have the potential to encounter archaeological resources. Similarly, based on known archaeological sites throughout Santa Clara County, there is a potential for any buried resources located within the project footprint to include human remains. **(Significant Impact)**

The following measures would be implemented as part of the project to reduce potential construction-related archaeological resource impacts to a less than significant level:

MM CUL-2.1: Avoid trenching, digging, and grading below eight (8) feet.

MM CUL-2.2: If trenching, digging, or grading below eight (8) feet is needed, archaeological monitoring shall be performed by a qualified archaeologist during such excavation and ground-disturbing activities.

MM CUL-2.3: In the event prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped, the Director of the City's Department of Planning, Building and Code Enforcement or his/her designee will be notified, and a qualified archaeologist will examine the find. The archaeologist will 1) evaluate the find(s) to determine if they meet the definition of a historical or archaeological resource; and (2) make appropriate recommendations regarding the disposition of such finds. If the finds do not meet the definition of historical or archaeological resources, no further study or protection is necessary prior to project implementation. If the find(s) does meet the definition of a historical or archaeological resource, then it shall be avoided by project activities. Project personnel shall not collect or move any cultural material. Fill soils used for construction purposes shall not contain archaeological materials.

MM CUL-2.4: If the resource cannot be avoided, adverse effects to such resources shall be mitigated in accordance with the recommendations of the archaeologist. Recommendations may include, but are not limited to, collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery shall be submitted to the Director of the City's Department of Planning, Building and Code Enforcement or his/her designee and Historic Preservation Officer of the City's Department of Planning, Building and Code Enforcement and the Northwest Information Center, Sonoma.

MM CUL-2.5: If any human remains are found during any field investigations, grading, or other construction activities, all provisions of California Health and Safety Code Sections 7054 and 7050.5 and Public Resources Code Sections 5097.9 through 5097.99, as amended per Assembly Bill 2641, shall be followed. In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The contractor shall immediately notify the Director of the City's Department of Planning, Building, and Code Enforcement or his/her designee and the qualified archaeologist, who will then notify the Santa Clara County Coroner. The Coroner will determine if the remains are Native American.

MM CUL-2.6: If the remains are believed to be Native American, the Coroner will contact the NAHC within 24 hours. The NAHC will then designate a Most Likely Descendant (MLD). The MLD will inspect the remains and make a recommendation on the treatment of the remains and associated artifacts.

MM CUL-2.7: If one of the following conditions occurs, the Director of the City's Department of Planning, Building, and Code Enforcement or his/her designee shall work with the Coroner to reinter the Native American human remains and associated grave goods with appropriate dignity in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a MLD; or
- The MLD failed to make a recommendation within 24 hours after being notified by the NAHC; or
- The landowner or his authorized representative rejects the recommendation of the MLD, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

The project, with the implementation mitigation measures MM CUL-2.1 through 2.4, would not result in significant impacts to archaeological resources during construction. **(Less Than Significant Impact with Mitigation Incorporated)**

The project, with the implementation mitigation measures MM CUL-2.5 through 2.7, would not result in significant impacts to human remains during construction. **(Less Than Significant Impact with Mitigation Incorporated)**

3.5.2.3 *Cumulative Impacts*

Impact CUL-C:	**The project would not result in a cumulatively considerable contribution to a significant cultural resources impact. (No Cumulative Impact)**

Historic Resources Impacts

As described under Impact CUL-1, the project would not impact historic resources. For this reason, the project would not contribute to a cumulative historic resource impact. **(No Cumulative Impact)**

Archaeological Resources and Human Remains

The study area for cumulative cultural resource impacts is defined as all locations within 1,000 feet of the alignment of the Charcot Avenue Extension because surrounding projects could affect archaeological resources associated with those within the project alignment. Based on a review of proposed and approved development permits[13], there are no projects located in the study area that would combine with the cultural impacts of the Charcot Avenue Extension to create a significant cumulative cultural resources impact. **(No Cumulative Impact)**

[13] Source: www.sjpermits.org, accessed March 2019.

3.6 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126(c) and Appendix F (Energy Conservation) of the CEQA Guidelines, which require that EIRs include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

3.6.1 Environmental Setting

3.6.1.1 *Regulatory Framework*

Federal

At the federal level, energy standards set by the U.S. Environmental Protection Agency (EPA) apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

State

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard (RPS) Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. In 2008, Executive Order S-14-08 was signed into law requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. Pacific Gas and Electric Company (PG&E's) is the electricity provider to the project area. PG&E's 2017 electricity mix was 33 percent renewable; thus, they have already met the requirements of Executive Order S-14-08.[14]

Building Codes

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years, and the 2016 Title 24 updates went into effect on January 1, 2017.[15] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.[16]

[14] PG&E. "Exploring Clean Energy Solutions". Accessed August 24, 2018. https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page.
[15] California Building Standards Commission. "Welcome to the California Building Standards Commission". Accessed February 6, 2018. http://www.bsc.ca.gov/.
[16] California Energy Commission (CEC). "2016 Building Energy Efficiency Standards". Accessed February 6, 2018. http://www.energy.ca.gov/title24/2016standards/index.html.

The California Green Building Standards Code (CALGreen) establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. The most recent update to CALGreen went into effect on January 1, 2017, and covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

City of San José

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.6-1 are specific to energy resources and are applicable to the proposed project:

Table 3.6-1: Applicable General Plan Policies – Energy Conservation

Policy	Description
MS-14.4	Implement the City's Green Building Policies (see Green Building Section) so that new construction and rehabilitation of existing buildings fully implements industry best practices, including the use of optimized energy systems, selection of materials and resources, water efficiency, sustainable site selection, passive solar building design, and planting of trees and other landscape materials to reduce energy consumption.7
MS-2.3	Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.
MS-3.3	Promote the use of drought tolerant plants and landscaping materials for nonresidential and residential uses.
IN-2.1	Utilize the City's Infrastructure Management System Program to identify the most efficient use of available resources to maintain infrastructure and minimize the need to replace it.

City of San José Water Efficient Landscape Standards for New and Rehabilitated Landscaping

Chapter 15.11 of the Municipal Code, titled *Water Efficient Landscape Standards for New and Rehabilitated Landscaping*, promote the conservation and efficient use of water by regulating landscape design, installation, and maintenance.

3.6.1.2 *Existing Conditions*

Total energy usage in California was approximately 7,830 trillion British thermal units (Btu) in the year 2016, the most recent year for which this data was available. Out of the 50 states, California is ranked 2nd in total energy consumption and 48th in energy consumption per capita. The breakdown by sector was approximately 18 percent (1,384 trillion Btu) for residential uses, 19 percent (1,477 trillion Btu) for commercial uses, 24 percent (1,853 trillion Btu) for industrial uses, and 40 percent (3,116 trillion Btu) for transportation.[17] This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electricity in Santa Clara County in 2017 was consumed primarily by the non-residential sector (76 percent), followed by the residential sector consuming 24 percent. In 2017, a total of approximately 17,190 GWh of electricity was consumed in Santa Clara County.[18]

The project alignment contains existing roadways and undeveloped right-of-way. Existing electricity use associated with operation and maintenance of the project alignment primarily consists of electricity used to power electric vehicles and streetlights.

Natural Gas

PG&E provides natural gas services to the project area. In 2017, approximately 10 percent of California's natural gas supply came from in-state production, while 90 percent was imported from other western states and Canada. In 2016, residential and commercial customers in California used 29 percent, power plants used 32 percent, and the industrial sector used 37 percent. Transportation accounted for one percent of natural gas use in California. In 2017, Santa Clara County used approximately 3.5 percent of the state's total consumption of natural gas.

There is no existing natural gas use associated with operation and maintenance of the existing project alignment.

Fuel for Motor Vehicles

In 2017, 15 billion gallons of gasoline were sold in California.[19] The average fuel economy for light-duty vehicles (autos, pickups, vans, and SUVs) in the United States has steadily increased from about 13.1 miles-per-gallon (mpg) in the mid-1970's to 22 mpg in 2016.[20] Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by

[17] United States Energy Information Administration. *State Profile and Energy Estimates, 2016.* Accessed September 6, 2018. https://www.eia.gov/state/?sid=CA#tabs-2.
[18] CEC. Energy Consumption Data Management System. "Electricity Consumption by County". Accessed March 15, 2019. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[19] California Department of Tax and Fee Administration. Net Taxable Gasoline Gallons. Accessed August 28, 2018. http://www.cdtfa.ca.gov/taxes-and-fees/MVF_10_Year_Report.pdf.
[20] U.S. EPA. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Accessed February 6, 2018. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html.

the year 2020, was subsequently revised to apply to cars and light trucks Model Years 2011 through 2020.[21,22] In 2012, the federal government raised the fuel economy standard to 54.5 miles per gallon for cars and light-duty trucks by Model Year 2025.[23]

Vehicles traveling on the existing roadways within the project alignment are mostly fueled by gasoline, with hybrid and electric-powered vehicles becoming more common in recent and future years.

3.6.2 Discussion of Energy Impacts

For the purpose of determining the significance of the project's energy impacts, would the project:

1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

3.6.2.1 *Project Impacts*

Impact EN-1:	**The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation. (Less than Significant Impact)**

Impact EN-2:	**The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant Impact)**

Construction Phase

Construction of the project would require the use of transportation fuel, including gasoline and diesel use in construction equipment, hauling trucks, vendor vehicles, and construction worker vehicles. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, while the transportation of construction materials and construction worker commutes would also result in fuel consumption. Heavy-duty construction equipment and vendor vehicles associated with construction activities would use diesel fuel. Construction workers would travel to and from the project site throughout the duration of construction.

[21] U.S. Department of Energy. Energy Independence & Security Act of 2007. Accessed February 8, 2018. http://www.afdc.energy.gov/laws/eisa.
[22] Public Law 110–140—December 19, 2007. Energy Independence & Security Act of 2007. Accessed February 8, 2018. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.
[23] National Highway Traffic Safety Administration. *Obama Administration Finalizes Historic 54.5 mpg Fuel Efficiency Standards.* August 28, 2012. Accessed February 8, 2018. http://www.nhtsa.gov/About+NHTSA/Press+Releases/2012/Obama+Administration+Finalizes+Historic+54.5+mpg+Fuel+Efficiency+Standards.

There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities, or equipment that would not conform to current emissions standards (and related fuel efficiencies).

In addition, the project would comply with the following state requirements designed to minimize idling and associated emissions, which also minimizes use of fuel/energy consumption:

- Idling of commercial vehicles would be limited to five minutes in accordance with the California Commercial Motor Vehicle Idling Regulation.
- Idling of off-road equipment would be limited to five minutes in accordance with the California Off-Road Regulation.

Further, consistent with existing City policy, 75 percent of all construction waste generated by the project shall be diverted from landfills (e.g., recycled or reused), which will reduce energy usage.

For the reasons described above, the energy impacts of the construction phase of the Charcot Avenue Extension would be less than significant. (**Less Than Significant Impact)**

Operational Phase

Operation of the proposed roadway extension would consume energy in the form of electricity to power streetlights and gasoline and diesel for cars and other motor vehicles that would utilize the extension. New streetlights will be energy-efficient LEDs. Consistent with existing City policy, all project installed landscaping shall be drought tolerant.

Unlike a land use development project, the roadway extension would not generate additional vehicle trips but would provide an alternate east-west connection across the I-880 corridor in the greater North San José area. The effect of the project would be to re-direct vehicle trips already on the roadways or trips that are planned to be on the roadway as the General Plan is implemented. By creating additional roadway system capacity, the project would reduce travel time and improve travel speed on roadways in the project area, which reduces energy (i.e., gasoline and diesel) consumed by vehicles traveling more efficiently in and through the City of San José.

The project would provide a new bicycle and pedestrian crossing of I-880, which would facilitate those forms of non-motorized travel. The proposed project would also shorten pedestrian and bicycle travel routes and provide the opportunity to utilize walking and bicycling as an alternative travel mode, which would lead to a reduction in the number of vehicle trips. The reduction in vehicle trips would, in turn, reduce energy consumption.

Based on the above discussion, the operational phase of the project would not use energy in a wasteful manner or substantially increase energy usage when compared to the overall energy used in the City of San José or in relation to projected energy supplies. **(Less Than Significant Impact)**

3.6.2.2 *Cumulative Impacts*

Impact EN-C:	**The project would not result in a cumulatively considerable contribution to a significant energy impact. (Less than Significant Cumulative Impact)**

The geographic study area for cumulative energy impacts is defined as the City of San José. Within a large city like San José, there are thousands of projects, both large and small, in various phases of construction and operation. Each of these projects utilize energy and, taken as a whole, substantial quantities of energy are consumed. The relevant question is whether or not the Charcot Avenue Extension's contribution to the overall impact would be cumulatively considerable. For the following reasons, the Charcot Avenue Extension's contribution to the overall impact would be not cumulatively considerable:

- The construction phase would incorporate energy efficiency methods, as required by the City's Green Building Policy for Municipal Projects.

- By providing improvements that will facilitate bicycle and pedestrian use, the operational phase would reduce vehicle trips and thereby reduce energy consumption.

- By providing an additional east-west route in the greater project area, the project will improve the efficiency of vehicle travel, thereby reducing energy consumption.

The project's contribution to the overall energy impacts of all projects in the City would not be cumulatively considerable. **(Less Than Significant Cumulative Impact)**

3.7 GEOLOGY AND SOILS

The following discussion is based on a Preliminary Geotechnical Report prepared by Parikh Consultants, Inc. in March 2018 and a Paleontological Identification Report prepared by Cogstone Resource Management Inc. in February 2018. A copy of the geotechnical report is included in Appendix H of this EIR. Due to the sensitive information contained in the paleontological report, a copy is on file with the City of San José Planning Department and can be viewed by qualified personnel during normal business hours.

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed into law following the destructive 1971 San Fernando earthquake. The Act ensures public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. Local agencies are responsible for regulating most development projects within designated fault zones. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction.

California Building Standards Code

The California Building Code (CBC) covers grading and other geotechnical issues, building specifications, and non-building structures. The CBC requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments. The purpose of a site-specific geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability.

Paleontological Resources Regulations

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These are in part valued for the information they yield about the history of the earth and its past ecological settings. The California Public Resources Code (Section 5097.5) specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it will disturb or destroy a unique paleontological resource or site or unique geologic feature.

Local

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.7-1 are specific to geology and soil resources and are applicable to the proposed project.

Table 3.7-1: Applicable General Plan Policies – Geology and Soils

Policy	Description
EC-4.2	Development in areas subject to soils and geologic hazards, including unengineered fill and weak soils and landslide-prone areas, only when the severity of hazards have been evaluated and if shown to be required, appropriate mitigation measures are provided. New development proposed within areas of geologic hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. The City of San José Geologist will review and approve geotechnical and geological investigation reports for projects within these areas as part of the project approval process.
EC-4.4	Require all new development to conform to the City of San José's Geologic Hazard Ordinance.
EC-4.5	Ensure that any development activity that requires grading does not impact adjacent properties, local creeks, and storm drainage systems by designing and building the site to drain properly and minimize erosion. An Erosion Control Plan is required for all private development projects that have a soil disturbance of one acre or more, adjacent to a creek/river, and/or are located in hillside areas. Erosion Control Plans are also required for any grading occurring between October 1 and April 30.
ES-4.9	Permit development only in those areas where potential danger to health, safety, and welfare of the persons in that area can be mitigated to an acceptable level.
ER-10.3	Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

3.7.1.2 *Existing Conditions*

Topography and On-site Soils

The project alignment is located in the southern portion of the San Francisco Bay area in the Coast Range geomorphic province of northern California. The Coast Range forms a nearly continuous topographic barrier between the California coastline and the San Joaquin Valley.

The project area is located in North San José, in a relatively flat area that slopes gently to the west towards Coyote Creek, which is located approximately 330 feet from the western end of the project alignment. Due to the flat topography of the project area, the project site is not located within a landslide hazard zone.[24]

[24] County of Santa Clara, Department of Planning. *Santa Clara County Geologic Hazard Zones*. October 2012. Sheet 12.

Two major Holocene age units are present beneath the project area and include the following two soil types: 1) Qa – Alluvial gravel, sand and clay including alluvia fan deposits; and 2) Qac – Alluvial clay soil, including clay mud. Due to their clay content, soils in the project area are moderately expansive.

Groundwater

The groundwater depth at the project site ranges from approximately five to 10 feet below the ground surface. Fluctuations in the groundwater level may occur due to seasonal variations in rainfall and temperature, nearby water courses, pumping wells, and groundwater recharge. Groundwater in the project area is anticipated to flow west of the site towards Coyote Creek.

Seismicity and Seismic Hazards

The San Francisco Bay Area is classified as Zone 4 for seismic activity, the most seismically active region in the United States. Based on a 2015 forecast completed by the United States Geological Survey (USGS), there is a 72 percent probability of experiencing at least one magnitude 6.7 earthquake during the next 30 years.[25]

The project area is not located within an Alquist-Priolo Earthquake Fault Zone.[26] There are no known active faults that traverse the site and, therefore, the potential for fault rupture is very low. The known major active faults (which are faults that have a higher probability [22 percent or more] that an earthquake magnitude of 6.7 on the fault system will occur by 2043) near the project site are shown in Table 3.7-2.

Table 3.7-2: Major Active Faults Near the Project Site

Fault Name	Approximate Distance from Site
Calaveras	6.3 miles east
Hayward	2.6 miles east
Silver Creek	0.6 miles west
San Andreas	10 miles west

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loose water-saturated soils from a solid to liquid state during ground shaking. According to the Santa Clara County Geologic Hazard Zone Map, the project alignment is located within a liquefaction hazard zone.[27]

[25] United States Geological Survey. *Earthquake Outlook for the San Francisco Bay Region 2014–2043*. Revised August 2016. Accessed: February 28, 2018. Available at: https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf.
[26] California Department of Conservation. *CGS Information Warehouse: Regulatory Maps.* Accessed: February 23, 2018. Available at: http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.
[27] County of Santa Clara, Department of Planning. *Santa Clara County Geologic Hazard Zones*. October 2012. Sheet 12.

Lateral Spreading

Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open area, such as the steep bank of a stream channel. The nearest waterway to the project alignment is Coyote Creek, approximately 330 feet from the intersection of Charcot Avenue and Paragon Drive, where the nearest excavation activity (e.g., utility relocation, pole foundations, etc.) for the project would occur. At this distance, the potential for lateral spreading is low.

Paleontological Resources

The surface of the project site is mapped as Holocene (<11,700 years old) stream channel, natural levee, alluvial terrace, and floodplain deposits. Older alluvium (11,700 to 500,000 years old) is present under Holocene alluvium throughout most of the valley areas of California. There are 17 known fossil localities recorded from Pleistocene alluvium in Santa Clara County. The nearest two localities are located two miles west of the proposed roadway alignment. No fossils are known from within the proposed roadway alignment or from within a mile of its borders.

3.7.2 Discussion of Geological Impacts

For the purpose of determining the significance of the project's impacts on geological resources, would the project:

1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
    - Strong seismic ground shaking?
    - Seismic-related ground failure, including liquefaction?
    - Landslides?
2) Result in substantial soil erosion or the loss of topsoil?
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
4) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2016), creating substantial direct or indirect risks to life or property?
5) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?
6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

3.7.2.1 *Project Impacts Related to Soils and Seismic Conditions*

Impact GEO-1:	**The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. (Less than Significant Impact)**

Impact GEO-2:	**The project would not result in substantial erosion or the loss of topsoil. (Less than Significant Impact)**

Impact GEO-3:	**Although the project would be located on soil that could become unstable during an earthquake, the implementation of standard conditions and compliance with current seismic safety codes will any significant effects due to this condition. (Less than Significant Impact)**

Impact GEO-4:	**The project would be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2016), however, would not create substantial direct or indirect risks to life or property. (Less than Significant Impact)**

The Charcot Avenue Extension project would consist of typical highway and bridge construction activities, including excavation and grading. There are no geologic features along the alignment that would pose special or unique hazards to users of the proposed roadway. Any potential hazards associated with the presence of expansive soils and/or soils subject to liquefaction would be addressed through standard engineering and permit conditions.

The project alignment is flat and, therefore, the potential for the project to induce landslides, cause erosion, or result in topsoil loss is considered very low.

As noted previously, the site is within the seismically active San Francisco Bay Area and severe ground shaking is probable during the anticipated life of the project. Users of the roadway, bridge, and bicycle facilities would be exposed to hazards associated with severe ground shaking during a major earthquake on one of the region's active faults. This hazard is not unique to the project because it applies to all locations throughout the greater Bay Area. The proposed project will not increase the existing exposure to hazards associated with earthquakes; the hazards in the area will be the same with or without the project. The I-880 overcrossing will be designed and constructed in accordance with Caltrans' Seismic Design Criteria to avoid or minimize potential damage from seismic shaking on the site.

Standard Conditions

To avoid or minimize potential damage from seismic shaking and seismic-related hazards, including the presence of soils that are expansive and/or subject to liquefaction, the proposed project will be subject to the following standard conditions:

- The project shall be built using standard engineering and seismic safety design techniques.
- As required by the California Building Code, a design-level geotechnical investigation shall be completed for the project, which shall include design and construction recommendations to avoid and reduce seismic and seismic-related hazards (including liquefaction and lateral spreading). The project shall implement the recommendations identified in the design-level geotechnical investigation.

The proposed project, with implementation of the Standard Conditions outlined above, would not result in significant seismic or soil impacts such that it would result in risk to life or property of surrounding development. **(Less Than Significant Impact)**

3.7.2.2 *Impacts Associated with Septic Tanks or Wastewater Disposal Systems*

Impact GEO-5:	**The project would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. (No Impact)**

The proposed project is a roadway extension project that does not include the use of septic tanks or alternative wastewater disposal systems. **(No Impact)**

3.7.2.3 *Impacts to Paleontological Resources*

Impact GEO-6:	**With the implementation of standard conditions, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant Impact)**

Sediment on the project surface are relatively young in age. In the project area, fossils of extinct organisms generally only occur in sediments at depths of about 10 feet or more below the surface. Accordingly, sediments less than eight feet below the original surface are given low sensitivity and those that are more than eight feet deep given a high sensitivity. The roadway alignment consists of excavation work for the utility relocation, installation of traffic signals, lighting pole foundations, sound walls, slip ramp envelope, and I-880 overcrossing. The overcrossing would be supported on cast-in-drilled-hole concrete piling, extending to a depth of up to approximately 120 feet below the ground surface.

While fossil fragments may rotate up on a mechanical auger, the specimens will lack context including depth/elevation, formation identification, and other elements that are crucial to scientific significance. Non-augering excavations into native sediments is expected to be fairly minimal for embankments (approximately two feet deep), utilities (approximately 10 feet deep), signal and lighting pole foundations (between six and 13 feet deep), and sound wall foundations (up to eight feet deep). Because of the limited amount of excavations over 10 feet deep, it is unlikely that the project would result in a significant impact to fossils. However, the project shall comply with all applicable

City regulatory programs and policies pertaining to unknown paleontological resources including the following Standard Conditions for avoiding and reducing construction-related paleontological resources impacts.

Standard Condition

In the event of unanticipated discoveries of paleontological resources during construction, all work within 50 feet of the discovery shall be halted until the find(s) has been evaluated by a qualified paleontologist. The recommendations of the paleontologist with regard to the find(s) will be followed to the satisfaction of the Director of the Planning Building & Code Enforcement Department and/or his/her designee.

Compliance with the above Standard Condition and applicable City policies and regulatory programs related to paleontological resources would reduce project paleontological resources impacts to a less than significant level. **(Less Than Significant Impact)**

3.7.2.4 *Cumulative Impacts*

Impact GEO-C:	**The project would not result in a cumulatively considerable contribution to a significant geology and soils impact. (Less than Significant Cumulative Impact)**

Cumulative Geologic Impacts

As described above, the project's impact with regard to soils and seismic shaking would not be significant because it will be required to comply with standard conditions that will minimize any adverse effects. Compliance with the standard conditions is required of all projects, as mandated by the California Building Code. Thus, each project mitigates its risk, which reduces impacts to a less than significant level. **(Less than Significant Cumulative Impact)**

Cumulative Paleontological Impacts

The study area for cumulative paleontological resource impacts is defined as all locations within 1,000 feet of the alignment of the Charcot Avenue Extension because other nearby proposed or approved projects could affect paleontological resources associated with those within the project alignment. Based on a review of proposed and approved development permits[28], there are no projects located in the study area that would combine with the paleontological impacts of the Charcot Avenue Extension to create a significant cumulative paleontological resources impact. **(No Cumulative Impact)**

[28] Source: www.sjpermits.org; accessed March 25, 2019.

3.8 GREENHOUSE GAS EMISSIONS

The following discussion is based on an Air Quality and Greenhouse Gas Emissions Assessment prepared by Illingworth & Rodkin, Inc. in February 2019. The report is included as Appendix E to this EIR.

3.8.1 Environmental Setting

Unlike emissions of criteria pollutants and toxic air contaminants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns. The principal GHGs contributing to global warming include CO_2, methane, nitrous oxide, and fluorinated compounds. GHG emissions contributing to global climate change are attributable in large part to human activities associated with the transportation, manufacturing, utility, and agricultural sectors.

3.8.1.1 *Regulatory Framework*

State

Global Warming Solutions Act

Under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32, the California Air Resources Board (CARB) established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHG, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, Senate Bill (SB) 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to express the 2030 statewide target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 $MMTCO_2e$.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035, as compared to 2005 emissions levels. The per-capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission partnered with the Association of Bay Area Governments, BAAQMD, and Bay Conservation and Development

Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2040. Plan Bay Area 2040 establishes a course for reducing per-capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). Charcot Avenue is located within a TPA and the portion of the alignment west of I-880 is located within a PDA.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.[29]

Regional

Bay Area 2017 Clean Air Plan

Regional air quality management districts, such as BAAQMD, must prepare air quality plans specifying how state and federal air quality standards would be met. BAAQMD's most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Local

Envision San José 2040 General Plan

The General Plan includes strategies, policies, and action items that are also incorporated in the City's GHG Reduction Strategy to help reduce GHG emissions. Multiple policies and actions in the General Plan have GHG implications, including land use, housing, transportation, water usage, solid waste generation and recycling, and reuse of historic buildings. The policies listed in Table 3.8-1 are specific to greenhouse gas emissions and are applicable to the proposed project.

[29] CARB. "The Advanced Clean Cars Program". Accessed April 6, 2018. https://www.arb.ca.gov/msprog/acc/acc.htm.

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Table 3.8-1: Applicable General Plan Policies – Greenhouse Gases	
Policy	**Description**
CD-3.2	Prioritize pedestrian and bicycle connections to transit, community facilities (including schools), commercial areas, and other areas serving daily needs. Ensure that the design of new facilities can accommodate significant anticipated future increases in bicycle and pedestrian activity
CD-5.1	Design areas to promote pedestrian and bicycle movements, to facilitate interaction between community members, and to strengthen the sense of community.
MS-2.3	Utilize solar orientation (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.

Greenhouse Gas Reduction Strategy

The City, in conjunction with preparation of the *Envision San José 2040 General Plan*, prepared and adopted a GHG Reduction Strategy. The purpose of the Strategy was to ensure that implementation of the General Plan aligns with implementation requirements of AB 32, which at the time it was adopted was the Year 2020 emissions reduction target. The City is currently preparing an update to the Strategy to address the Year 2030 emissions reduction target of AB 32.

The City's GHG Reduction Strategy identifies GHG emissions reduction measures to be implemented by development projects in three categories: built environment and energy, land use and transportation, and recycling and waste reduction. Some measures are mandatory for all proposed development projects and others are voluntary. Voluntary measures could be incorporated as mitigation measures for proposed projects, at the City's discretion.

Climate Smart San José

Climate Smart San José is a plan developed by the City to reduce air pollution, save water, and create a healthier community. The plan articulates how buildings, transportation/mobility, and citywide growth need to transform in order to minimize impacts on the climate. The plan outlines strategies that City departments, related agencies, the private sector, and residents can take to reduce carbon emissions consistent with the Paris Climate Agreement. The plan recognizes the scaling of renewable energy, electrification and sharing of vehicle fleets, investments in public infrastructure, and the role of local jobs in contributing to sustainability. It also includes detailed carbon-reducing commitments for the City, as well as timelines to deliver on those commitments in order to transform San José into a low-carbon economy.

San José Transportation Analysis Policy (Council Policy 5-1)

This policy, which was adopted in 2018, changed the methodology for the evaluation of traffic impacts of all projects from a delay-based metric (i.e., level of service) to one based on vehicle-miles-traveled (VMT). The intent of the policy is to reduce the emission GHGs and other pollutants associated with vehicular travel. Please see Section 3.17.1.1 for a detailed discussion of this policy and its applicability to the Charcot Avenue Extension.

3.8.1.2 *Existing Conditions*

[Note to Reader: For context when reading the following analyses, total GHG emissions in California in 2016 were 429.4 million metric tons of CO_2e.[30] Total GHG emissions in San José in 2017 were 5.7 million metric tons of CO_2e.[31]]

Under existing conditions, there is no extended roadway and the potential for direct GHG emissions is inconsequential because the emissions from the street lighting and vehicles traveling on the current alignment are small. Therefore, existing GHG emissions are considered nonexistent. Indirect emissions are generated from the burning of fuel required for site maintenance (e.g., infrequent disking and/or mowing to control fire hazards, etc.).

3.8.2 Discussion of GHG Impacts

For the purpose of determining the significance of the project's GHG impacts, would the project:

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

3.8.2.1 *Generation of GHG Emissions*

Impact GHG-1:	**The project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant Impact)**

Construction GHG Emissions

GHG emissions during construction of the Charcot Avenue Extension would be the result of processing and manufacturing construction supplies, operating construction equipment, and construction-related vehicle trips (construction crews, materials and equipment deliveries, off hauling demolition debris and soil, etc.). GHG emissions would be generated at different levels throughout project construction activities. Construction-related GHG emissions vary depending on the level of activity, duration of the construction, specific construction operations, equipment-type use, and number of construction personnel.

Currently, neither the City of San José nor BAAQMD have adopted GHG significance thresholds that apply to construction emissions. Nonetheless, for informational purposes, GHG emissions during construction of the proposed Charcot Avenue extension were modeled (see Appendix E). Those emissions are estimated to be 1,410 metric tons (MT) of CO_2e over the course of the entire project

[30] Source: California Air Resources Board, *California Greenhouse Gas Emissions Inventory – 2018 Edition*, released July 11, 2018.
[31] Source: City of San José, *2017 Inventory of Community Greenhouse Gas Emissions*, April 2019.

construction, which is estimated to be approximately ten months.[32] Given that the proposed project is in an urban setting near construction supplies, equipment, and workforces, GHG emissions resulting from project-related construction activities would not contribute substantially to local or regional greenhouse gas emissions. For these reasons and because construction GHG emissions would be a temporary condition and would not result in permanent ongoing emissions that would interfere with the implementing SB 32, GHG emissions during construction of the proposed project would be less than significant. **(Less Than Significant Impact)**

Operational GHG Emissions

Operational GHG emissions (e.g., carbon dioxide, methane, and nitrogen dioxide) associated with the proposed project are primarily the result of fuel consumed by vehicles traveling on the proposed Charcot Avenue Extension and the surrounding roadway network. Yearly GHG emissions with and without the proposed roadway extension were modeled and compared for existing, Year 2025 and Year 2040 conditions and are shown in Table 3.8-2, below.

Table 3.8-2: CO_2e Emissions in Metric Tons per Year

Existing		Year 2025		Year 2040	
No Project	**With Project**	**No Project**	**With Project**	**No Project**	**With Project**
598,123	585,605	698,812	688,980	847,438	841,842
Project Difference	(12,518)		(9,832)		(5,596)
	-0.35%		-0.23%		-0.11%

As shown in Table 3.8-2, the proposed project, when compared to the No Project scenario, would decrease GHG emissions under existing, Year 2025, and Year 2040 conditions. This decrease is the result of the reductions in congestion and improvements in operations that are associated with the project. For a detailed discussion of the traffic effects of the project, please see Section 3.17, *Transportation*. As discussed elsewhere in this section, a reduction in GHG emissions is the objective of various plans and policies. For these reasons, the project would not generate GHG emissions that would have a significant effect on the environment. **(Less Than Significant Impact)**

3.8.2.2 *Conflicts with GHG Plans and Policies*

Impact GHG-2: The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. (No Impact)

As discussed above and as shown in Table 3.8-2, the proposed extension of Charcot Avenue would incrementally reduce GHG emissions associated with motor vehicles by 12,518 metric tons under existing conditions, 9,832 metric tons under Year 2025 conditions, and 5,596 metric tons under Year 2040 conditions. The Extension includes bicycle and pedestrian improvements, including a new

[32] If the construction period were to be extended due to unforeseen delays (e.g., equipment scheduling, unavailability of materials, weather, etc.), these emissions would remain essentially unchanged because the same effort would still be required to undertake each task required to construct the project.

bike/ped connection over I-880, which will facilitate those modes of travel. Trips made by non-motorized modes instead of by motor vehicle have a direct benefit in terms of fewer GHG emissions.

Further, the proposed roadway extension is included in the adopted *Envision San José 2040 General Plan* roadway network and the planned roadway network for the *North San José Area Development Policy, both of which are consistent with the City's GHG Reduction Strategy.*

Note that while the City's current *GHG Reduction Strategy* addresses GHG reductions only through Year 2020, there is no basis for concluding that the project would be inconsistent with the update to the Strategy that is currently underway. This conclusion is based on the fact that 1) the data in Table 3.8-2 show that the project's effect on GHG emissions in Years 2025 and 2040 will be beneficial, and 2) the project includes new facilities that will facilitate future trips being taken by walking and bicycling as opposed to by motor vehicles.

Based on the above discussion, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. **(No Impact)**

3.8.2.3 *Cumulative Impacts*

Impact GHG-C:	**The project would not result in a cumulatively considerable contribution to a GHG emissions impact. (Less than Significant Cumulative Impact)**

As discussed above, greenhouse gas emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project in the City could generate enough greenhouse gas emissions, on its own, that would measurably change the global average temperature. The combination of greenhouse gas emissions from past, present, and future projects in San José, the entire State of California, and across the nation and around the world, contribute cumulatively to global climate change and its associated environmental impacts.

For these reasons, the discussion above focuses on whether project-related GHG emissions represent a cumulatively considerable contribution to climate change, as determined by consistency with the City of San José and Statewide efforts to curb GHG emissions. As described in Section 3.8.2.2, the project is consistent with all applicable GHG reduction plans and policies because it would directly reduce GHG emissions. For this reason, and in the context of all GHG emissions globally, the proposed roadway extension would not result in a cumulatively considerable contribution to a greenhouse gas emissions impact. **(Less Than Significant Cumulative Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based on an Initial Site Assessment prepared by Parikh Consultants, Inc. in April 2019. A copy of this report is included in Appendix I of this EIR.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples of hazardous materials include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds that are used in manufacturing and industrial processes. Due to the fact that hazardous substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs designed to minimize the chance for unintended releases and/or exposures to occur. Other programs establish remediation requirements where soils and/or groundwater contamination has occurred. The net result of regulatory control programs and institutional controls is reduced likelihood of chemical releases and reduced likelihood of off-site migration of hazardous materials in the event of a release.

The U.S. Environmental Protection Agency (US EPA) is the federal administering agency for hazardous waste regulations. State agencies include the California Environmental Protection agency (Cal EPA), Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), and the California Air Resources Board (CARB). Regional agencies include the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the Bay Area Air Quality Management District (BAAQMD). Local agencies including the San José Fire Department (SJFD) and the Santa Clara County Department of Environmental Health (SCCDEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program. The Santa Clara Valley Water District (Valley Water) monitors groundwater quality and supports groundwater clean-up efforts.

Existing federal, state and local regulations that reduce or avoid impacts associated with hazards and hazardous materials include:

- Federal Comprehensive Environmental Response and Liability Act (CERCLA, "Superfund")
- Federal Resource Conservation and Recovery Act (RCRA)
- Federal Hazardous Materials Transportation Act (HMTA)
- Natural Gas Pipeline Safety Act of 1968 (CFR, Title 49)
- Federal Process Safety Management of Highly Hazardous Chemicals (CFR, Title 29)
- Cal/OSHA Worker Health and Safety Regulations (California Code of Regulations, Title 8)
- California Health and Safety Code and CUPA Program
- California Accidental Release Prevention (CalARP) Program
- California Fire Code
- California's Porter-Cologne Water Quality Control Act
- CEQA Requirements for Hazardous Materials Users within One-Fourth of a Mile of School (Section 21151.4 of the Public Resources Code)
- City of San José Hazardous Materials Release Response Plans and Inventory

- City of San José Hazardous Materials Storage Ordinance and Toxic Gas Ordinance
- City of San José Building and Fire Codes
- City of San José Municipal Code (Chapters 6.14, 17.12, 17.88, and 20.80).

In addition to the above laws and regulations, the policies in Table 3.9-1 from the City's *Envision San José 2040 General Plan* have been adopted for the purpose of reducing or avoiding impacts related to hazards and hazardous materials.

Table 3.9-1: Applicable General Plan Policies – Hazards and Hazardous Materials

Policy	Description
RC-6.5	The City shall designate transportation routes to and from hazardous waste facilities as part of the permitting process in order to minimize adverse impacts on surrounding land uses and to minimize travel distances along residential and other non-industrial frontages
EC-7.1	For development and redevelopment projects, require evaluation of the proposed site's historical and present uses to determine if any potential environmental conditions exist that could adversely impact the community or environment.
EC-7.2	Identify existing soil, soil vapor, groundwater and indoor air contamination and mitigation for identified human health and environmental hazards to future users and provide as part of the environmental review process for all development and redevelopment projects. Mitigation measures for soil, soil vapor and groundwater contamination shall be designed to avoid adverse human health or environmental risk, in conformance with regional, state and federal laws, regulations, guidelines and standards
EC-7.5	On development and redevelopment sites, require all sources of imported fill to have adequate documentation that it is clean and free of contamination and/or acceptable for the proposed land use considering appropriate environmental screening levels for contaminants. Disposal of groundwater from excavations on construction sites shall comply with local, regional, and state requirements.
EC-7.8	Where an environmental review process identifies the presence of hazardous materials on a proposed development site, the City will ensure that feasible mitigation measures that will satisfactorily reduce impacts to human health and safety and to the environment are required of or incorporated into the projects. This applies to hazardous materials found in the soil, groundwater, soil vapor, or in existing structures
EC-7.9	Ensure coordination with the County of Santa Clara Department of Environmental Health, Regional Water Quality Control Board, Department of Toxic Substances Control or other applicable regulatory agencies, as appropriate, on projects with contaminated soil and/or groundwater or where historical or active regulatory oversight exists.
EC-7.10	Require review and approval of grading, erosion control and dust control plans prior to issuance of a grading permit by the Director of Public Works on sites with known soil contamination. Construct-ion operations shall be conducted to limit the creation and dispersion of dust and sediment runoff
EC-7.11	Require sampling for residual agricultural chemicals, based on the history of land use, on sites to be used for any new development or redevelopment to account for worker and community safety during construction. Mitigation to meet appropriate end use such as residential or commercial/industrial shall be provided.

Emergency Operations and Evacuation Plans

The City of San José's Emergency Operations Plan includes standard operating procedures for flood events, heat waves, off-airport aviation accidents, power outages, terrorism, and urban/wildland interface fires. The Citywide Emergency Evacuation Plan sets forth the responsibilities of City personnel and coordination with other agencies to ensure the safety of San José citizens in the event of a fire, geologic, or other hazardous occurrence. The Evacuation Plan identifies evacuation procedures but does not identify evacuation routes.

3.9.1.2 *Existing Conditions*

Existing Uses of the Project Site and Surrounding Area

The project alignment consists of the existing Charcot Avenue terminus on the western alignment and unpaved segments of City right-of-way and Silk Wood Lane on the eastern alignment. The surrounding uses on the western alignment consist of office/R&D uses. The eastern alignment is surrounded by office/R&D uses, residential uses, and an elementary school (Orchard School).

Historic Uses of the Project Site and Surrounding Area

Based on a review of historical maps and aerial photographs in the project area[33], the project alignment consisted of agricultural uses associated with orchards since the 1930's. Presence of I-880 was shown since the 1950's. Development in the project area spurred in the 1970's, including the existing Charcot Avenue and Charcot Avenue/Coyote Creek Bridge, and commercial properties to the south of Charcot Avenue. The area east of I-880 remained agricultural and gradually developed into commercial, residential, and Orchard School from 1993 through 2005, as seen today.

Off-Site Sources of Contamination

A database record search was conducted to review regulatory agency lists in order to identify the presence of hazardous waste sites within a one-mile radius of the project alignment. The purpose of the regulatory database search is 1) to identify sites with known or potential contamination from hazardous materials, and 2) to determine if any of those sites might adversely affect the proposed Charcot Avenue Extension.

All the sites identified in the records search were either closed, down/cross gradient, or too far up-gradient to pose an adverse effect on the project alignment. The results of the search and descriptions of the environmental database are included in Appendix I.

Airports

The Norman Y. Mineta San José International Airport (Airport) is approximately 1.6 miles southwest of the project alignment. The project site is not within the Airport's Airport Influence Area (AIA), nor is it located in any of its Airport Safety Zones or Aircraft Noise Contours.[34]

The project alignment, however, is located within the Federal Aviation Administration (FAA)'s Notification Surface area. Within the project alignment, any structure exceeding 140 feet above mean sea level (msl) would require submittal to the FAA for airspace safety review. The proposed bridge overcrossing would have a maximum height of approximately 80-feet above msl, therefore, would not require notification to FAA.

[33] Source: Environmental Data Resources (2019), as reviewed by Parikh Consultants, Initial Site Assessment for Charcot Avenue Extension Project, 2019.
[34] Santa Clara County Airport Land Use Commission. Norman Y. Mineta San José International Airport Comprehensive Land Use Plan. November 2016.

San José Emergency Operations Plan

The City's Emergency Operations Plan includes evacuation procedures but does not delineate evacuation routes. Instead, procedures are outlined for different types of emergencies occurring in different locations of San José.

3.9.2 Discussion of Hazards and Hazardous Material Impacts

For the purpose of determining the significance of the project's hazards and hazardous materials impacts, would the project:

1) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

3.9.2.1 *Impacts Associated with Transport, Use, or Disposal of Hazardous Materials*

Impact HAZ-1:	**The project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. (Less Than Significant Impact)**

Operation of the proposed Charcot Avenue Extension would not involve the use or disposal of hazardous materials. Hazardous materials, however, could be transported by commercial and/or private vehicles using the proposed extension (refer to *Section 3.17, Transportation*, for discussion on estimated truck trips on the proposed extension). Vehicles operating on public roads are subject to all local, state, and federal regulations governing the transport of hazardous materials. This includes, but is not limited to, the Hazardous Materials Transportation Act. Additionally, all public roadways constructed within the City of San José and County of Santa Clara are required to adhere to all applicable roadway design standards and regulations. For these reasons, the proposed project, would

not result in a significant impact related to the routine transport, use, and disposal of hazardous materials. **(Less Than Significant Impact)**

3.9.2.2 *Impacts due to Reasonably Foreseeable Conditions involving Release of Hazardous Substances*

Impact HAZ-2:	**The project could create a significant risk if hazardous materials in sufficient concentrations are present in soils and those materials are, in turn, released into the environment during construction. (Less than Significant Impact with Mitigation Incorporated)**

The project site was in agricultural use since the 1930's. Soils in the project area may contain elevated levels of pesticides and herbicides, that when exposed (i.e., during earth-work activities), could impact construction workers and nearby sensitive receptors from harmful chemicals. **(Significant Impact)**

The existing Charcot Avenue (in the western alignment) and I-880 and nearby roadways have supported vehicular activity since the 1950's. Although the use of lead in gasoline was phased out in the 1980s, aerially deposited lead (ADL) has been detected in roadways due to the historic use of leaded gasoline. As areas surrounding Charcot Avenue and I-880 have been used by vehicles for more than 40 years before leaded gasoline was phased out, it is likely the surface soils along the western alignment contain ADL. **(Significant Impact)**

The following measure would be implemented as part of the project to avoid impacts related to the potential presence of pesticides, herbicides, and ADL:

MM HAZ-2.1: Prior to demolition, grading, and excavation for the proposed road extension, soil within the project alignment shall be sampled and tested for organochlorine pesticides and lead to determine if soil contamination from previous agricultural use are above established RWQCB Environmental Screening Levels (ESLs) for construction worker safety and commercial/industrial standards. The result of soil sampling and testing will be provided to the Director of the City of San José Planning, Building, and Code Enforcement, or his/her designee, and the City's Environmental Compliance Officer for review.

If contaminated soils are found in concentrations above regulatory thresholds the project proponent shall obtain regulatory oversight from the SCCDEH or DTSC. The SCCDEH or DTSC will determine next steps including which documents are required such as a Site Management Plan (SMP), Removal Action Plan (RAP), or equivalent document which must prepared by a qualified hazardous materials consultant. The plan must establish remedial measures and/or soil management practices to ensure construction worker safety and the health and safety of future workers and site users. The Plan and evidence of regulatory oversight shall be provided to the Director of the City of San José Planning, Building, and Code Enforcement or his/her designee,

and the Environmental Compliance Officer in the City of San José's Environmental Services Department.

With implementation of the mitigation measure MM HAZ-2.1, the potential for construction of the proposed roadway extension to expose construction workers, future workers, and site users to harmful chemicals would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated).**

3.9.2.3 *Emission of Hazardous Materials Within One-Quarter Mile of a School*

Impact HAZ-3:	**The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant Impact)**

Orchard School is located adjacent to the proposed roadway extension. The project is not a land use such as a manufacturing facility that stores, utilizes, and disposes of hazardous materials. However, project construction activities and vehicles traveling on the roadway extension would generate air pollutant emissions, including TACs.

The potential for project construction and operation to expose Orchard School to substantial air pollutant concentrations is evaluated in this EIR. As discussed in Section 3.3, *Air Quality*, project-related air pollutant emissions would be below applicable thresholds and, therefore, the proposed roadway extension would not expose Orchard School to substantial air pollutant concentrations. **(Less Than Significant Impact)**

3.9.2.4 *Construction of the Project on a Site with Known Contamination*

Impact HAZ-4:	**The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. (No Impact)**

Section 65962.5 of the Government Code requires CalEPA to develop and update (at least annually) a list of hazardous waste and substances sites. The State, local agencies, and developers use this list to comply with CEQA requirements. The list includes hazardous substance release sites identified by the DTSC and the SWRCB.

Based on a search of the State regulatory databases (i.e., Geotracker databases managed by SWRCB, a list of solid waste disposal sites identified by SWRCB, a list of "active" Cease and Desist Orders and Cleanup and Abatement Orders managed by the SWRCB, and Envirostor managed by DTSC),

the project alignment is not listed on the hazardous waste or substances sites updated annually per Section 65962.5 of the Government Code.[35] [36] **(No Impact)**

3.9.2.5 *Project Location in Proximity to an Airport*

Impact HAZ-5:	**The project is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and would not result in a safety hazard or excessive noise for people residing or working in the project area. (No Impact)**

As discussed above, the project alignment is not located within the San José International Airport's AIA, nor would the proposed height of the overcrossing require submittal to the FAA for airspace safety review. For these reasons, the project would not result in a significant airport and aircraft safety hazard impact to the project area. **(No Impact)**

3.9.2.6 *Impairment or Interference with Emergency Plans*

Impact HAZ-6:	**The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (No Impact)**

The project will sever access to businesses located along Charcot Avenue between Paragon Drive and O'Toole Avenue. Replacement access to these businesses will be provided via other existing streets, such access that will be available for both normal and emergency purposes.

Although the City's Emergency Evacuation Plan does not identify evacuation routes, by providing a new east-west connection over I-880, the project alignment would improve roadway connectivity in the project area, thereby, improving the ability of the City's Office of Emergency Management to implement its Emergency Operations Plan. **(No Impact)**

3.9.2.7 *Exposure of People or Structures to Risks Associated with Wildfires*

Impact HAZ-7:	**The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (No Impact)**

[35] CalEPA. "Cortese List Data Resources." Accessed: December 14, 2018. Available at: https://calepa.ca.gov/sitecleanup/corteselist/.
[36] See also the list of regulatory databases in the Initial Site Assessment prepared for the Charcot Avenue Extension project, which is Appendix I of this EIR.

According to the California Department of Forestry and Fire Hazard Projection, the project alignment is not within an area subject to wildfire hazards. Therefore, the proposed project will result in no impacts from wildland fires.[37] **(No Impact)**

3.9.2.8 *Cumulative Impacts*

Impact HAZ-C:	**With implementation of the mitigation measures described above, the project would not result in a cumulatively considerable contribution to a significant hazards and hazardous materials impact. (Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic study area for cumulative hazardous materials impacts is defined as locations within 1,000 feet of the Charcot Avenue Extension. This radius is appropriate because impacts associated with exposure to hazardous materials would be limited to the roadway alignment and the adjacent properties.

Cumulative Exposure to ADL and/or Pesticides

As described under Impact HAZ-2, project construction activities could expose construction workers and nearby sensitive receptors to harmful pesticides and/or lead. The proposed project would implement mitigation measure MM HAZ-2.1 to reduce or avoid these hazards and hazardous materials impacts to a less than significant level. Based on a review of proposed and approved development permits, there are no projects located in the study area that would combine with the impacts of the Charcot Avenue Extension to create a significant cumulative impact related to exposure to ADL and/or pesticides.[38] **(No Cumulative Impact)**

Cumulative Exposure to Toxic Air Contaminants

In addition to the project's community risk impacts described above, cumulative community risk impacts were assessed by predicting and combining community risk impacts from project construction, project operation, and other existing TAC sources near the school MEI and the residential MEI. The maximum combined cancer risk, annual $PM_{2.5}$ concentrations, and non-cancer HI at the MEIs are shown in Table 3.3-6 in Section 3.3, *Air Quality*.

As shown in Table 3.3-6, the combined cancer risk, annual $PM_{2.5}$ concentrations, and non-cancer HI from project construction, project operation, and other nearby existing TAC sources at the MEI would be below applicable significance thresholds. Therefore, the cumulative toxic air contaminant impact would not be significant. **(Less Than Significant Cumulative Impact)**

[37] California Department of Forestry and Fire Hazard Projection. Santa Clara County Very High Fire Hazard Zones in Local Responsibility Area. October 8, 2008.
[38] Source: www.sjpermits.org, accessed March 2019.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

Federal, State, and Regional

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the US EPA and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. US EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the water quality control boards. The project alignment is within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB).

Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan or "Basin Plan." The Basin Plan lists the beneficial uses that the RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Statewide Construction General Permit

The SWRCB has implemented a NPDES Construction General Permit for the State of California. For projects disturbing one acre or more of soil, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction. The Construction General Permit includes requirements for training, inspections, record keeping, and for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize pollutant discharge and protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Municipal Regional Stormwater NPDES Permit

The San Francisco Bay RWQCB has issued a Municipal Regional Stormwater NPDES Permit (MRP) that covers the project area. Under provisions of the NPDES Municipal Permit, projects that disturb more than 10,000 square feet of impervious surface areas are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. The MRP requires regulated projects to include Low Impact Development (LID) practices, such as pollutant source control measures and stormwater treatment features aimed to maintain or restore the site's natural hydrologic functions. The MRP also requires that stormwater treatment measures are properly installed, operated and maintained.

In addition to water quality controls, the MRP requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements if they do not meet the size threshold, drain into tidally-influenced areas or directly into the Bay, drain into hardened channels, or are infill projects in subwatersheds or catchments areas that are greater ≥65% impervious (per the Santa Clara Valley Permittees Hydromodification Management Applicability Map).

Based on the Santa Clara Permittees Hydromodification Management Applicability Map for the City of San José, the project site is exempt from the NPDES hydromodification requirements related to preparation of a Hydromodification Management Plan (HMP) because the alignment is in a subwatershed ≥65% impervious.[39]

Local

City of San José Post-Construction Urban Runoff Management (Policy 6-29)

The City of San José's Policy 6-29 implements the stormwater treatment requirements of Provision C.3 of the Municipal Regional Stormwater NPDES Permit. The City of San José's Policy 6-29 requires all new development and redevelopment projects to implement post-construction Best Management Practices (BMP) and Treatment Control Measures (TCM) to the maximum extent practicable. This policy also establishes specific design standards for post-construction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surfaces.

City of San José Hydromodification Management (Policy 8-14)

Policy 8-14 implements the stormwater treatment requirements of Provision C.3 of the Municipal Regional Stormwater NPDES Permit. Policy 8-14 requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. If it is located in a subwatershed that is <65 percent (less than 65%) impervious, the policy requires a project to be designed to control project-related hydromodification through a HMP.

The Charcot Avenue Extension alignment is located in a subwatershed that is greater than or equal to 65 percent impervious and, therefore, is exempt from the NPDES hydromodification requirements, and preparation of an HMP is not required. [40]

[39] Santa Clara Valley Urban Runoff Pollution Prevention Program. "Classification of Subwatersheds and Catchment Areas for Determining Applicability of HMP Requirements." Accessed on: January 24, 2018. Available at: http://www.scvurppp-w2k.com/HMP_app_maps/San_Jose_HMP_Map.pdf.

[40] Santa Clara Valley Urban Runoff Pollution Prevention Program. "Classification of Subwatersheds and Catchment Areas for Determining Applicability of HMP Requirements." Accessed on: January 24, 2018. Available at: http://www.scvurppp-w2k.com/HMP_app_maps/San_Jose_HMP_Map.pdf.

Envision San José 2040 General Plan

The General Plan includes policies for avoiding or mitigating impacts resulting from planned development projects within the City. The policies listed in Table 3.10-1 are specific to hydrology and water quality and are applicable to the proposed project.

Table 3.10-1: Applicable General Plan Policies – Hydrology and Water Quality

Policy	Description
IN-3.7	Design new projects to minimize potential damage due to stormwaters and flooding to the site and other properties.
IN-3.9	Require developers to prepare drainage plans for proposed developments that define needed drainage improvements per City standards.
ER-8.1	Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff (6-29) and Hydromodification Management (8-14) Policies.
EC-5.7	Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.
EC-5.16	Implement the Post-Construction Urban Runoff Management requirements of the City's Municipal NPDES Permit to reduce urban runoff from project sites.

3.10.1.2 *Existing Conditions*

Water Quality

The project alignment is comprised of paved roads (i.e., Silk Wood Lane in the eastern alignment and Charcot Avenue in the western alignment), and segments of undeveloped right-of-way directly east of I-880. Stormwater runoff from the roadway alignment drains into a 15-inch storm drain line with an outfall to Coyote Creek.

Groundwater

The project alignment is underlain by the Santa Clara groundwater basin. Recharge of the Santa Clara groundwater basin is achieved through a combination of natural recharge and the Santa Clara Valley Water District's artificial recharge program.[41] Natural recharge occurs as infiltration from streambeds within the drainage basin and from direct percolation of precipitation that falls on the basin floor. Artificial recharge is conducted by releasing locally conserved or imported water to in-stream and off-stream facilities.

Flooding

The project alignment is not located within a 100-year flood hazard zone. The eastern alignment and a portion of the western alignment is located in Zone D, which are areas where flood hazards are

[41] Santa Clara Valley Water. Santa Clara Valley Groundwater Basin, Santa Clara Subbasin. Feb 27, 2004.

undetermined, but possible. The remainder of the alignment is located within Flood Zone X, which is defined as a 500-year flood zone (0.2 percent annual chance of flood).[42]

Seiche, Tsunami, and Mudflows

A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. The project alignment is not located near a lake or other landlocked body of water. Therefore, the potential for the alignment to be subject to seiches is considered low.

A tsunami or tidal wave is a series of water waves caused by the displacement of a large volume of a body of water, such as an ocean, bay, or large lake. Due to the immense volumes of water and energy involved, tsunamis can be devastating to areas along shorelines. The nearest large body of water to the project alignment is San Francisco Bay, which is located approximately 4.5 miles to the northwest. Due to this separation distance, the project alignment is not subject to tsunamis.[43]

The project area is flat and there are no hillsides or mountains near the site, therefore, the project site is not susceptible to mudflow hazards.

3.10.2 Discussion of Hydrological and Water Quality Impacts

For the purpose of determining the significance of the project's impacts on hydrological resources, would the project:

1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede groundwater management of the basin?
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - result in substantial erosion or siltation on- or off-site;
    - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - impede or redirect flood flows?
4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

[42] Federal Emergency Management Agency. "Flood Insurance Rate Map." Parcel 06085C0069H. May 2009. Accessed: March 1, 2018. Available at: https://msc.fema.gov/portal/search?AddressQuery=charcot%20avenue%20and%20paragon%20drive%20san%20jose#searchresultsanchor.

[43] Association of Bay Area Governments. "Resilience Program." Accessed: March 2, 2018. Available at: http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami.

3.10.2.1 *Degradation of Surface or Groundwater Quality*

Impact HYD-1:	**With the implementation of Standard Conditions, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (Less than Significant Impact)**

Project construction may result in temporary impacts to surface water quality. When disturbance to underlying soils occurs, the surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system. Construction of the project would disturb more than one acre of soil and, therefore, compliance with the City's NPDES Construction General Permit is required.

In addition, all development in San José must comply with the City's Grading Ordinance. The City of San José Grading Ordinance requires the use of erosion and sediment controls to protect water quality while a site is under construction. Prior to issuance of a permit for grading activity occurring during the rainy season (October 1 to April 30), the project would be required to submit an Erosion Control Plan to the Director of Public Works for review and approval. The plan must detail the Best Management Practices (BMPs) that shall be implemented to prevent the discharge of stormwater pollutants.

Standard Conditions

As required under City Council Policy 6-29 and the City's Grading Ordinance, the project shall implement measures to prevent stormwater pollution and minimize potential sedimentation during construction. These measures include, but are not limited to, the following:

- Utilize on-site sediment control BMPs to retain sediment on-site;
- Utilize stabilized construction entrances and/or wash racks;
- Implement damp street sweeping;
- Provide temporary cover of disturbed surfaces to control erosion during construction;
- Provide permanent cover to stabilize disturbed surfaces after construction is complete; and
- Prior to the issuance of a permit for grading activity occurring during the rainy season (October 1 to April 30), the project shall submit to the Director of Public Works an Erosion Control Plan detailing the BMPs to prevent discharge of stormwater pollutants.

The project, with implementation of the above Standard Conditions, would not result in significant construction-related water quality impacts. **(Less Than Significant Impact)**

3.10.2.2 *Groundwater Impacts*

Impact HYD-2:	**The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede groundwater management of the basin. (Less than Significant Impact)**

While the project would increase impervious surfaces within the project alignment by approximately 2.9 acres, thereby decreasing stormwater percolation on-site, the project alignment is not located within a designated groundwater recharge zone.[44] Therefore, the proposed project would not substantially affect groundwater recharge. **(Less Than Significant Impact)**

3.10.2.3 *Drainage and Flooding Impacts*

Impact HYD-3:	**The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. (Less than Significant Impact)**

The project alignment encompasses approximately 6.6 acres. The proposed roadway extension would increase impervious surfaces within the project alignment by approximately 2.9 acres and replace approximately 2.4 acres of existing impervious surface. These new and replaced impervious surfaces would increase stormwater runoff and require stormwater treatment.

In compliance with City Council Policy 6-29 and the MRP, the project proposes to install bioretention areas to treat 100% of the Project treatment requirement. Bioretention areas are depressed landscape areas that are strategically placed to capture and clean surface runoff before it can enter the storm drain system. The captured stormwater runoff would be cleaned by filtering through a layer of bioretention soil, a special soil mix with controlled percolation rates and the ability to sequester pollutants in water, and then infiltrate back into the groundwater or be released slowly into the storm drain system. These bioretention areas would be located throughout the project as landscape strips along the back of curb, which collect surface runoff directly from sidewalk and roadway, or deeper bioretention areas located behind retaining walls and sidewalks, which collect surface runoff indirectly from a drain and pipe network.

As discussed above, the project alignment is not located within a 100-year flood zone. Therefore, the project would not impede or redirect flood flows within a 100-year flood hazard area, nor would it exacerbate off-site flooding conditions. **(Less Than Significant Impact)**

[44] Santa Clara Valley Water District. *Groundwater Management Plan.* November 2016. Figure 2.8.

3.10.2.4 *Release of Pollutants due to Inundation*

Impact HYD-4:	**The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. (No Impact)**

The project alignment is not within a 100-year flood zone, subject to seiche, tsunami, or mudslide hazards. For these reasons, the proposed project would not result in release of pollutants from project inundation. **(No Impact)**

3.10.2.5 *Conflicts with Water Quality and Groundwater Management Plans*

Impact HYD-5:	**The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (No Impact)**

The project shall be required to comply with the City's Post-Construction Urban Runoff Management Policy (6-29), the City's Grading Ordinance, and the NPDES Construction General Permit and Municipal Regional Permit to treat stormwater runoff from the roadway extension. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan. **(No Impact)**

As described under Impact HYD-2, the project alignment is not located within a groundwater recharge zone; therefore, the project would not conflict with implementation of the groundwater management plan. **(No Impact)**

3.10.2.6 *Cumulative Impacts*

Impact HYD-C:	**The project would not result in a cumulatively considerable contribution to a significant hydrology and water quality impact. (Less than Significant Cumulative Impact)**

The geographic study area for cumulative hydrologic and water quality impacts is defined as all waterways and bodies of water downstream from the project alignment. This definition is appropriate because the stormwater runoff from the project enters the City's storm drainage system, which in turn discharges into local creeks (e.g., Coyote Creek) that flow into San Francisco Bay.

Cumulative development, as anticipated in the *Envision San José 2040 General Plan*, will increase impervious surfaces throughout the region. As with the proposed project, stormwater runoff from impervious surfaces on all development sites in the region flows into municipal storm drains and eventually into local waterways and ultimately the Bay. A variety of pollutants are present in stormwater, the effect of which is to degrade water quality in streams, which harms both plant and animal species. Thus, cumulative development has historically led to impairment of the water quality in waterways throughout the region, which is a significant impact.

In recent years, a variety of laws and policies have gone into effect for the purpose of addressing the problem of water pollution associated with stormwater runoff from development. These laws and policies, which are described in Section 3.10.1.1, require the treatment and control of stormwater runoff from most sites. Specifically, cumulative development in San José is required to comply with the City's Post-Construction Urban Runoff Management Policy (6-29), Hydromodification Management (Policy 8-14) and Grading Ordinance, and the NPDES Construction General Permit and MRP, as applicable.

Conformance with these policies, laws, and regulations will require future cumulative development to implement stormwater pollution best management practices (BMPs) during construction and incorporate low impact development (LID) project design measures to reduce water quality impacts. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative hydrology and water quality impacts. **(Less Than Significant Cumulative Impact)**

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

Regional

Plan Bay Area 2040

Plan Bay Area 2040 was adopted by ABAG and MTC to provide guidance for sustainable development throughout the San Francisco Bay Area. The Plan establishes a course for reducing per-capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). All of Charcot Avenue is located within a TPA and the portion of the alignment west of I-880 is located within a PDA.

Plan Bay Area 2040 focuses on future development patterns and densities and does not address the Charcot Avenue Extension directly. However, to the extent that the Extension supports in-fill and compact development within the TPA and PDA, it is consistent with the Plan. As described previously in Chapter 2, the Charcot Avenue Extension has been planned by the City for 25+ years to serve such development in the North San José area.

Local

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigation impacts resulting from planned development projects in the City. The proposed project would be subject to the land use policies of the City's General Plan, including those listed in Table 3.11-1.

The Charcot Avenue Extension is a planned roadway network change that is identified in the *Envision San José 2040 General Plan*. The General Plan street typology for Charcot Avenue, between Paragon Drive and Oakland Road, is City Connector Street. According to the General Plan, automobiles, bicycles, pedestrians, and trucks are prioritized equally on City Connector Streets. Transit use, if any, is incidental. These streets typically have four or six traffic lanes and would accommodate moderate to high volumes of through traffic within and beyond the City. Pedestrians are accommodated with sidewalks.

San José Complete Streets Policies

In recent years, San José updated its goals and policies for the City's transportation network to include what is commonly known as the "Complete Streets" concept. These policies embody the philosophy that local streets and highways should be designed not solely for motor vehicles, but for safe usage by all modes including pedestrians, bicyclists, and transit riders. These policies have led

Table 3.11-1: General Plan Policies – Land Use	
Policy	**Description**
LU-1.1	Encourage Walking. Create safe, attractive, and accessible pedestrian connections between developments and to adjacent public streets to minimize vehicular miles traveled.
LU-1.5	With new development or expansion and improvement of existing development or uses, incorporate measures to comply with current Federal, State, and local standards.
CD-2.1	Promote the Circulation Goals and Policies in this Plan. Create streets that promote pedestrian and bicycle transportation by following applicable goals and policies in the Circulation section of this Plan. 1. Design the street network for its safe shared use by pedestrians, bicyclists, and vehicles. Include elements that increase driver awareness. 2. Create a comfortable and safe pedestrian environment by implementing wider sidewalks, shade structures, attractive street furniture, street trees, reduced traffic speeds, pedestrian-oriented lighting, mid-block pedestrian crossings, pedestrian-activated crossing lights, bulb-outs and curb extensions at intersections, and on-street parking that buffers pedestrians from vehicles. 3. Consider support for reduced parking requirements, alternative parking arrangements, and Transportation Demand Management strategies to reduce area dedicated to parking and increase area dedicated to employment, housing, parks, public art, or other amenities. Encourage de-coupled parking to ensure that the value and cost of parking are considered in real estate and business transactions.
CD-3.10	Increase neighborhood connectivity in new development by providing access across natural barriers (e.g., rivers) and man-made barriers (e.g., freeways).

to features such as wider sidewalks, improved pedestrian crossings, buffered bike lanes, and modified intersection designs being incorporated into roadway plans. By including features that promote walking, bicycling, and transit usage into roadway designs, these policies also implement goals established by the City to reduce auto-related GHG emissions.

The proposed Charcot Avenue Extension incorporates "Complete Streets" features into its design. For a listing of the "Complete Streets" policies and a detailed discussion of the project's compliance with them, please see Section 3.17, *Transportation*.

North San José Area Development Policy

The City of San José prepared and adopted the *North San José Area Development Policy* to support the implementation of the City's vision for the North San José Area, such vision consisting of compact, in-fill uses. The Area Development Policy establishes a specific procedure for the allocation and timing of development capacity within the policy area. The policy identifies major transportation improvements needed to serve the development in the North San José Area, including the extension of Charcot Avenue to Oakland Road.

3.11.1.2 *Existing Conditions*

Onsite and Surrounding Land Uses

Figure 2.1-3 is an aerial photo that depicts the project alignment and the adjacent land uses. To the west of I-880, the project alignment is fully developed with Charcot Avenue and O'Toole Avenue. Landscaping and parking associated with the existing business parks are located along the north and south sides of Charcot Avenue. To the east of I-880, the alignment is partially developed with a loading dock area, Silk Wood Lane, and landscaping and outdoor recreation areas associated with the Orchard Elementary School site. The eastern portion also includes vacant right-of-way that has been set aside for the proposed project. Residential uses are located adjacent to the north side of Silk Wood Lane, west of Oakland Road.

3.11.2 Discussion of Land Use Impacts

For the purpose of determining the significance of the project's land use impacts, would the project:

1) Physically divide an established community?
2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.11.2.1 *Division of an Established Community*

Impact LU-1:	**The project would not physically divide an established community. (No Impact)**

Examples of projects that have the potential to physically divide an established community include new freeways and highways, major arterial streets, and railroad lines. In the project area, I-880 currently physically divides the community. The proposed roadway is not a new freeway, highway, or major arterial. The Charcot Avenue Extension would be a two-lane City Connector Street that would connect the communities on the east and west sides of I-880 in the project area. Developments along the alignment have been planned and approved in anticipation of the proposed Charcot Avenue Extension, which was added to the City's General Plan in August 1994. Such developments include:

- Orchard School (land purchase for school approved in 1995)[45]
- Super Micro Campus (approved in 1998)
- Residential development along the north side of Silk Wood Lane (approved in 2004)
- Orchard School District dedicates land to City for Charcot Avenue (approved in 2004)[46].

For these reasons, the proposed project would not divide an established community. **(No Impact)**

[45] Source: Letter to Orchard School District Board of Trustees from California Department of Education, School Facilities Planning Division, July 21, 1995.
[46] Source: Orchard School Board of Trustees Resolution #062204-01, adopted June 22, 2004.

3.11.2.2 *Impacts from Conflicts with Land Use Plans, Policies, and Regulations*

Impact LU-2:	**The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)**

The Charcot Avenue overcrossing and extension to Oakland Road is a planned roadway network change identified in the *Envision San José 2040 General Plan*. The project is also identified as a key transportation improvement in the *North San José Area Development Policy*.

The proposed project would promote the goals and policies of the General Plan by constructing a planned local serving connection across I-880 that accommodates motorists, pedestrians, and bicyclists. Specifically, the design of the proposed roadway includes features such as buffered bike lanes, new and widened sidewalks, crosswalks, traffic signals, and pedestrian signals that comply with the City's "Complete Streets" policies. For a detailed discussion of the project's compliance with the "Complete Streets" policies, please see Section 3.17, *Transportation*.

For the reasons described above, the proposed project would not conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(No Impact)**

3.11.2.3 *Cumulative Land Use Impacts*

Impact C-LU-1:	**The project would not result in a cumulatively considerable contribution to a significant cumulative land use impact. (No Cumulative Impact)**

For the reasons discussed above, the proposed project would not result in land use impacts. Therefore, per CEQA Guidelines Section 15130(a)(1), the project would not contribute to a significant cumulative land use impact. **(No Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Existing Conditions*

The Santa Clara Valley was formed when sediments derived from the Santa Cruz Mountains and the Mount Hamilton-Diablo Range were exposed by continuous tectonic uplift and regression of the inland sea that had previously inundated the area. As a result of this process, the topography of the City is relatively flat, and there are no significant mineral resources in the project area. The project site is not located in an area containing known mineral resources.

The State Mining and Geology Board, under the Surface Mining and Reclamation Act of 1975 (SMARA), has designated an area of Communications Hill in Central San José, bounded by the Union Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue, as a regional source of construction aggregate materials. Other than the Communications Hills area, San José does not have known mineral deposits subject to SMARA.

3.12.2 Discussion of Mineral Impacts

For the purpose of determining the significance of the project's impacts on mineral resources, would the project:

1) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
2) Result in the loss of availability of locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

3.12.2.1 *Impacts to Regional Mineral Resources*

Impact MIN-1:	**The project would not result in the loss of availability of a known mineral resource. (No Impact)**

The Communications Hill area in central San José is the only area within the City that is designated by the State Mining and Geology Board as containing mineral deposits of regional significance. The project site is not on or adjacent to Communications Hill. Therefore, the project would not result in the loss of availability of a known mineral resource. **(No Impact)**

3.12.2.2 *Impacts to Mineral Resource Recovery Site*

Impact MIN-2:	**The project would not result in the loss of availability of a mineral resource recovery site. (No Impact)**

The project site is not located in an area containing known mineral resources. Therefore, the project would not result in the loss of availability of a mineral resource recovery site. **(No Impact)**

3.12.2.3 *Cumulative Mineral Resource Impacts*

Impact C-MIN-1:	**The project would not result in a cumulatively considerable contribution to a significant cumulative mineral resource impact. (No Cumulative Impact)**

As discussed above, the proposed implementation of a planned roadway extension would not result in the loss of availability of a known mineral resource or mineral resource recovery site. Therefore, per CEQA Guidelines Section 15130(a)(1), the project would not contribute to a significant cumulative mineral resource impact. **(No Cumulative Impact)**

3.13 NOISE

The following discussion is based on an Environmental Noise Assessment prepared for the project by Illingworth & Rodkin, Inc. in June 2019. A copy of the report can be found in Appendix J of this EIR.

3.13.1 Environmental Setting

3.13.1.1 *Fundamentals of Noise*

Several factors influence sound as perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and the fluctuation in the noise level during exposure. Noise is measured on a "decibel" scale which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc.

There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the "A-weighted" decibel, or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods, such as Energy-Equivalent Sound/Noise Descriptor (L_{eq}), Day/Night Average Sound Level (DNL), or Community Noise Equivalent Level (CNEL).[47]

Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off from the Airport or when a leaf blower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows on I-880 or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

[47] **L_{eq}** stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. **DNL** stands for Day-Night Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. **CNEL** stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM.

3.13.1.2 *Fundamentals of Vibration*

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In the following discussion, a PPV descriptor with units of millimeters per second (mm/sec) or inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure, and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Damage caused by vibration can be classified as cosmetic or structural. Cosmetic damage includes minor cracking of building elements (exterior pavement, room surfaces, etc.). Structural damage includes threatening the integrity of the building. Damage resulting from construction related vibration is typically classified as cosmetic damage. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

Additional information on the fundamentals of noise and vibration is included in Appendix J.

3.13.1.3 *Regulatory Framework*

Norman Y. Mineta San José International Airport Comprehensive Land Use Plan

The Norman Y. Mineta San José International Airport Comprehensive Land Use Plan (CLUP) includes land use compatibility policies and standards, which form the basis for evaluating the land use compatibility of individual projects with the Airport and its operations.

The project site is located approximately two miles northeast of the Airport, however, it is not located within the Airport Influence Area, as defined by the Airport's CLUP, nor is the project site located within the Airport's official noise footprint, as defined by the 65 dBA CNEL contour line for aircraft activities.[48]

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.13-1 are specific to noise and vibration and are applicable to the proposed project. In addition, the noise and land use compatibility guidelines set forth in the General Plan are shown in Table 3.13-2.

City of San José Municipal Code

The San José Municipal Code restricts construction hours within 500 feet of a residential unit to 7:00 AM to 7:00 PM Monday through Friday, unless otherwise expressly allowed in a Development Permit or other planning approval.[49]

The San José Zoning Ordinance limits noise levels to 55 dBA L_{eq} at any residential property line and 60 dBA L_{eq} at commercial property lines, unless otherwise expressly allowed in a Development Permit or other planning approval. The Zoning Ordinance also limits noise emitted by stand-by/backup and emergency generators to 55 decibels at the property line of residential properties. The testing of generators is limited to 7:00 AM to 7:00 PM, Monday through Friday.

3.13.1.4 *Existing Conditions*

The project alignment consists of an eastern and western alignment: Charcot Avenue between Paragon Drive and O'Toole Avenue on the west side of I-880, and the existing Silk Wood Lane alignment to Oakland Road on the east side of I-880. Existing land uses in the project area are predominantly industrial and commercial office buildings along the western alignment, and residential and an elementary school along the eastern alignment. There is an existing 5-foot tall wooden barrier along the eastern alignment on the north side of Silk Wood Lane. The wooden barrier connects to a 10-foot tall masonry barrier that extends along the west side of Oakland Road. The classrooms at Orchard School were constructed with double-paned windows, insulation, and forced-air mechanical ventilation (Thorburn Associates, 1996), resulting in interior noise levels that are 25 dBA or more below exterior levels.

Ambient noise measurements were made at eight locations in the project vicinity to document existing noise levels, including two long-term noise measurements and six short-term noise measurements. The locations of these measurements are shown on Figure 3.13-1.

[48] Santa Clara County Airport Land Use Commission. *Norman Y. Mineta San José International Airport Comprehensive Land Use Plan*. November 2016.
[49] The Municipal Code does not establish quantitative noise limits for demolition or construction activities occurring in the City.

Table 3.13-1: Applicable General Plan Policies – Noise & Vibration	
Policy	**Description**
EC-1.1	Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review. Applicable standards and guidelines for land uses in San José include: <u>Interior Noise Levels</u> • The City's standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL. Include appropriate site and building design, building construction and noise attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected *Envision General Plan* traffic volumes to ensure land use compatibility and General Plan consistency over the life of this plan. <u>Exterior Noise Levels</u> • The City's acceptable exterior noise level objective is 60 dBA DNL or less for residential and most institutional land uses (refer to Table EC-1 in the General Plan or Table 4.12-1 in this Initial Study). Residential uses are considered "normally acceptable" with exterior noise exposures of up to 60 dBA DNL and "conditionally compatible" where the exterior noise exposure is between 60 and 75 dBA DNL such that the specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features are included in the design.
EC-1.2	Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Land Use Categories 1, 2, 3 and 6 in Table EC-1 in the General Plan or Table 4.12-1 in this Initial Study) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would: • Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or • Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.
EC-1.3	Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to uses through noise standards in the City's Municipal Code.
EC-1.7	Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would: • Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months. For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.
EC-2.3	Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Table 3.13-2: General Plan Land Use Compatibility Guidelines						
Land Use Category	**Exterior DNL Value in Decibels**					
	55	**60**	**65**	**70**	**75**	**80**
1. Residential, Hotels and Motels, Hospitals and Residential Care[1]						
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
3. Schools, Libraries, Museums, Meeting Halls, and Churches						
4. Office Buildings, Business Commercial, and Professional Offices						
5. Sports Arena, Outdoor Spectator Sports						
6. Public and Quasi-Public Auditoriums, Concert Halls, and Amphitheaters						

Notes: [1]Noise mitigation to reduce interior noise levels pursuant to Policy EC-1.1 is required.

Normally Acceptable:
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable:
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design.

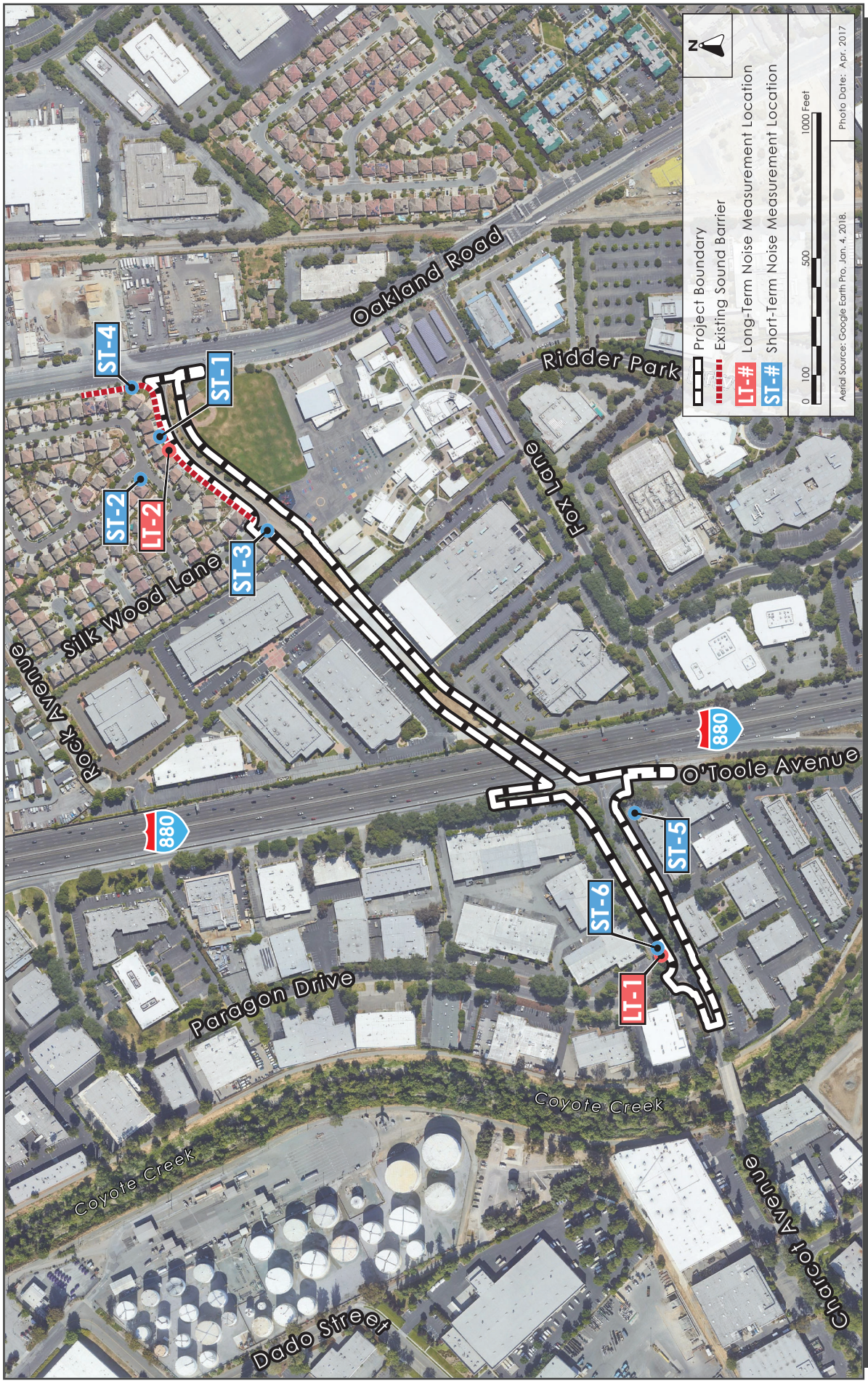
Unacceptable:
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Development will only be considered when technically feasible mitigation is identified that is also compatible with relevant design guidelines.

The first long-term noise measurement was made at one location (LT-1) on the western alignment, located approximately 50 feet from the centerline of Charcot Avenue and Paragon Drive. The primary noise source along the western alignment is distant traffic traveling along I-880 and local traffic along Charcot Avenue. The day-night average at this location was 67 dBA DNL.

The second long-term noise measurement was made at the eastern alignment, located on Silk Wood Lane approximately 180 feet from the centerline of Oakland Road (refer to LT-2). The day-night average at this location was 63 dBA DNL.

Short-term noise measurements were made at six locations in the project vicinity to complete the ambient noise monitoring survey. These measurements were made at two locations along the western alignment and four locations along the eastern alignment, along the project alignment (refer to ST-1 to ST-6 on Figure 3.13-1). Table 3.13-3 summarizes the day-night average noise levels at each noise measurement taken in the project vicinity. The day-night average in the project vicinity ranged from 52 to 72 dBA DNL.

Traffic noise modeling was conducted using Federal Highway Administration (FHWA)'s Traffic Noise Model, using the existing noise level data collected during the noise monitoring surveys to calibrate the model. The model calculated existing noise levels at the receptors adjacent to the proposed alignment. The locations of the adjacent receptors that were modeled are shown on Figure 3.13-1 and the calculated existing noise levels are shown in Table 3.13-4.



NOISE MEASUREMENT LOCATIONS

FIGURE 3.13-1

Table 3.13-3: Measured Existing Day/Night Average (L_{dn}) Sound Levels			
ID	**Location**	**Existing dBA DNL**	**Primary Noise Source**
LT-1 (behind five-foot high barrier)	50 feet from the centerline of Charcot Avenue and Paragon Drive	67	Traffic traveling along I-880 and on Charcot Avenue
LT-2	Silk Wood Lane, 180 feet from the centerline of Oakland Road	63	Traffic on Oakland Road and local recreational noise from Orchard School outdoor recreational areas
ST-1 (behind five-foot high barrier)	Backyard of 1937 Bright Willow Circle, shielded by 5-foot high barrier	57	Traffic on Oakland Road, children playing in Orchard School outdoor ball field
ST-2	West corner of Bright Willow Circle and Bramble Wood Lane, second row of homes	52	Traffic on Oakland Road,
ST-3 (backyard of residence)	1813 Silk Wood Lane	57 (traffic)*	Children playing in Orchard School outdoor play field
ST-4	60 feet from center of Oakland Road, north of Silk Wood Lane	72	Traffic on Oakland Road, trucks across Oakland Road
ST-5	Outdoor use area for 850 Charcot Avenue, 155 feet from center of O'Toole Avenue	64	Traffic on I-880 and O'Toole Avenue
ST-6	50 feet from center of Charcot Avenue, east of Paragon Drive	67	Traffic on Charcot Avenue

* The primary ambient noise source at this location during the noise monitoring survey was recreational activities occurring adjacent to the site at the Orchard School fields. Due to the variability of the playground and field use, the DNL resulting from these activities would vary. The existing traffic generated DNL at this location was calculated to be 57 dBA DNL.

See Figure 3.13-1 for receiver locations.

Table 3.13-4: Calculated Existing Day/Night Average (L_{dn}) Sound Levels	
Receiver	**Existing dBA DNL**
R1	60
R2 (behind 5-foot high barrier)	55
R3 (behind 10-foot high barrier)	56
R4 (behind 10-foot high barrier)	59
S1	63
S2	50
S3	50
S4	51
S5	58

R1 through R4 are residential receivers and S1 through S5 are school receivers. Please see Figure 3.13-1 for receiver locations.

3.13.2 Discussion of Noise and Vibration Impacts

For the purpose of determining the significance of the project's noise impacts, would the project result in:

1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2) Generation of excessive groundborne vibration or groundborne noise levels?
3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

For the purpose of this analysis, the following criteria were used to quantitatively evaluate noise and vibration impacts resulting from the project:

- **Conflict with Established Standards:** A significant impact would be identified if project construction were to conflict with local noise standards contained in the San José General Plan or Municipal Code.

- **Groundborne Vibration from Construction:** The City of San José specifies a vibration limit of 0.08 inches per second (in/sec) at sensitive historic structures and 0.20 in/sec at buildings of normal conventional construction (General Plan Policy EC-2.3).

- **Permanent Traffic Noise Increases:** A significant permanent noise increase would occur if the project resulted in an increase of three dBA DNL or greater at noise-sensitive land uses where existing or projected noise levels would exceed the noise level considered satisfactory for the affected land use (60 dBA DNL for single-family residential, 65 dBA DNL for outdoor field area and playground, and 70 dBA DNL for office and commercial use) and/or an increase of 5 dBA DNL or greater at noise-sensitive land uses where noise levels would continue to be below those considered satisfactory for the affected land use (General Plan policy EC-1.2).

- **Temporary Noise Increase due to Construction:** Due to the temporary nature of construction activities, construction noise levels are treated differently than operational noise levels. When construction activities are predicted to cause prolonged interference with normal activities at noise-sensitive receiver locations and exceed 60 dBA L_{eq} and ambient noise levels by 5 dBA L_{eq} or more, the impact would be considered significant. Prolonged interference is defined as noise level increase that occurs for more than one year.

3.13.2.1 *Noise Impacts of the Project*

Impact NOI-1:	**With the inclusion of standard conditions, the noise impacts of the project during the construction phase would not be significant. Over the long-term, the operational phase of the project would result in noise levels in the vicinity of the project in excess of standards established by San José. Mitigation for this impact is included in the project. (Less than Significant Impact with Mitigation Incorporated)**

Temporary Construction-Related Noise Impacts

Construction of the proposed roadway extension, including the I-880 overcrossing, would require the temporary use of heavy equipment that could generate high noise levels in the immediate vicinity. Noise impacts resulting from construction depend on the noise levels generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise sensitive receptors.

Based on the anticipated equipment to be used for the grading/excavation, trenching/foundation, and paving phases, unshielded noise levels at a distance of 50 feet from the edge of construction site to the nearest residence would generally range from 84 to 85 dBA L_{eq} during peak periods. The existing noise barrier located north of Silk Wood Lane is anticipated to provide a noise reduction of about 5 dBA to locations behind the barrier. Based on the anticipated equipment to be used for construction of the overcrossing, noise levels would be about 67 dBA L_{eq} at the nearest residences, which are approximately 500 feet away. A summary of the calculated noise levels for each phase of construction is summarized in Table 3.13-5.

Hourly average construction noise levels would exceed 60 dBA L_{eq} at residences and 70 dBA L_{eq} at commercial uses and ambient noise levels by more than 5 dBA during periods of heavy construction located adjacent to receptors. Construction of the project alignment, including the roadway improvement (130 days) and construction of the bridge (220 days) is anticipated to overlap. If construction were to occur sequentially, overall construction would occur a total period of 350 days. However, individual locations along the roadway alignment and overcrossing would not be exposed to construction noise for the entire project construction period in either scenarios. The duration of noise generating activities at individual locations along the project alignment would be significantly shorter as construction moves along the alignment as progress occurs. Noise produced by construction equipment typically attenuates over distance at a rate of about 6 dB per doubling of distance.

The construction of the road alignment would be limited to allowable days and hours specified in the City's Municipal Code. Therefore, construction of the project would not conflict with established noise standards. Compliance with the San José Municipal Code and standard construction measures would reduce noise from construction activities to a less than significant level.

Table 3.13-5: Calculated Construction Noise Levels			
Phase	**Construction Equipment (Quantity)**	**Noise Level at 50 feet**	
		L_{eq}, dBA	**L_{max}, dBA**
Grading/Excavation	Graders (2) Extractors (2) Rubber-Tired Dozers (4) Tractors/Loaders/Backhoes (4)	85	84
Trenching/Foundation	Tractors/Loaders/Backhoes (4) Excavators (4) Forklifts (2) Cement & Mortar Mixers (2)	85	85
Paving	Cement & Mortar Mixers (2) Pavers (2) Paving equipment (2) Rollers (2) Tractors/Loaders/Backhoes (4) Trucks: Hauling & Equipment (10)	85	85
Bridge Construction (500 feet from nearest residence)	Tractors/Loaders/Backhoes (1) Cranes (1) Bore/Drill Rigs (1) Generator Sets (2) Welders (1) Air Compressors (2) Aerial Lift (1) Trucks: Hauling & Equipment (2) Concrete Pumper (2) Concrete Mixer Trucks (2)	67	67
For descriptions of the L_{eq} and L_{max} noise levels, please see Section 3.13.1.1.			

As described previously, prolonged interference is defined as a noise level increase lasting more than one year. In the event the total duration to construct the project were to exceed one year, construction noise levels at individual locations along the project alignment would still be shorter as construction progresses along the alignment. In addition, the project would also be required to implement the following standard construction measures to reduce construction noise impacts to a less than significant level:

Standard Conditions

- Construction activities shall be limited to the hours between 7:00 AM and 7:00 PM, Monday through Friday. No construction activities are permitted on the weekends at sites within 500 feet of a residence (San José Municipal Code Section 20.100.450).
- Limit noise-producing signals, including horns, whistles, alarms, and bells, to safety warning purposes only.
- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment such as air compressors or portable power generators as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used to reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule

To summarize, with implementation of the identified Standard Conditions and because the duration of temporary, construction-related noise increases at a given location would be less than one year, the noise impacts of the project during construction would not be significant. **(Less Than Significant Impact)**

Permanent Traffic Noise Increases – Existing Condition Plus Project

The proposed roadway extension and overcrossing would extend Charcot Avenue to Oakland Road by constructing a new overcrossing over I-880 and provide east-west connection of the area. Traffic on the proposed extension would generate noise. Traffic modeling was completed to predict noise levels at the existing receptors along the project alignment upon completion and operation of the proposed extension. Table 3.13-6 summarizes the results of traffic modeling for existing and existing plus project conditions, which are further discussed below. Note from Figure 3.13-2 that locations R2 and ST-1 for residences on Silk Wood Lane are located behind an existing 5-foot high sound barrier. Locations R3 and R4 for residences on Oakland Road are located behind an existing 10-foot high sound barrier. No existing sound barrier is in place at location R1 for the residence at the turn/corner on Silk Wood Lane.

<u>Noise Impacts at First Row Residences on North Side of Silk Wood Lane</u>

As summarized in Table 3.13-6, noise increases resulting from the proposed Charcot Avenue Extension are calculated to range between two and 10 dBA DNL at first row residences along Silk Wood Lane (ST-1, ST-3, R1, and R2). Noise levels at these locations would equal or exceed 60 dBA DNL under existing plus project conditions and would experience significant traffic noise increases of three dBA DNL or greater. **(Significant Impact)**

RECEIVER LOCATIONS

FIGURE 3.13-2

Table 3.13-6: Traffic Noise Increases from Proposed Charcot Avenue Extension				
Receiver	**Normally Acceptable Noise Level dBA DNL**	**Calculated DNL, dBA**		**Increase Due to Project over Existing**
		Existing	**Existing Plus Project**	
ST-1 (behind 5-foot high barrier)	60	56	**65**	**9**
ST-2	60	52	53	1
ST-3 (backyard of residence)	60	60	**67**	**7**
ST-4	60	71	72	1
ST-5	70	65	66	1
ST-6	70	68	70	2
R1	60	60	62	2
R2 (behind 5-foot high barrier)	60	55	**65**	**10**
R3 (behind 10-foot high barrier)	60	56	59	3
R4 (behind 10-foot high barrier)	60	59	59	0
S1	65	63	**69**	**6**
S2	45 interior	50[a]	61[a]	11
S3	45 interior	50[a]	56[a]	6
S4	45 interior	51[a]	54[a]	3
S5	65	58	**67**	**9**

Numbers in **shading and bold** = Significant Impact.

Receiver locations ST-1 through ST-6 are shown on Figure 3.13-1. Receiver locations R1 through R4 and S1 through S5 are shown on Figure 3.13-2.

[a] Exterior levels shown. All school classrooms have been constructed with double-paned windows, insulation, and forced-air mechanical ventilation (Thorburn Associates, 1996), resulting in interior levels that are 25 dBA or more below exterior levels. Interior levels would still be maintained at or below 45 dBA DNL.

Source: Illingworth & Rodkin, 2019.

The following measures would be implemented as part of the project to reduce noise levels at residences on Silk Wood Lane to a less than significant level.

MM NOI-1.1: At the start of project construction on the east side of I-880, the City shall replace the existing 5-foot high barrier along the north side of Silk Wood Lane with a 10-foot high noise barrier. The replacement barrier will be constructed at the side yard property line of 1820 Silk Wood Lane; at the rear yard property lines of 1052, 1058, 1064, 1070, and 1076 Bright Willow Lane; and at the rear property lines of 1931, 1937, and 1943 Bright Willow Circle.

MM NOI-1.2: At the start of project construction on the east side of I-880, the City shall construct a 10-foot high barrier at the side yard property line of 1813 Silk Wood Lane. In addition, the City shall construct an 8-foot high barrier at the rear property lines of 1813 and 1819 Silk Wood Lane.

Per FHWA's Traffic Noise Model (see Appendix J), the 10-foot high barrier and the 8-foot high barrier, which are shown on Figure 3.13 3, will reduce noise levels at the residences on Bright Willow Circle and Silk Wood Lane to acceptable levels of 60 dBA DNL or less. Implementation of mitigation measures MM NOI-1.1 through MM-NOI-1.2 would reduce noise impacts from the project to adjacent residences on Silk Wood Lane to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Noise Impacts at Orchard School

As shown in Table 3.13-6, noise increases resulting from the proposed extension are calculated to range between three and 11 dBA DNL at Orchard School (S1, S2, S3, S4, and S5). Noise levels at the school uses adjacent to the proposed alignment, including the outdoor field area and the playground (S1 and S5) would exceed the "normally acceptable" criteria of 65 dBA DNL under existing plus project conditions and the noise increase due to the project would exceed three dBA DNL, which would be a significant impact. **(Significant Impact)**

While noise levels outside the Orchard School primary classrooms (S2 and S3) would be exposed to increases in traffic noise levels that are greater than five dBA DNL, the classrooms have been constructed with double-paned windows, insulation, and forced-air mechanical ventilation, therefore interior noise levels would still be maintained at 45 dBA DNL and the impact at this location would be less than significant. **(Less Than Significant Impact)**

The Orchard School multi-purpose room (S4) is also constructed with double-paned windows, insulation, and forced-air mechanical ventilation, and is setback farther from the proposed alignment, therefore interior noise level would also be maintained at 45 dBA DNL and the impact at this location would be less than significant. **(Less Than Significant Impact)**

The following measure would be implemented as part of the project to reduce noise levels at Orchard School outdoor play area and ball field to a less than significant level.

MM NOI-1.3: At the start of project construction on the east side of I-880, the City shall construct a 6-foot high barrier at the proposed right-of-way line on the southern side of Charcot Avenue along the Orchard School frontage.

Per FHWA's Traffic Noise Model (see Appendix J), this barrier, which is shown on Figure 3.13 3, would reduce noise levels on the Orchard School outdoor field area and playground to 65 dBA DNL and exterior levels at the primary classrooms to 60 dBA DNL. Implementation of mitigation measure MM NOI-1.3 would reduce noise impacts from the project to Orchard School to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

FIGURE 3.13-3

PROPOSED SOUND BARRIER LOCATIONS

Noise Impacts at Second Row Silk Wood Lane Residences and Oakland Road Residences

The noise environment at residential locations adjacent to Oakland Road (ST-2, ST-4, R3, and R4) would continue to be dominated by Oakland Road traffic noise. Project generated noise increases at these locations are calculated to be zero to one dBA DNL, and therefore, would not be significantly impacted by the proposed extension. **(Less Than Significant Impact)**

Noise Impacts at Commercial Uses on Existing Charcot Avenue

The noise environment at commercial land uses located west of I-880 (ST-5 and ST-6) would continue to be dominated by traffic noise on I-880 and the existing roadway network. Traffic noise increases at these locations from the proposed project would be zero to one dBA DNL and would not be considered significant. **(Less Than Significant Impact)**

3.13.2.2 *Vibration Impacts of the Project*

Impact NOI-2: The project would not result in generation of, excessive groundborne vibration or groundborne noise levels. (Less than Significant Impact)

As described above, heavy equipment would be used during construction of the Charcot Avenue Extension. Cast-in-drilled-holes (CIDH) method of pile driving is proposed as part of the construction of the proposed roadway alignment, including the overcrossing.[50] Construction activities with the greatest potential of generating perceptible vibration levels would include the removal of pavement and soil, the movement of heavy tracked equipment, and vibratory compacting of roadway base materials by use of a roller. Table 3.13-7 summarizes typical vibration levels associated with varying pieces of construction equipment at a distance of 50 feet.

There are no sensitive historic structures along the roadway alignment. Structures in the project area appear to be buildings of normal conventional construction; therefore, the vibration limit of 0.20 in/sec would apply to determine project's vibration impacts. The nearest structures are located approximately 30 feet from construction activities.

Table 3.13-7: Vibration Source Levels for Construction Equipment

Equipment		PPV at 50 feet (inches/seconds)
Hydromill (slurry wall)	In soil	0.008
	In rock	0.017
Vibratory Roller		0.074
Hoe Ram		0.031
Large bulldozer		0.089
Loaded trucks		0.027
Jackhammer		0.012
Small bulldozer		0.001

[50] Piles for the overcrossing would be constructed using the cast-in-drilled-holes (CIDH) method. Instead of hammering the piles into the ground with a pile driver, the CIDH method involves the drilling of holes into which piles are placed. The CIDH method avoids the vibration impacts that occur each time a pile is hammered/driven.

A review of the anticipated construction equipment and vibration level data provided in Table 3.13-7 by the acoustical engineers who prepared the project's noise and vibration analysis concluded that vibration levels generated by the proposed activities and equipment would be below the 0.2 in/sec PPV criteria when construction occurs at distances of 30 feet or greater from sensitive structures.

Vibration during construction activities for the Charcot Avenue Extension would be perceptible indoors when construction is located adjacent to structures and secondary vibration, such as a slight rattling of windows or doors, may be considered annoying at times. However, based on the anticipated vibration levels that are projected at the closest buildings, architectural damages to adjacent residential and commercial buildings are not anticipated. Construction will occur only during the daytime hours, reducing the potential for annoyance to residences during evening and night hours of rest and sleep. Further, the duration of vibration-generating construction will be limited as work progresses along the roadway alignment. For these reasons, the proposed project would not result in a significant groundborne vibration impact. **(Less Than Significant Impact)**

3.13.2.3 *Exposure to Excessive Aircraft-Generated Noise Levels*

Impact NOI-3:	**The Charcot Avenue Extension would not expose people residing or working in the project area to excessive aircraft-generated noise levels (No Impact)**

The project site is located approximately two miles northeast of the Norman Y. Mineta San José International Airport. However, it is not located within the Airport Influence Area, as defined by the Airport's Comprehensive Land Use Plan, nor is the project site located within the Airport's official noise footprint, as defined by the 65 dBA CNEL contour line for aircraft activities.

Further, given the nature of the project, which is a roadway extension in a developed area, exposure of residents or workers to noise from aircraft would be unaffected by the project. Any such exposure will occur with or without the project. **(No Impact)**

3.13.2.4 *Cumulative Impacts*

Impact NOI-C:	**The project would result in a cumulatively considerable contribution to a significant noise impact. Mitigation for this impact is included in the project. (Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic study area for cumulative noise impacts is defined as locations within 1,000 feet of the Charcot Avenue Extension. This radius is appropriate because impacts associated with exposure to noise would be limited to the roadway alignment and the adjacent properties. This statement is based on the physical properties of noise propagation, wherein noise levels drop significantly as distance between source and receiver increases.

As discussed in Section 2, planned development in the greater project area will occur with or without the Charcot Avenue Extension. This development will increase traffic volumes on area wide roadways over existing levels, which in turn will increase traffic-generated noise levels. As described in Appendix K, the City's traffic demand model forecasts future traffic volumes based on planned development through year 2040 in accordance with the *Envision San José 2040 General Plan*. These volumes, which are calculated for both "no project" and "project" conditions (see Section 3.17, *Transportation*), are input into FHWA's Traffic Noise Model, thereby allowing the projection of noise levels under cumulative conditions.

The determination of a significant cumulative traffic noise increase involves two steps:

> Step 1: The projected noise level under 2040 "project" conditions is compared to existing noise levels to determine whether the increase (if any) is significant. A significant noise increase would be three dBA DNL or greater at noise-sensitive land uses where existing or projected noise levels would exceed the noise level considered satisfactory for the affected land use and/or an increase of 5 dBA DNL or greater at noise-sensitive land uses where noise levels would continue to be below those considered satisfactory for the affected land use.
>
> Step 2: For locations where the Step 1 increase is significant, determine if the project will contribute one dBA DNL or more to that increase. If "yes" the project's contribution to the significant increase would be "cumulatively considerable," which would constitute a significant cumulative impact.

Table 3.13-8 summarizes traffic noise modeling results for year 2040 "no project" and "project" conditions and compares the results to existing traffic conditions. Traffic noise levels under 2040 "no project" conditions are anticipated to increase by zero to four dBA DNL over existing conditions. With construction of the proposed Charcot Avenue Extension (2040 build), traffic noise levels are anticipated to increase by one to 13 dBA DNL above existing conditions, with zero to 11 dBA DNL due to project traffic contribution.

As shown in Table 3.13-8, the project will result in a cumulatively considerable contribution to a significant cumulative noise increase at the residences located along the north side of Silk Wood Lane (see ST-1, ST-3, R1, R2, and R3 on Figure 3.13-2). The project will also have a cumulatively considerable contribution to a significant cumulative noise increase at the Orchard School outdoor field area and playfield (see S1and S5 on Figure 3.13-2). These are the same locations where the noise impacts of the project would be significant. **(Significant Cumulative Noise Impact)**

At all other locations (see ST-2, ST-4, ST-5, ST-6, R4, S2, S3, and S4 on Figure 3.13-2), Table 3.13-8 shows that the project would not result in a significant cumulative noise impact. **(Less Than Significant Cumulative Noise Impact)**

The following measure would be implemented as part of the project to reduce the cumulative noise impact to residences on Silk Wood Lane and to the play area and ball field at Orchard School to a less than significant level.

Table 3.13-8: Cumulative Increases in Traffic-Related Noise [Expressed in dBA, DNL]

	Existing	2040 No Project	2040 With Project	Total Increase Over Existing	Project's Contribution To Total Increase	Significant Cumulative Impact?	2040 Level with Mitigation In Place
ST-1 (behind 5-foot barrier)	56	59	68	12	9	**Yes**	59
ST-2	52	53	54	2	1	No	
ST-3 (backyard of residence)	60	60	69	9	9	**Yes**	60
ST-4	71	75	75	4	0	No	
ST-5	65	65	66	1	1	No	
ST-6	68	72	72	4	0	No	
R1	60	60	64	4	4	**Yes**	57
R2 (behind 5-foot barrier)	55	56	67	12	11	**Yes**	60
R3 (behind 10-foot barrier)	56	60	62	6	2	**Yes**	59
R4 (behind 10-foot barrier)	59	62	62	3	0	No	60
S1	63	66	71	8	5	**Yes**	65
S2	50[a]	53[a]	63[a]	13	10	No	
S3	50[a]	53[a]	58[a]	8	5	No	
S4	51[a]	54[a]	57[a]	6	3	No	
S5	58	59	69	11	10	**Yes**	64

Receiver locations are shown on Figure 3.13-2. Proposed noise barriers are shown on Figure 3.13-3.

[a]Exterior levels shown. All school classrooms have been constructed with double-paned windows, insulation, and forced-air mechanical ventilation (Thorburn Associates, 1996), resulting in interior levels that are 25 dBA or more below exterior levels. Interior levels would still be maintained at or below 45 dBA DNL.

Source: Illingworth & Rodkin, 2019.

MM NOI-C.1: At the start of project construction on the east side of I-880, the City shall increase the height of the existing 10-foot high barrier along the west side of Oakland Road to 12 feet. The higher barrier will be constructed at the rear yard property lines of 1949 and 1955 Bright Willow Circle. Per FHWA's Traffic Noise Model, this 12-foot high barrier, which is shown on Figure 3.13-3, will reduce noise levels at these residences to acceptable levels of 60 dBA DNL or less.

MM NOI-C.2: The City shall implement MM NOI-1.1 through MM NOI-1.3, which consists of the construction of noise barriers adjacent to residences and Orchard School. The locations of the noise barriers are described in detail in MM NOI-1.1 through MM NOI-1.3 and are shown on Figure 3.13-3.

These noise barriers would not only mitigate the significant noise impacts of the project but would also mitigate the significant cumulative noise impacts of the project. As shown in Table 3.13-8, the mitigated noise levels will comply with the City's noise and land use compatibility guidelines of 60 dBA DNL or less for residences, 65 dBA DNL or less for the. Orchard School outdoor field area and playground, and 60 dBA DNL or less (exterior) at the Orchard School primary classrooms.

Implementation of mitigation measures MM NOI-C.1 and MM NOI-C.2 would reduce the cumulative noise impacts of the project to a less than significant level. **(Less Than Significant Cumulative Impact with Mitigation Incorporated)**

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

State

In order to attain the state housing goal, cities must make sufficient suitable land available for residential development to accommodate their share of regional housing needs. California's Housing Element Law requires all cities to: 1) zone adequate lands to accommodate its Regional Housing Needs Allocation (RHNA); 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.

Regional

The Association of Bay Area Governments (ABAG) allocates regional housing needs to each city and county within the nine-county Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. The Metropolitan Transportation Commission (MTC) is the transportation planning, financing, and coordinating agency for the nine-county Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population and Housing, upon which *Plan Bay Area 2040* is based.

Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use and housing plan intended support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. *Plan Bay Area 2040* promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs) and Transit Priority Areas (TPAs). All of Charcot Avenue is located within a TPA and the portion of the alignment west of I-880 is located within a PDA.

Local

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. With respect to population, housing, and jobs, the General Plan focuses on having growth occur in a manner that is sustainable and efficient, as illustrated by the policies listed in Table 3.14-1. In addition, a key strategy of the General Plan is to balance the ratio of local jobs with available housing within the City.

North San José Area Development Policy

The City of San José prepared and adopted the *North San José Area Development Policy* to support the implementation of the City's vision for the North San José Area, such vision consisting of

Table 3.14-1: General Plan Policies – Population & Housing	
Policy	**Description**
LU-2.1	Provide significant job and housing growth capacity within strategically identified "Growth Areas" in order to maximize use of existing or planned infrastructure (including fixed transit facilities), minimize the environmental impacts of new development, provide for more efficient delivery of City services, and foster the development of more vibrant, walkable urban settings.
LU-2.2	Include within the Envision General Plan Land Use / Transportation Diagram significant job and housing growth capacity within the following identified Growth Areas: Downtown; Specific Plan Areas; North San José; Employment Lands; Urban Villages - Regional Transit (BART/Caltrain); Urban Villages - Local Transit (LRT and BRT); Urban Villages - Commercial Corridors and Centers; and Urban Villages - Neighborhood Urban Villages.

compact, in-fill employment and residential uses. The policy identifies major transportation improvements needed to serve the development in the North San José Area, including the extension of Charcot Avenue to Oakland Road.

3.14.1.2 *Existing Conditions*

The City of San José population was estimated to be approximately 1,051,316 with a total of 335,164 housing units in January 2018. The average number of persons per household in San José was estimated at 3.20.[51] According to the City's General Plan, the projected population in 2035 will be 1.3 million persons occupying 429,350 households.

There is no existing housing within the project alignment.

3.14.2 Discussion of Population and Housing Impacts

For the purpose of determining the significance of the project's impacts on population and housing, would the project:

1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.14.2.1 *Impacts from Inducement of Unplanned Population Growth*

Impact POP-1:	**The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (No Impact)**

[51] California Department of Finance. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Benchmark." Accessed: October 31, 2018. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

A project can induce substantial population growth by: 1) proposing new housing beyond projected or planned development levels, 2) generating demand for housing as a result of new businesses, 3) extending roads or other infrastructure to previously undeveloped areas, or 4) removing obstacles to population growth (i.e., expanding capacity of a wastewater treatment plant beyond that necessary to serve planned growth).

The proposed project, located in an existing developed urban area, is the implementation of a planned roadway extension identified in the *San José Envision 2040 General Plan* and the *North San José Area Development Policy*. Consistent with General Plan Policy LU 2-2, the roadway extension will support growth in North San José, which is a key growth area of the City. Regionally, Charcot Avenue is located within a Transit Priority Area and part of the alignment west of I-880 is located within a Priority Development Area in the *Plan Bay Area 2040.*

The proposed project does not include development of residences or businesses, would not extend roads or other infrastructure to undeveloped areas, and would not remove obstacles to unplanned population growth. For these reasons, the project would not induce unplanned population growth. **(No Impact)**

3.14.2.2 *Displacement of Housing*

Impact POP-2:	**The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (No Impact)**

There is no existing housing located within the project alignment. The project will not remove or demolish and existing housing units. Therefore, the proposed project would not displace existing people or housing. **(No Impact)**

3.14.2.3 *Cumulative Impacts*

Impact POP-C:	**The project would not result in a cumulatively considerable contribution to a significant population and housing impact. (No Cumulative Impact)**

The geographic study area for cumulative population and housing impacts is defined as all locations within the City of San José. This definition is appropriate because it encompasses all locations within the City's jurisdiction where decisions on projects that affect population and housing growth can occur.

As discussed above, the proposed roadway extension would not result in a population and housing impact. The project will not induce unplanned population growth nor will it displace existing housing. Therefore, per CEQA Guidelines Section 15130(a)(1), the proposed project would not contribute to a significant cumulative population and housing impact. **(No Cumulative Impact)**

3.15 PUBLIC SERVICES

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

Local

Envision San José 2040 General Plan

The General Plan includes policies for avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.15-1 are specific to public services and are applicable to the proposed project.

Table 3.15-1: Applicable General Plan Policies – Public Services

Policy	Description
ES-3.1	Provide rapid and timely Level of Service (LOS) response time to all emergencies: -----For police protection, use as a goal a response time of six minutes or less for 60 percent of all Priority 1 calls, and of eleven minutes or less for 60 percent of all Priority 2 calls. -----For fire protection, use as a goal a total response time (reflex) of eight minutes and a total travel time of four minutes for 80 percent of emergency incidents.
ES-3.9	Implement urban design techniques that promote public and property safety in new development through safe, durable construction and publicly visible and accessible spaces
ES-3.13	Maintain emergency traffic preemption controls for traffic signals.

3.15.1.2 *Existing Conditions*

Fire and Police Protection Services

Fire protection services for the project area are provided by the San José Fire Department (SJFD). The SJFD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents) in the City. The closest fire stations to the project alignment are Station No. 29, located at 199 Innovation Drive, approximately one-mile northwest of the western alignment, and Station No. 23, located at 1771 Via Cinco De Mayo, approximately one mile east of the eastern alignment.

Police protection services for the project area are provided by the San José Police Department (SJPD), which is headquartered at 201 West Mission Street, approximately 2.9 miles southwest of the project site.

Schools

The project area is located in the Orchard School District (K-8) and East Side Union High School District (ESUHSD). Students in the project area attend Orchard School and Independence High School.[52]

[52] Sources: 1) Orchard School District. "Indirect Transfers." Accessed: May 14, 2018. Available at: http://www.orchardsd.org/Parents/Interdistrict-Transfers/index.html. 2) East Side Union High School District.

Parks

The City of San José owns and maintains over 3,500 acres of parkland, including neighborhood parks, community parks, and regional parks. The City also manages 51 community centers, 17 community gardens, and six pool facilities. Other recreational facilities include seven public skate parks and 57.5 miles of interconnected trails.[53]

Orchard School and its associated playfields and outdoor recreation areas are located adjacent to the project alignment along Silk Wood Lane. As shown on Figure 2.1-4, the northern edges of the existing blacktop play area, children's play structure, walking/running path, turf playfield, and baseball field are located within the project alignment.

Libraries

The San José Public Library System consists of one main library and 19 branch libraries. The Dr. Martin Luther King Jr. Main Library is located on the corner of San Fernando and Fourth Street in Downtown San José. The nearest branch library is the Joyce Ellington Library at 491 East Empire Street, which is located approximately one mile south of the project alignment.

3.15.2 Discussion of Public Services Impacts

For the purpose of determining the significance of the project's impacts on public services, would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

1) Fire protection?
2) Police protection?
3) Schools?
4) Parks?
5) Other public facilities?

"School Boundaries." Accessed: May 14, 2018. Available at: http://www.esuhsd.org/Community/School-Boundaries/.

[53] City of San José. *Envision San José 2040 Envision San José 2040 General Plan*

3.15.2.1 *Project Impacts*

Impact PS-1:	**The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. (No Impact)**

The proposed Charcot Avenue Extension is not a land use development project (e.g., residential, commercial, industrial, etc.). It is not a project that would construct new buildings, but rather a transportation facility that will improve connectivity for motorists, bicyclists, and pedestrians. For these reasons, the project would not increase the demand for fire and police protection services, schools, parks, libraries, or other public services during the operation of the completed project. No new public services facilities would be needed if the project is constructed.

During the construction phase of the project, no full roadway closures/detours would be needed. Therefore, emergency response times during construction will not be adversely affected. The operational phase of the proposed project would improve the City's transportation network, including a new east-west connection over I-880. Therefore, the long-term effect of the project would be an improvement to fire and police response times. **(No Impact)**

3.15.2.2 *Cumulative Impacts*

Impact PS-C:	**The project would not result in a cumulatively considerable contribution to a significant public services impact. (No Cumulative Impact)**

The geographic study area for cumulative public services impacts is defined as all locations within the City of San José. This definition is appropriate because it encompasses all locations within the City's jurisdiction where it provides public services.

The proposed roadway extension project does not include uses (e.g., residences) that would increase the demand on public services in the project area and, therefore, per CEQA Guidelines Section 15130(a)(1), would not result in a cumulatively considerable contribution to a significant cumulative public services impact. **(No Cumulative Impact)**

3.16 RECREATION

3.16.1 Environmental Setting

3.16.1.1 *Regulatory Framework*

Local

Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* includes policies for avoiding or mitigating impacts resulting from planned development projects with the City. The policies listed in Table 3.16-1 are specific to recreation.

Table 3.16-1: Applicable General Plan Policies – Recreation

Policy	Description
PR-1.6	Where appropriate and feasible, develop parks and recreational facilities that are flexible and can adapt to the changing needs of their surrounding community.
PR-1.7	Design vibrant urban public spaces and parklands that function as community gathering and local focal points, providing opportunities for activities such as community events, festivals, and/or farmers markets as well as opportunities for passive and, where possible, active recreation.
PR-6.5	Design and maintain park and recreation facilities to minimize water, energy and chemical (e.g., pesticides and fertilizer) use. Incorporate native and/or drought-resistant vegetation and ground cover where appropriate.
PR-8.7	Actively collaborate with school districts, utilities, and other public agencies to provide for appropriate recreation uses of their respective properties and rights-of-ways. Consideration should be given to cooperative efforts between these entities and the City to develop parks, pedestrian and bicycle trails, sports fields and recreation facilities.
PR-8.19	Pursue joint use projects with schools and colleges, Santa Clara Valley Water District, other public agencies, and private foundations. Whenever feasible, obtain permanent joint-use agreements when partnering with other organizations or agencies in providing parks or recreation facilities in order to ensure the amenities' availability in perpetuity.

Greenprint

To implement the park and recreation policies of the General Plan, the *2000 Greenprint* was adopted by the San José City Council in September 2000 to provide staff and decision makers with a strategic plan for expanding recreation opportunities in the City. The *2000 Greenprint* identified areas of the City that were underserved by park and recreation facilities and included policies and strategies to correct those deficiencies through the development of additional facilities in those locations.

The City adopted the *2009 Greenprint* as an update to the 2000 version. The City is currently in the process of another revision to the plan known as Greenprint Update 2018.

3.16.1.2 *Existing Conditions*

The City of San José owns and maintains over 3,500 acres of parkland, including neighborhood parks, community parks, and regional parks. The City also manages 51 community centers, 17 community gardens, and six pool facilities. Other recreational facilities include seven public skate parks and 57.5 miles of interconnected trails. In addition to the lands operated and maintained by the City, parks and recreation amenities include properties owned and managed by private or public quasi-public entities, such as Valley Water, PG&E, and school districts.[54]

Orchard School

Orchard Elementary School and its associated playfields and outdoor recreation areas are located adjacent to the south side of Silk Wood Lane. The area is outlined in red on Figure 3.16-1 and totals approximately 5.7 acres (249,800 ft^2). Existing facilities include a ball field with dugouts and bleachers, blacktop play area, children's play structure, paved walking/running path, basketball courts, wall ball courts, four square courts, tetherball features, and picnic tables.

Consistent with General Plan Policies 8.7 and 8.17 described above, the City and the Orchard School District cooperated to provide recreational amenities to the community as follows:

- On June 16, 1998, the City entered into a joint-use-agreement (JUA) with the Orchard School District regarding the recreational facilities at Orchard School. According to that JUA, the City contributed $80,000 towards the total cost for the purchase and installation of playground climbing structures including play equipment with multiple elements and installing turf and hard surface play areas.[55]

- The *2000 Greenprint* indicated that 27 areas of the City were underserved by neighborhood/community-serving parkland including recreation school grounds using a ¾-mile radius. The Project area was identified as one of the 27 areas and the recommended action for the City was to "coordinate to secure public access to park and recreation spaces." The *2009 Greenprint* states that "Orchard School was relocated to this area and addresses part of this underserved area."[56]

- On April 6, 2004, the City Council approved the Hawthorn Place Project (Tract 9618) for the construction of 107 single-family residences on the southwest corner of Oakland Road and Rock Avenue. [Note: These are the residences located on the north side of Silk Wood Lane.] Instead of requiring the developer to construct a 1-acre park within the development, the City

[54] City of San José. *Envision San José 2040 General Plan*.
[55] The JUA between the City and the Orchard School District included the following stipulations: "Subject to mutual agreements, for non-exclusive use by City and public at reasonable time each day, without charge to City. City shall have first use of the improvements for the community recreation purposes after regularly scheduled District use. District shall provide, at its own cost and expense, any and all maintenance for improvements. Improvements become and remain property of the District. District shall post a plaque reading 'Improvements provided for public recreational use as a joint project between the City of San Jose and [District].' Upon early termination of the contract, District must redeem pro-rated value of improvements to City for unrealized use."
[56] Source: City of San Jose, *2009 Greenprint*, page 91.

ORCHARD SCHOOL RECREATIONAL FACILITY | FIGURE 3.16-1

Council directed that "a substantial part of the parkland dedication ordinance in-lieu fees shall be spent to make significant improvements to the property of Orchard School so that the community will have more park amenities and more opportunities for families to gather and those improvements will include new sports field and a landscaped picnic area."[57]

- Orchard School's Open Access Policy states: "Pedestrian access to playing fields, blacktop game areas, and parking areas are to be left open for use by children and parents during the school year, after school hours, and in the evenings, Saturdays, Sundays, holidays, and vacation periods."[58]

3.16.2 Discussion of Recreation Impacts

For the purpose of determining the significance of the project's impacts on recreation, would the project:

1) Increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
2) Include recreational facilities or require the construction of expansion of recreational facilities which might have an adverse physical effect on the environment?

3.16.2.1 *Impacts to Recreational Facilities from Increased Usage due to the Project*

Impact REC-1:	**The project would not increase the use of existing neighborhood and regional parks or other recreational facilities. (No Impact)**

The proposed project is the implementation of a planned roadway extension. The proposed project does not include residential development and, therefore, would not generate additional residents that could increase demand upon the existing recreational facilities in the project area. For this reason, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(No Impact)**

3.16.2.2 *Impacts to Existing Recreational Facilities*

Impact REC-2:	**The right-of-way required for the project would directly impact recreational facilities at Orchard Elementary School and reduce the area available for recreation. Mitigation is included in the project but the loss of recreational acreage at this location cannot be fully mitigated. (Significant Unavoidable Impact)**

Construction of the project would require approximately 19,410 ft^2 ((0.44 acre) of land from Orchard School (see Figure 2.1-5). This equates to a loss of approximately 7.8% of the existing 5.7 acres that

[57] Source: City of San Jose, Minutes of 4/6/2004 City Council Meeting,
[58] Source: https://www.facilitron.com/terms/os95131, accessed 6/27/2019.

comprise the school's recreation facilities, such facilities that are also used by the community and considered joint recreational facilities by the City. The right-of-way would be acquired along the northerly edge of the recreational facilities and would affect the following existing facilities:

- The planting strip with trees adjacent to the chain link perimeter fence;
- The north spectator bleachers at the baseball field;
- The paved spectator area & pathway adjacent to the baseball field;
- A portion of the baseball field (including north bench area, backstop area, & NE corner of field);
- The edge of the paved playground area, but not the play structure itself.

The loss of recreational land of approximately 0.44 acres would reduce the recreational space for the school children and public and therefore, is a significant impact of the project. **(Significant Impact)**

The following measure is included in the proposed project to reduce impacts to the existing recreational facilities:

MM REC-2.1: The City will work with Orchard School District to determine the appropriate amount of compensation for the approximate 0.44 acre required for the project. If an amount is not agreed upon, the City will follow local, state and federal laws to determine the appropriate compensation amount to the Orchard School District.

The amount of compensation may include reimbursement to the Orchard School District the cost to reconfigure/reconstruct the existing recreational facilities affected by the project. This could involve shifting and reconstructing the affected facilities to the south of their current locations. The intent of this measure is that the replacement facilities would be comparable to the existing facilities in size, function, and quality.

MM REC-2.1 would not result in any new permanent impacts since it would be limited to the replacement of existing facilities at the same location. It would result in temporary noise and air quality impacts during the construction phase for the reconfigured/reconstructed facilities, but such impacts would be mitigated with implementation of standard construction measures for noise, water quality, and dust (refer to Sections 3.3, *Air Quality*, 3.10, *Hydrology and Water Quality*, and 3.13, *Noise and Vibration*). Upon completion of the reconfigured/reconstructed facilities, users would not be significantly impacted by the Charcot Avenue Extension because a proposed new noise wall would mitigate for any increases in noise and air quality impacts would not be significant; see Sections 3.3, *Air Quality*, and 3.13, *Noise and Vibration*, for details.

While the implementation of MM REC-2.1 would mitigate the project's impact on the above-listed recreational facilities, it would not replace the lost parkland/recreational acreage. Further, there is no vacant land available contiguous to Orchard School that could be purchased and added to the school. Therefore, the loss of 0.44 acre of recreational land would constitute an unavoidable effect of the project. **(Significant Unavoidable Impact)**

3.16.2.3 *Cumulative Impacts*

Impact REC-C:	**The project would not result in a cumulative recreation impact. (No Cumulative Impact)**

The geographic study area for cumulative impacts to recreational facilities is defined as a 0.75-mile radius around the recreational facilities at Orchard School. This radius represents the goal of the City's Greenprint for providing neighborhood serving parks, playgrounds, and open recreation areas near residential areas. Within this study area, there is only one other recreational facility, Gran Paradiso Park, a 1-acre City park located on the corner of McCay Drive and Avenida Elisa. There are no plans to reduce the size or the facilities at Gran Paradiso Park. Therefore, no cumulative recreation impact within the geographic study area would occur. **(No Cumulative Impact)**

3.17 TRANSPORTATION

The information in this section is based primarily on a Transportation Analysis prepared for the project by Hexagon Transportation Consultants in April 2019. The report is Appendix K of this EIR.

3.17.1 Environmental Setting

3.17.1.1 *Regulatory Framework*

Regional

Regional Transportation Planning

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted *Plan Bay Area 2040* in July 2017, which includes the region's Sustainable Communities Strategy (integrating transportation, land use, and housing to meet GHG reduction targets set by CARB) and Regional Transportation Plan (including a regional transportation investment strategy for revenues from federal, state, regional and local sources over the next 24 years).

The Charcot Avenue Extension is on the list of projects contained in *Plan Bay Area 2040*.[59]

Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management, a land use impact analysis program, and a capital improvement element.

The Charcot Avenue Extension is one of the projects listed in the capital improvement element of the current *Congestion Management Program Document* that was adopted by VTA in December 2017.[60]

Valley Transportation Plan 2040

The Charcot Avenue Extension is also one of the projects listed in the local street element of the current *Valley Transportation Plan 2040* (VTP 2040) that was adopted by VTA in October 2014.[61] VTP 2040 serves as the countywide long-range transportation plan for Santa Clara County.

[59] Project ID #17-07-0005.
[60] The Charcot Avenue Extension is listed in Table 8.4.
[61] Table 2.5, Project ID #R19.

Local

Envision San José 2040 General Plan

The Circulation Element of the *Envision San José 2040 General Plan* contains various long-range goals and policies that are intended to:

- provide a transportation network that is safe, efficient, and sustainable (minimizes environmental, financial, and neighborhood impacts);
- improve multimodal accessibility to employment, housing, shopping, entertainment, schools, and parks;
- create a city where people are less reliant on driving to meet their daily needs; and
- increase bicycle, pedestrian, and transit travel, while reducing motor vehicle trips.

Various policies in the City's 2040 General Plan have been adopted that pertain to roadway improvement projects, as listed in Table 3.17-1.

City of San José Transportation Analysis Policy

Historically, transportation analyses prepared under CEQA have utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to a proposed project. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections. Therefore, in 2013, Senate Bill (SB) 743 became law, which requires jurisdictions to stop using congestion and delay metrics, such as level of service (LOS), as the measurement for CEQA impacts in a transportation analysis. Per SB 743, by July 2020, all public agencies are required to base the determination of transportation impacts under CEQA on vehicle miles traveled (VMT) rather than LOS.[62]

In February 2018, pursuant to SB 743, the City of San José adopted a new Transportation Analysis Policy, Council Policy 5-1. The policy replaces its predecessor (Policy 5-3) and establishes the thresholds for transportation impacts under CEQA based on VMT instead of LOS. The intent of this change is to shift the focus of transportation analysis under CEQA from vehicle delay and roadway auto capacity to a reduction in vehicle emissions, and the creation of robust multimodal networks that support integrated land uses. All new development and transportation projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1. The evaluation of a project's impact on LOS at intersections under the jurisdiction of the City of San José is no longer required under CEQA.

Transportation Analysis Policy 5-1 and its accompanying Transportation Analysis Handbook (April 2018) provide screening criteria that determine whether a CEQA transportation analysis is required for both new development and transportation projects. The criteria are based on the type of project and its resulting changes to the transportation system. Table 3.17-2 lists the City's screening criteria for transportation projects that are expected to result in less than significant VMT impacts. If a

[62] VMT measures the amount of distance people travel in personal vehicles to destinations in a day. VMT is measured by multiplying the total vehicle trips by the average distance of those trips.

Table 3.17-1: General Plan Policies – Transportation	
Policy	**Description**
TR-1.1	Accommodate and encourage use of non-automobile transportation modes to achieve San José's mobility goals and reduce vehicle trip generation and vehicle miles traveled (VMT).
TR-1.2	Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects.
TR-1.5	Design, construct, operate, and maintain public streets to enable safe, comfortable, and attractive access and travel for motorists and for pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.
TR-1.6	Require that public street improvements provide safe access for motorists and pedestrians along development frontages per current City design standards.
TR-1.9	Give priority to the funding of multimodal projects that provide the most benefit to all users. Evaluate new transportation projects to make the most efficient use of transportation resources and capacity.
TR-2.1	Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings (including proposed grade- separated crossings of freeways and other high vehicle volume roadways) and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas).
TR-2.2	Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement, on City streets. Include consideration of grade-separated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San José International Airport.
TR-2.3	Construct crosswalks and sidewalks that are universally accessible and de- signed for use by people of all abilities.
TR-2.5	Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.
TR-2.6	Require that all new traffic signal installations, existing traffic signal modifications, and projects included in San José's Capital Improvement Plan include installation of bicycle detection devices where appropriate and feasible.
TR-2.7	Give priority to pedestrian improvement projects that: improve pedestrian safety; improve pedestrian access to and within the Urban Villages and other growth areas; and that improve access to parks, schools, and transit facilities.
TR-2.10	Coordinate and collaborate with local School Districts to provide enhanced, safer bicycle and pedestrian connections to school facilities throughout San José.
TR-5.1	Develop and maintain a roadway network that categorizes streets according to function and type, considers the surrounding land use context, and incorporates the concepts of "complete streets."
TR-5.4	Maintain and enhance the interconnected network of streets and short blocks that support all modes of travel, provide direct access, calm neighborhood traffic, reduce vehicle speeds, and enhance safety.
TR-5.6	Complete build-out of the City's street system per its Land Use / Transportation Diagram.
TR-9.1	Enhance, expand and maintain facilities for walking and bicycling, particularly to connect with and ensure access to transit and to provide a safe and complete alternative transportation network that facilitates non-automobile trips.

Table 3.17-2: San José Transportation Project Types Screened from CEQA Transportation Analysis	
Type	**Description**
Maintenance	Rehabilitation, maintenance, replacement, and repair projects designed to improve condition of existing transportation assets (e.g. roadways, bridges, culverts, tunnels, transit systems, and assets that serve bicycle and pedestrian facilities) that do not add additional motor vehicle capacity.
Roadway Shoulder	Roadway shoulder enhancements to provide "breakdown space" (dedicated space for use only by transit vehicles) to provide bicycle access or to improve safety, but which will not be used as motor vehicle travel lanes.
Non-through Lanes	Installation, removal, reconfiguration of travel lanes that are not for through traffic, such as left-turn, right-turn and U-turn pockets (excluding trap lanes), two-way left-turn-lanes, or emergency breakdown lanes that are not utilized as through lanes.
Through Lanes	• Addition of roadway capacity on local or collector streets provided the project substantially improves conditions for pedestrians, cyclists, and/or transit, including but not limited to: o Protected and separated Class IV bikeway o Pedestrian refuges, bulb-outs, and elements that shorten pedestrian crossing distances o Consistency with the San José Complete Streets Design Standards and Guidelines and/or other applicable design guidelines; OR • Addition of a new lane that is permanently restricted to use only by transit vehicles; OR • Reduction in the number of through lanes; OR • Conversion of roadways from one-way to two-way operations with no net increase in the number of travel lanes.
Traffic Control Devices	• Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority features; OR • Timing of signals to optimize vehicle, bicycle, or pedestrian flow.
Traffic Circles	Installation of roundabouts or traffic circles.
Traffic Calming Devices	Installation, enhancement, or reconfiguration of traffic calming devices.
Parking	• Removal or relocation of on-street or off-street parking spaces; OR • Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
Traffic Wayfinding	Addition of traffic wayfinding signage
Active Transportation	• Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way; OR • Addition of Class I bike paths, trails, multi-use paths, or other off- road facilities that serve non-motorized travel
Fuel/Charging Infrastructure	Installation of publicly available alternative fuel or charging infrastructure.
Source: City of San José Transportation Analysis Handbook, April 2018.	

project meets the City's screening criteria, the project is presumed to result in less-than-significant VMT impacts and a detailed VMT analysis is not required under CEQA.

Policy 5-1 also requires preparation of a Local Transportation Analysis (LTA) to analyze non-CEQA transportation issues, including local transportation operations, intersection level of service, site access and circulation, and neighborhood transportation issues such as pedestrian and bicycle access, and recommend needed transportation improvements.

North San José Area Development Policy

The *North San José Area Development Policy*, as amended in December 2017, was originally adopted in 2005 to establish a policy framework to guide the ongoing development of the North San José area as an important employment center for San José. The Policy provides for full development of the previously adopted base Floor Area Ratio (FAR) caps but also provides additional industrial development capacity for 20 million square feet of transferable floor area credits that can be allocated to specific properties within the Policy area.

The Policy supports the conversion of specific sites from industrial to high-density residential, using specific criteria compatible with industrial activity. The Policy also identifies necessary transportation improvements to support development and establishes an equitable funding mechanism for new development to share the cost of those improvements.

The Charcot Avenue Extension Project, the subject of this EIR, is identified as a major roadway improvement to serve the planned development in the North San José Area Development Policy.

San José Bike Plan 2020

The City of San José *Bike Plan 2020* (adopted in 2009) contains policies for guiding the development and maintenance of bicycle and trail facilities within San José, as well as the following goals for improving bicycle access and connectivity:

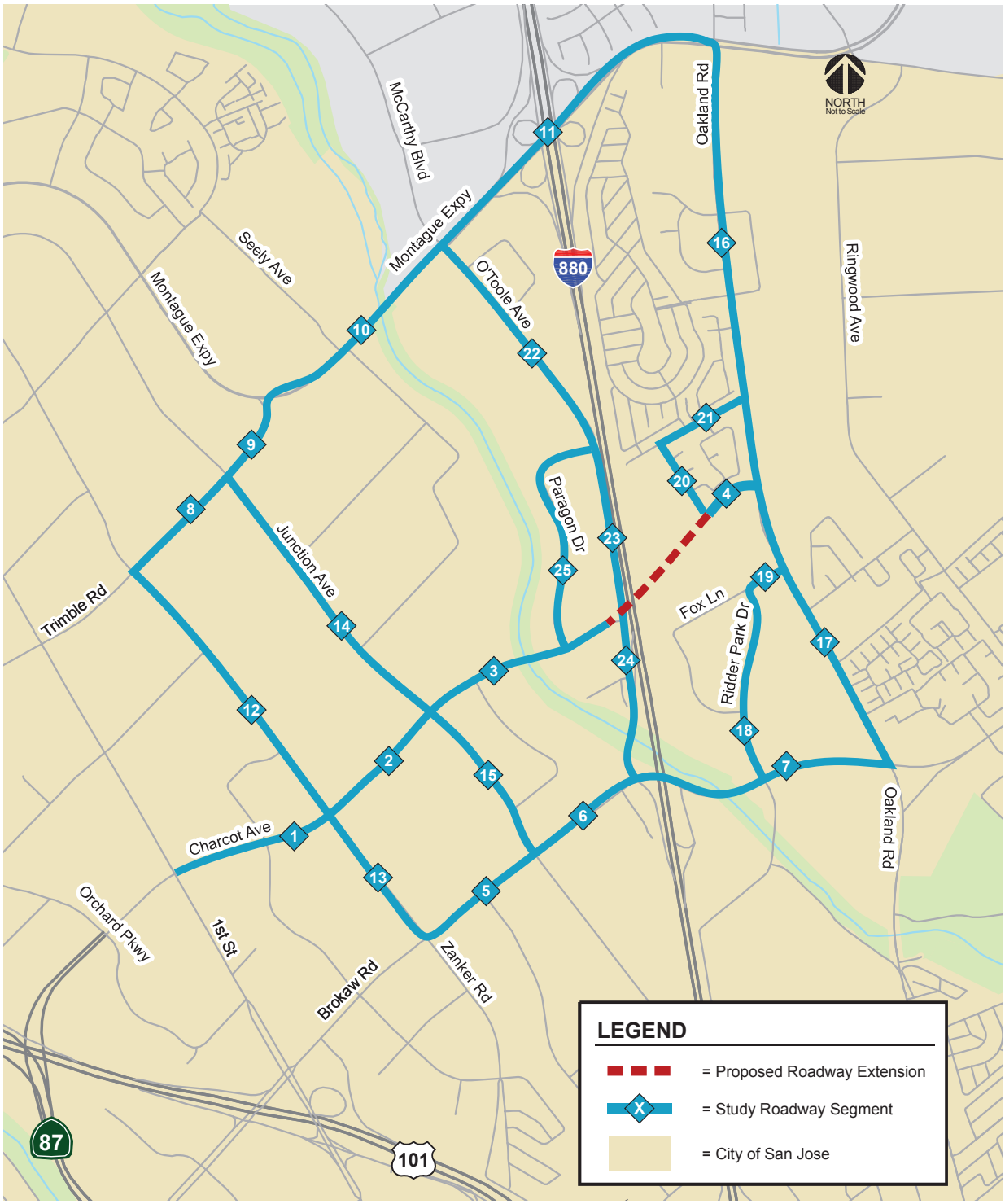
- Complete 500 miles of bikeways;
- Achieve a five percent bike mode share;
- Reduce bike collision rates by 50 percent;
- Add 5,000 bicycle parking spaces; and
- Achieve Gold-Level Bicycle Friendly Community status.

The *Bike Plan 2020* designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes.

3.17.1.2 *Existing Conditions*

Existing Roadway Network

The roadway network in the project area is shown on Figure 3.17-1 and the primary facilities are summarized as follows:



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

ROADWAY STUDY SEGMENTS | FIGURE 3.17-1

Interstate-880 (I-880) provides regional access to the project area. I-880 extends along the eastern side of San Francisco Bay from San José to Oakland. South of its interchange with I-280 in west San José, I-880 becomes SR 17 and extends southward to Santa Cruz. I-880 runs north-south with 8 travel lanes – including 2 high-occupancy vehicle (HOV) lanes - in the vicinity of the project area. Access to the project area is provided via interchanges at Brokaw Road and Montague Expressway.

Charcot Avenue is a two- to four-lane roadway that begins at the US 101/SR 87 junction as the SR 87 off- and on ramps to/from North First Street and runs eastward to O'Toole Avenue, just west of I-880, where it terminates. West of North First Street, Charcot Avenue is a four-lane roadway that provides direct access to SR 87, while the segment east of North First Street functions as a two-lane collector street providing access to adjacent employment areas.

Silk Wood Lane is a two-lane, L-shaped, roadway that extends from Rock Avenue southward then eastward to connect to Oakland Road. It currently provides access to an adjacent residential area.

Montague Expressway is a six- to eight-lane expressway providing a regional connection through the north San José area between Milpitas to the east and Santa Clara to the west. Montague Expressway also provides regional access to the study area via its full interchange at I-880. Its outside lanes operate as HOV lanes in the peak direction of travel during the peak periods.

Trimble Road is a six-lane arterial extending southward from Montague Expressway to De La Cruz Boulevard near US 101. Trimble Road provides regional access to the study area via its full interchange at US 101.

Brokaw Road is six-lane arterial that extends eastward from US 101 to Oakland Road. It provides regional access to the project area via its partial interchange with US 101 and its interchange at I-880. West of US 101, Brokaw Road becomes Airport Parkway and provides direct access to the San José Airport. East of Oakland Road, Brokaw Road continues as Murphy Avenue and Hostetter Road.

First Street is a north-south roadway that extends from the north San José area through downtown San José. VTA's light rail transit (LRT) lines run along the middle of First Street from downtown San José to Tasman Drive in north San José. In the vicinity of the project area, First Street is a four-lane (plus LRT line) roadway with a full access intersection at Charcot Avenue. First Street, in conjunction with Brokaw Road, provides full access to US 101.

Zanker Road is four-lane arterial that extends from US 101 northward past SR 237 where it transitions to Los Esteros Road. Zanker Road intersects with Charcot Avenue and provides a parallel route to First Street in the study area.

Junction Avenue is a two-lane collector that runs parallel to and east of Zanker Road. It begins just south of Montague Expressway at its intersection with Zanker Road and extends southward past Brokaw Road where it terminates at its intersection with Rogers Avenue. Junction Avenue has a full access intersection with Charcot Avenue.

Oakland Road is a six-lane north-south arterial that provides a major north-south route east of I-880 in San José and ultimately connects to US 101 in the south. North of Montague Expressway, Oakland Road transitions into Main and Abel Streets in the City of Milpitas. South of US 101, at Hedding

Street, Oakland Road continues as 13th Street through downtown San José. Oakland Road consists of six-lanes, with a 2-way left turn lane in the center median at its intersection with Silk Wood Lane.

Existing Traffic Volumes and Speeds

In September 2018, traffic volume data were collected for a 24-hour period along the roadway study segments in the project area (see Figure 3.17-1). In addition to the traffic volumes, speed data also were collected along each of the study segments. Peak-hour volumes along each of the roadway segments were extracted from the 24-hour tube counts. Table 3.17-1 summarizes the existing average daily traffic (ADT) and peak-hour volumes as well as the measured 85th-percentile speeds collected from the 24-hour counts on each of the study roadway segments.

Based on traffic count data collected in September 2018, the percentage of daily traffic volumes on Montague Expressway and Brokaw Road that is comprised of large trucks ranges from 5 to 12 percent with an average of 8 percent. Typical truck traffic percentages on other roadways in the project area range between 1 to 17 percent with an average of 7 percent, as shown in Table 3.17-2.

Existing Bicycle and Pedestrian Facilities

Figure 3.17-2 depicts existing pedestrian and bicycle facilities on each roadway in the project area. Currently, Montague Expressway and Brokaw Road provide the only crossing points of I-880 in the project area. Pedestrian and bicycle facilities on each of the roadways are limited and discontinuous between Oakland Road and O'Toole Avenue. There currently are no bike lanes on Montague Expressway and sidewalks are discontinuous. Brokaw Road does provide bike lanes, however sidewalks on the north side of the roadway west of I-880 are discontinuous. In addition, traffic volumes along both Montague Expressway and Brokaw Road are large since they serve as major east-west travel corridors that provide access to the regional I-880 freeway. The large traffic volumes and congestion on the roadways are not conducive to pedestrian and bicycle travel.

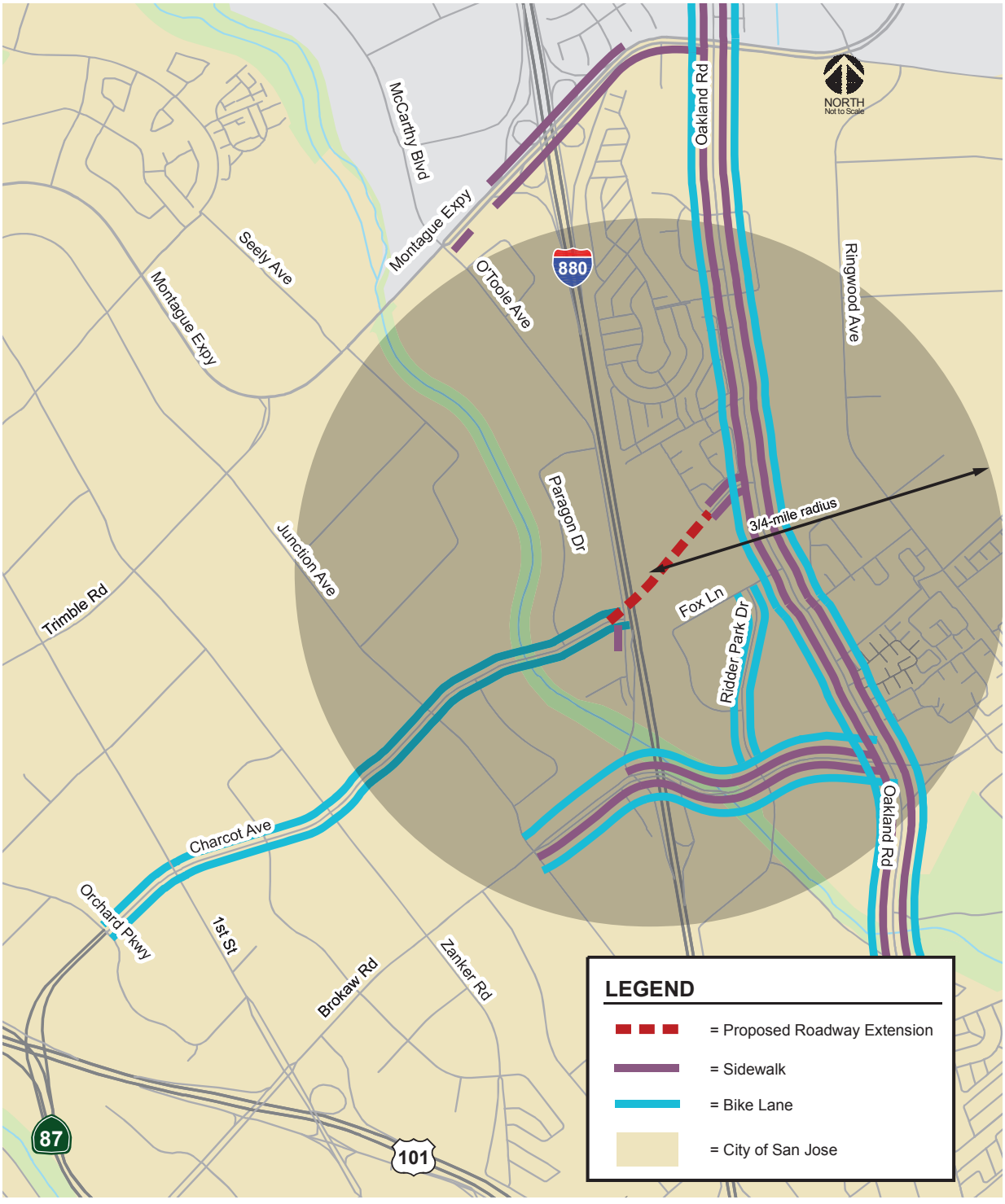
Existing Transit Facilities

Existing transit services in the study area are provided by the VTA and are shown on Figure 3.17-3. The study area is primarily served by one VTA local bus route (66) and one limited stop bus route (321). Route 66 runs along Oakland Road in the vicinity of the roadway extension. The nearest bus stops are located at the intersections of Oakland Road with Rock Avenue, Silk Wood Lane, and Fox Lane. Route 321 runs along Montague Expressway in the vicinity of the roadway extension. The nearest bus stops are located at the intersection of Montague Expressway with Oakland Road and O'Toole Avenue/McCarthy Boulevard.

VTA operates a 42.2-mile LRT system extending from south San José through downtown to the northern areas of San José, Santa Clara, Milpitas, Mountain View, and Sunnyvale. The Component and Karina LRT Stations are located on First Street, approximately one mile west of the roadway extension. LRT service at these stations is provided by both the Mountain View-Winchester line, which operates daily from 4:40 AM to 12:45 AM with 15-minute headways during peak commute and midday hours, and the Alum Rock-Santa Teresa line, which operates daily from 4:00 AM to 2:00 AM with 10-15-minute headways during peak commute and midday hours.

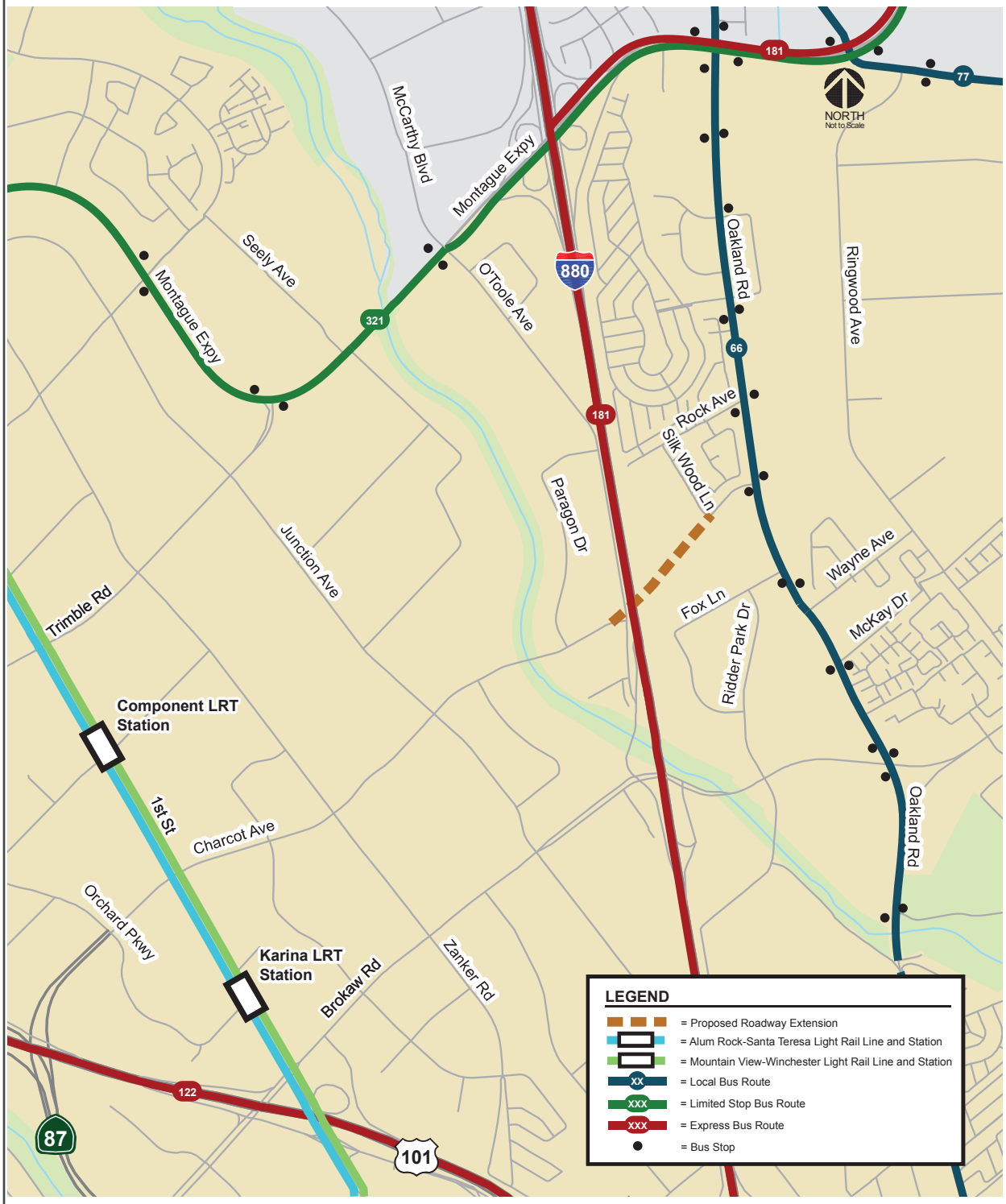
Table 3.17-1: Existing Traffic Volumes and Speeds											
		Northbound/Eastbound					Southbound/Westbound				
		Speed (mph)		Volume			Speed (mph)		Volume		
Roadway	**Location**	**Limit**	**85th Percentile**	**AM Peak**	**PM Peak**	**ADT**	**Limit**	**85th Percentile**	**AM Peak**	**PM Peak**	**ADT**
Charcot Avenue	East of First Street	40	39	450	600	6,500	40	41	460	400	5,400
Charcot Avenue	East of Zanker Road	40	35	270	490	4,500	40	32	240	360	3,800
Charcot Avenue	East of Junction Avenue	35	34	150	330	2,500	35	35	360	570	5,100
Silk Wood Lane	West of Oakland Road	25	29	60	20	300	25	28	60	30	400
Brokaw Road	East of Zanker Road	40	43	610	1,140	12,700	40	43	1,460	990	18,800
Brokaw Road	East of Junction Avenue	40	44	600	1,520	15,100	40	40	1,690	940	21,700
Brokaw Road	West of Oakland Road	40	37	580	1,700	17,400	40	33	1,230	1,050	17,700
Trimble Road	East of Zanker Road	45	45	660	1,160	12,000	45	57	1,240	830	14,100
Trimble Road	East of Junction Avenue	45	41	630	1,030	10,900	45	57	1,120	640	12,700
Montague Exp	East of Seely Avenue	45	54	1,500	1,670	23,000	45	56	2,540	1,350	29,600
Montague Exp	West of Oakland Road	45	43	1,270	1,270	22,700	45	41	2,760	1,280	28,200
Zanker Road	South of Trimble Road	45	45	1,320	300	8,400	45	54	210	1,470	9,100
Zanker Road	North of Brokaw Road	45	42	1,440	180	8,500	45	37	200	1,310	8,700
Junction Avenue	South of Trimble Road	40	36	490	150	4,700	40	38	150	990	5,500
Junction Avenue	North of Brokaw Road	40	38	690	200	6,700	40	33	150	830	5,100
Oakland Road	North of Silk Wood Lane	45	44	810	660	9.500	45	41	550	1,020	10,300
Oakland Road	South of Silk Wood Lane	45	39	750	560	8,800	45	38	550	1,030	9,700
Ridder Park Dr	North of Oakland Road	25	31	420	110	2,900	25	28	310	390	3,800
Fox Lane	West of Oakland Road	25	26	70	340	2,700	25	27	550	100	3,400
Silk Wood Lane	South of Rock Avenue	25	28	70	10	300	25	23	30	30	200
Rock Avenue	West of Oakland Road	25	28	150	80	1,600	25	28	210	90	1,600
O'Toole Avenue	South of Montague Exp	40	47	220	410	3,500	40	40	260	510	4,300
O'Toole Avenue	North of Charcot Avenue	40	47	200	340	2,800	40	41	180	530	3,800
O'Toole Avenue	South of Charcot Avenue	40	24	20	40	300	40	35	120	570	3,700
Paragon Drive	North of Charcot Avenue	25	36	100	20	700	25	36	30	70	600

AM and PM peak-hour volumes were rounded to the nearest 10 and ADT volumes were rounded to the nearest 100.
Source: Hexagon Transportation Consultants, 2019.



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

EXISTING BICYCLE & PEDESTRIAN FACILITIES | FIGURE 3.17-2



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

EXISTING TRANSIT FACILITIES | FIGURE 3.17-3

Table 3.17-2: Existing Truck Volumes				
		Average Daily Traffic (ADT)		
			Heavy Vehicles	
Roadway	**Location**	**Total**	**Volume**	**Percent**
Charcot Avenue	East of First Street	11,854	984	8%
Charcot Avenue	East of Zanker Road	8,286	477	6%
Charcot Avenue	East of Junction Avenue	7,673	488	6%
Silk Wood Lane	West of Oakland Road	688	7	1%
Brokaw Road	East of Zanker Road	31,476	1,615	5%
Brokaw Road	East of Junction Avenue	36,828	3,736	10%
Brokaw Road	West of Oakland Road	35,115	1,779	5%
Trimble Road	East of Zanker Road	26,180	2,275	5%
Trimble Road	East of Junction Avenue	23,634	2,115	9%
Montague Expressway	East of Seely Avenue	52,583	6,478	12%
Montague Expressway	West of Oakland Road	50,953	2,331	5%
Zanker Road	South of Trimble Road	17,453	1,015	6%
Zanker Road	North of Brokaw Road	17,192	725	4%
Junction Avenue	South of Trimble Road	10,188	718	7%
Junction Avenue	North of Brokaw Road	11,863	1,438	12%
Oakland Road	North of Silk Wood Lane	19,747	654	3%
Oakland Road	South of Silk Wood Lane	18,501	935	5%
Ridder Park Drive	North of Oakland Road	6,644	275	4%
Fox Lane	West of Oakland Road	6,062	143	2%
Silk Wood Lane	South of Rock Avenue	530	17	3%
Rock Avenue	West of Oakland Road	3,146	61	2%
O'Toole Avenue	South of Montague Expwy	7,864	1,366	17%
O'Toole Avenue	North of Charcot Avenue	6,538	807	12%
O'Toole Avenue	South of Charcot Avenue	4,015	230	6%
Paragon Drive	North of Charcot Avenue	1,371	161	12%
			Average of All Segments:	**7%**
			Average of Montague & Brokaw Segments:	**8%**
Source: Hexagon Transportation Consultants, 2019.				

Existing Orchard School Site Access and Drop-Off/Pick-Up Activities

Orchard School is currently served by three driveways along Fox Lane that provide access to two on-site parking lots and one driveway along Oakland Road that provides access to the school's event center. There is no vehicular access to the school provided along Silk Wood Lane. Further, parking or stopping along the south side of Silk Wood Lane at any time of day is currently prohibited. Each of the school driveways and location of drop-off and pick-up activities are shown on Figure 3.17-4.

Fox Lane: The Orchard School parking lot along Fox Lane serves as the designated school drop-off/pick-up area. The school parking lot on Fox lane, as well as curb-parking along the northside of Fox Lane, are heavily used during morning drop-offs and afternoon pick-ups. The northside curb of Fox Lane has designated loading zones. Fox Lane has a posted 25 mph speed limit along the school frontage. Striped crosswalks are provided along the south and east legs of the Ridder Park Drive and

Fox Lane stop-controlled intersection. Crosswalks and pedestrian signal heads are provided at the signalized Fox Lane and Oakland Road intersection. Crossing guards were located at both the Fox Lane/Ridder Park Drive and Fox Lane/Oakland Road intersections during drop-off/pick-up periods. Parents also were observed to utilize adjacent private parking lots along Ridder Park Drive to park and walk children onto campus. Parking is not permitted along the south side of Fox Lane between Oakland Road and Ridder Park at any time during the day, however parents were observed to utilize the south side of Fox Lane to drop-off/pick-up students.

Oakland Road: The school's event center parking lot along Oakland Road also was observed to be utilized to drop-off and pick-up students. However, the use of the event center parking for student drop-off/pick-up was minimal when compared to activities along Fox Lane and Silk Wood Lane. Drop-off/pick-up activity along Oakland Road mostly consisted of parents entering the event center parking lot to drop-off/pick-up students, and a few students were dropped-off/picked-up along the curb on west side of Oakland Road.

Silk Wood Lane: There is no vehicular access to the school or school parking lot along Silk Wood Lane. The south side of Silk Wood Lane along the school property is posted as a no stopping zone at any time. However, the north side of Silk Wood Lane provides on-street parking. There is a school access gate on Silk Wood Lane that is open during the morning drop-off and afternoon pick-up periods. The access gate is heavily used by students that are dropped-off and picked-up by parents that are driving a vehicle despite the fact that there are no explicitly marked loading zones or signage on Silk Wood Lane.

Though Silk Wood Lane is not a designated school drop-off/pick-up area, it was observed to be heavily used to drop-off/pick-up students. During the school drop-off/pick-up periods parents were observed to park along the extent of Silk Wood Lane, including illegally along the south side of Silk Wood Lane, to walk children onto campus and/or wait for students to arrive for pick-up. Parents also were observed to double-park along Silk Wood Lane while dropping-off and picking-up students.

3.17.2 Discussion of Transportation Impacts

For the purpose of determining the significance of the project's impacts on transportation, would the project:

1) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths?
2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?
4) Result in inadequate emergency access?

Source: Hexagon Transportation Consultants, Inc., 4/8/19.

EXISTING ORCHARD SCHOOL DRIVEWAYS AND DROP-OFF/PICK-UP ACTIVITIES | FIGURE 3.17-4

3.17.2.1 *Conflicts with Circulation Plans and Policies*

Impact TRN-1:	**The project would not conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths. (No Impact)**

As described in Section 3.17.1.1, the Charcot Avenue Extension is one of the projects listed in *Plan Bay Area 2040*. The construction of the project would, therefore, be consistent with this plan.

The Charcot Avenue Extension is one of the projects listed in the capital improvement element of the current *Congestion Management Program Document* (see Section 3.17.1.1). The construction of the project would, therefore, be consistent with this plan.

The Charcot Avenue Extension is also one of the projects listed in the local street element of the current *Valley Transportation Plan 2040*, again described in Section 3.17.1.1. The construction of the project would, therefore, be consistent with this plan.

As described in Section 3.17.1.1, the *San José Bike Plan 2020* designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes. The proposed Charcot Avenue Extension is consistent with this designation because it includes the construction of Class IV bike lanes within the full project limits (i.e., Paragon Drive to Oakland Road). [Note: Unlike Class II bike lanes, Class IV bike lanes are separated from vehicular traffic by 2-foot wide buffers.]

The Charcot Avenue Extension is also identified as one of the major roadway improvement projects in the *North San José Development Area Policy* (see Section 3.17.1.1). The construction of the project would, therefore, be consistent with this policy.

As listed in Section 3.17.1.1, the Circulation Element of the *Envision San José 2040 General Plan* contains policies that pertain to the design and implementation of the proposed Charcot Avenue Extension. Most of these policies state that roadway improvement projects should be designed to include features that promote the safe use of the facility by pedestrians and bicyclists including, where applicable, improved access to transit. The design of the proposed project includes multiple components that implement these policies; see Section 2.3 for a detailed listing. In addition, the project implements Policy TR-5.6, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994. Based on these facts, the project would be consistent with the General Plan.

As described in Section 3.17.1.1, *San José Transportation Analysis Policy 5-1* sets forth the requirements for the analysis of projects as to both CEQA and non-CEQA transportation impacts. This transportation section of the EIR presents the findings of that analysis, which was completed per the requirements of Policy 5-1. The construction of the proposed project would, therefore, be consistent with this policy.

Based upon the above analysis, the project would not conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes and pedestrian paths. **(No Impact)**

3.17.2.2 *Conflicts with CEQA Guidelines Section 15064.3 (b)*

Impact TRN-2:	**The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (No Impact)**

The updated CEQA Guidelines (2019) include language consistent with SB 743, which became law in 2013.[63] Section 15064.3(b)(2) of the CEQA Guidelines states that transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements.

As described in Section 3.17.1.1, the City Council adopted *San José Transportation Analysis Policy 5.1* in February 2018 to comply with SB 743 and CEQA Guidelines Section 15064.3(b)(2). Under Policy 5.1, if a project meets certain screening criteria (see Table 3.17-2), the project is presumed to result in less-than-significant VMT impacts and a detailed VMT analysis is not required under CEQA.

VMT Analysis

VMT Screening: The proposed project will result in the addition of roadway capacity to the Citywide roadway network that would result in an increase in VMT. However, the project also includes new Class IV separated bike lanes and sidewalks along both sides of the roadway extension that will provide for a safe crossing over I-880 for pedestrians and bicyclists that does not currently exist in the project area. The proposed roadway project will shorten pedestrian and bicycle travel routes and provide the opportunity to utilize walking and bicycling as an alternative travel mode and reduce automobile trips in the project area consistent with the *Envision San José 2040 General Plan* goals and policies. Based on these facts, the proposed roadway extension will meet the "through lanes" transportation project screening criteria listed in Table 3.17-2 since it will improve conditions for pedestrians, bicyclists, and transit. Therefore, according to San José Transportation Analysis Policy 5-1, the project would have less-than-significant transportation impact and is screened from a detailed CEQA transportation analysis. However, for informational purposes, a VMT evaluation for the project was completed and the results are described below.

VMT Methodology: Per Policy 5-1, the effect of the proposed project on VMT was evaluated using the methodology outlined in the City's Transportation Analysis Handbook. The City's Transportation Demand Forecasting (TDF) model was used to produce baseline and projected VMT with the proposed roadway extension. The determination of a significant VMT impact is based on the extent to which the project causes a significant increase in VMT for roadways (1) within a sphere of

[63] SB 743 requires jurisdictions to stop using congestion and delay metrics as the measurement for CEQA impacts in a transportation analysis. By January 2020, all public agencies are required to base the determination of transportation impacts under CEQA on VMT.

influence including feeder and parallel roadways proximate to the project, and (2) within Santa Clara County. Table 3.17-3 shows the VMT thresholds of significance for transportation projects as listed in Policy 5.1. If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its effect on VMT to an acceptable level (i.e., below the established thresholds of significance applicable to the project).

Table 3.17-3: CEQA VMT Analysis Transportation Project Significance Criteria	
Significance Criteria	**Threshold**
Percent increase in total VMT for roadways within Sphere of Influence	0.3% increase for every percent increase in lane miles for roadways within Sphere of Influence
Percent increase in total VMT for roadways within Santa Clara County	0.3% increase for every percent increase in lane miles for roadways within Santa Clara County

Source: City of San José Transportation Analysis Handbook, April 2018.

VMT Evaluation Results: The VMT evaluation considered the effect of the proposed Charcot Avenue Extension on all major roadways within a general 1.5-mile radius. The results of the evaluation, which are summarized in Table 3.17-4, show that the proposed Charcot Avenue Extension would result in a 0.1% increase in VMT under existing, year 2025, and year 2040 conditions. The projected increase in VMT of 0.1% would be less than the established VMT impact thresholds shown in Table 3.17-3. Therefore, the proposed project would not result in an impact on the transportation system based on the City's VMT impact criteria.

Based upon the above analysis, the project would not conflict with CEQA Guidelines Section 15064.3(b). **(No Impact)**

Table 3.17-4: VMT Evaluation			
Daily VMT			
Scenario	**Existing**	**Year 2025**	**Year 2040**
No Project	1,263,080	1,821,479	2,659,078
Project	1,264,478	1,823,272	2,661,463
Absolute Change	1,398	1,793	2,386
Percent Change	**0.1%**	**0.1%**	**0.1%**
Total Lane-Miles within a 1.5-mile Radius:		102	
Charcot Extension Lane-Miles:		1.0	
% of Charcot Extension:		1.0%	
Threshold (0.3% for every % increase):		**0.3%**	
Significant Impact?		**No**	

Source: Hexagon Transportation Consultants, 2019.

3.17.2.3 *Increase in Hazards due to Design Features or Incompatible Uses*

Impact TRN-3:	**The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (No Impact)**

The proposed Charcot Avenue Extension has been designed to comply with current highway design standards, including those applicable to motorized vehicles, bicyclists, and pedestrians. The project does not include any substandard geometric design features or incompatible uses that might result in a substantial increase in hazards. **(No Impact)**

3.17.2.4 *Emergency Access Impacts*

Impact TRN-4:	**The project would not result in inadequate emergency access. (No Impact)**

The proposed Charcot Avenue Extension will not impair or sever emergency access in the area. The extension of Charcot Avenue would create an additional east-west crossing of I-880 that would be available for use by emergency vehicles that, depending on the location of a call-for-assistance, could reduce response times. During construction, access to businesses located along Charcot Avenue between Paragon Drive and O'Toole Avenue will be maintained. **(No Impact)**

3.17.2.5 *Cumulative Impacts*

Impact TRN-C:	**The project would not result in a cumulatively considerable contribution to a significant transportation impact. (Less than Significant Cumulative Impact)**

The City's Transportation Analysis Handbook states that an evaluation of cumulative transportation impacts should take a project's long-term effects on VMT into account. In addition, a cumulative analysis should address a transportation project's potential to increase land development in outlying areas, thereby increasing trip lengths and VMT.

As shown in Table 3.17-4, the impacts of the proposed project on long-term VMT (i.e., in year 2040) would be negligible. Since year 2040 is the horizon year for the City's General Plan, the VMT analysis for year 2040 takes planned Citywide/cumulative growth into account.

The proposed project is identified in the *Envision San José 2040 General Plan* and the *North San José Area Development Policy* as part of the roadway network needed to serve development in the surrounding area, all of which is infill and planned. The project would not open new areas for development, such development that might result in increased VMT.

3.17.3 Non-CEQA Effects – Local Transportation Analysis

As described in Section 3.17.1, San José Transportation Policy 5.1 requires preparation of a Local Transportation Analysis (LTA) to analyze non-CEQA transportation issues, including local transportation operations, intersection level of service, site access and circulation, and neighborhood transportation issues such as pedestrian and bicycle access, and recommend needed transportation improvements. Although the conclusions reached in the LTA are not impacts under CEQA, the LTA is presented here to provide information to the reader, consistent with the primary function of an EIR as an informational document.

3.17.3.1 *Intersection Levels of Service*

An intersection level of service (LOS) analysis was undertaken for the weekday AM and PM peak-hours at five study intersections located in the immediate project area. LOS was calculated for both existing and year 2025 conditions with the project in place. LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The correlation between average control delay and LOS at signalized intersections is shown in Table 3.17-5.

Table 3.17-5: Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delays indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	Greater than 80.0

Sources: Transportation Research Board, *2000 Highway Capacity Manual* and VTA, *Traffic Level of Service Analysis Guidelines*

LOS was calculated for the five study intersections using the City's TDF model and TRAFFIX software.[64] The existing and year 2025 LOS are presented in Table 3.17-6. Note that the LOS is based on the recommended lane configuration at each intersection with the project in place.

[64] For greater detail on the LOS calculations and methodology, please see Appendix K.

Table 3.17-6: Intersection Levels of Service with Project in Place							
Name of Intersection	**Lane Geometry**	**Traffic Control**	**Peak Hour**	**Existing**		**Year 2025**	
				Delay	**LOS**	**Delay**	**LOS**
Paragon Dr./ Charcot Ave.	SB: 1-LTR; NB: 1-LTR EB: 1-L & 1-TR; WB: 1-TR	Traffic Signal	AM	13.6	B	30.9	C
			PM	13.2	B	69.6	E
O'Toole Ave./ Charcot Ave.	SB: 1-T; NB: 1-T EB: 1-L & 1-R	Traffic Signal	AM	11.2	B	12.9	B
			PM	16.6	B	16.7	B
Silk Wood La./ Charcot Ave.	SB: 1-R EB: 1-T; WB: 1-T & 1-TR	SB Stop Sign	AM	11.7	B	12.5	B
			PM	8.8	A	9.2	A
Oakland Rd./ Charcot Ave.	SB: 1-TR & 2-T; NB: 2-L & 3-T EB: 1-L & 1-LR	Traffic Signal	AM	17.2	B	17.8	B
			PM	23.3	C	26.7	C
O'Toole Ave./ Paragon Dr.	SB: 1-TR; NB: 1-LT EB: 1-LR	EB Stop Sign	AM	11.6	B	15.4	C
			PM	16.7	C	22.4	C
SB = southbound; NB = northbound; EB = eastbound; WB = westbound; L = left ; T = thru ; R = right **Source:** Hexagon Transportation Consultants, 2019.							

3.17.3.2 *Changes in Roadway Volumes due to the Project*

The project would result in changes to existing and future travel patterns and traffic volumes on surrounding roadways for which the Charcot Avenue Extension would provide an alternate route. The changes in peak-hour and average daily traffic (ADT) volumes that would result from the project are shown for existing, near-term (2025) and long-term (2040) conditions in Table 3.17-7, Table 3.17-8, and Table 3.17-9, respectively. To provide an overview of the changes in traffic patterns and volumes due to the project, this same information is presented in pictorial form on Figure 3.17-5, Figure 3.17-6, and Figure 3.17-7.

The data show that the project would result in a diversion of traffic to the proposed Charcot Avenue Extension from other parallel routes, including Brokaw Road, Trimble Road, and Montague Expressway. Traffic projections indicate that the Charcot Avenue Extension could serve approximately 1,080 peak-hour trips and 8,700 daily trips under Existing Plus Project conditions and approximately 1,720 peak-hour trips and 13,900 daily trips under Year 2040 Project conditions.

With the Charcot Avenue Extension, the traffic volumes on east-west streets that run parallel to Charcot Avenue (e.g., Brokaw Road, Trimble Road, and Montague Expressway) would decrease while traffic along north-south streets (e.g., Zanker Road, Junction Avenue, and Oakland Road) providing access to Charcot Avenue would increase.

To conclude, the evaluation of roadway segment ADTs indicate that the Charcot Avenue Extension would result in additional roadway system capacity and reduce traffic volumes and congestion on parallel roadways.

Table 3.17-7: Changes in Existing Roadway Volumes due to the Project

		AM Peak-Hour				PM Peak-Hour				Average Daily Traffic (ADT)			
Roadway	Location	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change
Charcot Avenue	East of First Street	910	1,060	150	16%	1,000	1,200	200	20%	11,900	14,100	2,200	18%
Charcot Avenue	East of Zanker Road	510	830	320	63%	850	1,240	390	46%	8,300	12,600	4,300	52%
Charcot Avenue	East of Junction Avenue	510	1,260	750	147%	900	1,720	820	91%	7,600	16,100	8,500	112%
Silk Wood Lane	West of Oakland Road	120	1,080	960	800%	50	930	880	1,760%	700	8,700	8,000	1,143%
Brokaw Road	East of Zanker Road	2,070	1,900	-170	-8%	2,130	2,000	-130	-6%	31,500	29,200	-2,300	-7%
Brokaw Road	East of Junction Avenue	2,290	1,990	-300	-13%	2,460	2,210	-250	-10%	36,800	32,400	-4,400	-12%
Brokaw Road	West of Oakland Road	1,810	1,620	-190	-10%	2,750	2,530	-220	-8%	35,100	32,000	-3,100	-9%
Trimble Road	East of Zanker Road	1,900	1,860	-40	-2%	1,990	1,950	-40	-2%	26,100	25,500	-600	-2%
Trimble Road	East of Junction Avenue	1,750	1,950	200	11%	1,670	1,610	-60	-4%	23,600	24,500	900	4%
Montague Exp	East of Seely Avenue	4,040	3,860	-180	-4%	3,020	2,810	-210	-7%	52,600	49,600	-3,000	-6%
Montague Exp	West of Oakland Road	4,030	3,740	-290	-7%	2,550	2,250	-300	-12%	50,900	46,400	-4,500	-9%
Zanker Road	South of Trimble Road	1,530	1,530	0	0%	1,770	1,820	50	3%	17,500	17,700	200	1%
Zanker Road	North of Brokaw Road	1,640	1,660	20	1%	1,490	1,550	60	4%	17,200	17,600	400	2%
Junction Avenue	South of Trimble Road	640	950	310	48%	1,140	1,410	270	24%	10,200	13,800	3,600	35%
Junction Avenue	North of Brokaw Road	840	760	-80	-10%	1,030	980	-50	-5%	11,800	10,900	-900	-8%
Oakland Road	North of Silk Wood Lane	1,360	1,610	250	18%	1,680	1,990	310	18%	19,800	23,400	3,600	18%
Oakland Road	South of Silk Wood Lane	1,300	1,740	440	34%	1,590	1,910	320	20%	18,500	23,500	5,000	27%
Ridder Park Dr	North of Oakland Road	730	730	0	0%	500	500	0	0%	6,700	6,700	0	0%
Fox Lane	West of Oakland Road	620	620	0	0%	440	440	0	0%	6,100	6,100	0	0%
Silk Wood Lane	South of Rock Avenue	100	100	0	0%	40	40	0	0%	500	500	0	0%
Rock Avenue	West of Oakland Road	360	360	0	0%	170	170	0	0%	3,200	3,200	0	0%
O'Toole Avenue	South of Montague Exp	480	470	-10	-2%	920	900	-20	-2%	7,800	7,700	-100	-1%
O'Toole Avenue	North of Charcot Avenue	380	350	-30	-8%	870	860	-10	-1%	6,600	6,300	-300	-5%
O'Toole Avenue	South of Charcot Avenue	140	140	0	0%	610	580	-30	-5%	4,000	3,900	-100	-3%
Paragon Drive	North of Charcot Avenue	130	240	110	85%	90	120	30	33%	1,300	2,200	900	69%

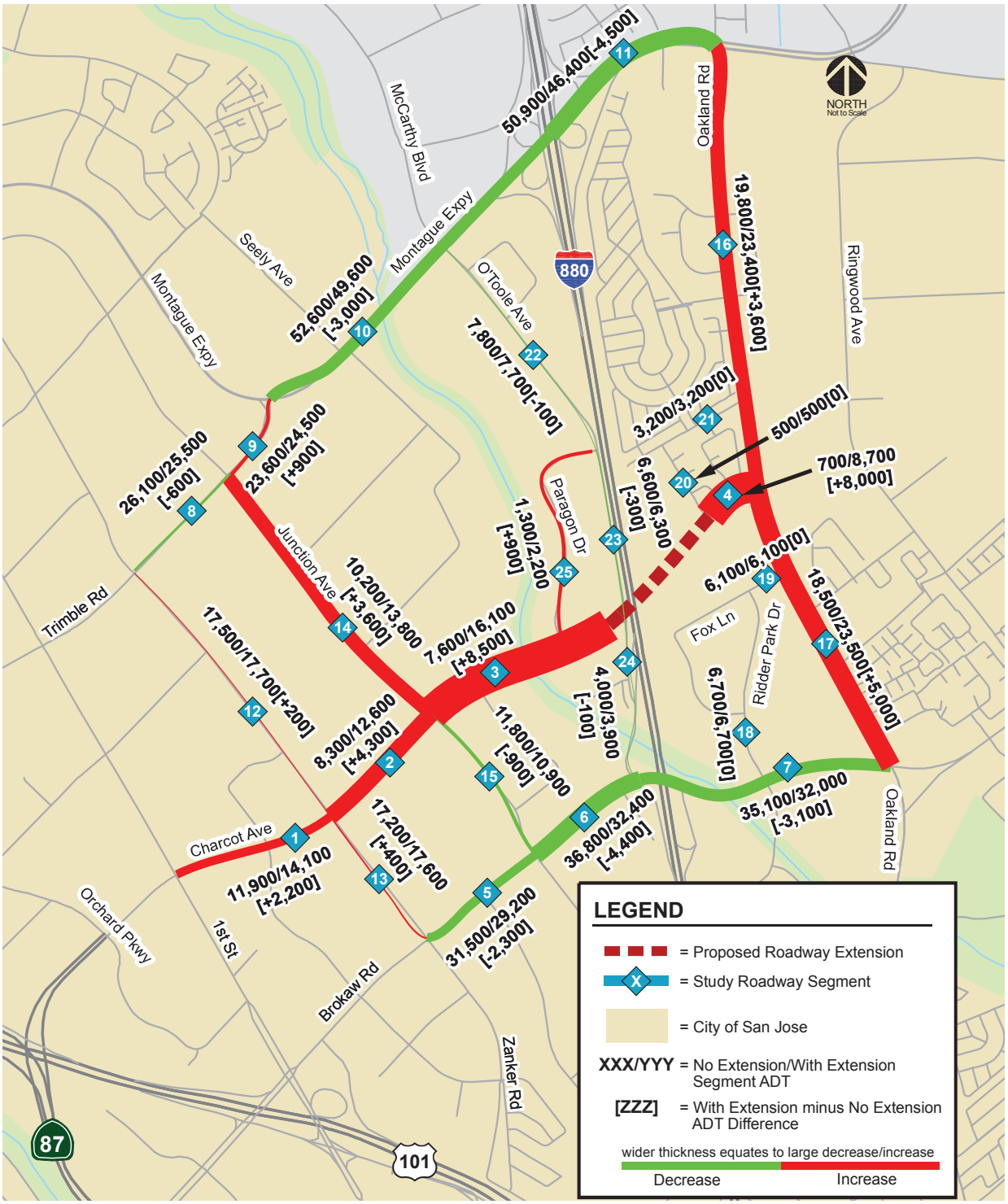
Volumes are for both directions. AM and PM peak-hour volumes were rounded to the nearest 10 and ADT volumes were rounded to the nearest 100.
Source: Hexagon Transportation Consultants, 2019.

Table 3.17-8: Changes in Year 2025 Roadway Volumes due to the Project													
		AM Peak-Hour				PM Peak-Hour				Average Daily Traffic (ADT)			
Roadway	Location	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change
Charcot Avenue	East of First Street	1,400	1,600	200	14%	1,680	1,910	230	14%	19,100	21,700	2,600	14%
Charcot Avenue	East of Zanker Road	670	1,090	420	63%	1,250	1,760	510	41%	11,800	17,400	5,600	47%
Charcot Avenue	East of Junction Avenue	710	1,570	860	121%	1,370	2,390	1,020	74%	11,300	21,400	10,100	89%
Silk Wood Lane	West of Oakland Road	120	1,240	1,120	933%	50	1,250	1,200	2,400%	700	10,700	10,000	1,429%
Brokaw Road	East of Zanker Road	2,500	2,290	-210	-8%	2,890	2,690	-200	-7%	40,300	37,300	-3,000	-7%
Brokaw Road	East of Junction Avenue	2,940	2,570	-370	-13%	3,280	2,900	-380	-12%	48,000	42,100	-5,900	-12%
Brokaw Road	West of Oakland Road	2,100	1,870	-230	-11%	3,250	2,970	-280	-9%	41,200	37,300	-3,900	-9%
Trimble Road	East of Zanker Road	2,600	2,540	-60	-2%	2,770	2,670	-100	-4%	36,100	34,900	-1,200	-3%
Trimble Road	East of Junction Avenue	2,540	2,630	90	4%	2,710	2,550	-160	-6%	36,200	35,700	-500	-1%
Montague Exp	East of Seely Avenue	5,390	5,120	-270	-5%	4,560	4,270	-290	-6%	74,100	69,900	-4,200	-6%
Montague Exp	West of Oakland Road	5,010	4,630	-380	-8%	3,990	3,580	-410	-10%	70,600	64,500	-6,100	-9%
Zanker Road	South of Trimble Road	2,340	2,330	-10	0%	2,740	2,710	-30	-1%	26,800	26,700	-100	0%
Zanker Road	North of Brokaw Road	2,410	2.390	-20	-1%	2,450	2,460	10	0%	26,600	26,700	100	0%
Junction Avenue	South of Trimble Road	910	1,220	310	34%	1,510	1,780	270	18%	14,200	17,700	3,500	25%
Junction Avenue	North of Brokaw Road	1,090	1,000	-90	-8%	1,430	1,380	-50	-3%	16,100	15,000	-1,100	-7%
Oakland Road	North of Silk Wood Lane	2,130	2,510	380	18%	2,460	2,860	400	16%	29,800	35,000	5,200	17%
Oakland Road	South of Silk Wood Lane	1,820	2,290	470	26%	2,280	2,740	460	20%	26,300	32,300	6,000	23%
Ridder Park Dr	North of Oakland Road	810	810	0	0%	570	570	0	0%	7,400	7,400	0	0%
Fox Lane	West of Oakland Road	700	700	0	0%	490	490	0	0%	6,800	6,800	0	0%
Silk Wood Lane	South of Rock Avenue	100	100	0	0%	40	40	0	0%	500	500	0	0%
Rock Avenue	West of Oakland Road	360	360	0	0%	170	170	0	0%	3,200	3,200	0	0%
O'Toole Avenue	South of Montague Exp	800	730	-70	-9%	1,280	1,240	-40	-3%	11,700	11,000	-700	-6%
O'Toole Avenue	North of Charcot Avenue	600	530	-70	-12%	1,080	1,050	-30	-3%	8,800	8,200	-600	-7%
O'Toole Avenue	South of Charcot Avenue	180	170	-10	-6%	860	800	-60	-7%	5,600	5,300	-300	-5%
Paragon Drive	North of Charcot Avenue	140	260	120	86%	210	260	50	24%	2,100	3,200	1,100	52%

Volumes are for both directions.AM and PM peak-hour volumes were rounded to the nearest 10 and ADT volumes were rounded to the nearest 100.
Source: Hexagon Transportation Consultants, 2019.

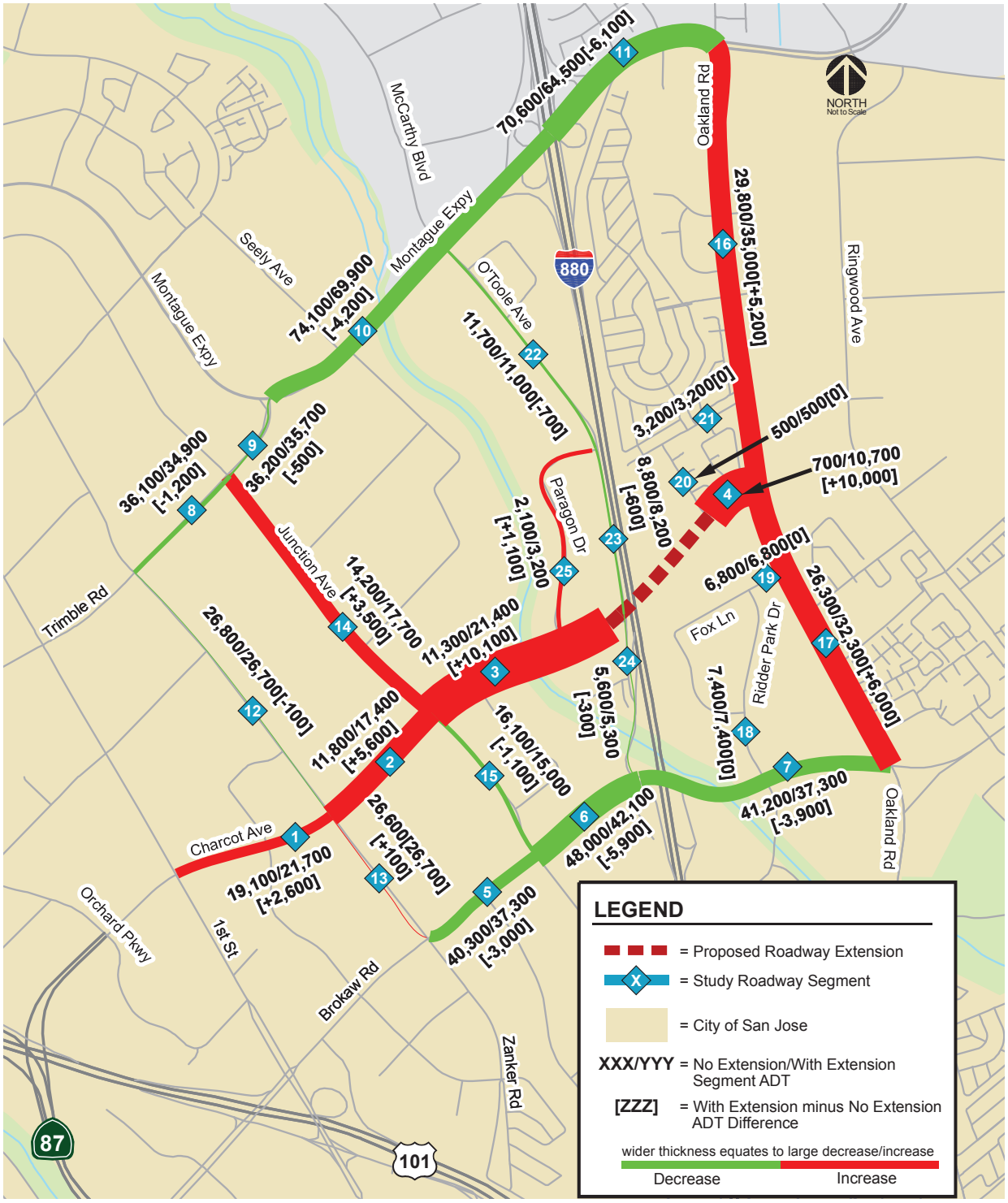
Table 3.17-9: Changes in Year 2040 Roadway Volumes due to the Project													
		AM Peak-Hour				PM Peak-Hour				Average Daily Traffic (ADT)			
Roadway	Location	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change	No Project	With Project	Volume Change	Percent Change
Charcot Avenue	East of First Street	2,150	2,390	240	11%	2,700	2,980	280	10%	30,100	33,400	3,300	11%
Charcot Avenue	East of Zanker Road	920	1,480	560	61%	1,850	2,540	690	37%	16,900	24,500	7,600	45%
Charcot Avenue	East of Junction Avenue	1,020	2,050	1,030	101%	2,090	3,390	1,300	62%	16,800	29,400	12,600	75%
Silk Wood Lane	West of Oakland Road	120	1,490	1,370	1,142%	50	1,720	1,670	3,340%	700	13,900	13,200	1,886%
Brokaw Road	East of Zanker Road	3,170	2,900	-270	-9%	4,020	3,730	-290	-7%	53,700	49,400	-4,300	-8%
Brokaw Road	East of Junction Avenue	3,910	3,450	-460	-12%	4,500	3,940	-560	-12%	64,800	56,800	-8,000	-12%
Brokaw Road	West of Oakland Road	2,520	2,260	-260	-10%	4,010	3,630	-380	-9%	50,200	45,200	-5,000	-10%
Trimble Road	East of Zanker Road	3,660	3,540	-120	-3%	3,940	3,740	-200	-5%	50,900	49,000	-1,900	-4%
Trimble Road	East of Junction Avenue	3,740	3,650	-90	-2%	4,260	3,990	-270	-6%	55,100	52,400	-2,700	-5%
Montague Exp	East of Seely Avenue	7,420	7,020	-400	-5%	6,890	6,460	-430	-6%	106,300	100,200	-6,100	-6%
Montague Exp	West of Oakland Road	6,470	5,980	-490	-8%	6,160	5,560	-600	-10%	100,200	91,700	-8,500	-8%
Zanker Road	South of Trimble Road	3,560	3,520	-40	-1%	4,190	4,060	-130	-3%	41,000	40,100	-900	-2%
Zanker Road	North of Brokaw Road	3,540	3,490	-50	-1%	3,890	3,840	-50	-1%	40,800	40,200	-600	-1%
Junction Avenue	South of Trimble Road	1,330	1,630	300	23%	2,070	2,340	270	13%	20,100	23,600	3,500	17%
Junction Avenue	North of Brokaw Road	1,470	1,360	-110	-7%	2,010	1,970	-40	-2%	22,300	21,200	-1,100	-5%
Oakland Road	North of Silk Wood Lane	3,300	3,880	580	18%	3,620	4,180	560	15%	44,900	52,400	7,500	17%
Oakland Road	South of Silk Wood Lane	2,600	3,110	510	20%	3,330	3,980	650	20%	38,000	45,500	7,500	20%
Ridder Park Dr	North of Oakland Road	940	940	0	0%	660	660	0	0%	8,600	8,600	0	0%
Fox Lane	West of Oakland Road	810	810	0	0%	560	560	0	0%	7,800	7,800	0	0%
Silk Wood Lane	South of Rock Avenue	100	100	0	0%	40	40	0	0%	500	500	0	0%
Rock Avenue	West of Oakland Road	360	360	0	0%	170	170	0	0%	3,200	3,200	0	0%
O'Toole Avenue	South of Montague Exp	1,280	1,130	-150	-12%	1,820	1,760	-60	-3%	17,400	16,100	-1,300	-7%
O'Toole Avenue	North of Charcot Avenue	920	820	-100	-11%	1,400	1,310	-90	-6%	12,100	11,100	-1,000	-8%
O'Toole Avenue	South of Charcot Avenue	240	220	-20	-8%	1,240	1,140	-100	-8%	8,000	7,300	-700	-9%
Paragon Drive	North of Charcot Avenue	160	300	140	88%	370	480	110	30%	3,200	4,700	1,500	47%

Volumes are for both directions. AM and PM peak-hour volumes were rounded to the nearest 10 and ADT volumes were rounded to the nearest 100.
Source: Hexagon Transportation Consultants, 2019.



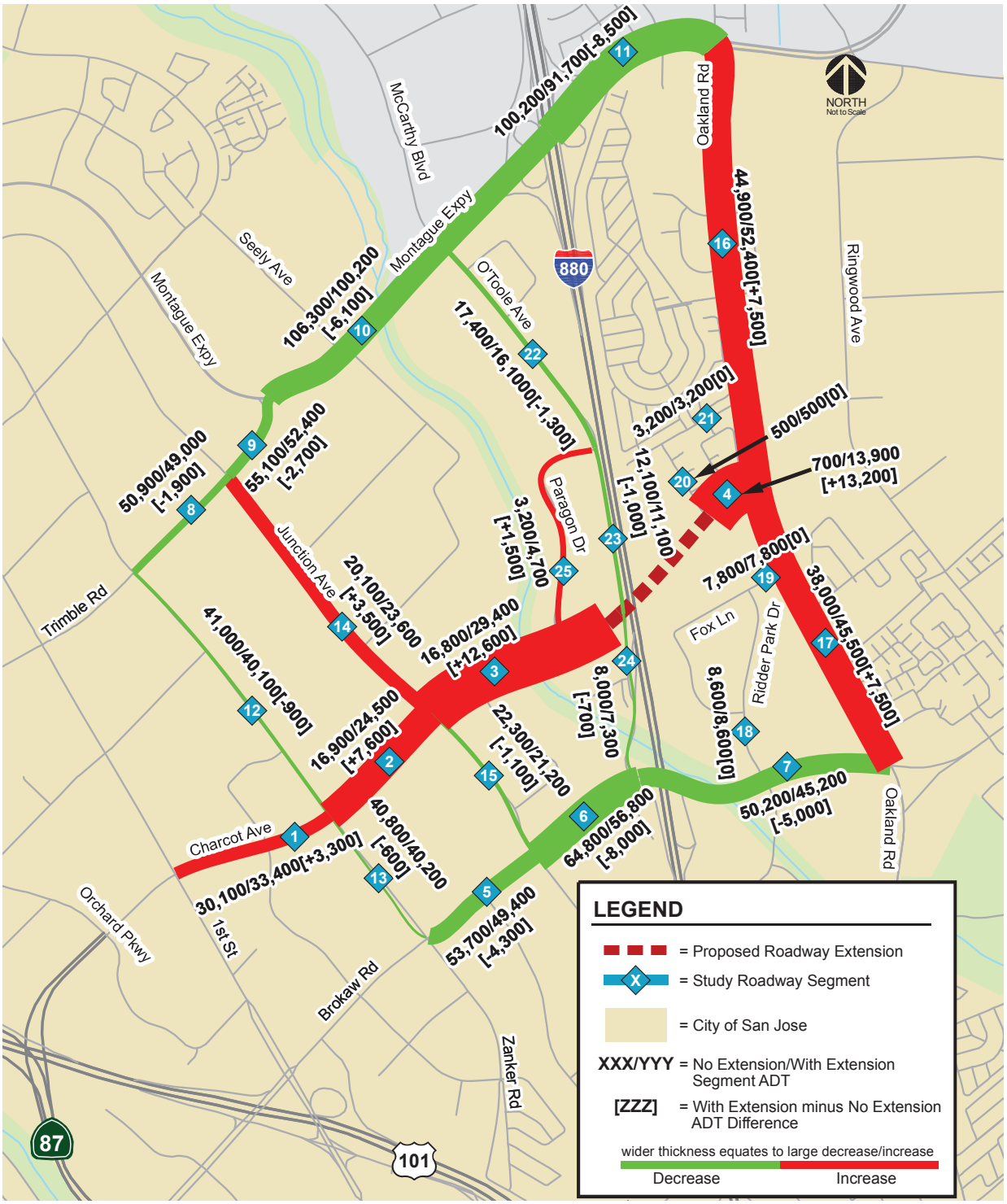
Source: Hexagon Transportation Consultants, Inc., 4/8/19.

YEAR 2018: CHANGES IN ADT DUE TO PROJECT | FIGURE 3.17-5



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

YEAR 2025: CHANGES IN ADT DUE TO PROJECT | FIGURE 3.17-6



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

YEAR 2040: CHANGES IN ADT DUE TO PROJECT | FIGURE 3.17-7

3.17.3.3 *Changes in Vehicle-Hours-Traveled and Speeds due to the Project*

As another measure of the overall effect of a project on the roadway system, the City's TDF model calculates total vehicle-hours-traveled (VHT) and average speeds on the roadway network for both No Project and Project conditions. The results of these calculations from the model are presented in Table 3.17-10. Compared to No Project, the Project would reduce VHT and increase average speeds.

Table 3.17-10: Changes in Vehicle-Hours-Traveled and Speeds due to the Project

	Existing		Year 2025		Year 2040	
Scenario	**Daily VHT**	**Average Speed (mph)**	**Daily VHT**	**Average Speed (mph)**	**Daily VHT**	**Average Speed (mph)**
No Project	50.074	25.22	104,144	17.49	185,249	14.35
Project	50,019	25.28	103,460	17.62	183,620	14.49
Absolute Change	-55	+0.06	-684	+0.13	-1,629	+0.14
Percent Change	**-0.1%**	**+0.2%**	**-0.7%**	**+0.8%**	**-0.9%**	**+1.0%**

Source: Hexagon Transportation Consultants, 2019.

3.17.3.4 *Changes in Truck Volumes due to the Project*

Table 3.17-2 depicts the existing use of roadways in the project area by large trucks based on counts taken in September 2018. The use of the proposed Charcot Avenue Extension by large trucks (semis) will not be prohibited. However, it is unlikely that a substantial amount of large trucks will utilize the extension since Montague Expressway and Brokaw Road provide the most direct access routes to regional freeways including US 101, I-680, and I-880.

Truck traffic on the proposed Charcot Avenue Extension is anticipated to be limited to only those trucks originating from or bound for destinations along Charcot Avenue between Oakland Road and Zanker Road. In addition, the Charcot Avenue Extension will not provide direct access to US 101, I-680, and I-880. Therefore, it is expected that the composition of truck traffic along the Charcot Avenue Extension would be less than that currently along Montague Expressway and Brokaw Road, and comparable to the seven percent average on other roadways in the project area.

3.17.3.5 *Changes in Travel Time due to the Project*

A quantitative evaluation of travel times without and with the proposed roadway extension was completed as a supplement to the traffic modeling described above. The evaluation consisted of estimates of travel times to and from major residential and employment destinations within a general two-mile radius of the Charcot Avenue Extension. The use of the proposed extension is expected to be minimal outside of a two-mile radius since other roadways, including Montague Expressway (8-lane roadway) and Brokaw Road (6-lane roadway) will continue to provide greater capacity and speed limits than the proposed two-lane roadway extension.

The evaluation utilized Google Maps navigation to estimate current travel times during the morning and evening commute periods to and from destinations on the west and east sides of I-880 within the

general two-mile radius. Travel times between the selected origins and destinations were projected assuming that it would take approximately 30 seconds to travel between Oakland Road and O'Toole Avenue via the proposed extension. Figure 3.17-8 presents a graphical summary of the travel time evaluation. Table 3.17-11 shows the estimated travel time reductions due to the proposed extension. Highlights of the conclusions of the travel time evaluation are as follows:

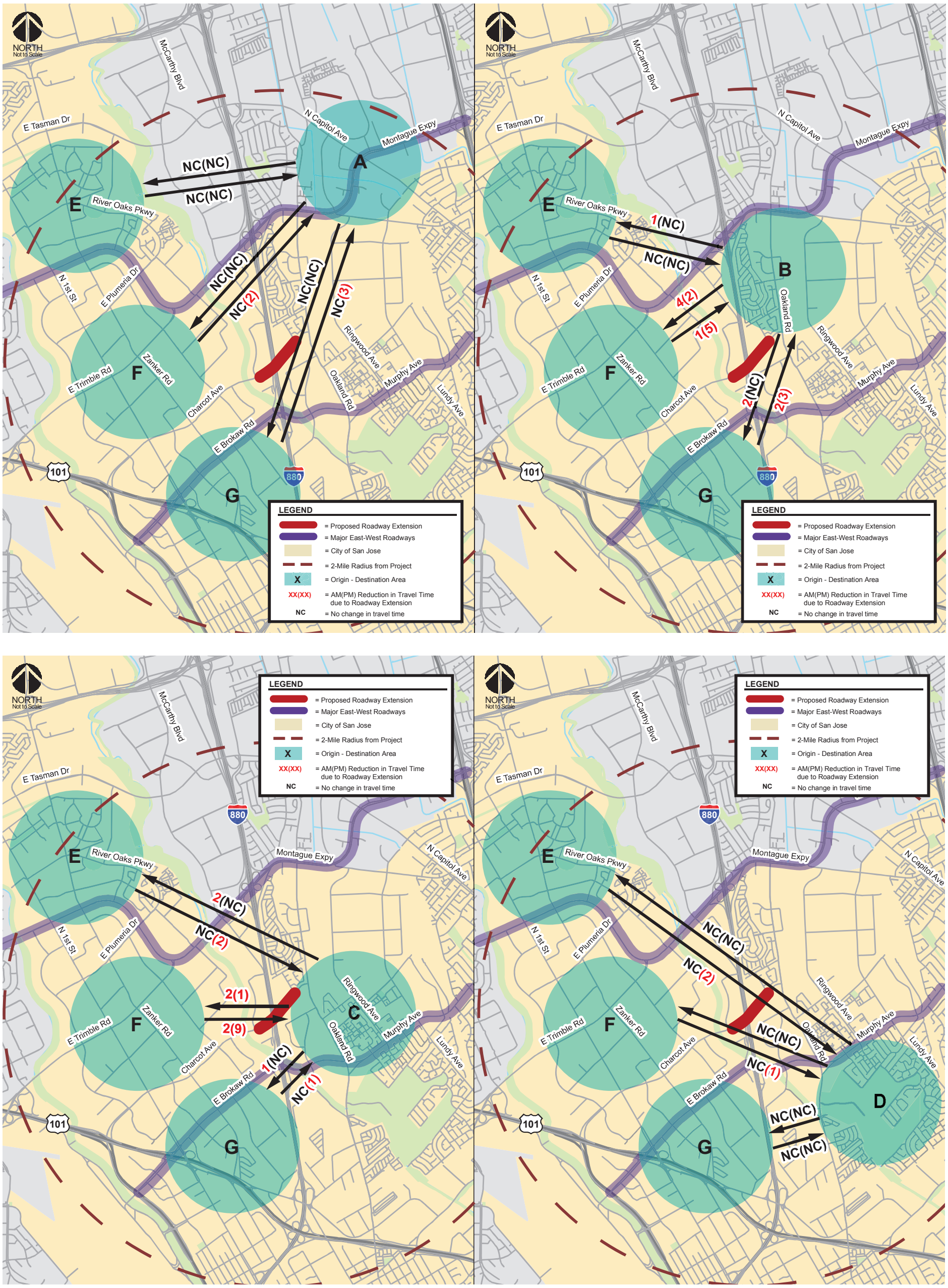
- The proposed Charcot Avenue Extension would provide the greatest reduction in travel times for trips with origins and destinations that are located between Montague Expressway and Brokaw Road. The estimated reduction would vary from one to nine minutes, which equates to a 12 to 60 percent decrease.

The proposed extension is projected to result in only minimal (i.e., less than three minutes) reductions in travel times for trips with origins and destinations that are located near Montague Expressway and Brokaw Road.

Table 3.17-11: Reduction in Travel Times due to the Charcot Avenue Extension

			Westbound Travel Times (min)			**Eastbound Travel Times (min)**		
Origin [a]	**Destination [a]**	**Peak Hour**	**Via shortest existing route**	**Via Charcot Extension**	**Reduction**	**Via shortest existing route**	**Via Charcot Extension**	**Reduction**
A	E	AM	13	17	None	7	12	None
		PM	6	12	None	10	12	None
	F	AM	12	12	None	5	7	None
		PM	7	7	None	9	**7**	**2**
	G	AM	12	13	None	7	8	None
		PM	9	9	None	11	**8**	**3**
B	E	AM	10	**9**	**1**	7	9	None
		PM	7	9	None	10	10	None
	F	AM	8	**4**	**4**	6	**5**	**1**
		PM	6	**4**	**2**	10	**5**	**5**
	G	AM	8	**6**	**2**	8	**6**	**2**
		PM	6	6	None	9	**6**	**3**
C	E	AM	13	**11**	**2**	9	11	None
		PM	9	10	None	13	**11**	**2**
	F	AM	8	**6**	**2**	8	**6**	**2**
		PM	6	**5**	**1**	15	**6**	**9**
	G	AM	8	**7**	**1**	7	7	None
		PM	6	7	None	8	**7**	**1**
D	E	AM	13	13	None	11	12	None
		PM	10	11	None	14	**12**	**2**
	F	AM	7	8	None	6	7	None
		PM	5	6	None	8	**7**	**1**
	G	AM	9	10	None	6	8	None
		PM	5	8	None	7	8	None

Travel time data collected from Google Maps between October 9, 2018 and October 11, 2018
Travel times in **bold** indicate less travel time with the Charcot Avenue Extension, as compared to travel time using the shortest existing route.
[a] Origins and destinations are shown on Figure 3.17-8.
Source: Hexagon Transportation Consultants, 2019.



Source: Hexagon Transportation Consultants, Inc., 4/8/19.

TRAVEL TIME REDUCTIONS DUE TO PROJECT | FIGURE 3.17-8

3.17.3.6 *Effects of the Project on Bicycle and Pedestrian Facilities*

Existing bicycle and pedestrian facilities are described above in Section 3.17.1.2.

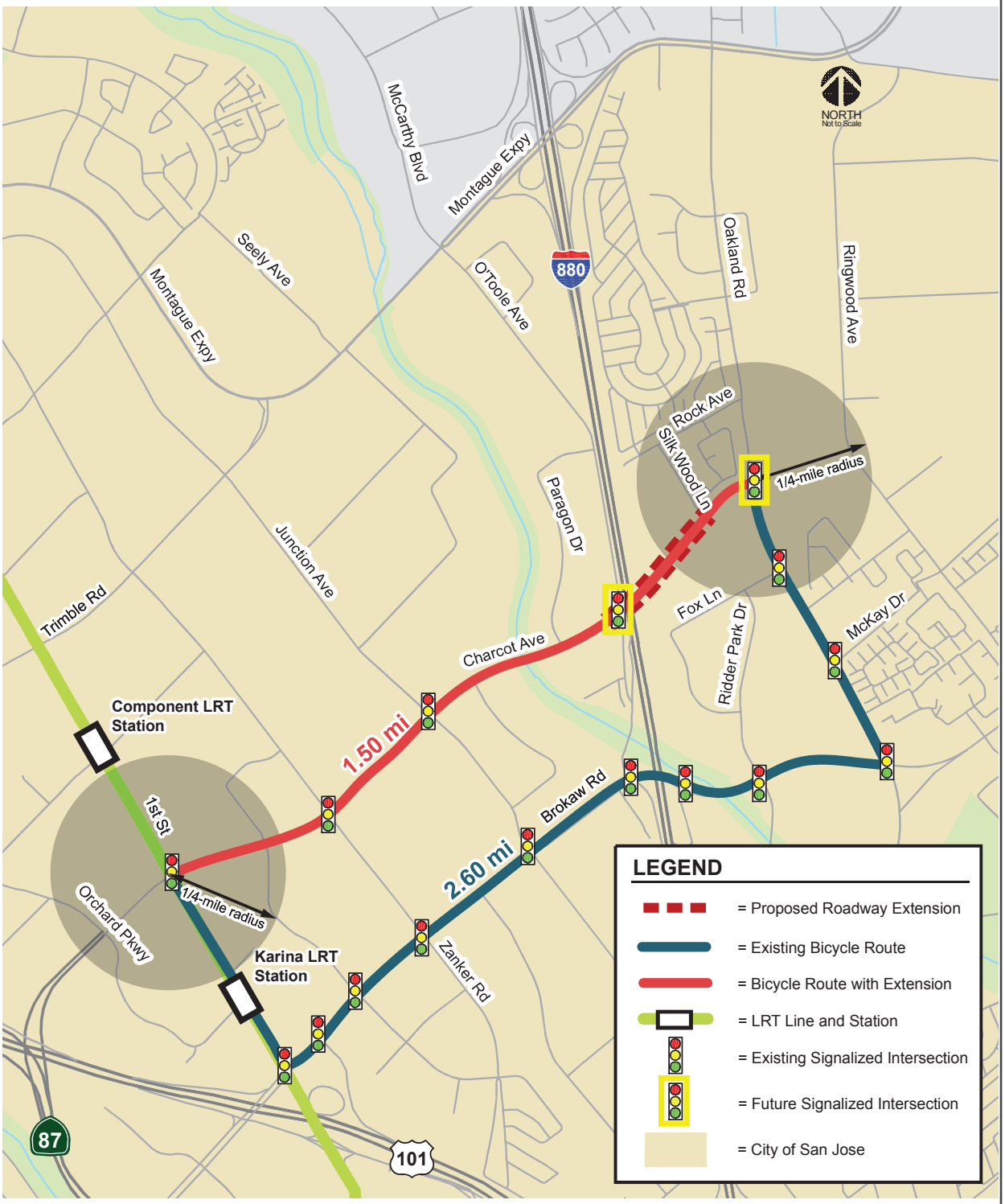
The project includes new Class IV bike lanes and sidewalks along both sides of the proposed roadway extension. The new bicycle and pedestrian facilities of the project will provide for a safe crossing of I-880 for pedestrians and bicyclists that does not currently exist in the project area. The current crossing of I-880 provided by Montague Expressway and Brokaw Road require lengthy travel routes from destinations within the immediate project area. As shown in Figure 3.17-9, bicyclists traveling between areas east of I-880 (in the vicinity of Oakland Road and Silk Wood Lane) and areas west of I-880 (including the Karina LRT Station on First Street) currently must utilize Brokaw Road. The approximately two-mile route requires traveling through congested roadway corridors, including Oakland Road and Brokaw Road, and ten or more signalized intersections. Therefore, it is likely that the length of the existing travel paths to cross I-880 and the need to negotiate multiple signalized intersections along high-volume roadways within the project area do not encourage the use of bicycles.

With the proposed roadway extension, bicyclists could utilize Charcot Avenue between Oakland Road and First Street. The travel route across I-880 would be reduced by only ¼-mile with the Charcot Avenue extension. However, the travel time along the route provided by the Charcot Avenue extension would be greatly reduced and safety greatly improved since it will allow travel through fewer than five signalized intersections and along a less congested two-lane roadway with protected bike lanes.

Similarly, the current pedestrian routes across I-880 in the vicinity of the extension require the use of sidewalks along Brokaw Road or Montague Expressway. The current pedestrian routes between areas east of I-880 (near the vicinity of Oakland Road and Silk Wood Lane) and areas west of I-880 (near the vicinity of Paragon Drive and Charcot Avenue) require an approximately two-mile walk via Brokaw Road and 2.5 miles via Montague Expressway. In general, walking distances of more than ¾ of a mile are not ideal. Therefore, it is likely that the length of the existing travel paths to cross I-880 within the project area do not encourage walking. With the proposed extension, the pedestrian routes would be reduced to approximately ½-mile with the use of sidewalks provided with the Charcot Avenue extension.

Therefore, the proposed roadway project would provide for a new safe crossing of I-880 in the project area and significantly shorten pedestrian and bicycle travel routes. The reduction in length of travel routes would provide the opportunity to utilize walking and bicycling as an alternative travel mode and reduce automobile trips in the project area. Bicyclists, in particular, would be able to utilize existing bike lanes along Charcot Avenue as a faster alternative to bike lanes along Brokaw Road.

The project's improvements to the bicycle network would provide the project site with improved connections to surrounding pedestrian/bike and transit facilities and a balanced transportation system as outlined in the Envision 2040 General Plan goals and policies (see Section 3.17.1.1).



Source: Hexagon Transportation Consultants, Inc., April 2019.

IMPROVED BICYCLE TRAVEL ROUTES | FIGURE 3.17-9

3.17.3.7 *Effects of the Project on Orchard School Drop-Off and Pick-Up Activities*

The existing Orchard Elementary School drop-off and pick-up locations and activities are described above in Section 3.17.1.2 and are depicted on Figure 3.17-4. The school's primary entrances and parking lot are located along Fox Avenue and there is an access to the school's event center parking lot along Oakland Road, approximately 520 feet from the Oakland Road/Charcot Avenue intersection. The project would not construct improvements at these locations and, therefore, it is not anticipated that the proposed Charcot Avenue Extension would have an adverse effect on the school's access. Further, the Charcot Avenue Extension would have no effect on the school's drop-off/pick-up areas and/or parking lots that are located on Fox Lane and Oakland Road.

With the Charcot Avenue Extension in place, it would no longer be possible for cars to illegally stop/park along the south side of Silk Wood Lane to drop-off, pick-up, or wait for students. Further, the project would remove the existing on-street parking along the north side of Silk Wood Lane. These changes would substantially curtail this informal use of Silk Wood Lane for student drop-off/pick-up because the only remaining on-street parking will be along the north-south segment of Silk Wood Lane that connects to Rock Avenue. This, in turn, would result in a greater use of the official Oakland Road and Fox Lane drop-off/pick-up areas.

It is recommended that Orchard School consider a review of the school drop-off/pick-up plan and procedures and implement measures to reduce adverse effects on surrounding businesses and residential areas during the school drop-off/pick-up periods. Since Silk Wood Lane is not a designated school drop-off/pick-up area, parents should be directed to only use designated drop-off/pick-up areas along Oakland Road and Fox Lane. Staggered arrival and dismissal schedules should also be considered given the physical limitations of the use of public streets and school parking lots to accommodate the current demand of the school.

Although the project would impact the ability to drop-off/pick-up students on Silk Wood Lane, it is likely that students would continue to cross Charcot Avenue/Silk Wood Lane as they walk between the school and the neighborhood to the north. To enhance safety for students and all pedestrians crossing Charcot Avenue at this location, the following features would be constructed as part of the project:

- A new pedestrian-only signal such as a High-Intensity Activated crosswalk (HAWK) beacon would be installed along Charcot Avenue at Silk Wood Lane.
- A median would be constructed along Charcot Avenue at Silk Wood Lane to restrict left-turn movements.
- The width of the sidewalk on the south side of Charcot Avenue at Silk Wood Lane would be widened to 11 feet. In addition, a 9-foot wide paved pedestrian path would be constructed next to the 11-foot wide sidewalk to connect to a gate at the school playground.
- The 11-foot wide sidewalk would narrow back to an 8-foot width along the segment of Charcot Avenue between Silk Wood Lane and Oakland Road and extend around the northeastern corner of the existing Orchard School ball field.

3.17.3.8 *Silk Wood Lane Cut-Through and Rock Avenue Traffic Diversion*

The following discussion describes two scenarios of trip diversion that could result from construction of the project, such diversion that would affect traffic volumes on the streets of the neighborhood located between Silk Wood Lane and Rock Avenue. The potential trip diversion routes are shown on Figure 3.17-10.

Trip Diversion Scenario #1

A median along the proposed Charcot Avenue Extension, at its intersection with Silk Wood Lane, is proposed to be constructed to restrict turn-movements at the intersection to right-turns to and from Silk Wood Lane only. The turn restrictions at Silk Wood Lane would result in a diversion of traffic originating from the neighborhood along Silk Wood Lane that would be bound for Oakland Road to instead use Rock Avenue to access Oakland Road. It is estimated that approximately 22 AM peak-hour vehicles and 19 PM peak-hour vehicles would be diverted to Rock Avenue with the turn restrictions at Silk Wood Lane along Charcot Avenue. The Oakland Road/Rock Avenue intersection currently operates at LOS B conditions during each of the peak hours. The turn restrictions on Silk Wood Lane and resulting traffic diversion would not degrade operations at the Oakland Road/Rock Avenue intersection. Further, the traffic that would be diverted to Rock Avenue is already currently utilizing the internal residential streets of the Silk Wood neighborhood and, therefore, would have minimal effect on the neighborhood streets and Rock Avenue.

Trip Diversion Scenario #2

With the proposed Charcot Avenue Extension, Silk Wood Lane would intersect the new extended Charcot Avenue. As described above, a median is proposed to restrict turn-movements at the intersection to right-turns to and from Silk Wood Lane only. However, Silk Wood Lane would continue to provide access to Rock Avenue. Therefore, it is possible that drivers may utilize Silk Wood Lane as a cut-through route. Specifically, drivers travelling along southbound Oakland Road that are bound for westbound Charcot Avenue may choose to use Silk Wood Lane as a bypass to avoid congestion and delays at the Oakland Road/Charcot Avenue intersection.

Silk Wood Lane and Rock Avenue are narrow residential streets with on-street parking along both sides of the streets and speed limits of 25 mph and do not provide for the free-flow of travel as does the six-lane Oakland Road with posted speed limit of 45-mph. In addition, the use of Silk Wood Lane results in an increase in travel distance of 0.1-mile when compared to the use of Oakland Road. Therefore, the use of Silk Wood Lane as a bypass would be dependent on delay at the Oakland Road/Charcot Avenue intersection and perceived travel time reduction experienced by drivers. Based on the projected southbound right-turn volume at the Oakland Road/Charcot Avenue intersection, it is estimated that approximately 129 AM peak-hour vehicles, and 54 PM peak-hour vehicles could potentially use Silk Wood Lane as a cut-through route. Should this volume of cut-through traffic occur, it would represent an increase of peak-hour traffic volumes of nearly twice the existing volumes along Silk Wood Lane.

Source: Hexagon Transportation Consultants, Inc., 4/8/19.

POTENTIAL SILK WOOD LANE CUT-THROUGH AND TRAFFIC DIVERSION | FIGURE 3.17-10

Potential Traffic Calming Measures

The recommended median and turn-restrictions along the proposed Charcot Avenue extension, at its intersection with Silk Wood Lane, will minimize increases in traffic volumes along Silk Wood Lane. In addition, the use of Silk Wood Lane as a cut-through route is expected to be minimal. Nevertheless, the effects of a roadway project such as the proposed Charcot Avenue extension on surrounding residential streets like Silk Wood Lane are of concern.

In order to minimize any potential adverse effects of traffic conditions along Silk Wood Lane, traffic calming measures can be considered for implementation along Silk Wood Lane. As an example, Silk Wood Lane can be narrowed at its intersections with Charcot Avenue and Rock Avenue by extending the curb radius into the street. Curb extensions are commonly referred to as bulb-outs. Bulb-outs typically shorten the pedestrian crossing lengths, keep the vehicle speeds low and allow better pedestrian visibility around parked cars. However, bulb-outs result in a loss of on-street parking and also impede emergency response vehicles and other trucks.

3.18 TRIBAL CULTURAL RESOURCES

The following discussion is based on an Archaeological Survey and Extended Phase I Report prepared by *Far Western Anthropological Research Group, Inc*. in May 2018. Due to the sensitive information contained in the report, it is on file with the City of San José Community Development Department. The report can be viewed by qualified personnel during normal business hours.

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State

Assembly Bill 52 Tribal Cultural Resources

A tribal cultural resource can be a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. It also must be either on or eligible for the California Historic Register, a local historic register, or the lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource. Assembly Bill 52 (AB 52), which amendment the Public Resources Code, requires lead agencies to participate in formal consultations with California Native American tribes during the CEQA process, if requested by any tribe, to identify tribal cultural resources that may be subject to significant impacts by a project. Where a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document must discuss the impact and whether feasible alternatives or mitigation measures could avoid or substantially lessen the impact. Consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached.

3.18.1.2 *Existing Conditions*

Native American consultation was conducted for the proposed project. A request was submitted to the Native American Heritage Commission (NAHC) on January 1, 2018 for a search of the sacred lands file and a list of interested Native American parties. The NAHC stated that no known Sacred Lands are recorded within the project area and provided a list of six Native American contacts that may have knowledge about cultural resources in the area. No requests for formal consultation under AB 52 and no identifications of tribal cultural resources were received from the six contacted Native American individuals/organizations. One contact requested a qualified Native American archaeological monitor be present during all ground-disturbing activity.

3.18.2 Discussion of Impacts to Tribal Cultural Resources

For the purpose of determining the significance of the project's impacts on tribal cultural resources, would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying these criteria, the significance of the resource to a California Native American tribe shall be considered.

3.18.2.1 *Project Impacts*

Impact TCR-1:	**The project may impact buried archaeological resources, such resources that may be determined to be tribal cultural resources eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1(k). Mitigation for these impacts is included in the project. (Less Than Significant Impact with Mitigation Incorporated)**

Impact TCR-2:	**The project may impact buried archaeological resources, such resources that may be tribal cultural resources that are determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1. Mitigation for these impacts is included in the project. (Less Than Significant Impact with Mitigation Incorporated)**

As noted above, tribal cultural resources may be a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. No tribes identified project site or surrounding area as a location with known or potential tribal cultural resources. The project site is, however, located in an area considered sensitive for archaeological deposits which could include tribal cultural objects. Impacts to tribal cultural objects, if found, would be reduced to less than significant with implementation of mitigation measures CUL-2.1 through CUL-2.7.

No other tribal cultural features, including sites, features, places, cultural landscapes, or sacred places were identified based on available information or consultation with the tribes. In addition, any prehistoric surface features or landscapes have been modified due to development of the project site and area. However, if a subsurface site or feature is found during project construction and it is determined to be a tribal cultural resource, implementation of mitigation measures CUL-2.1 through CUL-2.7 [See Cultural Resources Section 3.5] would reduce any impact to a less than significant level. Therefore, implementation of the proposed project would have a less than significant impact on tribal cultural resources**. (Less Than Significant Impact with Mitigation Incorporated)**

3.18.2.2 *Cumulative Impacts*

Impact TCR-C:	**The project would not result in a cumulatively considerable contribution to a significant tribal cultural resources impact. (No Cumulative Impact)**

The geographic study area for cumulative tribal cultural resource impacts is defined as all locations within 1,000 feet of the alignment of the Charcot Avenue Extension. This radius was chosen because

it would include surrounding projects that could affect the same tribal cultural resources as any that might be affected by the project.

As stated above, the project would not impact any tribal cultural resources since none are present. Therefore, per CEQA Guidelines Section 15130(a)(1), there would be no cumulative impacts to tribal cultural resources. **(No Cumulative Impact)**

3.19 UTILITIES AND SERVICE SYSTEMS

3.19.1 Environmental Setting

3.19.1.1 *Regulatory Framework*

Local

Envision San José 2040 General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts to utilities and public services resulting from planned development projects with the City. The policies listed in Table 3.19-1 are specific to utilities and service systems and are applicable to the proposed project.

Table 3.19-1: General Plan Policies – Utilities and Services

Policy	Description
MS-3.3	Promote the use of drought tolerant plants and landscaping materials for nonresidential and residential uses.
IN-3.7	Design new projects to minimize potential damage due to stormwaters and flooding to the site and other properties.
EIN-3.9	Require developers to prepare drainage plans that define needed drainage improvements for proposed developments per City standards.
IN-3.10	Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit

3.19.1.2 *Existing Conditions*

The project alignment contains the following utilities: water, stormwater, sanitary sewer, gas, electric line, and communication facilities. The project alignment does not contain uses that would generate demands on the City's sanitary sewer and wastewater treatment system, nor does it generate solid waste. The project alignment, however, contains landscaping that uses water, and partially contains an existing 15-inch storm drain line along the alignment that carries stormwater runoff to Coyote Creek.

3.19.2 Discussion of Impacts to Utilities and Service Systems

For the purpose of determining the significance of the project's impacts on utilities and service systems, would the project:

1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
4) Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
5) Negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals?
6) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?

3.19.2.1 *Utility Construction or Relocation Impacts*

Impact UTL-1:	**The project would require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which would not cause significant environmental effects. (Less than Significant Impact)**

Electricity and Natural Gas

The roadway extension would not include uses that require the consumption of natural gas. Electricity consumption associated with the project would be limited to power for new streetlights and traffic signals. Electrical consumption by such features would be minimal because, consistent with the City's Green Building Policy for Municipal Projects, that equipment would utilize LED-bulbs. **(Less than Significant Impact)**

Stormwater Drainage

As discussed in Section 3.10, *Hydrology and Water Quality*, the project would increase the site's impervious surfaces by approximately 2.9 acres, which would increase its stormwater runoff. The project proposes to relocate and connect to the existing 15-inch storm drain and install stormwater treatment onsite in the form of bioretention areas. The installation of the bioretention area would be in accordance with the RWQCB Municipal Regional NPDES permit, which would reduce impacts to storm drain systems to a less than significant level. For this reason, the project would not exceed the capacity of the storm drain system. **(Less Than Significant Impact)**

Utility Relocation

The project would relocate existing utilities (mainly underground) along the alignment to accommodate the construction of the project. The project proposes to acquire a utility easement north of the western alignment between Paragon Drive and O'Toole Avenue for the utility relocation. Relocation of utilities in the western alignment would remove approximately seven trees, which would be mitigated as described in Section 3.4, *Biological Resources*.

Utility relocation in the remaining part of the alignment would be within the City's existing utility easement where previous ground disturbances has occurred and would not result in removal of trees.

For the reasons described above, the proposed project would not result in significant impacts to utilities and service systems. **(Less Than Significant Impact)**

3.19.2.2 *Water Supply Impacts*

Impact UTL-2:	**The water needed for irrigation along the Charcot Avenue Extension would be available. (Less than Significant Impact)**

The proposed landscaping along the Charcot Avenue Extension, including replaced trees, would be irrigated, which would require water use. Consistent with Chapter 15.11 of the Municipal Code, *Water Efficient Landscape Standards for New and Rehabilitated Landscaping*, the proposed trees and landscaping would be drought tolerant, and would require little watering. For these reasons, the project would not generate a significant demand on water use that requires new or expanded entitlements. **(Less Than Significant Impact)**

3.19.2.3 *Wastewater Treatment Impacts*

Impact UTL-3:	**The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (No Impact)**

The project would not include uses that would generate wastewater. Therefore, the project would not result in demand on wastewater treatment systems. **(No Impact)**

3.19.2.4 *Solid Waste Impacts*

Impact UTL-4:	**The project would not generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure. (No Impact)**

Impact UTL-5:	**The project would not negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals. (No Impact)**

Impact UTL-6:	**The project would not be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste. (No Impact)**

Consistent with existing City policy, 75 percent of all construction waste generated by the project shall be diverted from landfills (e.g., recycled or reused). The operation of the project would not

include uses that would generate solid waste. Therefore, the project would not impact solid waste or landfill capacity. **(No Impact)**

3.19.2.5 *Cumulative Impacts*

Impact UTL-C:	**The project would not result in a cumulatively considerable contribution to a significant utilities and service systems impact. (Less than Significant Cumulative Impact)**

The geographic study area for cumulative impacts to utilities and service systems varies by subcategory. For impacts associated with utility line construction or relocation, the study area is confined to locations at or adjacent to the affected lines. For impacts associated with cumulative demand (e.g., electricity, natural gas, water supply, wastewater treatment, solid waste disposal, etc.), the study area is defined as all locations within the applicable utility's service area.

As discussed above, the project would not generate wastewater, nor would it generate solid waste, and would not consume natural gas. Therefore, per CEQA Guidelines Section 15130(a)(1), the project would not contribute to a cumulative impact for those utility categories. **(No Cumulative Impact)**

Landscaping associated with the project would require irrigation. However, water consumption for irrigation would not be substantial because the project would plant drought tolerant species. Further, assuming water conservation measures are implemented, the *Envision San José 2040 General Plan* anticipates an adequate water supply for buildout of the planned land uses. For these reasons, the cumulative water supply demand would not be significant and the project's contribution to total water demand would not be cumulatively considerable. (**Less than Significant Cumulative Impact)**

As described above, the project would relocate existing utilities, including a 15-inch storm drain, along its alignment to accommodate the roadway extension. Based on a review of proposed and approved permits for adjacent parcels, there are no other projects that would require the relocation of these same utilities. Therefore, per CEQA Guidelines Section 15130(a)(1), there would be no cumulative utility relocation impact. **(No Cumulative Impact)**

3.20 WILDFIRE

3.20.1 Environmental Setting

3.20.1.1 *Regulatory Framework*

Emergency Operations and Evacuation Plans

The City of San José's Emergency Operations Plan includes standard operating procedures for flood events, heat waves, off-airport aviation accidents, power outages, terrorism, and urban/wildland interface fires. The Citywide Emergency Evacuation Plan sets forth the responsibilities of City personnel and coordination with other agencies to ensure the safety of San José citizens in the event of a fire, geologic, or other hazardous occurrence.

3.20.1.2 *Existing Conditions*

The project site is within an urban environment and is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The closest location with a risk of wildland fires are the rural and largely open space lands of the foothills of the Diablo Range, more than three miles to the east.

3.20.2 Discussion of Wildfire Impacts

For the purpose of determining the significance of the project's wildfire impacts, and if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

1) Substantially impair an adopted emergency response plan or emergency evacuation plan?
2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.20.2.1 *Project Impacts*

Impact WF-1:	**The project would not impair an adopted emergency response plan or emergency evacuation plan. (No Impact)**

Impact WF-2:	**The project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (No Impact)**

Impact WF-3:	**The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (No Impact)**

Impact WF-4:	**The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (No Impact)**

As stated above, the project site is within an urban environment and is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Further, there are no aspects of the project that would potentially exacerbate wildlife risks. There is no aspect of the project that would cause or worsen risks associated with conditions that would exist in a post-wildfire environment. By constructing a new east-west crossing of I-880, an additional facility would be available for use in the case of an emergency or emergency evacuation. Therefore, the project would not result in any significant impacts related to wildfires. **(No Impact)**

3.20.2.2 *Cumulative Impacts*

Impact WF-C:	**The project would not result in a cumulatively considerable contribution to a significant wildfire impact. (No Cumulative Impact)**

If the project is within state responsibility areas or lands classified as very high fire hazard severity zones, the geographic study area for cumulative wildlife impacts would be all locations within or near the boundaries of those zones.

For the reasons stated above, the project would have no wildfire impacts. Therefore, per CEQA Guidelines Section 15130(a)(1), there would be no cumulative wildfire impact. **(No Cumulative Impact)**

SECTION 4.0 GROWTH-INDUCING IMPACTS

4.1 INTRODUCTION

CEQA requires a discussion of the potential growth-inducing impacts of a proposed project. This discussion addresses how implementation of the proposed project could either directly or indirectly foster economic development, population growth, or the construction of additional housing, and how that growth would affect the surrounding environment. Section 15126.2(e) of the State CEQA Guidelines states that a growth-inducing impact could occur if: "...the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in the service areas)."

4.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Impact GRO-1:	**The project is one of many infrastructure improvement projects that have been identified to facilitate planned growth in the North San José area. The project would not lead to unplanned economic or population growth beyond that contemplated in the San José General Plan. (Less than Significant Impact)**

4.2.1 Direct Growth

The project will have no direct effect on growth because it does not include the construction of residential or employment land uses that would increase population. Further, there are no pending or recently-approved projects whose construction is conditioned upon the implementation of the project.

4.2.2 Indirect Effect on Planned Growth

The *Envision San José 2040 General Plan* provides for the development of 26,700,000 square feet of industrial uses, 300,000 square feet of commercial uses, and 32,000 residential dwelling units in North San José. The City's *North San José Area Development Policy* (NSJADP) establishes a policy framework to guide this planned growth of the North San José area. Chapter 5 of the NSJADP identifies the infrastructure improvements needed to serve the planned development. The Charcot Avenue Extension is listed as one of nine Major Roadway Projects, which the NSJADP defines as projects that "generally serve as gateways and/or major arterials to and within North San José and serve the North San José area as a whole" (NSJADP, page 29).

Therefore, since the Charcot Avenue Extension is identified as one of the infrastructure projects in the NSJADP, its construction will facilitate the planned growth in North San José that is identified above.

4.2.3 Inducement of Unplanned Growth

Charcot Avenue is located within an existing developed urban area. The proposed Extension would provide a new connection between two developed areas on the east and west sides of I-880. The project would not extend a roadway or any other infrastructure to any undeveloped areas. The extended roadway would not provide access to areas where growth is not contemplated. [Note: The closest areas for which growth would be prohibited or severely limited are the open space lands of the foothills, which are more than three miles to the east.]

Therefore, given the above facts, there is no basis to conclude that the project would lead to unplanned growth.

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines Section 15126.2(d) requires that an EIR address "significant irreversible environmental changes which would be caused by the proposed project, should it be implemented." However, CEQA Guidelines Section 15127 states that this discussion need be included only in EIRs prepared in connection with any of the following activities:

(a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;
(b) The adoption by a Local Agency Formation Commission of a resolution making determinations; or
(c) A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4347.

The proposed Charcot Avenue Extension does not involve any of the above-listed activities. Therefore, a discussion of significant irreversible environmental changes is not included in this EIR.

SECTION 6.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

A significant unavoidable impact is an impact that cannot be mitigated to a less than significant level if the project is implemented as proposed. The following significant unavoidable impacts have been identified resulting from the proposed project:

- **Impact AES-3:** The project would substantially alter the visual character along Charcot Avenue between Paragon Drive and O'Toole Avenue by removing approximately 37 mature trees. The trees and adjacent raised berms dominate the existing setting and screen views of the office buildings and associated parking from the road, and vice-versa. This segment of Charcot Avenue is designated as a "Gateway" in the *Envision San José 2040 General Plan*. Due to the constraints posed by the presence of existing utility lines and the adjacent business parks, the planting of replacement trees as mitigation for this visual/aesthetic impact is not feasible.

- **Impact REC-2:** The right-of-way required for the project would directly impact recreational facilities at Orchard Elementary School and reduce the area available for recreation. Mitigation is included in the project but the loss of recreational acreage at this location cannot be fully mitigated.

All other significant impacts of the proposed project would be reduced to a less than significant level with the implementation of mitigation measures identified in this EIR

SECTION 7.0 ALTERNATIVES

7.1 INTRODUCTION

CEQA Guidelines Section 15126.6 states, in part, that "an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."

ALTERNATIVES

- Purpose is to identify ways to mitigate or avoid significant effects of the project
- Alternative(s) limited to those that would feasibly attain most of the project objectives
- Discussion of infeasible or unreasonable alternatives is not required
- Number of alternatives limited to a "reasonable range"
- Alternatives must include the "No Project Alternative"

An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

This section of CEQA also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis, as follows: Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines further require that the alternatives be compared to the project's environmental impacts and that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[d] [e]). In defining "feasibility" (e.g.," … feasibly attain most of the basic objectives of the project…"), State CEQA Guidelines Section 15126.6(f) (1) states, in part: Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made

by the lead agency's decision-making body, City of San José City Council. (See PRC Section 21081[a] [3].)

Several project alternatives based on design and alignment were evaluated during the planning process for the Charcot Avenue Extension. Additionally, the City engaged the neighborhood with a community meeting held in 2017, followed by two scoping meetings in 2018 during the NOP stage. Community members provided input and request for additional alternatives. These alternatives have also been evaluated.

Table 7.1-1 lists the alternatives evaluated in this EIR.

Table 7.1-1: List of Alternatives Evaluated

Alternative Designation	Alternative Name	Feasible? [a]
A	Fox Lane Alignment	No
B	Widen Montague Expressway and/or Brokaw Road	No
C	New I-880 Overcrossing South of Brokaw Road	No
D	No Project	Yes
E	New Overcrossing for Bicycles and Pedestrians Only	Yes
F	Single Left-Turn Lane from Oakland Road to Charcot Avenue	Yes
G	Single Turn Lane on Charcot Avenue at Oakland Road	Yes
H	Single Turn Lanes on Both Charcot Avenue and Oakland Road	Yes

[a] Under CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. [CEQA Guidelines §15364]

7.2 PROJECT OBJECTIVES

As described in Section 2.4, the project objectives include the following:

- Improve connectivity between the east side of I-880 and the west side of I-880;
- Increase the capacity for east/west travel across the I-880 corridor;
- Provide a safe bicycle/pedestrian facility over I-880, in compliance with San José's Complete Streets Policy;
- Implement a programmed roadway network improvement project identified in the *Envision San José 2040 General Plan;* and
- Implement a planned major roadway improvement project, as set forth in the *North San José Area Development Policy* and the *North San José Deficiency Plan*.

7.3 INFEASIBLE ALTERNATIVES TO THE PROJECT

7.3.1 Alternative A: Fox Lane Alignment

Under the Fox Lane Alignment Alternative, the alignment for the Charcot Avenue Extension on the east side of I-880 would utilize Fox Lane instead of Silk Wood Lane (see Figure 7.3-1). On the west side of I-880, this alternative would be identical to the proposed project. The Fox Lane Alternative would meet the five objectives of the project to the same degree as the proposed design.

The Fox Lane alignment would require acquisition of right-of way and elimination of property access along the north side of Fox Lane. In addition, the Fox Lane alignment would require the removal of one or two buildings on the Super Micro campus on the east side of I-880 to accommodate the alignment alternative. Further, the use of Fox Lane for the Charcot Avenue Extension would result in increased traffic volumes along the Orchard School frontage, which provides access to the school's designated student drop-off/pick-up area.

The Fox Lane alignment also would result in a connection to Oakland Road that would be in proximity to the Union Pacific Railroad (UPRR) tracks that cross Oakland Road approximately 240 feet south of Fox Lane. Increased demand at the northbound left-turn movement from northbound Oakland Road to westbound Fox Lane (to the planned Charcot Extension) could result in vehicle queues that extend back from the Oakland Road/Fox Lane intersection and through the UPRR tracks.

On the west side of I-880, the Fox Lane Alternative would have the same environmental impacts as the proposed project design. However, this alternative would avoid the noise and tree removal impacts of the proposed alignment along Silk Wood Lane. No right-of-way from the Orchard School playground/ball field would be needed. Further, there would also be no increased traffic on Silk Wood Lane and no potential traffic diversion through the Silk Wood Lane/Rock Avenue neighborhood.

In conclusion, it has been determined that Alternative A, the Fox Lane Alignment, is not feasible[65] for the following reasons:

- From an economic/funding perspective, there would be substantial right-of-way costs associated with direct impacts to the Super Micro campus, and
- From an environmental perspective, there would be substantial impacts to Orchard School's designated student drop-off/pick-up area on Fox Lane.

7.3.2 Alternative B: Widen Montague Expressway and/or Brokaw Road

Instead of constructing the Charcot Avenue Extension, Alternative B would widen Montague Expressway and/or Brokaw Road to improve east-west connectivity across I-880, which is one of the project objectives.

Montague Expressway has already been widened to eight lanes west of I-880, as identified in the North San José Area Development Policy. Additional widening to ten lanes west of I-880 to increase

[65] Under CEQA, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. [CEQA Guidelines §15364]

Source: BKF, April 11, 2019.

ALTERNATIVE A: FOX LANE ALIGNMENT | FIGURE 7.3-1

east-east capacity into the North San José area would require significant right-of-way and the acquisition of numerous businesses that are adjacent to the expressway.

Brokaw Road is already widened to its maximum within the physical limitations of its right-of-way. Additional widening to increase east-east capacity would require significant right-of-way and the acquisition of numerous businesses that are adjacent to this roadway.

Further, even if Alternative B could be implemented without the need to purchase significant right-of-way, the widening of Montague Expressway and Brokaw Road also may not improve the east-west travel due to capacity constraints at their connections to major regional freeways including their interchanges with I-880. It is likely that the capacity constraints (ramp meters) at freeway ramps and congestion on the freeway mainline could result in blockage of travel lanes on both roadways even with widening. The improvement of access to and from I-880 also would provide minimal benefit to operations along Brokaw Road and Montague Expressway due to congestion on the freeway mainline that restricts flow onto the freeway.

In conclusion, it has been determined that Alternative B, the widening of Montague Expressway or Brokaw Road, is not feasible for the following reason:

- From an economic/funding perspective, there would be significant right-of-way costs associated with the widening of Montague Expressway or Brokaw Road.

7.3.3 Alternative C: New I-880 Overcrossing South of Brokaw Road

Instead of constructing the Charcot Avenue Extension, Alternative C would construct a new I-880 overcrossing near Brokaw Road to improve east-west connectivity across I-880, which is one of the project objectives. On the east side of I-880, the overcrossing would utilize Ridder Park Drive along the south side of Lowe's. On the west side of I-880, the overcrossing would connect to Junction Avenue utilizing an existing access point and parking area for a business park.

Alternative C would require significant right-of-way and the acquisition of multiple businesses located along the east side of Junction Avenue. It would also sever access to Lowe's and an adjacent building that contains multiple businesses.

Further, even if Alternative C could be implemented without the need to purchase significant right-of-way its usefulness as an east-west route would be substantially less than with the Charcot Avenue Extension. Specifically, unlike the Charcot Avenue alignment, there would be no direct connection to major North San José roadways such as Zanker Road, North First Street, and SR 87.

In conclusion, it has been determined that Alternative C, a new I-880 overcrossing south of Brokaw Road, is not feasible for the following reason:

- From an economic/funding perspective, there would be significant right-of-way costs associated with a new I-880 overcrossing south of Brokaw Road.

7.4 FEASIBLE ALTERNATIVES TO THE PROJECT

7.4.1 Alternative D: No Project Alternative

Under the No Project Alternative, the proposed Charcot Avenue Extension would not be constructed. No new vehicular, bicycle, and pedestrian crossing of I-880 in the Charcot Corridor would be built. None of the project components described in Section 2.3 would be constructed.

Traffic circulation for the No Project Alternative under existing, year 2025, and year 2040 conditions is described in Section 3.17, *Transportation*.

The No Project Alternative would avoid all the identified significant impacts of the project, namely aesthetics/visual, biological, cultural (archaeological), hazardous materials, noise, and recreational.

The No Project Alternative would not, however, meet any of the project objectives. It would also be inconsistent with:

- Policy TR-5.6 of the *Envision San José 2040 General Plan*, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994.
- The *San José Bike Plan 2020*, which designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes.
- The *North San José Area Development Policy*, which identifies the Charcot Avenue Extension as a key roadway improvement project needed to serve the planned development of North San José.

7.4.2 Alternative E: New Overcrossing for Bicycles and Pedestrians Only

Alternative E would consist of constructing a new bicycle/pedestrian overcrossing of I-880/O'Toole Avenue on the same alignment as that proposed for the Charcot Avenue Extension. The overcrossing would connect to the existing bike lanes and sidewalks along Charcot Avenue west of O'Toole Avenue. On the east side of I-880, the overcrossing would connect to Silk Wood Lane.

Since this alternative would not include any travel lanes for motor vehicles, its cross-section/footprint would be much smaller than that of the proposed project. On the west side of I-880, this alternative would not require the elevation of Charcot Avenue between Paragon Drive and O'Toole Avenue and access to properties along this segment of Charcot Avenue would be maintained. Unlike the proposed project, this alternative would also not require the removal of most of the trees that line both sides of Charcot Avenue between Paragon Drive and O'Toole Avenue.

On the east side of I-880, the footprint of Alternative E would fit within the right-of-way reserved by Super Micro for the Charcot Avenue Extension and within the existing Silk Wood Lane right-of-way. No right-of-way from Orchard School would be required and there would be no direct impacts to the school's playground and playing field. The noise and air quality impacts of the project to the residences located on the north side of Silk Wood Lane and the school located on the south side of Silk Wood Lane would not occur under this alternative since there would be no increase in traffic. Finally, tree removal along Silk Wood Lane would be minimal, if any.

Traffic circulation for the Bicycle/Pedestrian Overcrossing Only would be the same as for the No Project Alternative under existing, year 2025, and year 2040 conditions, as described in Section 3.17.

Alternative E would meet the following objective of the project to the same degree as the proposed design:

- Provide a safe bicycle/pedestrian facility over I-880, in compliance with San José's Complete Streets Policy

Alternative E would not meet the following four objectives of the project:

- Improve connectivity between the east side of I-880 and the west side of I-880
- Increase the capacity for east/west travel across the I-880 corridor
- Implement a programmed roadway network improvement project identified in the *Envision San José 2040 General Plan;* and
- Implement a planned major roadway improvement project, as set forth in the *North San José Area Development Policy* and the *North San José Deficiency Plan*.

7.4.3 Alternative F: Single Left-Turn Lane from Oakland Road to Charcot Avenue

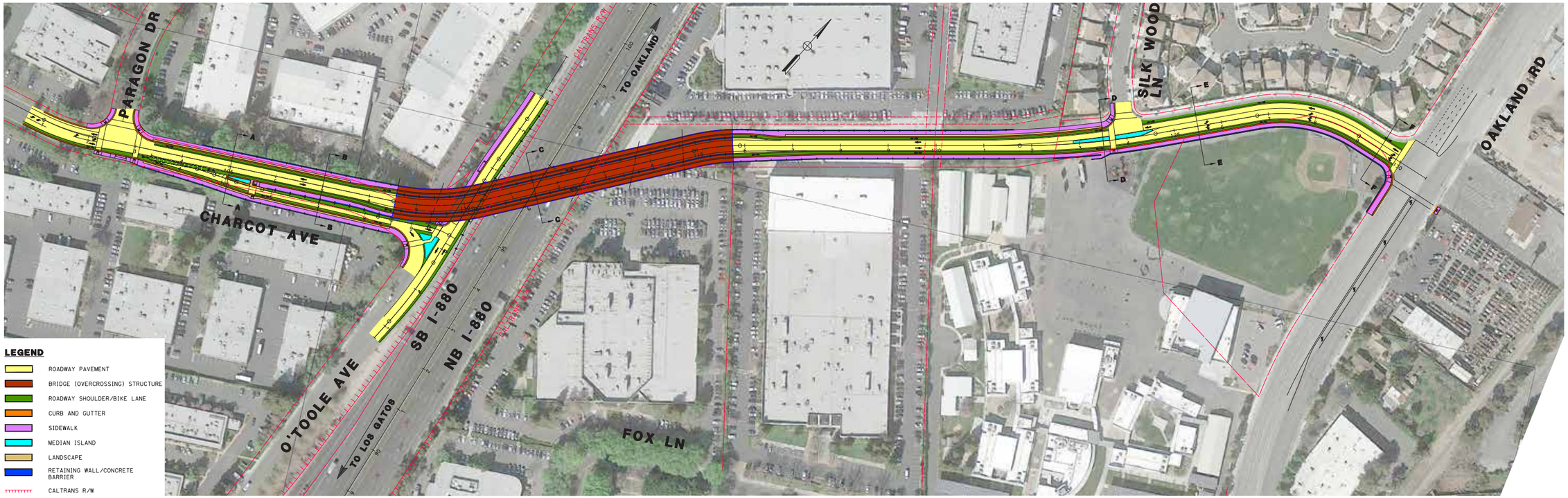
Introductory Note to Alternatives F, G, and H

During the EIR Scoping Meetings held in 2018, various members of the public expressed concern over the design of the Charcot Avenue Extension at Oakland Road because of the fact that the design would encroach onto Orchard School property. Specifically, while the proposed Charcot Avenue Extension would be a 2-lane facility overall (i.e., one lane in each direction), the roadway would be widened to four lanes at Oakland Road to accommodate turns at the Charcot Avenue/Oakland Road intersection. This 4-lane cross-section would require additional right-of-way from Orchard School, which in turn would encroach onto a portion of the school's ball field and playground.[66]

In response to the above-stated concerns, the City has evaluated three alternatives that would have a narrower cross-section for Charcot Avenue at Oakland Road than the 4-lane cross-section proposed by the project. Alternative F, evaluated below, and Alternative G, evaluated in Section 7.4.4, each have a 3-lane cross-section on Charcot Avenue at Oakland Road. Alternative H, evaluated in Section 7.4.5, has a 2-lane cross-section on Charcot Avenue at Oakland Road. These narrower cross-sections would reduce the degree to which the school's ball field and playground are impacted.]

Alternative F, which is shown on Figure 7.4-1, would be the same as the proposed project except that it would eliminate one of two proposed left-turn lanes from northbound Oakland Road to westbound Charcot Avenue, which in turn would allow for a reduction in westbound lanes on Charcot Avenue from two to one. Therefore, as stated above, the cross-section of Charcot Avenue at Oakland Road

[66] The width of the existing right-of-way that has been reserved for the Charcot Avenue Extension is not sufficient to accommodate the project under the requirements of the City's Complete Streets Policy.



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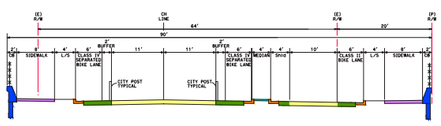

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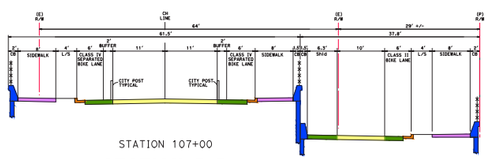
SECTION A-A



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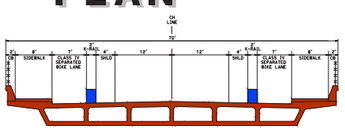

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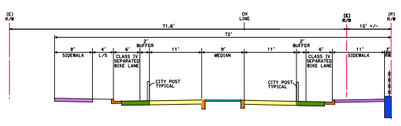

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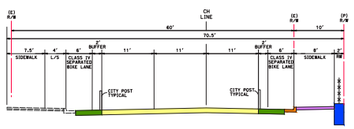

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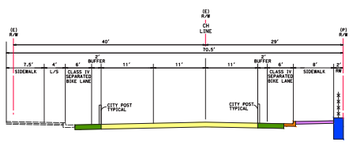
SECTION E-E



STATION 129+50

SECTION F-F

0 100 300 Feet

Source: BKF, Nov. 2018.

ALTERNATIVE F: SINGLE LEFT-TURN LANE FROM OAKLAND ROAD TO CHARCOT AVENUE | FIGURE 7.4-1

under Alternative F would be three lanes, as compared to the four lanes contemplated under the proposed project.

As shown in Table 7.4-1, Alternative F would still require right-of-way from Orchard School but to a lesser extent than for the proposed project. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities, as described in Table 7.4-1.

When Alternative F is compared to the proposed project design, the northbound left-turn queue at the Charcot Avenue/Oakland Road intersection is projected to increase from 325 feet to 575 feet because only a single left-turn lane would be provided. The projected queue would not extend back to the Fox Lane intersection with Oakland Road that is located approximately 900 feet south of Charcot Avenue. However, peak-hour delays will increase slightly on all approaches due to the additional green time that must be allocated to the northbound left-turn movement.

For noise, Alternative F was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-2 and are summarized as follows:

- When compared to the proposed design, the DNL under Alternative F would be two decibels lower at Receiver S1 and one decibel lower at Receivers ST-1, R2, S2, and S3.
- When compared to the proposed design, the DNL under Alternative F would be one decibel higher at Receiver R1.
- When compared to the proposed design, there would be no change in the DNL under Alternative F at Receivers ST-2, ST-3, ST-4, ST-5, ST-6, R3, R4, S4, and S5.

For air quality, Alternative F was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-3 and are summarized as follows:

- The air quality impacts of the project would not be significant under the proposed project design or Alternative F.
- The health risks from TAC and $PM_{2.5}$ emissions would be slightly less under Alternative F, as compared to the proposed design.

Similar to the proposed project design, Alternative F would meet all five project objectives, recognizing the following differences:

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative F would be less efficient due to the elimination of a turning lane; levels of service would, however, remain at an acceptable LOS C.
- Under Alternative F, left turns from northbound Oakland Road into the Orchard School Event Center driveway would be prohibited. Those motorists would need to make a U-turn at the Oakland Road/Charcot Avenue intersection to access the Event Center driveway.

Alternative F would be consistent with:

- Policy TR-5.6 of the *Envision San José 2040 General Plan*, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994.

Table 7.4-1: Comparison of Charcot Avenue Cross-Section Alternatives at Oakland Road				
	Proposed Design	**Alternative F**	**Alternative G**	**Alternative H**
Geometry				
Charcot Avenue Cross-Section at Oakland Rd	4 lanes (2 EB + 2 WB)	3 lanes (2 EB + 1 WB)	3 lanes (1 EB + 2 WB)	2 lanes (1 EB + 1 WB)
Right-of-Way Acquisition at Orchard School				
Orchard School APN 237-15-201	4,950 ft^2	2,000 ft^2	3,040 ft^2	910 ft^2
Orchard School APN 237-15-202	14,460 ft^2	9,480 ft^2	9,730 ft^2	4,680 ft^2
Maximum Width Needed (APN 237-15-202)	42 feet	31 feet	31 feet	20 feet
School Facilities Impacted (including during construction) [Note: All alternatives require the relocation of the chain-link fence along the northern perimeter of the school.]	Planting strip w/trees; north spectator bleachers; paved spectator area & pathway; portion of baseball field (including north bench area, backstop area, & NE corner of field); edge of paved playground area (but not the play structure itself)	Planting strip w/trees; north spectator bleachers; portion of paved spectator areas & pathway	Planting strip w/trees; north spectator bleachers; portion of paved spectator areas & pathway	Portion of planting strip (most trees to remain); north spectator bleachers; corner of paved spectator areas & pathway
Traffic				
Peak Queue Length (eastbound Charcot Ave)	675 feet	675 feet	850 feet	850 feet
Peak Queue Length (northbound Oakland Rd)	325 feet	575 feet	325 feet	575 feet
Charcot/Oakland Intersection Operations	LOS C	LOS C	LOS D	LOS D
Orchard School Event Center Driveway Access from Oakland Rd	NB & SB Access maintained	SB Access Only	NB & SB Access Maintained	SB Access Only
Noise				
Impacts at Residences along Silk Wood Lane	See Table 7.4-2 for comparison			
Impacts at Orchard Sch.	See Table 7.4-2 for comparison			
Air Quality				
Impacts at Residences along Silk Wood Lane	See Table 7.4-3 for comparison			
Impacts at Orchard Sch.	See Table 7.4-3 for comparison			

NB = northbound SB = southbound EB = eastbound WB = westbound
APN = Assessor's Parcel Number LOS = level of service

Sources: Hexagon Transportation Consultants (2019), Illingworth & Rodkin (2019) and BKF Engineers (2019).

Table 7.4-2: Comparison of Noise Impacts Between the Charcot Avenue Cross-Section Alternatives						
	Noise Level (DNL, dBA)					
Receiver	**Normally-Acceptable Noise Level**	**Exist-ing**	**Existing + Project**	**Existing + Alternative F**	**Existing + Alternative G**	**Existing + Alternative H**
ST-1 (behind 5-foot high barrier)	60	56	**65**	**64**	**64**	**66**
ST-2	60	52	53	53	53	53
ST-3 (backyard of residence)	60	60	**67**	**67**	**67**	**67**
ST-4	60	71	72	72	72	72
ST-5	70	65	66	66	66	66
ST-6	70	68	70	70	70	70
R-1	60	60	62	**63**	**63**	**62**
R-2 (behind 5-foot high barrier)	60	55	**65**	**64**	**64**	**66**
R-3 (behind 10-foot high barrier)	60	56	59	59	59	59
R-4 (behind 10-foot high barrier)	60	59	59	59	59	59
S1	65	63	**69**	**67**	**67**	**68**
S2	45 interior	50	61[a]	60[a]	60[a]	61[a]
S3	45 interior	50	56[a]	55[a]	55[a]	55[a]
S4	45 interior	51	54[a]	54[a]	54[a]	54[a]
S5	65	58	**67**	**67**	**67**	**67**

Numbers in **shading and bold** = Significant Impact.

Receiver locations are shown on Figure 3.13-2.

[a] All school classrooms have been constructed with double-paned windows, insulation, and forced-air mechanical ventilation (Thorburn Associates, 1996), resulting in interior levels that are 25 dBA or more below exterior levels.

Source: Illingworth & Rodkin, 2019.

Table 7.4-3: Comparison of Cumulative Health Risks by Charcot Avenue Cross-Section Alternatives

	Lifetime Maximum Cancer Risk (per million)								Maximum Annual $PM_{2.5}$ Concentration ($\mu g/m^3$)								Maximum Hazard Index							
	Proposed Project		Alternative F		Alternative G		Alternative H		Proposed Project		Alternative F		Alternative G		Alternative H		Proposed Project		Alternative F		Alternative G		Alternative H	
	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI	Resident MEI	School MEI
Project																								
Construction + Operation	8.1	1.6	7.6	1.5	7.6	1.5	7.5	1.6																
Maximum Risk									0.19	0.26	0.20	0.23	0.19	0.25	0.20	0.23	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cumulative																								
Oakland Road	2.3	0.5	2.3	0.5	2.3	0.5	2.3	0.5	0.06	0.07	0.06	0.07	0.06	0.07	0.06	0.07	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
I-880	19.9	2.8	19.9	2.8	19.9	2.8	19.9	2.8	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Plant #20285																	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Plant 6919	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Plant 20442										0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Plant 1618																	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Plant 4020	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5									0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Total for Project + Cumulative Sources	**31.9**	**6.5**	**31.4**	**6.4**	**31.4**	**6.4**	**31.3**	**6.5**	**0.55**	**0.56**	**0.55**	**0.56**	**0.55**	**0.56**	**0.55**	**0.56**	**1.18**	**1.18**	**1.18**	**1.18**	**1.18**	**1.18**	**1.18**	**1.18**
BAAQMD Threshold for Cumulative Sources	>100 per million								>0.8 $\mu g/m^3$								>10.0							
Significant Impact?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

MEI = Maximally Exposed Individual

Source: Illingworth & Rodkin, 2019.

- The *San José Bike Plan 2020*, which designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes.
- The *North San José Area Development Policy*, which identifies the Charcot Avenue Extension as a key roadway improvement project needed to serve the planned development of North San José.

7.4.4 Alternative G: Single Turn Lane on Charcot Avenue at Oakland Road

Alternative G, which is shown on Figure 7.4-2, would be the same as the proposed project except that it would eliminate the exclusive left-turn lane from eastbound Charcot Avenue to northbound Oakland Road; instead there would be only one eastbound lane from which both left-turns and right-turns would be made. Therefore, as stated above, the cross-section of Charcot Avenue at Oakland Road under Alternative G would be three lanes, as compared to the four lanes contemplated under the proposed project.

As shown in Table 7.4-1, Alternative G would still require right-of-way from Orchard School but to a lesser extent than for the proposed project. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities, as described in Table 7.4-1.

When Alternative G is compared to the proposed project design, the eastbound queue on Charcot Avenue at Oakland Road would increase from 675 feet to 850 feet and the PM peak-hour LOS would degrade to LOS D should the planned exclusive left-turn lane not be provided. The extended queue along eastbound Charcot Avenue may not be clearly visible to drivers travelling eastbound along Charcot Avenue due to the vertical alignment of the Charcot Avenue overcrossing of I-880.

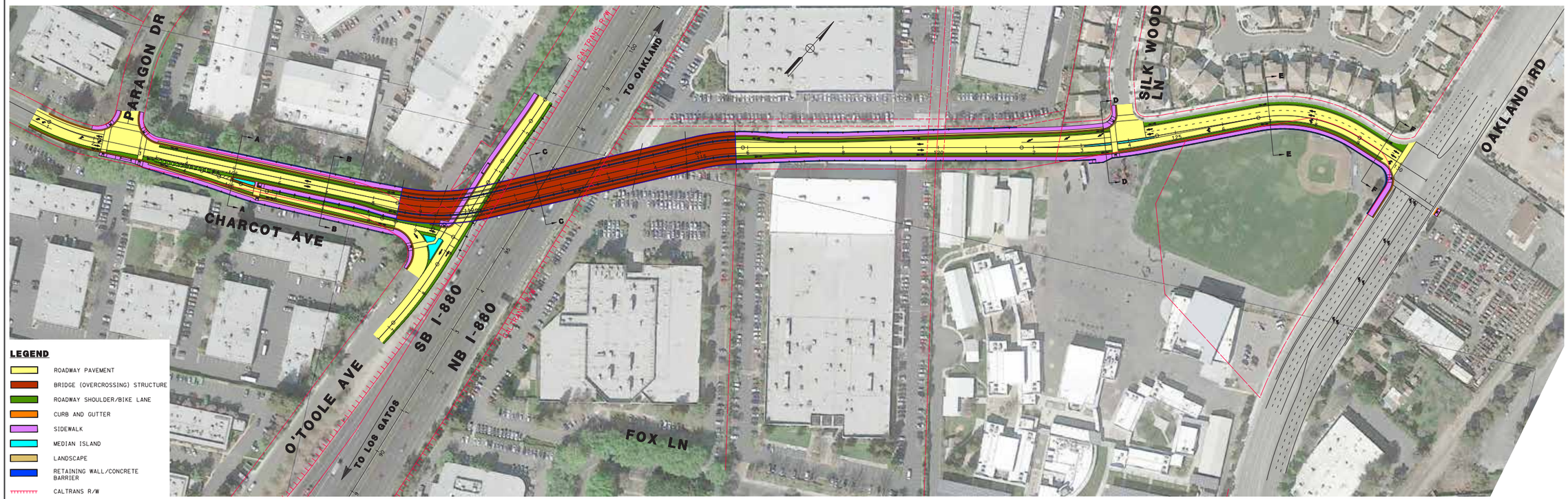
For noise, Alternative G was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-2 and are summarized as follows:

- When compared to the proposed design, the DNL under Alternative G would be two decibels lower at Receiver S1 and one decibel lower at Receivers ST-1, R2, S2, and S3.
- When compared to the proposed design, the DNL under Alternative G would be one decibel higher at Receiver R1.
- When compared to the proposed design, there would be no change in the DNL under Alternative G at Receivers ST-2, ST-3, ST-4, ST-5, ST-6, R3, R4, S4, and S5.

For air quality, Alternative G was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-3 and are summarized as follows:

- The air quality impacts of the project would not be significant under the proposed project design or Alternative G.
- The health risks from TAC and $PM_{2.5}$ emissions would be slightly less under Alternative G, as compared to the proposed design.

Similar to the proposed project design, Alternative G would meet all five project objectives, recognizing the following difference:



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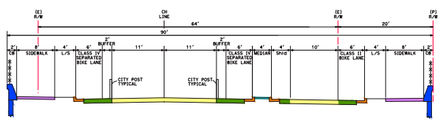

STATION 105+03

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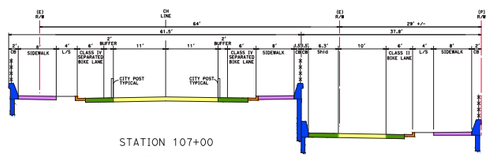

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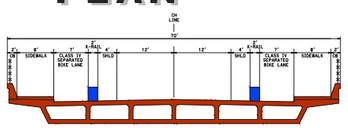
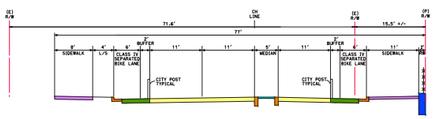


STATION 111+50

SECTION C-C



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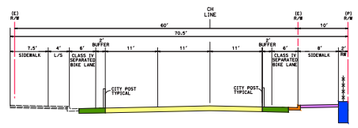

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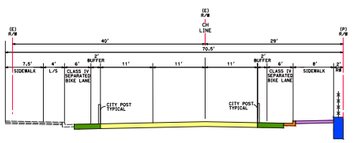
SECTION E-E



STATION 129+50

SECTION F-F

0 100 300 Feet

Source: BKF, Nov. 2018.

ALTERNATIVE G: SINGLE TURN LANE ON CHARCOT AVENUE AT OAKLAND ROAD | FIGURE 7.4-2

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative G would be less efficient due to the elimination of a turning lane; levels of service would, however, remain at an acceptable LOS D.

Alternative G would be consistent with:

- Policy TR-5.6 of the *Envision San José 2040 General Plan*, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994.
- The *San José Bike Plan 2020*, which designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes.
- The *North San José Area Development Policy*, which identifies the Charcot Avenue Extension as a key roadway improvement project needed to serve the planned development of North San José.

7.4.5 Alternative H: Single Turn Lanes on Both Charcot Avenue and Oakland Road

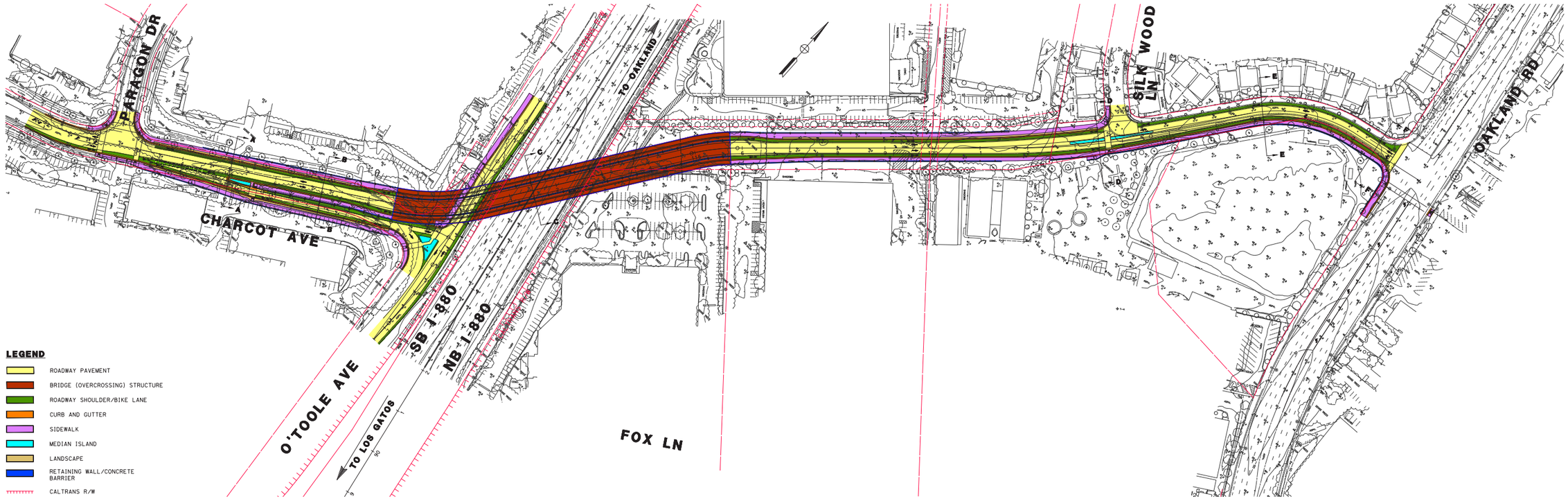
Alternative H, which is shown on Figure 7.4-3, would be the same as the proposed project except that it would 1) eliminate one of two proposed left-turn lanes from northbound Oakland Road to westbound Charcot Avenue and 2) would eliminate the exclusive left-turn lane from eastbound Charcot Avenue to northbound Oakland Road. Instead, there would be only one eastbound lane from which both left-turns and right-turns would be made and only one northbound left-turn lane. Therefore, as stated above, the cross-section of Charcot Avenue at Oakland Road under Alternative H would be two lanes, as compared to the four lanes contemplated under the proposed project.

As shown in Table 7.4-1, Alternative H would still require right-of-way from Orchard School but to a lesser extent than for the proposed project. The smaller amount right-of-way needed would, in turn, reduce impacts to the existing recreational facilities, as described in Table 7.4-1.

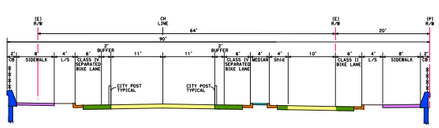
For traffic operations, Alternative H would differ from the proposed project design in the following ways:

- The eastbound queue on Charcot Avenue on Oakland Road would increase from 675 feet to 850 feet and the PM peak-hour LOS would degrade to LOS D should the planned exclusive left-turn lane not be provided. The extended queue along eastbound Charcot Avenue may not be clearly visible to drivers travelling eastbound along Charcot Avenue due to the vertical alignment of the Charcot Avenue overcrossing of I-880.
- The northbound left-turn queue at the Charcot Avenue/Oakland Road intersection is projected to increase from 325 feet to 575 feet because only a single left-turn lane would be provided. The projected queue would not extend back to the Fox Lane intersection with Oakland Road that is located approximately 900 feet south of Charcot Avenue. However, peak-hour delays will increase slightly on all approaches due to the additional green time that must be allocated to the northbound left-turn movement.

For noise, Alternative H was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-2 and are summarized as follows:



PLAN



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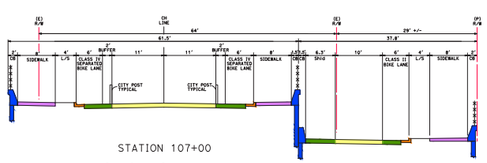
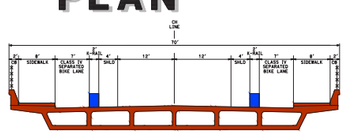
SECTION A-A



STATION 107+00

SECTION B-B



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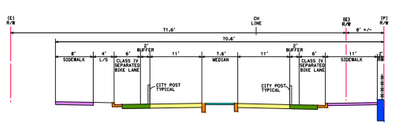
SECTION C-C



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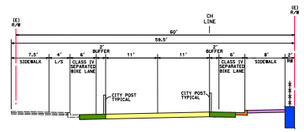
SECTION D-D



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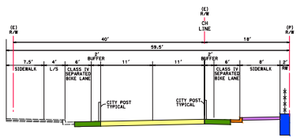
SECTION E-E



STATION 129+50

SECTION F-F

X - SECTIONS

0 100 300 Feet

Source: BKF, Nov. 2018.

ALTERNATIVE H: SINGLE TURN LANES ON BOTH CHARCOT AVENUE AND OAKLAND ROAD | FIGURE 7.4-3

- When compared to the proposed design, the DNL under Alternative H would be one decibel lower at Receivers S1 and S3.
- When compared to the proposed design, the DNL under Alternative H would be one decibel higher at Receivers ST-1 and R2.
- When compared to the proposed design, there would be no change in the DNL under Alternative H at Receivers ST-2, ST-3, ST-4, ST-5, ST-6, R1, R3, R4, S2, S4, and S5.

For air quality, Alternative H was modeled to determine if its impacts would differ from those of the proposed design. The results are presented in Table 7.4-3 and are summarized as follows:

- The air quality impacts of the project would not be significant under the proposed project design or Alternative H.
- The health risks from TAC and $PM_{2.5}$ emissions would be slightly less under Alternative H, as compared to the proposed design.

Similar to the proposed project design, Alternative H would meet all five project objectives, recognizing the following difference:

- When compared to the proposed design, traffic operations at the Charcot Avenue/Oakland Road intersection under Alternative H would be less efficient due to the elimination of two turning lanes; levels of service would, however, remain at an acceptable LOS D.
- Left turns from northbound Oakland Road into the Orchard School Event Center driveway would be prohibited. Those motorists would need to make a U-turn at the Oakland Road/Charcot Avenue intersection to access the Event Center driveway.

Alternative H would be consistent with:

- Policy TR-5.6 of the *Envision San José 2040 General Plan*, which states that the City should complete the buildout of the City's street system per its Land Use / Transportation Diagram, on which the Charcot Avenue Extension has been listed since 1994.
- The *San José Bike Plan 2020*, which designates Charcot Avenue from Orchard Parkway on the west to Oakland Road on the east as a bikeway with Class II bike lanes.
- The *North San José Area Development Policy*, which identifies the Charcot Avenue Extension as a key roadway improvement project needed to serve the planned development of North San José.

7.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(1) states "if the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

As described previously in Section 7.4.1, Alternative D, the No Project Alternative, would avoid all the identified significant impacts of the project, namely aesthetics/visual, biological, cultural (archaeological), hazardous materials, noise, and recreational. From that perspective, it would be the

environmentally superior alternative. However, for the reasons described in the following paragraph, the avoidance of the project's significant impacts does not present the complete picture.

The No Project Alternative would not meet any of the project objectives because it would not construct any improvements to the transportation network for motorists, pedestrians, and bicyclists. By not constructing those improvements, none of the environmentally related benefits of the project would occur. These benefits include a reduction in congestion and travel time that would lead to a decrease in energy consumption, emissions of criteria air pollutants, and emissions of GHGs. Foregoing improvements for bicyclists and pedestrians would reduce the likelihood that people will choose those modes of transportation.

Other than the No Project Alternative, Alternative E (New Overcrossing for Bicycles and Pedestrians Only) would have the fewest adverse environmental impacts. It would avoid the significant removal of trees, the long-term increases in noise, long-term emissions of criteria air pollutants and TACs, and impacts to the recreational land and facilities at Orchard School. Alternative E's impacts would be mostly limited to those associated with the construction of the bicycle/pedestrian facility.

Alternative E would not meet four of the five project objectives and would be inconsistent with the *Envision San José 2040 General Plan*, *North San José Area Development Policy*, and *North San José Deficiency Plan*. The only objective that would be met would be the provision of a bicycle/pedestrian crossing of I-880.

Of the three remaining feasible alternatives (i.e., Alternatives F, G, and H), their environmental impacts are very similar to each other and to those of the proposed project. As described above in Section 7.4, the overall differences in impacts are negligible. Further, the proposed project, Alternative F, Alternative G, and Alternative H each meet all five of the project objectives.

The previous paragraph notwithstanding, the one category where there is a notable difference between the proposed project and Alternatives F, G, and H is the impacts to the recreational land and facilities at Orchard School. While none of the alternatives completely avoid this significant impact, Alternative H has the smallest effect. Alternative H avoids the direct impact to the baseball field, the paved playground area, most of the trees along the northerly planting strip, and most of the paved spectator areas and pathway. In addition, in terms of net loss of recreational area, Alternative H has the smallest impact at 5,590 ft^2 (0.1 acre). This net loss compares to 19,410 ft^2 (0.44 acre) under the proposed project, 11,480 ft^2 (0.26 acre) under Alternative F, and 12,770 ft^2 (0.29 acre) under Alternative G.

For all the above reasons, **Alternative H is the environmentally superior alternative.**

SECTION 8.0 SCOPING AND COORDINATION

The City has engaged in extensive public and agency outreach/coordination activities regarding the proposed Charcot Avenue Extension project. These have included the following:

- Meetings with community groups, property owners, and stakeholders who live or work along the alignment of the Charcot Avenue Extension, including the following: Orchard Elementary School, Super Micro, PS Business Park, and California Walks (Cal Walks).

- A community meeting was held on March 22, 2017 at Orchard School to inform the public about the history of the project, the purpose of the project, the preliminary design features of the project, and the status of the project approval process. The meeting, which was attended by approximately 50 members of the community, included an extensive question and answer period.

- The EIR Notice of Preparation (NOP) was circulated for public and agency input for 30 days beginning on April 30, 2018.

- During the NOP circulation period, two public Scoping Meetings were held, the first on May 17, 2018 at the Berryessa Branch Library attended by approximately 25 members of the community and the second on May 21, 2018 at Orchard School attended by approximately 75 members of the community.

The City received 53 written comments from the public and governmental agencies during the NOP circulation period. The comments, copies of which are contained in Appendix C, provided input regarding the requested scope of environmental analyses to be undertaken in the EIR, project alternatives to be evaluated, and mitigation measures to be considered. Many comments also expressed opinions regarding support or opposition to the project itself.

Due to the substantial interest of the community in the project, coupled with the City's desire to provide clear answers to all comments and questions, specific responses have been prepared to each of the 53 written comments received during the scoping process. See Appendix B.

SECTION 9.0 REFERENCES

The analysis in this Environmental Impact Report is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

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SECTION 10.0 LEAD AGENCY AND CONSULTANTS

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SECTION 11.0 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADL	aerially deposited lead
ADT	Average daily traffic
AIA	Airport's Airport Influence Area
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practices
Btu	British thermal units
CALEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
dBA	A-weighted decibel
DNL	Day-Night Noise Level
DPM	diesel particulate matter
DOT	U.S. Department of Transportation
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ESUHSD	East Side Union High School District
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FHWA	Federal Highway Administration

GHG	Greenhouse gases
HAWK	High-Intensity Activated crosswalk
HI	hazard index
HMP	Hydromodification Management Plan
HMTA	Hazardous Materials Transportation Act
HOV	high-occupancy vehicle
In/sec	inches per second
I-680	Interstate 680
I-880	Interstate 880
JUA	joint use agreement
L_{eq}	Energy-Equivalent Sound/Noise Descriptor
LID	Low Impact Development
LTA	Local Transportation Analysis
LOS	Level of service
LRT	light rail transit
MBTA	Migratory Bird Treaty Act
MEI	Maximally Exposed Individual
MLD	Most Likely Descendant
Mm/sec	millimeters per second
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
Mpg	miles-per-gallon
MRP	Municipal Regional Stormwater NPDES Permit
Msl	mean sea level
MT	metric tons
MTC	Metropolitan Transportation Commission
NAHC	Native American Heritage Commission
NGPSA	Natural Gas Pipeline Safety Act
NOD	Notice of Determination
NOP	Notice of Preparation of an EIR
NO_x	Nitrogen oxides
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSJADP	North San José Area Development Policy

OEHHA	California Office of Environmental Health Hazard Assessment
PM	particulate matter
$PM_{2.5}$	fine particulate matter
PM_{10}	respirable particulate matter
PG&E	Pacific Gas and Electric Company
PPV	Peak Particle Velocity
ROG	Reactive organic gases
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCDEH	Santa Clara County Department of Environmental Health
SCS	Sustainable Communities Strategy
SCVHCP	Santa Clara Valley Habitat Conservation Plan
SHPO	State Office of Historic Preservation
SJC	Mineta San José International Airport
SJFD	San José Fire Department
SJPD	San José Police Department
SMARA	Surface Mining and Reclamation Act of 1975
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
TCM	Treatment Control Measures
Title 24	California Code of Regulations
$\mu g/m^3$	micrograms per cubic meter
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
Valley Water	Santa Clara Valley Water District
VHT	Vehicle hours traveled
VMT	Vehicle miles traveled
VTA	Santa Clara Valley Transportation Authority
2017 CAP	Bay Area 2017 Clean Air Plan