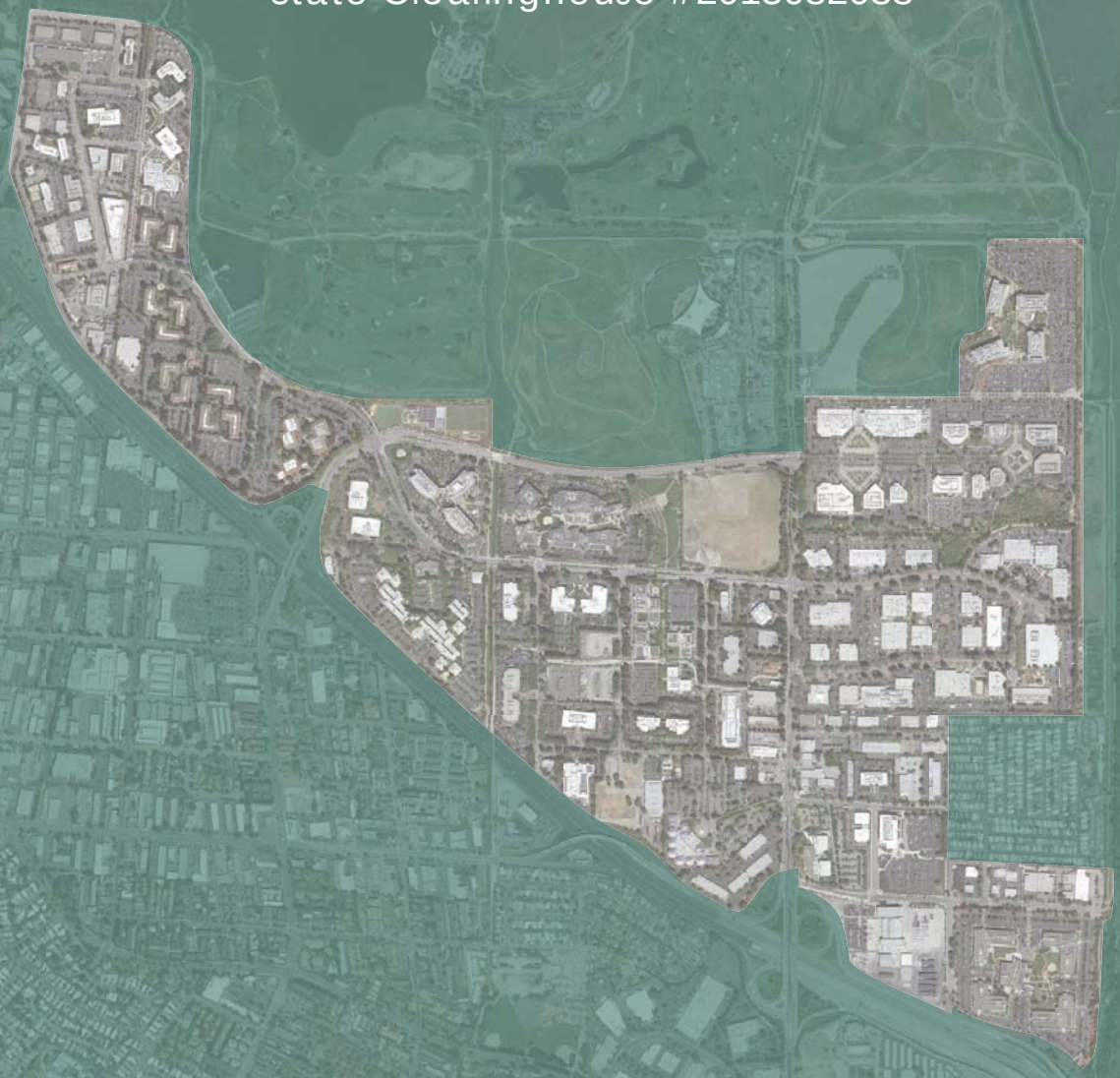
Draft Subsequent Environmental Impact Report

North Bayshore Precise Plan

State Clearinghouse #2013082088



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CITY OF MOUNTAIN VIEW

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SECTION 1.0 EXECUTIVE SUMMARY

1.1 PROJECT LOCATION

The approximately 650-acre North Bayshore Precise Plan area is located in the northern portion of the City of Mountain View, in northern Santa Clara County. The project site is bordered by the Shoreline at Mountain View Regional Park and the San Francisco Bay to the north, U.S. Highway 101 (US 101) to the south, the City of Palo Alto to the west, and Moffett Federal Airfield and the National Aeronautics and Space Administration (NASA)/Ames Research Center to the east. The Stevens Creek trail corridor and the Santiago Villa mobile home park are also located east of and adjacent to the project site.

A regional map and a vicinity map of the site are shown on Figures 3.1-1 and 3.1-2, and an aerial photograph of the project site and the surrounding area is shown on Figure 3.1-3.

1.2 PROJECT OVERVIEW

The proposed project consists of City-initiated revisions to the Mountain View 2030 General Plan and *P(39) North Bayshore Precise Plan* zoning district to allow residential uses, in addition to office and commercial uses. The adopted North Bayshore Precise Plan was designed to provide a vision and guiding principles, development standards, and design guidelines for the properties in this area, in conformance with the 2030 General Plan vision for North Bayshore.

The project proposes to amend the Mountain View 2030 General Plan to allow an increase in residential uses, consistent with the proposed revisions to the North Bayshore Precise Plan. Up to 9,850 new multi-family residential units would be allowed under the amended 2030 General Plan and North Bayshore Precise Plan, in addition to 3.6 million square feet of office and commercial development. The project area could also include new or enhanced parks and trails, and new public streets. The amended Precise Plan would allow a mix of multi-family units, including a goal of up to 70 percent one-bedroom and "micro" units,[1] with the remaining 30 percent comprised of two- and three-bedroom units.

The proposed residential uses would be located in the central portion of the Precise Plan area, and would have a 2030 General Plan land use designation of either *North Bayshore Mixed-Use* or *Mixed-Use Center*. The existing North Bayshore Residential Uses Boundary would be removed from the General Plan land use map.

The amended North Bayshore Precise Plan includes the development of "Complete Neighborhoods," which have been envisioned to include a mix of land uses, amenities and services. The amended Precise Plan includes an increase in retail and supporting services over the existing plan, and would include neighborhood-serving retail in several locations along Shoreline Boulevard and regional retail in the Gateway Character Area. The Precise Plan includes a goal of a minimum of 20 percent affordable housing units within the North Bayshore district.

The amended North Bayshore Precise Plan also includes program-level information regarding a potential new bridge crossing(s) over Stevens Creek. A new bridge would be anticipated to serve transit vehicles, bicycles, and pedestrians only. No formal bridge project is currently proposed at this

[1] "Micro" units are defined as approximately 300-350 square feet in size, with some shared common areas.

time. The Precise Plan could include a policy supporting a new bridge crossing over Stevens Creek into North Bayshore, based on policy direction from the City Council. A new bridge would serve transit vehicles, bicycles, and pedestrians only.

Other infrastructure included in the Precise Plan includes transportation and utility improvements.

1.2.1 Summary of Significant Impacts

The following table summarizes the ***significant*** effects of the proposed project on the environment and mitigation measures proposed to reduce the effects. A significant effect on the environment means a substantial, or potentially substantial, adverse change on the environment. Impacts that are less than significant are not described in this summary and can be found in the text of the SEIR, except those less than significant impacts that have been further mitigated to some extent. A complete description of the project and of its impacts and proposed mitigation measures can be found in the text of the SEIR which follows this summary.

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
Air Quality Impacts	
Impact AQ-2: Unless properly controlled, project construction activities could result in impacts as a result of temporary dust from activities and diesel exhaust from construction equipment. **[Significant Impact]**	**MM AQ-2.1:** Measures to reduce diesel particulate matter (DPM) and PM_{10} from construction shall be implemented to ensure that short-term health impacts to nearby sensitive receptors are avoided. • Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times. • Cover all hauling trucks or maintain at least two feet of freeboard. • Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas. • Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (i.e., previously-graded areas that are inactive for 10 days or more). • Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• Limit traffic speeds on any unpaved roads to 15 mph. • Replant vegetation in disturbed areas as quickly as possible. • Suspend construction activities that cause visible dust plumes to extend beyond the construction site. • Post a publically visible sign(s) with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. **MM AQ-2.2:** The following additional measures to reduce exhaust emissions from large construction projects shall be implemented: • The developer or contractor shall provide a plan for approval by the City or BAAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent particulate reduction compared to the most recent CARB fleet average for the year 2011. • Clear signage at all construction sites will be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite or adjacent to the construction site. • The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors). • Properly tune and maintain equipment for low emissions.

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	[Less than Significant Impact with Mitigation Measures Incorporated in the Project]
Impact AQ-3: Health risks associated with exposure to TACs during temporary construction activities could significantly impact sensitive receptors. **[Significant Impact]**	**MM AQ-3.1:** Construction health risk assessments shall be required on a project-by-project basis, either through screening or refined modeling, to identify impacts and, if necessary, include effective mitigation measures to reduce exposure and significant risks to health, based upon BAAQMD-recommended thresholds for TACs (e.g., 10 in one million cancer cases). Reduction in health risk can be accomplished through, though is not limited to, the following measures: • Construction equipment selection; • Use of alternative fuels, engine retrofits, and added exhaust devices; • Modify construction schedule; and • Implementation of BAAQMD Basic and/or Additional Construction Mitigation Measures for control of fugitive dust. **[Less than Significant Impact with Mitigation Measures Incorporated in the Project]**
Impact AQ-4: Health risks associated with exposure to TACs as a result of operation of future uses could significantly impact sensitive receptors. **[Significant Impact]**	**MM AQ-4.1:** The following measures shall be utilized in site planning and building designs to reduce TAC and $PM_{2.5}$ exposure where new sensitive receptors are located within 650 feet of US 101: • Future development under the Precise Plan that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located within 650 feet of US 101, local roadways, and stationary sources shall require site-specific analysis to quantify the level of TAC and $PM_{2.5}$ exposure. This analysis shall be conducted following procedures outlined by BAAQMD. If the site-specific analysis reveals significant exposures, such as cancer risk greater than 10 in one million acute or chronic hazards with a Hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 $\mu g/m^3$, or a significant cumulative health risk in terms of excess cancer risk greater than 100 in one million,

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	acute or chronic hazards with a Hazard Index greater than 10.0, or annual $PM_{2.5}$ exposures greater than 0.8 µg/m^3, additional measures such as those detailed below shall be employed to reduce the risk to below the threshold. If this is not possible, the sensitive receptors shall be relocated. • Future developments that would include TAC sources would be evaluated through the CEQA process or BAAQMD permit process to ensure that they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a Hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 µg/m^3, or a significant cumulative health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a Hazard Index greater than 10.0, or annual $PM_{2.5}$ exposures greater than 0.8 µg/m^3. • For significant cancer risk exposure, as defined by BAAQMD, indoor air filtration systems shall be installed to effectively reduce particulate levels to a less than significant level. Project sponsors shall submit performance specifications and design details to demonstrate that lifetime residential exposures would result in less than significant cancer risks (less than 10 in one million chances or 100 in one million for cumulative sources), Hazard Index or $PM_{2.5}$ concentration. • Air filtration systems installed shall be rated MERV-13 or higher and a maintenance plan for the air filtration system shall be implemented. • Trees and/or vegetation shall be planted between sensitive receptors and pollution sources, if feasible. Trees that are best suited to trapping particulate matter shall be planted, including the following: Pine (*Pinus nigra var. maritime*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*). • Sites shall be designed to locate sensitive receptors as far as possible from any freeways, roadways, refineries, diesel generators, distribution centers, and rail lines.

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods. **[Less than Significant Impact with Mitigation Measures Incorporated in the Project]**
Biological Resources Impacts	
Impact BIO-10: Construction of a bridge across Stevens Creek could result in impacts to biological resources. **[Potentially Significant Impact]**	**MM BIO-10.1:** Nesting Birds: • A qualified biologist shall be retained to conduct preconstruction nest surveys of appropriate nesting habitat prior to any construction activity during the nesting/breeding season (February 1st through August 31st). If an active nest (i.e., a nest with eggs or young, or any completed raptor nest attended by adults) is found sufficiently close to work areas to be disturbed by construction activities, the biologist, in coordination with the California Department of Fish and Wildlife, shall determine the extent of a disturbance-free buffer zone to be established around the nest. These requirements are detailed in the standards and guidelines in Section 5.3 of the Precise Plan (refer to *Section 4.3.4.5* of the Draft SEIR). **MM BIO-10.2:** Burrowing Owl: • Prior to construction, staging, or site preparation activities, a qualified biologist will conduct a preconstruction survey for burrowing owl. Because burrowing owls occupy burrows year-round, the survey will be required regardless of the time of year. The biologist will coordinate with City and NASA biologists prior to conducting surveys. The purpose of the preconstruction survey is to document the presence or absence of burrowing owls on the project site and within 250 feet of construction activity.

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• To maximize the likelihood of detecting owls, the preconstruction survey will last a minimum of three (3) hours. The survey will begin one (1) hour before sunrise and continue until two (2) hours after sunrise or begin two hours before sunset and continue until one hour after sunset. Additional time may be required for large project sites. A minimum of two surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their locations will be mapped. • Surveys will conclude no more than two (2) calendar days prior to construction. Therefore, the project proponent must begin surveys no more than four (4) days prior to construction (two days of surveying plus up to two days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the project proponent may also conduct a preliminary survey up to 14 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than two (2) calendar days in advance of construction. • If evidence of burrowing owls is found during the breeding season (February 1–August 31), the project will avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance will include establishment of a 250-foot non-disturbance buffer zone around nests. Construction may occur outside of the 250-foot non-disturbance buffer zone. Construction may occur inside of the 250-foot non-disturbance buffer during the breeding season if: – The nest is not disturbed, and – The project proponent develops an avoidance, minimization, and monitoring plan that will be reviewed by the Habitat

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	Agency and the Wildlife Agencies prior to project construction based on the following criteria. – The Habitat Agency and the Wildlife Agencies approve of the avoidance and minimization plan provided by the project proponent. – A qualified biologist monitors the owls for at least three (3) days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction). – The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities. – If there is any change in owl nesting and foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until the adults and juveniles from the occupied burrows have moved out of the project site. – If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the non-disturbance buffer zone may be removed. The biologist will excavate the burrow to prevent reoccupation after receiving approval from the Wildlife Agencies. – The Habitat Agency and the Wildlife Agencies have 21 calendar days to respond to a request from the project proponent to review the proposed avoidance, minimization, and monitoring plan. If these parties do not respond within 21 calendar days, it will be presumed that they concur with the proposal and work can commence. • If evidence of burrowing owls is found during the non-breeding season (September 1–January 31), the project will establish a 250-foot non-disturbance buffer around occupied burrows as determined by a qualified biologist. Construction

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	activities outside of this 250-foot buffer are allowed. Construction activities within the non-disturbance buffer are allowed if the following criteria are met in order to prevent owls from abandoning important overwintering sites. – A qualified biologist monitors the owls for at least three (3) days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). – The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. – If there is any change in owl foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. – If the owls are gone for at least one (1) week, the project proponent may request approval from the Habitat Agency that a qualified biologist excavate usable burrows to prevent owls from reoccupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue. • Based on the avoidance, minimization, and monitoring plan developed, during construction, the non-disturbance buffer zones will be established and maintained as applicable. A qualified biologist will monitor the site consistent with the requirements described above to ensure that buffers are enforced and owls are not disturbed. The biological monitor will also conduct training of construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl enters an active construction zone. • If impacts to occupied burrowing owl burrows shall be avoided to the greatest extent feasible. Passive relocation of burrowing owls is prohibited until positive growth trends described in Section 5.4.6 of the SCVHP have been achieved. Once the burrowing owl positive growth trend included

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	in the SCVHP occurs, passive relocation of owls may occur with the approval of the Wildlife Agencies (CDFW and USFWS), on project sites during the non-breeding season (September 1-January 31) if mitigation measures described above do not allow for work to continue. Passive relocation would only be proposed if the occupied burrow needed to be removed or had the potential to collapses as a result of construction activities. The project may apply for an exception to the passive relocation prohibition if owls continually persist on a site where avoidance is not feasible. Exceptions may be requested through the application process described in Section 6.8 of the SCVHP and must be reviewed and approved by the SCVHP Habitat Agency and Wildlife Agencies. **MM BIO-10.3:** Hoary Bat Maternity Roosts • A qualified biologist will examine all trees that could contain potential maternity roosts of hoary bats within 100 feet of all proposed construction activities. Surveys for maternity roosts of hoary bats will take place no more than 30 days before any initial vegetation, woody debris, or tree removal or other initial ground-disturbing activities during the period of April 1st to August 31st. If a hoary bat with young is observed roosting, a buffer will be established by a qualified biologist (typically 50 feet, or as otherwise determined dependent upon the habitat present and proposed level of disturbance). **MM BIO-10.4:** Central California Coast Steelhead and Central Valley Fall-run Chinook Salmon • All construction activities that require dewatering or pile driving within Stevens Creek will be limited to the summer low flow period (June 1 to October 15). • Night lighting on the bridge will be minimized, with the exception of lighting needed for safety and compliance with regulations. To the extent

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	feasible, all lighting will be directed at the bridge deck (not outwards into natural areas). • Before any construction activities begin, a qualified biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the Central California Coast steelhead, the Central Valley fall-run Chinook salmon, and their habitat, the importance of these species, the general measures that are being implemented to conserve them as they relate to the project, their legal protections, and the boundaries within which the project may be accomplished. • If cofferdams are necessary, then during cofferdam installation, a block net will be positioned at the upstream end of the reach to be dewatered. Where feasible (e.g., where the channel configuration permits), and where sufficient water to support fish is present downstream from the dewatering area, two biologists will then walk from this net in a downstream direction while carrying a block net or nets in order to encourage fish to move downstream and out of the area to be dewatered. The downstream block net will then be positioned to prevent fish from re-entering the dewatering area. The cofferdam will then be constructed. If insufficient water is present downstream from the dewatering area to support fish, then fish will be relocated to another location providing suitable conditions for fish as described in the next bullet. • A qualified biologist will be present during dewatering to relocate all native fish to a suitable habitat location as needed. Within the area to be dewatered, any fish remaining in the work area will be captured by seine, dip net, and/or electrofisher, and then transported and released to suitable in stream locations outside of the work area. All captured fish will be kept in cool, shaded, aerated water protected from excessive noise, jostling, or overcrowding any time they are not in the stream, and fish will not be removed from this water except when released. To avoid predation, the biologist will use at least two containers to separate young-of-year fish from

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	larger age-classes and other potential aquatic predators. Captured salmonids will be relocated, as soon as possible, to an instream location in which suitable habitat conditions are present to allow for adequate survival of transported fish and fish already present. • All pumps used for dewatering where salmonids may be present will be screened according to the National Marine Fisheries Service (NMFS) criteria for juvenile salmonids. • Following construction of the temporary cofferdam, water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate. • According to the Fisheries Hydroacoustic Working Group (2008), fish may be injured or killed when underwater pile driving sound levels exceed the peak threshold of 206 decibels (dB) or cumulatively exceeds 187 dB sound exposure level. With conservative estimates, only where impact pile driving occurs within 20 feet of aquatic habitat in Stevens Creek could underwater sound levels cumulatively exceed the 187 dB sound exposure level threshold. Thus, the project will site the dewatering area to extend a minimum of 30 feet from pile driving locations to avoid the injury or death of special-status fish due to pile driving. No pile driving will occur within 30 feet of aquatic habitat in Stevens Creek. **MM BIO-10.5:** <u>Western Pond Turtle</u> • If vegetation or tree removal or other initial ground-disturbing activities will begin during the western pond turtle nesting season (April 1st through July 31st), a qualified biologist will examine the study area for pond turtles and their nests 48 hours before proposed activities begin. If impacts within the study area occur in the bed and banks of Stevens Creek, a preconstruction survey for western pond turtles will be conducted within 48 hours prior to the start of work year-

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	round. If a western pond turtle is observed within the work area at any time before or during proposed project activities, all activities will cease until such time that either (1) the pond turtle leaves the area or (2) the qualified biologist can capture and relocate the animal to suitable habitat away from construction activity. **MM BIO-10.6:** Wetland and Aquatic Habitats. • All temporary and permanent impacts on wetland and riparian habitats within the bed and banks of Stevens Creek will be avoided to the extent feasible. • All construction staging shall be above the top of bank and outside the riparian canopy of Stevens Creek. • An assessment of impacts (jurisdictional delineation) shall be completed prior to any construction activities that maps all wetlands and streams impacted by ground disturbance, access, fill, and structure placement. All wetlands that will be permanently impacted by construction or through shading from the new bridge deck will be mitigated through the purchase of credits at a wetland mitigation bank at 1:1 ratio or through the creation or restoration of wetlands at a 2:1 ratio. Any loss of non-wetland stream habitat from permanent fill placed within the ordinary high water mark of the stream will be mitigated through purchase of credits or creation of similar aquatic habitat at a 1:1 ratio. • Created or restored wetlands or aquatic habitat will be designed and monitored in accordance with a wetlands mitigation and monitoring plan (MMP) that includes specific success criteria and monitoring for at least five years. The plan would be subject to approval by the City. The MMP will be prepared by a qualified restoration ecologists. • Regulatory permits will be required for all impacts to wetland and streams from the USACE, RWQCB, and CDFW. The construction of a bridge would comply with all permit conditions required by these approvals.

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	MM BIO-10.7: Riparian Habitat and Trees. • The project will be designed to minimize impacts to riparian habitat to the maximum extent practicable. • Trees to be removed as well as trees to be avoided, as determined by a qualified arborist, will be clearly marked on the project plans. Trees to be avoided will be protected during construction by a tree protection zone fence placed around the drip line of the tree, as determined by a qualified arborist. • Riparian tree removal should be carefully considered on an individual tree basis and in coordination with the City. Riparian trees that will be permanently removed shall be mitigated by providing in-kind riparian plantings at a 5:1 ratio for oaks 16 inches in diameter at breast height (dbh) or greater and 3:1 for smaller oaks and all other native riparian tress. • A mitigation and monitoring plan (MMP) shall be prepared by a qualified biologist that describes the location, manner of planning, planting species, success criteria, and a reporting schedule covering at least 10 years of post-planting monitoring. The MMP will be developed by a qualified biologist and approved by the City. • Regulatory permits will be required for all impacts to riparian habitat from the CDFW and the RWQCB. The construction of a bridge would comply with all permit conditions required by these approvals. **MM BIO-10.8:** Heritage Trees • Trees that will be removed during construction of the project will be surveyed by a qualified arborist. A tree report shall be and a tree preservation and mitigation plan will be produced and implemented to avoid impacts to City regulated trees. **MM BIO-10.9:** Invasive Plants • Invasive non-native plants shall not be used in any landscaping. Any imported soil used for landscaping must be certified as weed-free.

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	Erosion control materials that contain hay or other dried plant materials must be certified weed-free. Any construction equipment operating within 250 feet of jurisdictional wetlands or other sensitive habitats shall be washed off-site to remove potential weed seeds prior to use. **MM BIO-10.10:** Water Quality • Construction activities shall conform to the permit requirements specified in the State of California Construction General Stormwater Permit. This includes filing of a notice of intent and preparation of a stormwater pollution prevention plan (SWPPP) and implementation of best management practices (BMPs) to reduce stormwater runoff. • Post-construction stormwater controls will be installed in accordance with the Santa Clara Valley Urban Runoff Pollution Program, implemented pursuant to the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit. • BMP's and post-construction water quality measures will be reviewed and approved by the NASA Ames Environmental Management Division and the City of Mountain view Public Works. • All areas disturbed by construction on the banks of Stevens Creek will be seeded following construction with a native grassland-type seed mix • If construction equipment access is required within the bed of Stevens Creek or construction activities could result in materials falling into the creek, the creek channel work area shall be dewatered. A dewatering plan shall be prepared if dewatering is necessary. • All construction work within the banks of Stevens Creek shall be restricted to the dry season between April 15 and October 15. **[Less Than Significant Impact with Mitigation Measures Included in the Project]**

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
Impact BIO-11: Construction of a Charleston Road and/or La Avenida Avenue Bridge could result in in bird strikes from avian collisions with bridge structures. **[Significant Impact]**	**MM BIO-11.1:** The following program-level mitigation measure would be required of any future bridge project to avoid and minimize potential impacts from bird strikes and to reduce the risk of avian collisions with a bridge. • No power lines shall be suspended above the bridge deck • High reflective surfaces will not be used. • Night lighting on the bridge will be minimized, with the exception of lighting needed for safety and compliance with regulations. To the extent feasible, all lighting will be directed at the bridge deck (not outwards into natural areas). • If suspension cables are proposed, then spiral-shaped Bird Flight Diverters (BFDs), shall be installed on all suspension cables on the bridge. The BFDs shall be designed to increase the diameter of each cable to at least eight inches over a length of at least four-to-eight inches, placed at least every 16-32 feet. A minimum of 60 percent of each cable will be marked with BFDs. Where multiple cables are parallel, the BFDs will be staggered to increase visual density, this strategy can be used to reduce the number of markers needed on each individual cable. **[Less Than Significant Impact With Mitigation Measures Incorporated in the Project]**
Greenhouse Gas Emissions Impacts	
Impact GHG-1: Under the 2030 full buildout under the amended North Bayshore Precise Plan, annual service population emissions of CO_2e/yr/service population would exceed the City's established GGRP threshold of 4.5 MT of CO_2e/year/service population, and would also exceed the mid-term 2030 target under SB 32. This impact is, therefore, significant. **[Significant Impact]**	The North Bayshore Precise Plan provides Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these standards and guidelines, along with adopted State regulations, would not be sufficient to meet the City's targets for GHG emissions by 2030. Achieving the substantial GHG emissions reductions needed by 2030 will require a substantial multiple-pronged approach that includes policy decisions citywide and additional emission controls at the federal and state level and new and

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	substantially advanced technologies whose adoption cannot be predicted with accuracy at this time. It also will require substantial behavioral changes both to replace fuel sources and reduce single-occupant vehicle trips further, especially to and from work places. Both the Draft 2017 Climate Change Scoping Plan Update[2] and the BAAQMD Draft 2017 Clean Air Plan include standards, guidelines, and implementation measures that seek to reduce GHG emissions. Additional measures from these documents that could be included in North Bayshore Precise Plan Bonus FAR commercial applications, are noted below: **MM GHG-1.1:** Bonus FAR commercial projects shall prepare an analysis of feasible energy efficiency and renewable energy, materials management, and mobility measures to reduce GHG emissions resulting from the project. Feasible measures shall be incorporated in the building design and/or TDM program. The analysis shall be prepared to the satisfaction of the Community Development Director. Measures to be considered and analyzed by applicants shall include those in the amended North Bayshore Precise Plan, including, but not limited to, the following added measures: **Green Building and Design** **Materials Management** • **Super-GHGs reduction.[3]** Use low-global warming potential (GWP) refrigerants in new building cooling systems and replacement in existing buildings when renovated. • **Zero-emission construction equipment (Resource Use).** Existing grid power for electric energy shall be used rather than operating temporary gasoline/diesel powered generators

[2] California Air Resources Board. *The Draft 2030 Climate Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target*. January 20, 2017.

[3] Super-GHGs are defined as compounds with very high global warming potential, such as methane, black carbon, and fluorinated gases.

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	where available. Construction projects shall also increase use of electric and renewable fuel powered construction equipment where commercially available. Other measures that may have increased GHG reduction benefits in the future include electricity produced using renewable energy and used for building heating and cooling. To systematically identify effective, feasible measures for future development, the following implementation action will be added to the amended North Bayshore Precise Plan. **MM GHG-1.2:** The City shall prepare a list of additional recommendations for effective GHG reductions in Transportation, Energy, and Building Operations that will be based upon adopted recommendations of CARB, BAAQMD, and relevant City policy documents. The recommendations will apply to both residential and commercial projects and are intended to reduce project GHG emissions to the point where they meet the City's adopted GGRP 2030 efficiency threshold. For residential uses in particular, potential GHG reductions relating to transportation will also include a vehicle trip reduction performance standard and/or reduced parking standard. The list of recommendations shall be updated regularly in conjunction with the review of the North Bayshore Precise Plan and/or with updates to the City's GGRP. Given the uncertainties about the feasibility of achieving the needed 2030 timeframe emissions reductions, and despite the City's requirements for future development in North Bayshore to implement additional sustainability measures, the project's contribution to greenhouse gas emissions and climate change for the 2030 timeframe is conservatively determined to be cumulatively considerable. **[Significant Unavoidable Impact]**
Impact GHG-3: New development will be required to implement TDM measures	The amended North Bayshore Precise Plan provides Standards and Guidelines for development for an area

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and other emissions-reduction features in the GGRP. The additional new residential could increase the percentage of vehicle trip internalization or increased walking or bicycling trips. However, total emissions in the North Bayshore area are projected to increase beyond those previously assumed in the City's GGRP. Therefore, implementation of the Precise Plan would conflict with plans, policies, or regulations for reducing GHG emissions adopted by the City of Mountain View. **[Significant Impact]**	that is a model of highly sustainable and innovative development within the City of Mountain View. The amended North Bayshore Precise Plan includes Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these measures, along with adopted State regulations, would not be sufficient to avoid conflicts with plans. The discussion following Impact GHG-1 outlines some measures that could be used to reduce this impact, but not to a less than significant level. **[Significant Unavoidable Impact]**
Impact C-GHG-1: The amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in Impact GHG-1 and Impact GHG-3. **[Significant Cumulative Impact]**	The North Bayshore Precise Plan provides Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these measures, along with adopted State regulations, would not be sufficient to reduce greenhouse gas emissions to a less than significant level (refer also to Mitigation Measure GHG-1.1, above.) **[Significant Unavoidable Cumulative Impact]**
Hazardous Materials Impacts	
Impact HAZ-3: Contaminated soils and groundwater in the plan area could pose a risk to construction workers, future residents and employees, and/or the general public. **[Potentially Significant Impact]**	**MM HAZ-4.1:** If a future project is located in an area for which an overseeing regulatory agency (e.g., US EPA, California Department of Toxic Substances Control [DTSC]), San Francisco Bay Regional Water Quality Control Board (Water Board) or Santa Clara County Department of Environmental Health (DEH) has determined that mitigation or other site management measures are required prior to future development, the project applicant shall coordinate development activities with the overseeing regulatory agency and adhere to the project-specific development requirements.

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	MM HAZ-4.2: If a future project is not located in such areas as described in MM HAZ-4.1 and as part of the building permit application process, project applicants shall prepare the following reports: • **Phase I Environmental Site Assessment (ESA)** - The purpose of the Phase I ESA shall be to identify Recognized Environmental Conditions (RECs), Controlled RECs or Historical RECs at the property (if any of these conditions exist). The scope of work shall be prepared in general accordance with ASTM E 1527-13 (or latest edition) titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule). • **Phase II Investigation** - If warranted by the findings of the Phase I ESA, a Phase II investigation shall be completed. The primary objective of this investigation shall be to evaluate the RECs identified in the Phase I ESA for the purpose of providing information regarding the nature and extent of possible contamination. The scope of work shall include soil, ground water and/or soil vapor sampling in areas of potential concern to evaluate if mitigation measures are needed to protect the health and safety of property occupants. • **Remedial Action Plan** – If contaminants of concern (COC) are detected above the lower of the then-current DTSC, Water Board or US EPA residential screening levels,[1] the project applicant shall then prepare a Remedial Action Plan (RAP) that reflects the results of the above investigations and implement the RAP, including long-term operation and maintenance. Site cleanup levels presented in the RAP shall be based on a target cancer risk (TR) of 10^{-6} or, for non-carcinogens, a target hazard quotient (THQ)

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	of 1.0. The lower of the then-current DTSC, Water Board or US EPA residential screening levels shall be used to interpret the TR and THQ levels or, alternatively, a site-specific human health risk assessment shall be prepared and approved by the overseeing regulatory agency. Higher cleanup goals may be acceptable to the City if approved in writing by the oversight agency. The project applicant shall provide an oversight agency's written approval of the RAP to the City. [[1]Note: Naturally occurring background concentrations of some metals may exceed their respective screening levels. Regulatory agencies generally do not require cleanup of contaminants in soil to below background levels. Site specific background levels may be substituted for the published screening levels if approved by the overseeing regulatory agency.] **MM HAZ-4.3:** Prior to the start of any construction activity on properties with known COC exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels1, the project applicant shall submit the following plans and controls to a regulatory agency for review and approval: • **Air Monitoring Plan**, which would assess the exposure of future on-site construction workers and neighboring occupants adjoining the site to COCs; this plan shall specify measures to be implemented if COC concentrations exceed threshold values. • **Vapor Intrusion Mitigation Plan,** which would describe the measures to be implemented to help prevent exposure of future project occupants to VOCs in indoor air as a result of vapor intrusion. If vapor intrusion of VOCs is identified as a REC, the Vapor Intrusion Mitigation Plan shall require the project applicant to design the proposed occupied spaces with appropriate structural and engineering features to reduce risk of vapor intrusion into buildings. At a minimum,

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	this design shall include: 1) passive sub-slab ventilation with a vapor barrier[2] and with the ability to convert the system from passive to active ventilation; 2) monitoring to ensure the long- term effectiveness of the remedy; and 3) the implementation of institutional controls. Other designs would be acceptable if approved in writing by the overseeing regulatory agency. The project applicant shall be required to submit the vapor intrusion remedial design and remedial action documents to an oversight agency for review and approval. [[2]Note: The vapor barrier shall be required for new construction; it may not be feasible to install the barrier under existing buildings planned for improvements.] Upon installation, the project applicant shall provide a Vapor Intrusion Response Action Completion Report to the oversight agency for review and approval. The report shall document installation of the vapor control measures identified in the Vapor Intrusion Mitigation Plan, including plans and specifications, and shall include a long-term operation, maintenance and monitoring plan. • **Long-Term Operations, Maintenance, and Monitoring Plan**, which shall describe actions to be taken following construction to maintain and monitor selected remedial measures as well as a contingency plan should a remedial measure fail. • **Institutional Controls Implementation Plan**, which shall identify non-engineered instruments of control, such as administrative and legal controls that help to minimize the potential for human exposure to contamination and/or protect the integrity of the response action. Institutional Controls shall be implemented through the City's planning and permitting procedures which will ensure that the appropriate remedy is applied to particular building construction. • **Financial Assurance**, which is proof that

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	adequate funds are available for long-term maintenance and monitoring of the selected remedial measure. • The project applicant shall provide the oversight agency's written approval of the above plans to the City. **MM HAZ-4.4:** Prior to the start of any construction activity on properties with known COC exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels, the project applicant shall coordinate work activities with the oversight agency and Responsible Parties (as designated by the oversight agency), including identifying conditions that could affect the implementation and monitoring of the approved remedy. **MM HAZ-4.5:** At future project sites identified as being impacted or potentially impacted during the property-specific Phase I ESA or subsequent studies, a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, or other materials during construction. The SMP shall be prepared by an Environmental Professional and be submitted to the overseeing regulatory agency for review and approval prior to construction. The project applicant shall provide the oversight agency's written approval of the SMP to the City. The SMP for the property shall include the following activities: • Property control procedures to control the flow of personnel, vehicles and materials in and out of the property. • Monitoring of vapors (if VOCs are determined to be a COC) during the removal of the underground utilities as well as any other underground features. An Environmental Professional shall be present to observe soil conditions, monitor vapors with a hand held meter and low level VOC detector, as appropriate, and determine if additional soil, soil gas, and air sampling should be performed. Protocols and procedures shall be presented for

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	determining when soil sampling and analytical testing will be performed. If additional sampling is performed, a report documenting sampling activities (with site plans and analytical data) shall be provided to the oversight agency. • Minimization of dust generation, storm water runoff and off-property tracking of soil. • Minimization of airborne dust during demolition activities. • Management of property risks during earthwork activities in areas where impacted soil, soil vapor and/or ground water are present or suspected. Worker training requirements, health and safety measures and soil handling procedures shall be described. • Decontamination to be implemented by the Contractor to reduce the potential for construction equipment and vehicles to release contaminated soil onto public roadways or other off-property transfer. • Perimeter air monitoring at the property during any activity that substantially disturbs the property soil (e.g., mass grading, foundation construction, excavation or utility trenching). This monitoring shall be used to document the effectiveness of required dust and vapor control measures. • Contingency measures for previously unidentified buried structures, wells, debris, or areas of impacted soil that could be encountered during property development activities. • Characterization and profiling of soil suspected of being contaminated so that appropriate disposal or reuse alternatives can be implemented. All soil excavated and transported from the property shall be appropriated disposed at a permitted facility. • Segregation of "clean" and "impacted" soil stockpiles. • Evaluation and documentation of the quality of soil imported to the property. • Soil containing chemicals exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels or typical background concentrations of metals shall not be accepted. • Monitoring of excavations and trenches for the

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	potential presence of VOC vapors (if a COC). • Evaluation of the on-property soil conditions to determine if they will adversely affect the integrity of below ground utility lines and/or structures (e.g., the potential for corrosion). • Measures to reduce potential soil vapor and ground water migration through trench backfill and utility conduits (if soil and/or ground water are contaminated). Such measures shall include placement of low-permeability backfill "plugs" at specified intervals on-property and at all locations where utility trenches extend off-property. In addition, utility conduits that are placed below ground water shall be installed with water-tight fittings to reduce the potential for ground water to migrate into conduits. • If the property is known to have COCs with the potential for mobilization, a Civil Engineer shall design the bottom and sides of vegetated swales and water retention ponds to be lined with a minimum 30 mil heavy duty plastic to help prevent infiltration. • If deep foundation systems are proposed, the foundations shall incorporate measures to help reduce the potential for the downward migration of contaminated ground water (if present). • Methods to mitigate the potential for vapor intrusion of VOC vapors (if present) into the planned structures. • For construction activity that involves below ground work (e.g., mass grading, foundation construction, excavating or utility trenching), information regarding property risk management procedures (e.g., a copy of the SMP) shall be provided to the contractors for their review, and each contractor should provide such information to its subcontractors. • If excavation dewatering is required, protocols shall be prepared to evaluate water quality and discharge/disposal alternatives; the pumped water shall not be used for on-property dust control or any other on-property use if contaminated. If long-term dewatering is required, the means and methods to extract, treat and dispose ground water also shall be presented and shall include

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	treating/discharging ground water to the sanitary sewer under a Publicly Owned Treatment Works (POTW) permit or treating /discharging ground water to the storm drain system pursuant to a California Regional Water Quality Control Board - San Francisco Bay Region (Water Board) NPDES permit. If dewatering activities may impact known ground water contaminant plumes in the vicinity of the property, the oversight agency responsible for the remediation of these contaminant releases shall be notified of planned activities. • The project applicant's Environmental Professional shall assist in the implementation of the SMP for the property and shall, at a minimum, perform part-time observation services during demolition, excavation, grading and trenching activities. Upon completion of construction activities that significantly disturb the soil, the Environmental Professional shall prepare a report documenting compliance with the SMP; this report shall be submitted to the City and to the oversight agency (if the property is under regulatory oversight - which would require the Project Applicant to provide the oversight agency's written approval of the SMP Completion Report to the City). **MM HAZ-4.6:** Leaving contaminated soil with COC above residential screening levels in-place or re-using it on future project sites shall require an oversight agency's written approval; the written approval shall be provided to the City. At a minimum, if contaminated soil is left in-place, a deed restriction or land use covenant shall detail the location of these soils. This document shall include a surveyed map of these impacted soils; shall restrict future excavation in these areas; and shall require future excavation be conducted in these areas only upon written approval by an oversight agency. **MM HAZ-4.7:** Any soil, soil vapor and/or ground water remediation of a future project site during development activities shall require written approval by an oversight agency and shall meet all applicable

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	federal, state and local laws, regulations and requirements. **MM HAZ-4.8:** Due to the North Bayshore Precise Plan area's proximity to US 101, soil sampling and analytical testing on a future site adjacent to US 101 for lead shall be performed (due to historical leaded gasoline use). If lead is detected above the lower of the then-current DTSC, Water Board or US EPA residential screening levels, it should appropriately mitigated under regulatory agency oversight. **MM HAZ-4.9:** Unless the Phase I ESA documents that a specific project site was historically not used for agricultural purposes, soil sampling and laboratory analyses shall be performed to evaluate the residual pesticide concentrations, if any, and potential health risks to future occupants and construction workers. **MM HAZ-4.10:** Soil exported from future project sites within the Precise Plan area shall be analyzed for COCs amongst other chemicals as required by the receiving facility. **MM HAZ-4.11:** The project applicant shall require the construction General Contractor to prepare a Health and Safety Plan (HSP) establishing appropriate protocols for working at the property. Workers conducting property earthwork activities in contaminated areas shall complete 40-hour HAZWOPER training course (29 CFR 1910.120). The General Contractor shall be responsible for the health and safety of their employees as wells as for compliance with all applicable federal, state, and local laws and guidelines. **MM HAZ-4.12:** Groundwater monitoring wells and remediation system components located on future project sites within the Precise Plan area shall be protected during construction. Upon written approval from the overseeing regulatory agency, the wells could be destroyed under permit from the Santa Clara Water District prior to mass grading activities. Relocation of the wells may be required. The

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	locations of future ground water monitoring wells and other remediation infrastructure, if any, shall be incorporated into the development plans. **MM HAZ-4.13:** If future project sites are under active regulatory agency oversight, the project applicant and subsequent owners and occupants shall provide access to the sites, including ongoing access to monitoring wells for monitoring and sampling purposes, and cooperate with the oversight agency and Responsible Parties during implementation of any subsequent investigation or remediation, if required. In addition, if vapor intrusion poses a human health risk, the project applicant and subsequent property owners and occupants shall provide access for future indoor air vapor monitoring activities and shall not interfere with the implementation of remedies required by the oversight agency. **MM HAZ-4.14:** For future sites that are subject to activity and use limitations (AULs), such as institutional (legal or regulatory restrictions on a property's use such as deed restrictions) and engineering (physical mechanisms that restrict property access or use) controls, compliance will be maintained. **MM HAZ-4.15:** At future sites where hazardous materials are used or stored, a permit may be required for facility closure (i.e., demolition, removal, or abandonment) of any facility or portion of a facility. The project applicant shall contact the Mountain View Fire Department and County Department of Environmental Health to determine facility closure requirements prior to building demolition or change in property use. **[Less Than Significant Impact with Mitigation Measures Incorporated in the Project]**
Noise and Vibration Impacts	
Impact NOISE-4: Construction activities during implementation of the amended North Bayshore Precise Plan could result	**MM NOI-4.1:** Avoid impact pile driving where possible. Drilled piles cause lower vibration levels where geological conditions permit their use.

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in significant ground-borne vibration impacts to existing structures. **[Significant Impact]**	**MM NOI-4.2:** Avoid using vibratory rollers and tampers near sensitive areas. **MM NOI-4.3:** In areas where project construction is anticipated to include vibration-generating activities, such as pile driving, in close proximity to existing structures, site-specific vibration studies should be conducted to determine the area of impact and to present appropriate mitigation measures that may include the following: • Identification of sites that would include vibration compaction activities such as pile driving and have the potential to generate ground-borne vibration, and the sensitivity of nearby structures to ground-borne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 200 feet of the project. A qualified structural engineer should conduct this task. • Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. • Construction contingencies would be identified for when vibration levels approached the limits. • At a minimum, vibration monitoring should be conducted during initial demolition activities and during pile driving activities. Monitoring results may indicate the need for more or less intensive measurements. • When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures. • Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

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	[Less Than Significant Impact with Mitigation Measures Incorporated in the Project]
Traffic and Transportation Impacts	
Impact TRANS-1: Implementation of the proposed amended North Bayshore Precise Plan would result in significant impacts to 22 project study intersections under Existing With Project conditions in either the AM and/or the PM peak hours. **[Significant Impact]**	**Mitigation Measures and Improvements** ***San Antonio Road Gateway Improvements*** • **#1. San Antonio Road and Bayshore Parkway (Palo Alto).** There are no feasible physical intersection improvements that would improve intersection operations to an acceptable level. The City of Mountain View recently increased vehicle storage for the northbound right-turn lane (San Antonio Road to Bayshore Parkway), and the westbound left-turn lane (Bayshore Parkway to San Antonio Road). The eastbound right-turn lane (Bayshore Parkway to San Antonio Road) should be lengthened to 150 feet. Further lengthening of the westbound left turn lane up to 300 feet, while beneficial to intersection operations, would require additional right-of-way and relocation of the existing sidewalk on the east side of Bayshore Parkway. While not typically considered mitigation, an update of the signal timings would incrementally improve the vehicle operations at this intersection. However, these mitigation measures do not improve intersection operations to acceptable LOS in the PM Peak hour. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** ***Rengstorff Avenue Gateway Improvements*** • **#13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View):** To improve operations and improve queueing in the northbound direction, an additional northbound right-turn lane (Rengstorff Avenue to Charleston Avenue) could be added with overlap signal

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	phasing; however, this would not improve intersection operations to an acceptable level of service. The eastbound approach could be reconfigured to include a dedicated right-turn lane; however, this improvement would not improve intersection operations. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#15. Rengstorff Avenue and US 101 Southbound ramps (Mountain View):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Rengstorff Avenue and US 101 Southbound ramps are physically feasible. A northbound right turn lane could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#16. Rengstorff Avenue and Leghorn Street (Mountain View):** Converting the westbound and eastbound approaches to include a separate left-turn lane and a shared through-right lane with permitted east/west phasing would improve intersection operations. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east/west legs. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. Modification of the east/west approaches could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the

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	impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]** ***Shoreline Boulevard Gateway Improvements*** The intersection improvements described below should be accompanied by a modification of the signal coordination to improve signal progression through the Shoreline Boulevard corridor. • **#32. Shoreline Boulevard and Space Park Way (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see the mitigation discussion below for the Shoreline Boulevard and Plymouth Street intersection). Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. • **#33. Shoreline Boulevard and Plymouth Street (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach. Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. Two options are described here:

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	– Option 1 – Dual Northbound Left Turn Lanes: To accommodate the morning peak hour demand, the two left turn lanes would each need to be approximately 425 feet long. This configuration would require additional right-of-way between Space Park Way and Pear Avenue and would affect the configuration of the southbound left turn lane at Shoreline Boulevard and Pear Avenue. – Option 2 – Single Split Phase Northbound Left Turn Lane: This improvement would include north/south split phasing and a single northbound left turn lane with an approximately 350 foot storage pocket. To fully accommodate the morning peak hour demand volumes, one of the northbound through lanes would serve as a de facto left turn lane requiring approximately 850 feet of storage; this vehicle queue would extend from Space Park Way through Pear Avenue halfway to the US 101 Northbound Off-Ramps. This configuration could require additional right-of-way. This option improves LOS to acceptable operations during the AM peak hour but does not provide acceptable operations in the PM peak hour. Moving Plymouth Street approximately 230 feet further north to align with Space Park Way would increase the potential vehicle storage space along Shoreline Boulevard. Either improvement would require additional right-of-way, removal of trees, and potentially relocation of utilities, but would reduce the project traffic impact to less than significant. However due to the right-of-way constraints and prioritization of bicycle and pedestrian crossing the City is considering the option with the least right-of-way take, which means the northbound left turn lane queue would likely spill back onto Shoreline Boulevard. These improvements would better manage vehicle storage, however, the City is trying to minimize right-of-way and balance considerations to

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	prioritize transit, bicycle, and pedestrians within this corridor too. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. Signalization of Shoreline Boulevard and Plymouth Street as a T-intersection (maintaining the current alignment) is not recommended because the signal would not serve a substantial volume of traffic and would only add delay to traffic on Shoreline Boulevard. **[Significant Unavoidable Impact]** • **#34. Shoreline Boulevard and Pear Avenue (Mountain View):** This intersection currently acts as a bottleneck during the AM and PM peak hours. To provide more green time to the through movements along Shoreline Boulevard the Shoreline Boulevard and Pear Avenue intersection could be modified to include: – Restripe westbound approach as left turn lane and one shared through-right lane. – Restripe eastbound approach as a left turn lane, through lane, and two right turn lanes with a no-right turn on red condition. – Reconfigure the northbound approach with three northbound through lanes (no left turn access), and a northbound right turn lane. Create 300 foot northbound right-turn pocket to bypass the Shoreline Boulevard queue and provide space for right turn vehicles to wait while pedestrians cross the east leg of the intersection. This option limits access from Shoreline Boulevard to/from the parcels currently occupied by the movie theater, fitness center, and dance studio. With this option, the morning peak hour operations would improve to LOS C; the evening peak hour operations would operate at LOS F. This improvement may require additional right-of-way, removal of trees, and potentially relocation of utilities. These improvements would have secondary effects on the Shoreline Boulevard and Plymouth

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	Street intersection because the northbound left turns at Pear Avenue would need to divert to Plymouth Street. To address the storage space needs, this option would also require two 500-foot northbound left turn lanes from Shoreline Boulevard to Plymouth Street (see the Option 1 mitigation for the Shoreline Boulevard and Plymouth Street-Space Park Way intersection mitigation #33). Under this mitigation measure, the Plymouth Street intersection would operate at LOS B (15.9 seconds of delay) and LOS C (34.6 seconds of delay) during the AM and PM peak hours, respectively. This limited access configuration results in acceptable level of service at the Shoreline Boulevard and Pear Avenue intersection during the AM peak hour, but would limit access to land uses west of Shoreline Boulevard at Pear Avenue and would shift some traffic to the Shoreline Boulevard and Plymouth Street-Space Park Way intersection. In consideration of the potential for right-of-way constraints that could affect the feasibility, the impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]** • **#35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View):** This five-legged intersection serves approximately 44 percent of all inbound and outbound traffic accessing the North Bayshore area during the morning peak hour and 51 percent during the evening peak hour. As currently configured, vehicles destined for areas east of Shoreline Boulevard must travel through the Shoreline Boulevard and Pear Avenue intersection to access La Avenida Avenue. The realignment of the US 101 northbound ramps would create a new T-intersection west of the Inigo Way and La Avenida Avenue intersection (shown in mitigation analysis in Appendix J). This intersection would include east/west intersection modifications at the Shoreline

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	Boulevard and La Avenida Avenue intersection and the Inigo Way and La Avenida Avenue intersection. These improvements would improve the overall intersection to an acceptable level of operation in the AM peak hour. Appendix J provides the intersection volume and level of services results for the study intersections (#31 to 35 and 71 to 75, plus the realigned ramp intersection #76) with affected by the ramp realignment. With this realignment of the US 101 northbound off-ramp, three notable shifts occur (inbound traffic summarized below): – Shift from Shoreline Boulevard to the new local north/south street between Charleston Road and Pear Avenue. Approximately 700 inbound vehicles during the morning peak hour (340 inbound vehicles from Shoreline Boulevard and 360 inbound vehicles from US 101 northbound off-ramp), and 280 inbound vehicles during the evening peak hour (80 inbound vehicles from Shoreline Boulevard and 170 inbound vehicles from US 101 northbound off-ramp) would shift to Inigo Way and the new north/south local street connecting La Avenida and Charleston Road parallel to Shoreline Boulevard. – Shift from Pear Avenue to La Avenida. The realignment provides a more direct access path to La Avenida Avenue and the north/south street north of Pear Avenue. Approximately 250 inbound vehicles shift during the morning peak hour, and 180 inbound vehicles during the evening peak hour to La Avenida from Pear Avenue. – Redistribution of inbound traffic from Shoreline Boulevard to Pear Avenue accessing the proposed Shoreline Commons site (1400 North Shoreline Boulevard). The realignment also shifts about 240 inbound vehicles during the morning peak hour and 30

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	inbound vehicles during the evening peak hour from the northbound left turn at pear to the westbound through movement. This redistribution of off-ramp traffic would reduce the traffic at Shoreline Boulevard and La Avenida-US 101 Northbound Ramps and redistribute traffic at the Shoreline Boulevard and Pear Avenue intersection. Outbound La Avenida traffic to southbound Shoreline Boulevard may have difficulty weaving to the westbound left turn lane due to queuing of inbound vehicles entering into North Bayshore. The short spacing between the realigned ramp and Inigo Way may present difficult weaving conditions for inbound vehicles too. The realignment of the US 101 northbound off-ramp would increase traffic on the new north/south street; this increase in traffic would require signalization of the new north/south local street intersections at Shorebird Way and Space Park Way. The new north/south local street and Charleston Road would also operate unacceptably during the evening peak hour (see Appendix K of the TIA). Although the peak hour signal warrant is not currently met, it would be possible to improve the intersection operations either by signalizing the intersection or by constructing a single-lane roundabout. The determination of which type of improvement would be most appropriate depends in part on the decision about whether to construct a new crossing of Stevens Creek at the end of Charleston Road. Realignment of the US 101 northbound off-ramp would require coordination with Caltrans. Since it cannot be assumed Caltrans would approve this mitigation measure and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable. However, the City should diligently pursue measures to fully mitigate this impact. **[Significant Unavoidable Impact]**

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	• **#38. Shoreline Boulevard and Middlefield Road (Mountain View):** Converting the westbound and eastbound approaches to include two left turn lanes, a through lane, and a shared through-right turn lane and signal timing modifications would reduce the project impact. These additional left-turn lanes may require relocation of existing utilities and removal of trees within the median of Middlefield Road. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. This improvement is designed with reversible bus lane project. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** ***North Bayshore Precise Plan Intersections*** • **#12. Salado Drive and Garcia Avenue (Mountain View):** Signalizing this intersection would reduce the impact to a less than significant level. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]** • **#72. New North-South Local Street and Shorebird Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Shorebird Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]** • **#73. New North-South Local Street and Space Park Way (Mountain View):** With most of the

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	residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Space Park Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]** • **#75. Inigo Way and La Avenida (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, this intersection would need to be signalized. The eastbound approach would have shared left through lane, the southbound approach would have a separate left-turn and right turn lanes, and the westbound approach would have a shared through right-turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]** ***On-Site Intersections and Streets*** The amended North Bayshore Precise Plan includes the priority transportation infrastructure described previously and other new local streets, multi-use paths, modifications to existing streets to include wider sidewalks, landscape areas within the median or along the curb, and cycle tracks on one or both sides of the street (refer to Appendix C). These street improvements may cause secondary impacts often associated with constructing new infrastructure or modifying existing facilities, such as the removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could

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	increase the crossing distance/time for pedestrians and bicyclists. ***Off-Site Intersections*** • **#17. Rengstorff Avenue and Middlefield Road (Mountain View):** Adding a second westbound left-turn lane and signal timing modifications would reduce the project impact. This would require widening curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **Significant Unavoidable Impact]** • **#20. Rengstorff Avenue and Central Expressway (Santa Clara County):** The widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway are potential mitigation measures at this intersection. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project (VTP Project #R12). **[Significant Unavoidable Impact]**

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	• **#24. Springer Road-Magdalena Avenue and Foothill Expressway (Santa Clara County):** Restriping the northbound approach to include one left-turn lane and one through lane and restriping the southbound approach to include one left-turn lane and two through lanes with protected left-turns north/south would improve operations to an acceptable LOS during the AM and PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]** • **#49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks crossing Central Expressway. The city is also considering closing the northbound movements from Castro Street to Central Expressway and Moffett Boulevard. This traffic would use alternative railroad crossings west of this crossing location at Shoreline Boulevard and east of this location at Whisman Road. With the closure of the northbound movements, intersection operations would improve to acceptable LOS in the AM and PM peak hour. These improvements would have secondary effects on the Shoreline Boulevard and Central Expressway intersection due to the rerouting of traffic caused by this closure. Under this mitigation measure the Shoreline Boulevard and Central Expressway (east) intersection would operate at LOS D (41.5 seconds of delay) and LOS B (15.7 seconds of delay) during the AM and PM peak hours, respectively. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this

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	impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#57. Bayfront Expressway and University Avenue (Menlo Park):** Potential mitigation at this intersection would require grade separation of Bayfront Expressway and University Avenue. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#59. Donohoe Street and University Avenue (East Palo Alto):** Converting the westbound approach to include dual left turn lanes, one through lane and one right turn lane with protected left turns would reduce the project impact at this intersection. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. These modifications do not improve traffic operations to acceptable LOS in the PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

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	• **#62. Embarcadero Road and E. Bayshore Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at the intersection of Embarcadero Road and East Bayshore Road are physically feasible within the current right-of-way. Modifying cycle length to 120 seconds would reduce the project impact. This modification, however, would not improve traffic operations to acceptable LOS during the PM peak hour. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#66. Arastradero Road and Foothill Expressway (Santa Clara County):** Potential mitigation at this intersection would require grade separation of Arastradero Road and Foothill Expressway. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]** • **#67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County):** The installation of a signal would improve operations to an acceptable LOS D operations or better during both peak hours. Signalization is a part of the I-280 and Page Mill Road interchange improvements (VTP 2040 ID #X15 and B48) to accommodate bicycle travel. In addition, Caltrans has been evaluating a safety project at this location that would include signalization. The signalization and intersection improvements will reduce the intersection level of service impact to an acceptable level. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this

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	impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]**
Impact TRANS-2: Implementation of the project would result in significant impacts to freeway segments during the AM and/or PM peak hour under Existing with Project Conditions. **[Significant Impact]**	**Mitigation for Freeway Impacts: Existing With Project Conditions** To improve operations, the affected freeway segments could be widened to meet the current level of service standard. Specifically, the Santa Clara Valley Transportation Authority (VTA) Valley Transportation Plan 2040 (October 2014) identifies freeway express lanes (VTA VTP 2040 Project #H1, H2, H3, and H5), and freeway auxiliary lane projects. These projects will ultimately enhance travel choices for this project, and make more efficient use of the transportation network. The complete mitigation of freeway impacts, however, is considered beyond the scope of an individual development project, due to the inability of any individual project or City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans, and as such the City cannot guarantee implementation of any improvement in the freeway right-of-way. The amended North Bayshore Precise Plan includes efforts to reduce single occupant vehicle trips by implementing a comprehensive Transportation Demand Management (TDM) Program, and a morning peak period trip cap. To manage deficient freeway operations, potential TDM measures that reduce peak period vehicle trips are described in the VTA Immediate Implementation Action List (See Appendix L of the TIA). The VTA action list is supplemented by a list of TDM measures described in a report titled *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* by the California Air Pollution Control Officers Association

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	(CAPCOA) (August 2010). While a successful TDM program and trip cap may incrementally reduce peak period freeway traffic, by itself it would not reduce the identified freeway impacts to a less than significant level. Therefore, the addition of project traffic results in a significant and unavoidable impact to the remaining identified freeway segments. A fair share contribution toward freeway improvement costs could be considered as a mitigation measure and a community benefit for the Statement of Overriding Considerations needed for this significant and unavoidable impact. Significant impacts, however, would not be eliminated until the improvements are constructed. To provide adequate funding, additional sources would be needed, which may include State Transportation Improvement Program funds for projects identified in the VTP, City impact fees, and/or a future regional impact fee. The City of Mountain View could potentially participate in development of a regional fee should it be proposed by regional agencies, such as VTA. **[Significant Unavoidable Impact]**
Impact TRANS-4: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact. **[Significant Impact]**	Transit operational improvements such as signal coordination and transit vehicle preemption could potentially improve the overall reliability of transit in congested areas, but are not likely to fully mitigate this effect. **[Significant Unavoidable Impact]**
Impact C-TRANS-1: Implementation of the proposed Precise Plan would result in significant impacts to 40 project study intersections under Year 2030 Cumulative With Project conditions in either the AM and/or the PM peak hours. **[Significant Impact]**	***San Antonio Road Gateway Improvements*** • **#1. San Antonio Road and Bayshore Parkway (Palo Alto):** There are no feasible physical intersection improvements that would improve intersection operations to an acceptable level. The City of Mountain View recently increased vehicle storage for the northbound right-turn lane (San Antonio Road to Bayshore Parkway), and the westbound left-turn lane (Bayshore Parkway

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	to San Antonio Road). The eastbound right-turn lane (Bayshore Parkway to San Antonio Road) should be lengthened to 150 feet. Further lengthening of the westbound left turn lane up to 300 feet, while beneficial to intersection operations, would require additional right-of-way and relocation of the existing sidewalk on the east side of Bayshore Parkway. While not typically, considered mitigation an update of the signal timings would incrementally improve the vehicle operations at this intersection. However, these mitigation measures do not improve intersection operations to acceptable LOS in the PM Peak hour. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#2. San Antonio Road and US 101 Northbound Ramps (Palo Alto):** No feasible vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and US 101 Northbound Ramps. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#3. San Antonio Road and Charleston Road (Palo Alto):** No feasible vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and Charleston Road because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other

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	improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** ***Rengstorff Avenue Gateway Improvements*** • **#13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View):** To improve operations and improve queueing in the northbound direction an additional northbound right-turn lane (Rengstorff Avenue to Charleston Avenue) could be added with overlap signal phasing; however, this would not improve intersection operations to an acceptable level of service. The eastbound approach could be reconfigured to include a dedicated right-turn lane; however, this improvement would not improve intersection operations. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#15. Rengstorff Avenue and US 101 Southbound Ramps (Mountain View):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Rengstorff Avenue and US 101 Southbound ramps are physically feasible. A northbound right-turn lane could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#16. Rengstorff Avenue and Leghorn Street (Mountain View):** Converting the westbound and eastbound approaches to include a separate left-turn lane and a shared through-right lane with permitted east/west phasing would improve intersection operations. This would require

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	widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east/west legs. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. Modification of the east/west approaches could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** ***Shoreline Boulevard Gateway Improvements*** The intersection improvements described below should be accompanied by a modification of the signal coordination to improve signal progression through the Shoreline Boulevard corridor. • **#32. Shoreline Boulevard and Space Park Way (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see the mitigation discussion below for the Shoreline Boulevard and Plymouth Street intersection). Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. **[Significant Unavoidable Cumulative Impact]** • **#33. Shoreline Boulevard and Plymouth Street (Mountain View):** The realignment of Plymouth

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	Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see Table 14 of the TIA for summary of the geometric configuration). Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. Two options are described here: – Option 1 – Dual Northbound Left Turn Lanes: To accommodate the morning peak hour demand, the two left turn lanes would each need to be approximately 425 feet long. This configuration would require additional right-of-way between Space Park Way and Pear Avenue and would affect the configuration of the southbound left turn lane at Shoreline Boulevard and Pear Avenue. – Option 2 – Single Split Phase Northbound Left Turn Lane: This improvement would include north/south split phasing and a single northbound left turn lane with an approximately 350 foot storage pocket. To fully accommodate the morning peak hour demand volumes, one of the northbound through lanes would serve as a de facto left turn lane requiring approximately 850 feet of storage; this vehicle queue would extend from Space Park Way through Pear Avenue halfway to the US 101 Northbound Off-Ramps. This configuration could require additional right-of-way. This option improves LOS to acceptable operations during the AM peak hour but does not provide acceptable operations in the PM peak hour.

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	Moving Plymouth Street approximately 230 feet further north to align with Space Park Way would increase the potential vehicle storage space along Shoreline Boulevard. This improvement would require additional right-of-way, removal of trees, and potentially relocation of utilities, but would reduce the project traffic impact to less than significant. However due to the right-of-way constraints and prioritization of bicycle and pedestrian crossing the City is considering the option with the least right-of-way take, which means the northbound left turn lane queue would likely spill back onto Shoreline Boulevard. These improvements would better manage vehicle storage, however, the City is trying to minimize right-of-way and balance considerations to prioritize transit, bicycle, and pedestrians within this corridor too. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. Signalization of Shoreline Boulevard and Plymouth Street as a T-intersection (maintaining the current alignment) is not recommended because the signal would not serve a substantial volume of traffic and would only add delay to traffic on Shoreline Boulevard. **[Significant Unavoidable Cumulative Impact]** • **#34. Shoreline Boulevard and Pear Avenue (Mountain View)**: This intersection currently acts as a bottleneck during the AM and PM peak hours. To provide more green time to the through movements along Shoreline Boulevard the Shoreline Boulevard and Pear Avenue intersection could be modified to include: – Restripe westbound approach as left turn lane and one shared through-right lane. – Restripe eastbound approach as a left turn lane, through lane, and two right turn lanes with a no-right turn on red condition. – Reconfigure the northbound approach with three northbound through lanes (no left turn access), and a northbound right turn lane. Create 300 foot northbound right-turn pocket

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	to bypass the Shoreline Boulevard queue and provide space for right turn vehicles to wait while pedestrians cross the east leg of the intersection. This option limits access from Shoreline Boulevard to/from the parcels currently occupied by the movie theater, fitness center, and dance studio. With this option, the morning peak hour operations would improve to LOS C; the evening peak hour operations would operate at LOS F. This improvement may require additional right-of-way, removal of trees, and potentially relocation of utilities. These improvements would have secondary effects on the Shoreline Boulevard and Plymouth Street intersection because the northbound left turns at Pear Avenue would need to divert to Plymouth Street. To address the storage space needs, this option would also require two 500-foot northbound left turn lanes from Shoreline Boulevard to Plymouth Street (see the mitigation for the Shoreline Boulevard and Plymouth Street-Space Park Way intersection, Mitigation Measure #33). Under this mitigation measure, the Plymouth Street intersection would operate at LOS B (15.9 seconds of delay) and LOS C (34.6 seconds of delay) during the AM and PM peak hours, respectively. This limited access configuration results in acceptable level of service at the Shoreline Boulevard and Pear Avenue intersection during the AM peak hour, but would limit access to land uses west of Shoreline Boulevard at Pear Avenue and would shift some traffic to the Shoreline Boulevard and Plymouth Street-Space Park Way intersection. In consideration of the potential for right-of-way constraints that could affect the feasibility, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

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	• **#35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View):** This five-legged intersection serves approximately 44 percent of inbound and outbound traffic accessing the North Bayshore Precise Plan area during the morning peak hour and 51 percent during the evening peak hour. As currently configured, vehicles destined for areas east of Shoreline Boulevard must travel through the Shoreline Boulevard and Pear Avenue intersection to access La Avenida. The realignment of the US 101 northbound ramps would create a new T-intersection west of the Inigo Way and La Avenida intersection (shown in mitigation analysis). This intersection would include east/west intersection modifications at the Shoreline Boulevard and La Avenida Avenue intersection and the Inigo Way and La Avenida Avenue intersection. These improvements would improve the overall intersection to an acceptable level of operation in the AM peak hour. Appendix K of the TIA provides the intersection volume and level of services results for the study intersections (#31 to 35 and 71 to 75 plus the realigned ramp intersection #76) with affected by the ramp realignment. With this realignment of the US 101 northbound off-ramp, three notable shifts occur (inbound traffic summarized below): – <u>Shift from Shoreline Boulevard to the new local north/south street between Charleston Road and Pear Avenue</u>. Approximately 700 inbound vehicles during the morning peak hour, (340 inbound vehicles from Shoreline Boulevard and 360 inbound vehicles from US 101 northbound off-ramp), and 280 inbound vehicles during the evening peak hour (80 inbound vehicles from Shoreline Boulevard and 170 inbound vehicles from US 101 northbound off-ramp) would shift to Inigo Way and the new north/south local street connecting La Avenida and Charleston Road parallel to Shoreline Boulevard.

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	– Shift from Pear Avenue to La Avenida Avenue. The realignment provides a more direct access path to La Avenida Avenue, and the north/south street north of Pear Avenue. Approximately 250 inbound vehicles shift during the morning peak hour, and 180 inbound vehicles during the evening peak hour to La Avenida from Pear Avenue. – Redistribution of inbound traffic from Shoreline Boulevard to Pear Avenue accessing the proposed Shoreline Commons site (1400 North Shoreline Boulevard). The realignment also shifts about 240 inbound vehicles during the morning peak hour and 30 inbound vehicles during the evening peak hour from the northbound left turn at pear to the westbound through movement. This redistribution of off-ramp traffic would reduce the traffic at Shoreline Boulevard and La Avenida-US 101 Northbound Ramps at the Shoreline Boulevard and Pear Avenue intersection. Outbound La Avenida traffic to southbound Shoreline Boulevard may have difficulty weaving to the westbound left turn lane due to queuing of inbound vehicles entering into North Bayshore. The short spacing between the realigned ramp and Inigo Way may present difficult weaving conditions for inbound vehicles too. The realignment of the US 101 northbound off-ramp would increase traffic on the new north/south street; this increase in traffic would require signalization of the new north/south local street intersections at Shorebird Way and Space Park Way. The new north/south local street and Charleston Road would also operate unacceptably during the evening peak hour (see Appendix K of the TIA). Although the peak hour signal warrant is not currently met it would be possible to improve the intersection operations either by signalizing the intersection

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	or by constructing a single-lane roundabout. The determination of which type of improvement would be most appropriate depends in part on the decision about whether to construct a new crossing of Stevens Creek at the end of Charleston Road. Realignment of the US 101 northbound off-ramp would require coordination with Caltrans. Since it cannot be assumed Caltrans would approve this mitigation measure and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable. However, the City should diligently pursue measures to fully mitigate this impact. **[Significant Unavoidable Cumulative Impact]** • **#37. Shoreline Boulevard and Terra Bella Ave (Mountain View):** Converting the southbound approach to include two through lanes and a right turn lane would return the intersection operations to an acceptable level of service. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. The estimated southbound right-turn volume of 150 vehicles does not typically justify a separate right-turn lane and this potential mitigation may require additional right-of-way with the proposed reversible transit lane on Shoreline Boulevard. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#38. Shoreline Boulevard and Middlefield Road (Mountain View):** Converting the westbound and eastbound approaches to include two left turn lanes, a through lane, and a shared through-right turn lane and signal timing modifications would reduce the project impact.

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	These additional left-turn lanes may require relocation of existing utilities and removal of trees within the median of Middlefield Road. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. This improvement is designed with reversible bus lane project. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** ***On-Site Intersections and Streets*** The North Bayshore Precise Plan includes the priority transportation infrastructure and other new local streets, multi-use paths, modifications to existing streets to include wider sidewalks, landscape areas within the median or along the curb, and cycle tracks on one or both sides of the street (see the North Bayshore Precise Plan for more details). These street improvements may cause secondary impacts often associated with constructing new infrastructure or modifying existing facilities, such as the removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. • **#12. Salado Drive and Garcia Avenue (Mountain View):** Signalizing this intersection would reduce the impact to a less than significant level. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]** • **#72. New North-South Local Street and Shorebird Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Shorebird Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing

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	and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]** • **#73. New North-South Local Street and Space Park Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Space Park Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]** • **#75. Inigo Way and La Avenida (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, this intersection would need to be signalized. The eastbound approach would have shared left through lane, the southbound approach would have a separate left-turn and right turn lanes, and the westbound approach would have a through right-turn lane. This signalization and intersection improvements will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]** ***Other Off-Site Intersections***

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	• **#4. San Antonio Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and Middlefield Road are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#6. San Antonio Road and California Street (Mountain View)**: Reconfiguring the southbound approach to include two southbound left turn lanes, one through lane and one through right-lane, and signal timing modifications would reduce the project impact. However, this would not improve operations to an acceptable level of service in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#8. Charleston Road and Fabian Way (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically

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	considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]** • **#9. Charleston Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]** • **#10. Charleston Road and Alma Street (Palo Alto):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Charleston Road and Alma Street are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto policies accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#17. Rengstorff Avenue and Middlefield Road (Mountain View):** Adding a second westbound

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	left-turn lane and signal timing modifications would reduce the project impact. This would require widening curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#20. Rengstorff Avenue and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project (VTP Project #R12). **[Significant Unavoidable Cumulative Impact]** • **#21. Rengstorff Avenue and California Avenue (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]** • **#22. Rengstorff Avenue and El Camino Real (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#39. Shoreline Boulevard and Montecito Avenue-Stierlin Road (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#42. Shoreline Boulevard and Central Expressway (East) (Santa Clara County):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]**

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• **#43. Shoreline Boulevard and California Street (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#44. Shoreline Boulevard-Miramonte Avenue and El Camino Real (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#45. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View):** Converting the northbound approach to include a separate left-turn lane, two through lanes, and a right-turn lane. Restriping the southbound approach to include a separate left-turn lane, through lane and shared through-right lane. Converting the eastbound approach to include a separate left-turn lane and a shared through-right lane and converting the westbound approach to include a separate left-turn lane, a through lane, and a right-turn lane with protected left turns on all approaches would reduce the project impact to a less than significant level. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• **#46. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#48. Moffett Boulevard and Middlefield Road (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway. The City is also considering closing the northbound movements from Castro Street to Central Expressway and Moffett Boulevard. This traffic would use alternative railroad crossings west of this crossing location at Shoreline Boulevard and east of this location at Whisman Road. The closure of the northbound movements improves operations to acceptable LOS in the AM and PM peak hour. These improvements would have secondary effects on the Shoreline Boulevard and Central Expressway intersection due to the rerouting of traffic caused by this closure. Improvements required to reduce the secondary impact at this intersection would include an additional southbound left turn lane and implementation of the 150 second cycle length. Under this mitigation measure the Shoreline Boulevard

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	intersection would operate at LOS E+ (55.1 seconds of delay) and LOS F (>120 seconds of delay) during the AM and PM peak hours respectively. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#50. Central Expressway and State Route 85 Ramps (Santa Clara County):** The addition of a third through lane on the eastbound and westbound approach would reduce the project impact at this intersection. This would require widening curb-to-curb width on the east and west leg, and re-striping the lanes for the east and west leg. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#52. Whisman Station Road and Central Expressway (Santa Clara County):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#54. Ferguson Drive and Central Expressway (Santa Clara County):** The addition of a third through lane on the westbound approach would improve intersection operations to an acceptable level. However this improvement is controlled by

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	another agency and the City of Mountain View cannot guarantee it will be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. This would require widening curb-to-curb width on the west leg, and re-striping the lanes for the west leg. **[Significant Unavoidable Cumulative Impact]** • **#56. Mary Avenue and Central Expressway (Santa Clara County):** The addition of a fourth through lane on the eastbound and westbound approach would reduce the project impact at this intersection. This would require widening curb-to-curb width on the east and west leg, additional right-of-way, and re-striping the lanes for the east and west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#58. Bay Road and University Avenue (East Palo Alto):** Reconfiguring the intersection to include an exclusive right-turn lane on the northbound approach, a second left-turn lane on the westbound and southbound approach with signal timing modifications would improve operations to acceptable LOS at this intersection. Secondary impacts associated with the widening of the intersection would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#59. Donohoe Street and University Avenue (East Palo Alto):** Converting the westbound approach to include dual left turn lanes, one through lane and one right turn lane with protected left turns would reduce the project impact at this intersection. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. These modifications do not improve traffic operations to acceptable LOS in the PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]** • **#62. Embarcadero Road and East Bayshore Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. Although not typically considered a mitigation measure by itself, signal timing modification (increasing the cycle length) would reduce the project impact at this location. **[Significant Unavoidable Cumulative Impact]**

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	• **#63. Embarcadero Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Furthermore, widening this intersection would conflict with Palo Alto policies to prioritize the needs of bicyclists and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#64. Oregon Expressway and Middlefield Road (Santa Clara County):** The addition of a second westbound and eastbound left-turn lane would mitigate the project impact but would not improve intersection operations to an acceptable level in the PM peak hour (LOS E or better). While signal modifications and intersection improvements will reduce levels of service impacts at this intersection, the City cannot be certain at this time that such improvements will be implemented since Oregon Expressway is under the jurisdiction of Santa Clara County and no other feasible mitigation measures have been identified. This impact would remain significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#65. Arastradero Road-Charleston Road and El Camino Real (Palo Alto)**: No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]** • **#67. Page Mill Road and I-280 Southbound Off Ramp-Arastradero Road (Santa Clara County):** The installation of a signal with dual left-turn lanes and a shared through-right lane on the westbound approach and a dedicated left-turn

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
	lane and dedicated right-turn lane on the eastbound approach would improve operations to an acceptable LOS E operations during both peak hours. Signalization is a part of the I-280 and Page Mill Road interchange improvements (VTP 2040 ID #X15 and B48) to accommodate bicycle travel. In addition, Caltrans has been evaluating a safety project at this location that would include signalization. However, this improvement is controlled by another agency and the City of Mountain View cannot guarantee it will be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Impact]** **#70. Moffett Boulevard and SR 85 Southbound Ramp (Mountain View):** The installation of a signal would improve operations to an acceptable LOS B operations during both peak hours. The signalization and intersection improvements will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**
Impact C-TRANS-2: Implementation of the project would result in significant cumulative impacts to freeway segments during the AM and/or PM peak hour. **[Significant Cumulative Impact]**	The complete mitigation of freeway impacts is considered beyond the scope of individual projects or plans such as the North Bayshore Precise Plan, due to the inability of the City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans and, as such, the City cannot guarantee implementation of any improvement in the freeway right-of-way. **[Significant Unavoidable Cumulative Impact]**
Impact C-TRANS-3: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable	Transit operational improvements such as signal coordination and transit vehicle preemption could potentially improve the overall reliability of transit in

SIGNIFICANT IMPACTS	MITIGATION AND AVOIDANCE MEASURES
cumulative effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact determination. **[Significant Unavoidable Cumulative Impact]**	congested areas, but are not likely to fully mitigate this effect. **[Significant Unavoidable Cumulative Impact]**

1.3 SIGNIFICANT UNAVOIDABLE IMPACTS

The project would result in the significant unavoidable impacts discussed below. All other impacts of the proposed project would be mitigated to a less than significant level with incorporation of the Precise Plan standards and guidelines, applicable mitigation measures, and General Plan policies and actions identified in this SEIR.

Transportation and Traffic:

- **Intersection Impacts:** As shown in Table 4.14-11, under Existing with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion. This congestion would result in significant and unavoidable impacts to 18 intersections in the AM and/or PM peak hours.

  These significant, unavoidable intersection impacts are as follows:

  1. San Antonio Road and Bayshore Parkway (Palo Alto)
  13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View)
  15. Rengstorff Avenue and US 101 Southbound ramps (Mountain View)
  16. Rengstorff Avenue and Leghorn Street (Mountain View)
  17. Rengstorff Avenue and Old Middlefield Way (Mountain View)
  20. Rengstorff Avenue and Central Expressway (Santa Clara County)
  24. Springer Road-Magdalena Avenue and Foothill Expressway (Santa Clara County)
  32. Shoreline Boulevard and Space Park Way (Mountain View)
  33. Shoreline Boulevard and Plymouth Street (Mountain View)
  34. Shoreline Boulevard and Pear Avenue (Mountain View)
  35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View)
  38. Shoreline Boulevard and Middlefield Road (Mountain View)
  49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County)
  57. Bayfront Expressway and University Avenue (Menlo Park)
  59. Donohoe Street and University Avenue (East Palo Alto)
  62. Embarcadero Road and East Bayshore Road (Palo Alto)
  66. Arastradero Road and Foothill Expressway (Santa Clara County)
  67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County)

Mitigation measures were considered for these impacts (refer to Table 4.14-12 in *Section 4.14.3.4*), and improvements identified would not ultimately improve the intersection operations to an acceptable level of service, or are not guaranteed to be implemented. For example, re-alignment of the US 101 northbound off-ramp (a potential mitigation measure for impacts at Intersection #35) would require coordination with Caltrans. Since it cannot be assumed that Caltrans would approve this mitigation measure, and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable.

The City will diligently pursue measures to fully mitigate these impacts. No other improvements are feasible due to right-of-way constraints or other issues, therefore the project's impact to these 18 intersections is considered significant and unavoidable.

Freeway Impacts: Project traffic would result in impacts to 74 freeway segments in the AM peak hour (45 mixed-flow, 29 HOV lanes), and 84 freeway segments in the PM peak hour (62 mixed-flow and 22 HOV lanes) under Existing with Project Conditions (refer to the TIA in Appendix J). The complete mitigation of freeway impacts is considered beyond the scope of an individual development project or City plan, due to the inability of any individual project or City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans, and as such the City cannot guarantee implementation of any improvement in the freeway right-of-way. Therefore, impacts to these freeway segments is considered significant and unavoidable.

- **Transit Vehicle Delay Impacts:** Implementation of the amended North Bayshore Precise Plan would not disrupt existing or interfere with planned transit services or facilities; however, the increase in transit vehicles, congestion at the North Bayshore gateways, and increased delay at off-site intersections would delay transit vehicles. Therefore, the project would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable impact determination for traffic delay. Transit operational improvements such as signal coordination and transit vehicle preemption could potentially improve the overall reliability of transit in congested areas, but are not likely to fully mitigate this effect.

- **Cumulative Transportation Impacts:** The cumulative projects, including the amended Precise Plan, would result in cumulatively significant and unavoidable impacts to intersections, freeway segments, and transit levels of service.

  – Implementation of the proposed Precise Plan would result in significant and unavoidable impacts to 45 intersections during either the AM and/or PM peak hours under Year 2030 Cumulative with Project Conditions.

  – Implementation of the project would result in a cumulatively considerable contribution to impacts to 130 freeway segments in the AM peak hour (67 mixed-flow, 63 HOV lanes) and 122 freeway segments in the PM peak hour (66 mixed-flow and 56 HOV lanes) under Year 2030 Cumulative with Project conditions.

– Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable cumulative effect on transit vehicle operations under Year 2030 with Cumulative with Project Conditions, in particular at those intersections with a significant and unavoidable impact determination for traffic delay.

Greenhouse Gas Emissions

- **Operational Emissions:** Under the 2030 full buildout of the amended North Bayshore Precise Plan, annual service population emissions of CO_2e/yr/service population would exceed the City's established GGRP threshold of 4.5 MT of CO_2e/year/service population. The project proposes to implement feasible energy efficiency and TDM measures identified in the City's GGRP and North Bayshore Precise Plan to minimize impacts; however, these measures would not reduce impacts to a less than significant level. This impact is, therefore, significant and unavoidable.

- **Consistency with Plans:** New development will be required to implement TDM measures and other emissions-reduction features in the GGRP and the additional housing could allow for internalization of trips or increased walking or bicycling trips. However, total emissions in the North Bayshore area are projected to increase beyond those previously assumed in the City's GGRP and Plan Bay Area. Therefore, implementation of the Precise Plan would conflict with plans, policies, or regulations for reducing GHG emissions adopted by the California legislature, CARB, BAAQMD, and City of Mountain View. This impact is, therefore, significant and unavoidable.

- **Cumulative Greenhouse Gas Emissions:** The amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in the project-level impacts. This impact is, therefore, significant and unavoidable.

All other impacts of the proposed project would be mitigated to a less than significant level with incorporation of the Precise Plan standards and guidelines, applicable project-level mitigation measures and General Plan policies and actions identified in this SEIR.

1.4 SUMMARY OF ALTERNATIVES

CEQA requires that an EIR identify alternatives to the project as proposed. The CEQA Guidelines specify that an EIR identify alternatives which "would feasibly attain the most basic objectives of the project, but avoid or substantially lessen many of the significant environmental effects of the project," or would further reduce impacts that are considered less than significant with the incorporation of identified mitigation.

The following is a summary of the project objectives and the alternatives evaluated in this SEIR. Please refer to *Section 8.0, Alternatives to the Proposed Project* for additional detail regarding these alternatives.

The objectives of the City of Mountain View for the North Bayshore Precise Plan project, approved in 2014, were as follows:

- Create four distinct character areas within North Bayshore, differing their physical character, form, interfaces with habitat and open space, building intensity and scale, and building massing.
- Make the area a model for a highly sustainable and innovative development area, which will be implemented by building-, site-, and district-scale improvements.
- Concentrate growth to support transit, directing higher intensity development towards Gateway and Core Areas.
- Enhance ecosystems and habitat areas within and adjacent to the Precise Plan area.
- Promote transit, carpools, biking, and walking for access to and between the businesses of North Bayshore.
- Create walkable, human-scale blocks to promote bike and pedestrian transportation.
- Improve connectivity to North Bayshore through more effective connections to Downtown and across US 101.
- Improve infrastructure in the area, including a new transit, bicycle, and pedestrian connection over US 101 and the improved design of existing facilities such as the North Bayshore off-ramp from US 101.
- Allow for new and emerging technologies such as Intelligent Transportation Systems and autonomous vehicles that maximize the functionality of roadways even as more vehicles are added to the network.
- Construct buildings that support public areas and support the safety, comfort, and use of the transportation network and community open spaces.
- Encourage and support a diverse economic base to ensure the long-term fiscal health of the area and the City.
- Promote retail, entertainment and the arts through expanded retail, civic, lodging, arts and entertainment uses.
- Proactively address climate change.
- Minimize the potential consequences of sea-level rise through strategies, including improving levees, upgrading stormwater facilities, and elevating development.
- Expand and improve recreation and open spaces, creating a diverse network of public and private open spaces.

The additional objectives of the City of Mountain View for the amended North Bayshore Precise Plan (residential uses), are as follows:

- Blend residential, commercial, and office uses to create complete neighborhoods with services, open space, and transportation options for residents and area employees.
- Improve the jobs-housing balance of the area and City by including residential uses in North Bayshore.
- Promote housing affordability, with an affordable housing goal of 20 percent or more for new housing within the area.
- Improve connections to/from NASA-Ames and North Bayshore.
- Develop residential urban design principles to help create an urban neighborhood with buildings up to 15 stories in certain locations and under specific circumstances.

- Incentivize new housing through an affordable housing strategy that allows increased FAR (floor area ratio) and more affordable units, and allowing demolished office FAR to be rebuilt.
- Support vehicle trip reduction and reduced parking standards for residential uses to reduce private car usage and increase other transportation modes.
- Create new residential street standards to make biking/walking for area residents more convenient and comfortable.

1.4.1 No Project Alternative

The North Bayshore area was zoned *P(39) North Bayshore Precise Plan* in 2014. The adopted North Bayshore Precise Plan allows development of 3.4 million square feet of office and commercial development within the area, consistent with the 2030 General Plan and the policies of the Precise Plan. In 2015, the 2030 General Plan was amended to allow up to 1,100 multi-family dwelling units in the area, although the underlying zoning was not changed. The Precise Plan area is currently developed with numerous existing office/industrial buildings, so the "No Project" alternative may include continued occupancy or re-occupancy of these buildings. New development projects could seek approval to redevelop sites to the maximum development allowed by the existing zoning. Implementation of infrastructure projects described in the adopted Precise Plan and funded by development fees would also continue.

Impact Comparison: Similar to the adopted North Bayshore Precise Plan, the proposed amended Precise Plan would result in significant and unavoidable traffic and transportation impacts to local intersections, freeways, and transit delays. The No Project alternative would result in fewer intersection and freeway impacts than buildout of the proposed amended Precise Plan. Since the adopted North Bayshore Precise Plan is consistent with the 2030 General Plan and the Greenhouse Gas Reduction Program (GGRP), the No Project alternative would not result in the significant, unavoidable greenhouse gas emissions impacts anticipated under the amended Precise Plan.

Without the implementation of new residential uses in the North Bayshore area, impacts to new residents from construction and operational activities, including air quality, groundborne vibration, and hazardous materials impacts, would not occur. Mitigation measures are included in the proposed amended Precise Plan to reduce these impacts to a less than significant level; however, these impacts would not occur without the introduction of sensitive receptors into the area. The No Project alternative would not include a policy supporting a new bridge crossing over Stevens Creek, avoiding potential impacts to biological resources in and near the creek,

Objectives: The No Project alternative would not fulfill the new, additional objectives of the City for the amended North Bayshore Precise Plan, including the objectives of the City to construct new housing, develop blended residential neighborhoods, improve the jobs-housing balance, and promote housing affordability. The No Project alternative would not provide as many opportunities for vehicle trip reductions resulting from area 'trip internalization,' and increased pedestrian and bicycle use through the planned development of higher density residential development in close proximity to the jobs-rich North Bayshore area when compared to the amended plan.

1.4.2 Reduced Residential Alternative

One of the City's intentions in proposing to amend the North Bayshore Precise Plan to include residential uses is to address "gateway" vehicle capacity issues at the three North Bayshore gateways (San Antonio Road, Rengstorff Avenue, and Shoreline Boulevard) in the AM peak hour (and exiting in the PM peak hour) by providing residential uses near employment centers. The addition of residential uses to North Bayshore does slightly increase the total capacity of the gateways. A Reduced Residential alternative could include allowing only the estimated maximum number of residential units within North Bayshore that could be accommodated by the capacity of the three gateways into North Bayshore. Under this scenario, up to approximately 3,000 multi-family dwelling units could be developed in the North Bayshore area, and unit sizes similar to those assumed for the project would be combined with a reduced parking ratio (e.g., 0.6 spaces per unit). The office and commercial development in the area would still be included under this alternative. This alternative assumes that the standards and guidelines contained in the proposed amended Precise Plan would still be implemented, but with a much lower density of residential development.

Impact Comparison: The Reduced Residential alternative includes approximately 30 percent of the proposed project's residential units and would have a proportionate reduction in vehicle trips. Since up to 3,000 dwelling units would be accommodated within the North Bayshore gateway capacity, the gateway traffic impacts for buildout of the Reduced Residential would be similar to the impacts of the adopted North Bayshore Precise Plan (the No Project alternative), described previously. This alternative would avoid many of the project's impacted intersections and freeway segments. Since freeways in the vicinity of the project have little capacity under existing conditions, nearly all projects proposed for the North Bayshore area could still result in significant impacts to freeway traffic, even at a small percentage of the proposed Precise Plan buildout. A substantially reduced amount of development, however, may not be enough to substantially support transit use and other efforts to increase mode share.

The residential units included in the Reduced Residential alternative would still require a General Plan amendment for development of over 1,100 dwelling units, and, therefore, would not be consistent with the GGRP. Since the number of residents within the area would decrease the ratio of emissions per service population would increase. For this reason, greenhouse gas emissions impacts would not be reduced to a less than significant level under a Reduced Residential alternative.

Because this alternative would develop approximately 30 percent of the residential uses proposed by the amended Precise Plan, the Reduced Residential alternative would result in reduced impacts for air pollutant emissions, hazardous materials, noise and vibration, energy, and utilities. Although construction impacts would be reduced, including those from air quality, groundborne vibration, and hazardous materials, they would still occur. Similar to the proposed project, the Reduced Residential alternative could include a policy supporting a new bridge crossing over Stevens Creek. Any potential impacts from a bridge crossing could be reduced to a less than significant level with the implementation of mitigation measures included in the amended Precise Plan.

Objectives: A Reduced Residential alternative would fulfill the objectives of the adopted Precise Plan, which are also included as objectives of the amended Precise Plan. A Reduced Residential alternative would not significantly fulfill the new objectives of the amended Precise Plan regarding development of new neighborhoods and improvement of the jobs-housing balance. The Reduced

Residential alternative would provide fewer affordable housing units in the City. This alternative would fulfill objectives related to creating a new mixed use urban neighborhood, creating new residential street standards, and creating connections with NASA-Ames Research Center to a similar extent as the proposed project, although the density of development would be substantially reduced.

1.4.3 Increased Gateway Capacity Alternative

The proposed amended North Bayshore Precise Plan considers the possible addition of a Stevens Creek bridge crossing for pedestrian/bicycle and transit vehicle access. An alternative to the proposed project to reduce vehicular congestion by addressing vehicle capacity limits at the gateways would be to provide an additional vehicular access to the North Bayshore area, either via a bridge over Stevens Creek, or another crossing of US 101. The addition of a new gateway would provide additional capacity for travel in and out of the North Bayshore area. Possible gateway connections might include a bridge over Stevens Creek near Charleston Road or La Avenida, and/or an additional crossing location of US 101 connecting Charleston Road to Landings Drive. Any new gateway connection would need to be further evaluated to determine its benefits and impacts. It is assumed this alternative would include the same amount of commercial and residential development as the proposed amended Precise Plan.

Impact Comparison: The Increased Gateway Capacity alternative would generate the same number of vehicle trips as the proposed project. This alternative would allow North Bayshore traffic to be distributed to four vehicle gateways, instead of the current three gateways. This would likely help reduce traffic congestion into and out of and within North Bayshore. Outside of North Bayshore, this alternative would have similar impacts to the proposed project, because the same volume of trips would be using the freeway system and intersections outside of the North Bayshore area.

The Increased Gateway Capacity alternative would result in the same level of commercial and residential development as the proposed project, so it would require a General Plan amendment and would not be consistent with the City's adopted GGRP, resulting in similar significant, unavoidable greenhouse gas emissions impacts as the proposed project. The provision of a fourth vehicle gateway may actually encourage driving and result in increased vehicle miles traveled unless it was restricted to transit, bicycle, and pedestrian use. The impacts of constructing a new vehicle gateway could include increased biological impacts from a new bridge crossing of Stevens Creek and increased use of that bridge crossing, and from impacts from constructing a crossing of US 101. All other impacts of the project would be similar under this alternative.

Objectives: Although it would fulfill most objectives of the Precise Plan, the Increased Gateway Capacity alternative is contrary to adopted General Plan policies to not widen streets or construct substantial new transportation infrastructure that prioritizes automobile vehicle travel over other modes of transportation.

1.4.4 Alternatives Considered But Rejected

1.4.4.1 *Location Alternative*

The CEQA Guidelines encourage consideration of an alternative site when significant effects of the project might be avoided or substantially lessened (Section 15126.6(f)(2)(A)). Only locations that

would avoid or substantially lessen any of the significant impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

No location alternatives were identified, due to the large size and site-specific nature of the proposed project. This quantity of development within Mountain View could be expected to have similar intersection and freeway impacts, or possibly other traffic impacts, as well as greenhouse gas emissions impacts and cumulative regional air quality impacts. Therefore, since no suitable alternative site was found that could meet the basic objectives of the project, and significant impacts would not be substantially reduced, a location alternative was not analyzed further.

1.4.4.2 *Design Alternative*

An alternative to the proposed project would be to adjust (reduce) the parking supply. The amount of parking provided for residential development influences the vehicle trip generation. Lower parking ratios typically mean that fewer residents own and regularly operate vehicles, while higher parking ratios serve to allow more vehicle ownership and operation. Parking supply is a key consideration in the market feasibility of any new residential development, so this factor must be carefully balanced with the availability of alternative travel modes and infrastructure.

The proposed amended North Bayshore Precise Plan includes a single occupancy vehicle rate of 45 percent for commercial office development, in addition to a "standard" residential parking ratio of 1.2 spaces per unit. A further reduction in the residential parking ratio was not considered feasible at this time for the purpose of this environmental analysis, given the current limited multi-modal infrastructure and services available in the area. However, the amended Precise Plan's goals, policies, and actions will continue to guide more innovative and sustainable development, which could include parking standards below 1.2 spaces per unit and a vehicle trip 'performance standard', and through project design characteristics, TDM strategies, shared parking, and other strategies.

1.4.4.3 *Increased Residential Density Alternative*

An alternative to the proposed project to avoid the project's significant, unavoidable GHG impact would be to substantially increase the residential population within the North Bayshore Precise Plan area, such that the GGRP threshold of 4.5 MT CO_2e/year/service population would not be exceeded. While a detailed quantitative analysis was not completed for this alternative, it is estimated that approximately 15,750 additional residents or an additional 9,000 residential units above what is proposed by the amended Precise Plan, with the additional residents not generating any mobile emissions, would be necessary to reduce annual CO_2e emissions per service population below the 4.5 MT threshold of significance.

As described previously, the proposed amended Precise Plan contains residential and office TDM requirements already considered aggressive in terms of reducing vehicle trips. A further increase in population assuming that it could result in zero additional vehicle trips would not be practicable, given the current infrastructure and transit options available to the area. For these reasons, this alternative was rejected from further consideration.

1.4.5 Environmentally Superior Alternative(s):

The CEQA Guidelines state than an EIR shall identify an environmentally superior alternative. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6(e)(2)). Based upon the previous discussion, the No Project alternative, which is the existing North Bayshore Precise Plan, would be the environmentally superior alternative. Although significant freeway and intersection impacts would still occur, these impacts would be greater with the residential development allowed under the amended North Bayshore Precise Plan. The No Project alternative would not result in impacts to sensitive uses from hazardous materials contamination, groundborne vibration, and other construction impacts from the development of new residential uses.

Apart from the No Project alternative, the alternatives considered would not substantially reduce the significant intersection and freeway impacts. The Reduced Residential alternative would somewhat reduce intersection and freeway impacts and, therefore, would be the environmentally superior alternative. This alternative, however, would not fulfill most of the amended Precise Plan's objectives for the density of new residential development in the area.

SECTION 2.0 INTRODUCTION AND CEQA PROCESS

2.1 INTRODUCTION

The City of Mountain View, as the Lead Agency, has prepared this Draft Subsequent Environmental Impact Report (SEIR) for the amended North Bayshore Precise Plan project, in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code Regulations, tit. 14, Section 15000 et seq.). The purpose of an EIR is to inform decision-makers and the general public of the environmental effects of the proposed amendments to the North Bayshore Precise Plan, to identify ways in which the significant effects might be minimized, and to identify alternatives to the project that could avoid or reduce those significant impacts.

This EIR for the amended North Bayshore Precise Plan is a Subsequent EIR (SEIR) to the previously certified *North Bayshore Precise Plan Environmental Impact Report* (2014). The adopted North Bayshore Precise Plan provides zoning standards for development activities in the Precise Plan area, including office, commercial, and supporting uses. The currently proposed project will amend the existing North Bayshore Precise Plan to include zoning standards and guidelines for residential uses. The SEIR for the amended North Bayshore Precise Plan will replace the *North Bayshore Precise Plan EIR* as the environmental review document for future development in the North Bayshore Precise Plan area.

The City of Mountain View adopted the Mountain View 2030 General Plan and Greenhouse Gas Reduction Program (GGRP), and certified the General Plan and Greenhouse Gas Reduction Program EIR in July 2012. The General Plan is the guiding document for future growth of the City. The GGRP is a separate but complementary document and long-range plan that implements the greenhouse gas emissions reduction goals of the General Plan, and serves as a programmatic greenhouse gas reduction strategy for CEQA tiering purposes. In accordance with the CEQA Guidelines Section 15152, this SEIR tiers off the *City of Mountain View 2030 General Plan and Greenhouse Gas Reduction Program Environmental Impact Report* (SCH No. 2011012069) to the extent possible, including all appendices thereto (General Plan EIR), certified by the Mountain View City Council on July 10, 2012.

2.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

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 Section 15121(a)). As the CEQA Lead Agency for this project, the City of Mountain View is required to consider the information in the SEIR 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. The environmental impacts associated with the proposed project are primarily related to air quality, biological resources, greenhouse gas emissions, hazardous materials, noise, and transportation and traffic. These issues are discussed in *Sections 4.2, 4.3, 4.7, 4.8, 4.11, and 4.15* of this SEIR, respectively.

The purpose and role of an EIR are detailed in CEQA and the CEQA Guidelines. This document provides a program-level environmental review appropriate for the North Bayshore Precise Plan project in accordance with CEQA Guidelines Sections 15121, 15145, 15146, 15151, and 15168. The CEQA Guidelines state that the advantage of program-level analysis is that an EIR can avoid duplicate consideration of basic policy considerations and look at broad policy alternatives and program-wide mitigation measures at an early time when there is greater flexibility to deal with basic problems or cumulative impacts.

The following CEQA Guidelines clarify the role of an EIR.

> **Section 15121(a). Informational Document.** An EIR is an informational document, which will inform public agency decision makers, and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR, along with other information which may be presented to the agency.
>
> **Section 15145. Speculation.** If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impacts.
>
> **Section 15146. Degree of Specificity.** The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.
>
> (a) An EIR on a construction project will necessarily be more detailed in the specific effects of a project than will an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.
>
> (b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction project that might follow.
>
> **Section 15151. Standards for Adequacy of an EIR.**
>
> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently considers environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

The following CEQA Guidelines explain the use of a Subsequent EIR and Program EIRs.

Section 15162. Subsequent EIRs and Negative Declarations.

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
    (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

(c) Once a project has been approved, the lead agency‘s role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

(d) A subsequent EIR or subsequent negative declaration shall be given the same notice and public review as required under Section 15087 or Section 15072. A subsequent EIR or

negative declaration shall state where the previous document is available and can be reviewed.

Section 15168. Program EIR.

(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) A logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

(b) Advantages. Use of a program EIR can provide the following advantages. The program EIR can: (1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis, (3) Avoid duplicative reconsideration of basic policy considerations, (4) Allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and (5) Allow reduction in paperwork.

(c) Use with Later Activities. Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared. (1) If a later activity would have effects that were not examined in the program EIR, a new Initial Study would need to be prepared leading to either an EIR or a Negative Declaration. (2) If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required. (3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program. (4) Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR. (5) A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

(d) Use with Subsequent EIRs and Negative Declarations. A program EIR can be used to simplify the task of preparing environmental documents on later parts of the program. The program EIR can: (1) Provide the basis in an Initial Study for determining whether the later activity may have any significant effects. (2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole. (3) Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before.

(e) Notice with Later Activities. When a law other than CEQA requires public notice when the agency later proposes to carry out or approve an activity within the program and to rely on the program EIR for CEQA compliance, the notice for the activity shall include a statement that: (1) This activity is within the scope of the program approved earlier, and (2) The program EIR adequately describes the activity for the purposes of CEQA.

Section 15152. Tiering.

(a) "Tiering" refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

(b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects including general plans, zoning changes, and development projects. This approach can eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review. Tiering is appropriate when the sequence of analysis is from an EIR prepared for a general plan, policy, or program to an EIR or negative declaration for another plan, policy, or program of lesser scope, or to a site-specific EIR or negative declaration.

2.3 EIR PROCESS

The SEIR will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended and the City of Mountain View's requirements. In accordance with the requirements of CEQA, the SEIR will include the following:

- A summary of the project;
- A project description;
- A description of the existing environmental setting, probable environmental impacts, and mitigation measures;
- Alternatives to the project as proposed; and
- Environmental consequences, including (a) any significant environmental effects which cannot be avoided if the project is implemented; (b) any significant irreversible and irretrievable commitments of resources; (c) the growth-inducing impacts of the proposed project; and (d) cumulative impacts.

This SEIR evaluates the impacts of the project according to the requirements of the City of Mountain View and CEQA. The amended North Bayshore Precise Plan is available for review at: http://www.mountainview.gov/depts/comdev/planning/activeprojects/northbayshore_/default.asp, and the Mountain View 2030 General Plan and Mountain View Greenhouse Gas Reduction Program are available at: http://www.mountainview.gov/depts/comdev/planning/regulations/general.asp.

2.3.1 Notice of Preparation and Scoping

The City of Mountain View is the Lead Agency for the project. The City of Mountain View, as required under CEQA, encourages public participation in the environmental review process. Opportunities for comments by public agencies and the public include responding to the NOP, written comments on this Draft SEIR, and presentation of written or verbal comments at public hearings.

In accordance with Sections 15063 and 15082 of the CEQA Guidelines, a Notice of Preparation (NOP) was circulated to the public and responsible agencies for input regarding the analysis in this SEIR for 30 days, from March 22 through April 20, 2016. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project.

In addition to the circulation of the NOP to the public and responsible agencies, the public was invited to make comments on the proposed project at an EIR scoping meeting, which was held at Mountain View City Hall on April 11, 2016. In addition to this meeting that was specifically identified to provide scoping information for the Draft SEIR, the proposed amendments to the North Bayshore Precise Plan have been discussed at several Environmental Planning Commission and City Council meetings and study sessions since early 2015, when the public had an opportunity to comment on the Precise Plan.

This Draft SEIR addresses those environmental issues raised by the public and responsible agencies in response to the NOP. A copy of the NOP for the SEIR is included as Appendix A of this Draft SEIR. Responses to the NOP from public agencies and the public are included in Appendix B of this document.

2.3.2 Draft SEIR/Public Participation

The Draft SEIR includes descriptions of the physical environment in the vicinity of the project, as those conditions existed at the time the NOP was circulated (from March 22 to April 21, 2016). Environmental impacts are based on a comparison of the expected project conditions at buildout in 2030 with the baseline conditions at the time the NOP was circulated. The consideration and discussion of environmental impacts that follow evaluate whether the environmental effects are significant; that is: do those effects exceed stated levels, or "thresholds of significance." Mitigation measures, proposed to minimize the identified significant environmental effects, are also described in the discussion of environmental impacts and mitigation measures, per CEQA Guidelines Section 15126.

Under CEQA, the Lead Agency is required, after completion of a Draft EIR, to solicit comments from public agencies having jurisdiction by law with respect to the proposed project, and to provide the general public with an opportunity to comment on the Draft EIR. Written comments concerning the environmental review contained in this Draft SEIR must be received by the Lead Agency at the following address before 5:00 p.m. on the last day of the 45-day public review and comment period, which will run from March 1, 2017 to April 14, 2017. Written and verbal comments may also be presented at scheduled public hearings on certification of the Final SEIR; however, only timely

comments on the Draft SEIR will be provided written responses in the Final SEIR. Written comments can be directed to the City of Mountain View, Community Development Department.

City of Mountain View
Community Development Department
Attention: Martin Alkire, Principal Planner
500 Castro Street
Mountain View, CA 94039
(650) 903-6306
Martin.Alkire@mountainview.gov

Copies of documents referred to in this SEIR are available for review as follows:

City of Mountain View
Community Development Department
City Hall, 1st Floor
500 Castro Street
Mountain View, CA 94041
Main Phone Number: (650) 903-6306
Website:
http://www.mountainview.gov/depts/comdev/planning/activeprojects/northbayshore_/nbppupdate.asp

Counter and Phone Hours:
Monday through Friday: 8:00 a.m. to Noon, 1:00 p.m. to 4:00 p.m.

Mountain View Public Library
585 Franklin Street
Mountain View, CA 94041
Phone: 650-903-6887

Library Hours:
Monday to Thursday, 10:00 a.m. to 9:00 p.m.
Friday to Saturday, 10:00 a.m. to 6:00 p.m.
Sunday, 1:00 p.m. to 5:00 p.m.

2.3.3 Final SEIR/Responses to Comments

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

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

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.

2.3.4 Notice of Determination

If the project is approved, City of Mountain View will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt 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)).

SECTION 3.0 BACKGROUND AND PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The approximately 650-acre North Bayshore Precise Plan area is located in the northern portion of the City of Mountain View, in northern Santa Clara County. The project site is bordered by the Shoreline at Mountain View Regional Park and the San Francisco Bay to the north, U.S. Highway 101 (US 101) to the south, the City of Palo Alto to the west, and Moffett Federal Airfield and the National Aeronautics and Space Administration (NASA)/Ames Research Center to the east. The Stevens Creek trail corridor and the Santiago Villa mobile home park are also located east of and adjacent to the project site.

The North Bayshore area is an important employment center for the City and the region, with moderate-intensity, suburban-type office parks, and is geographically distinctive due to its clear separation from the rest of the City by US 101. The area also includes commercial uses, including cafés, restaurants, movie theaters, and cultural destinations such as the Computer History Museum. The North Bayshore Precise Plan area contains limited existing single-family residential uses, although the Santiago Villa mobile home park is adjacent to the Precise Plan area to the east.

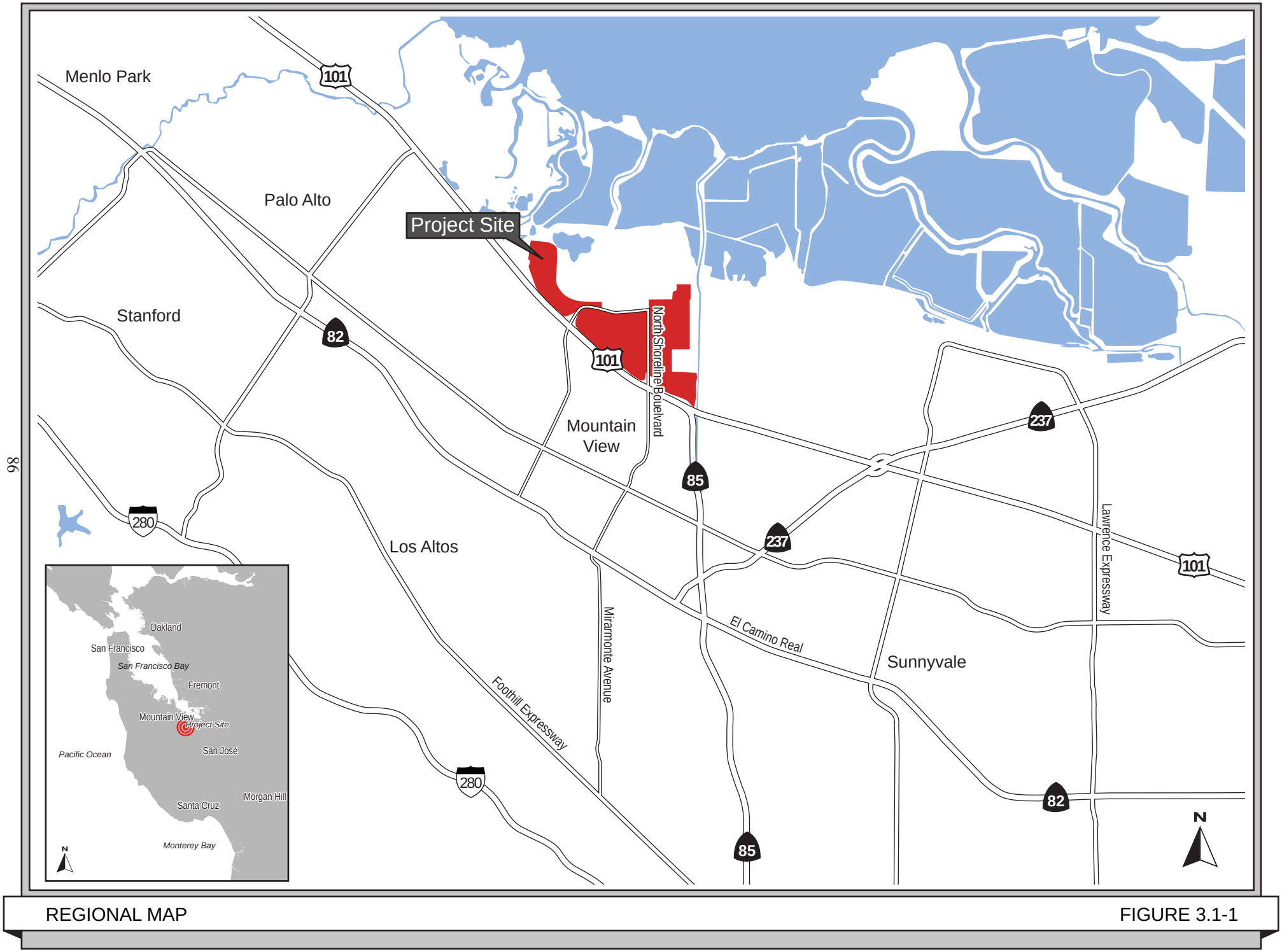
Open space and recreational areas adjacent to the Precise Plan area include the Stevens Creek trail corridor, Shoreline at Mountain View Regional Park, and the Shoreline Amphitheater. Shoreline at Mountain View Regional Park and the surrounding Baylands are known to contain sensitive habitat and wildlife species. Shoreline at Mountain View Regional Park, Shoreline Amphitheater, and other facilities north of the Precise Plan area are located within the area identified as the former Mountain View Shoreline Landfill.

A regional map and a vicinity map of the site are shown on Figures 3.1-1 and 3.1-2, and an aerial photograph of the project site and the surrounding area is shown on Figure 3.1-3.

3.2 BACKGROUND AND OVERVIEW OF THE PROJECT

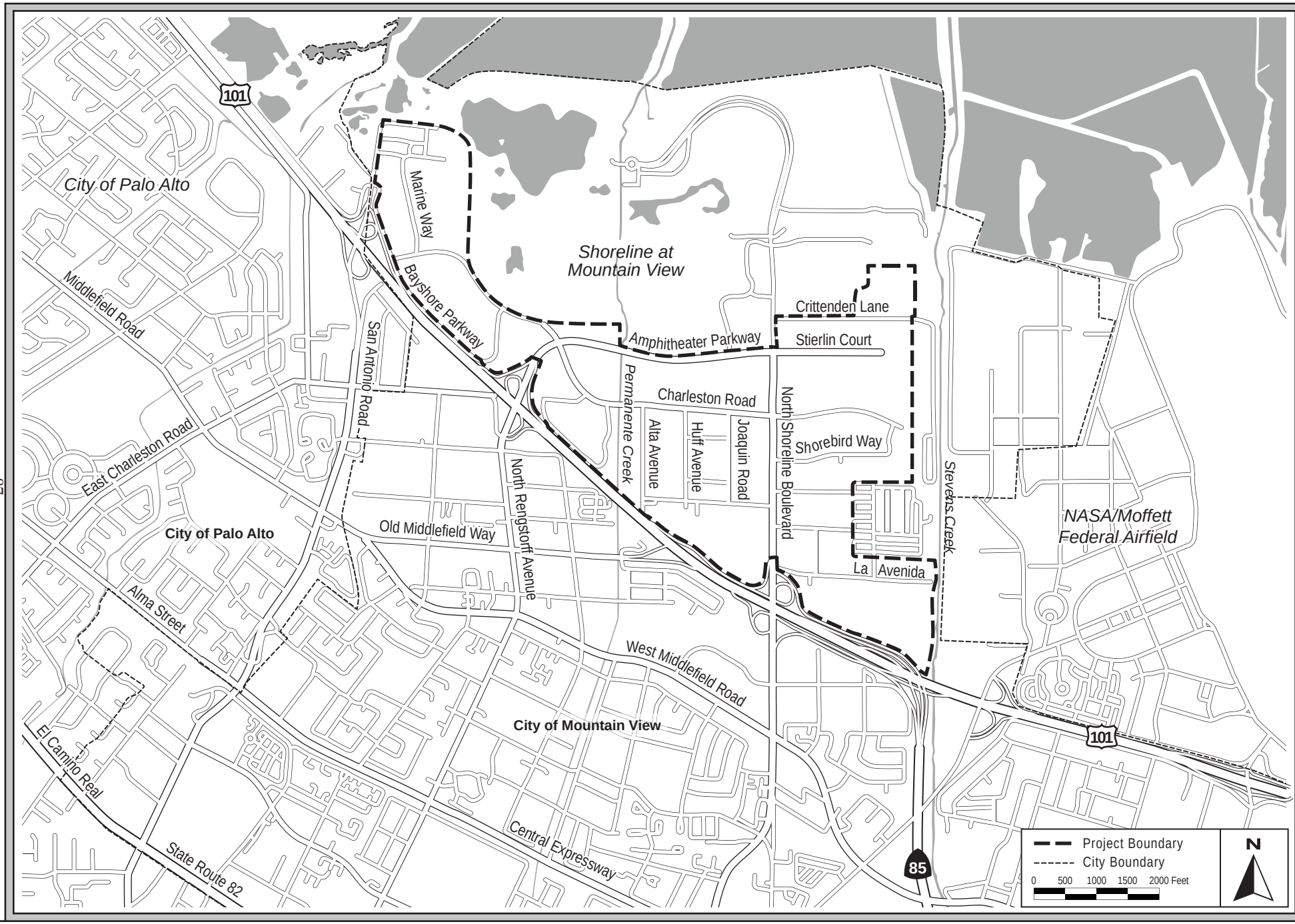
The North Bayshore Precise Plan area is characterized by large high-technology campuses and by nearby open space resources bordering the San Francisco Bay. The North Bayshore Precise Plan area currently contains approximately 7.3 million square feet of office, light industrial, and commercial uses, and a small number of residential units. The approval of the North Bayshore Precise Plan in 2014 allowed an increase in the intensity of office and commercial uses within the area, consistent with the growth studied for the North Bayshore area in the 2030 General Plan, up to a maximum of approximately 3.4 million square feet of net new development. No new residential uses were approved under the Precise Plan adopted in 2014.

Since the approval of the Precise Plan, a number of development applications for the development of office and commercial uses have been submitted to the City, and several have been reviewed and approved for development.



REGIONAL MAP

FIGURE 3.1-1



VICINITY MAP

FIGURE 3.1-2

AERIAL PHOTOGRAPH

FIGURE 3.1-3

The existing land uses in the project area by acreage are shown in Table 3.2-1.

Table 3.2-1: Existing Land Uses (2016)	
North Bayshore Precise Plan Area*	**Approximate Acreage**
Office / R&D / Light Industrial	442.6
Heavy Commercial / Light Industrial	23.7
Retail / Entertainment	35
Institutional	31.3
Residential	2.1
Vacant	30.3
Rights of Way (including creeks)	71.4
Total:	**636.4**
Source: City of Mountain View GIS, 2016.	

3.2.1 Mountain View 2030 General Plan

Following adoption of the 2030 General Plan in July 2012, much of the North Bayshore Precise Plan area received the General Plan land use designation of *High Intensity Office.* Areas surrounding the Shoreline Boulevard corridor are designated *North Bayshore Mixed-Use,* existing commercial properties west of Shoreline Boulevard and north of US 101 are designated *Mixed-Use Center,* and Charleston Park is designated *Parks, Schools, and City Facilities.* The acreage contained in each General Plan land use area is shown below in Table 3.2-2.

Table 3.2-2: Areas in Mountain View 2030 General Plan Current Land Use Designations	
General Plan Land Use Designation	**Acreage**
High-Intensity Office	464.9
North Bayshore Mixed-Use (Residential)	105.1
North Bayshore Mixed-Use (Non-Residential)	37.7
Mixed-Use Center	28.7
Total Acreage	**636.4**

Detailed descriptions of these General Plan land use designations are included in *Section 4.10, Land Use,* of this Draft SEIR. The 2030 General Plan includes the following goals to shape the future of the North Bayshore area:

- An area that is a model of highly sustainable and innovative development, protective of the natural and biological assets of the area.

- A diverse area of complementary land uses and open space resources.
- A sustainable and efficient multi-modal transportation system.
- A comprehensive strategy for reducing the effects of future sea-level rise.

3.2.1.1 *2015 General Plan Amendment*

In June 2015, the Mountain View 2030 General Plan text and map was amended to allow up to 1,100 residential units in the *North Bayshore Mixed-Use* land use designation, as was analyzed in the Draft EIR for the Mountain View 2030 General Plan.[4] Although the General Plan map and text were amended to allow residential uses at that time, the underlying North Bayshore Precise Plan zoning district was not amended then.

The boundary of the area where residential uses are currently allowed under the 2030 General Plan is shown in Figure 3.2-1, Existing General Plan Land Use Designations.

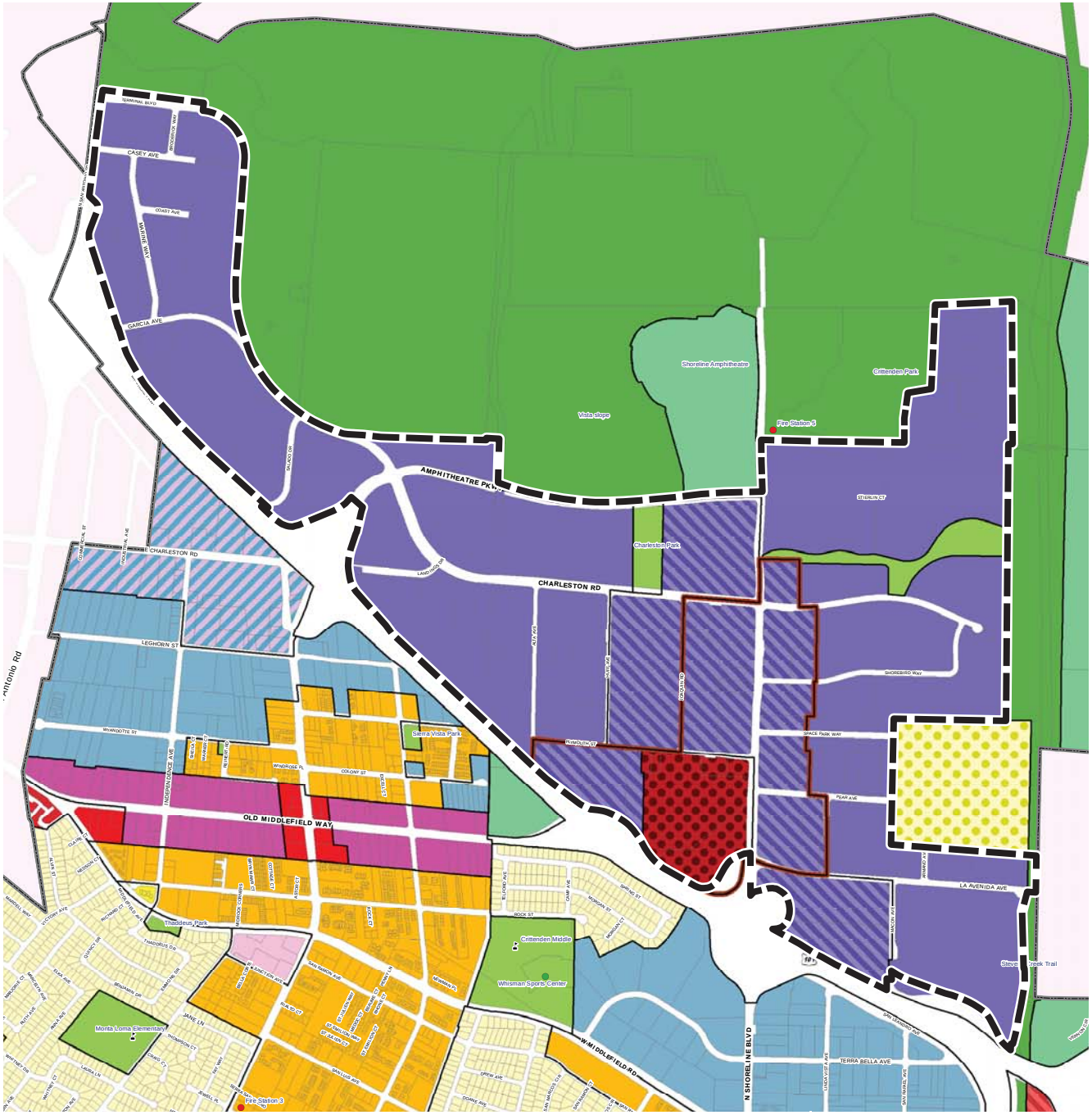
3.2.2 Mountain View Zoning Ordinance and Precise Plans

Precise Plans are defined in Section 36.70 of the Mountain View Municipal Code. The City has 32 active Precise Plans. Adopted in late 2014, the San Antonio, El Camino, and North Bayshore Precise Plans were developed to provide zoning and design standards for three large Change Areas identified in the 2030 General Plan. The East Whisman Precise Plan, currently in preparation, will provide zoning standards and guidelines for the East Whisman Change Area. The existing zoning districts for the North Bayshore Precise Plan area are shown on Figure 3.2-2, and the acreage for these districts is summarized in Table 3.2-3.

Table 3.2-3:
Existing North Bayshore Zoning Districts

Zoning Districts	Acreage
North Bayshore Precise Plan (P39)	577
Floodplain (F)	9.9
Public Right-of-Ways (approximate)	63
Total Acreage:	**649.9**

[4] In July 2012, the Mountain View City Council adopted a land use alternative described in the Final EIR instead of the General Plan project evaluated in the Draft EIR for the 2030 General Plan. This alternative, known as the "North Bayshore Alternative," amended the Draft General Plan to remove the allowance for residential uses, which were evaluated in the Draft EIR. The General Plan amendment approved in 2015 restored the allowance for residential uses in North Bayshore to the General Plan.



Mountain View Land Use Designations

Public Facilities

- City Operations and Administration
- Transit Station
- Community Facility
- Fire Station
- School
- City Hall

Residential

- Low-Density Residential (up to 6 DU/acre)
- Medium Low-Density Residential (7 to 12 DU/ac)
- Medium-Density Residential (13 to 25 DU/ac)
- Medium High-Density Residential (26 to 35 DU/ac)
- High-Density Residential (36 to 80 DU/ac)
- Mobile Home Residential

Commercial

- Neighborhood Commercial
- General Commercial
- Industrial/Regional Commercial

Office/Industrial

- Office
- High-Intensity Office
- General Industrial

Mixed-Use

- Neighborhood Mixed-Use
- General Mixed-Use
- Mixed-Use Corridor
- North Bayshore Mixed-Use
- North Bayshore Residential Uses*
- Mixed-Use Center
- Downtown Mixed-Use

Public/Institutional

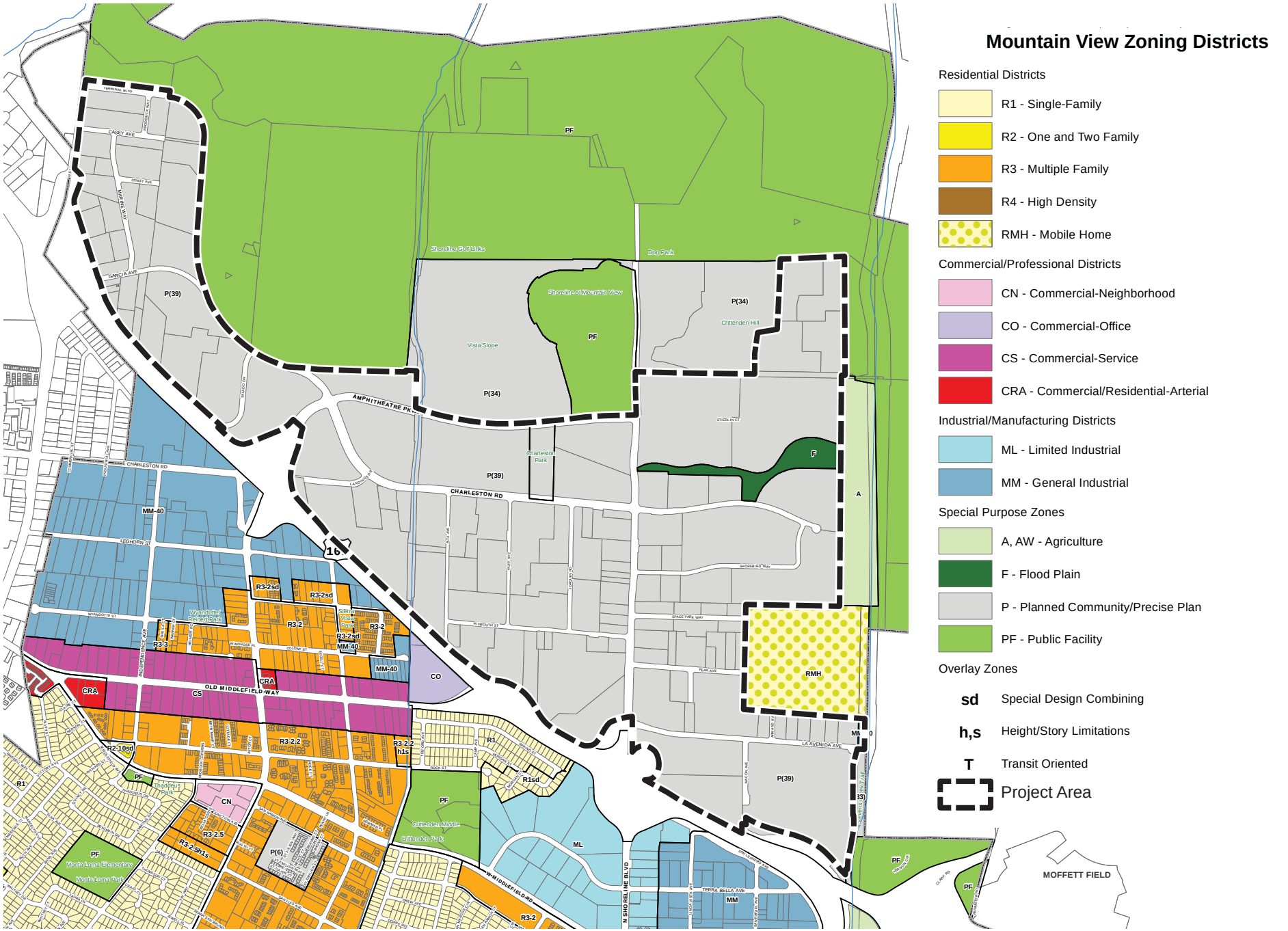
- Parks, Schools and City Facilities
- Regional Park
- Institutional

* Multi-family residential allowed. See Resolution 17969 for more information.

Project Area

EXISTING GENERAL PLAN LAND USE DESIGNATIONS

FIGURE 3.2-1



EXISTING ZONING DISTRICTS FIGURE 3.2-2

3.3 PROJECT DESCRIPTION

3.3.1 Project Description Summary

The proposed project consists of City-initiated revisions to the Mountain View 2030 General Plan and *P(39) North Bayshore Precise Plan* zoning district to allow residential uses, in addition to office and commercial uses. The North Bayshore Precise Plan was designed to provide a vision and guiding principles, development standards, and design guidelines for the properties in this area, in conformance with the 2030 General Plan vision for North Bayshore.

Under Section 36.22 of the City's Municipal Zoning Ordinance, the existing *North Bayshore Precise Plan* zoning allows flexibility to implement standards and features (such as increased office intensity and building heights) that more closely conform to the Mountain View 2030 General Plan policy direction for the area. The adopted Precise Plan is consistent with the growth studied for the North Bayshore Change Area in the 2030 General Plan, up to a maximum of approximately 3.6 million square feet of net new development.[5] In addition to office and commercial space, development in the project area could include enhanced parks and trail corridors, new public streets, and recreation facilities.

The proposed amended *North Bayshore Precise Plan* zoning district would update the development standards and design guidelines to include residential uses, in conformance with the City's desire expressed in the 2030 General Plan to add residential uses in the areas designated for mixed-use development. Up to 9,850 new multi-family residential units would be allowed under these proposed revisions to the Precise Plan.

The amended Precise Plan would allow a mix of multi-family units, including a goal of up to 70 percent one-bedroom and "micro" units,[6] with the remaining 30 percent comprised of two- and three-bedroom units, as shown below.

Table 3.3-1:
Proposed Dwelling Unit Distribution Goal

Unit Type	Percentage of Units	Approximate Number of Units per Type
Micro-Unit/Studio	40%	3,940
One-bedroom	30%	2,955
Two-bedroom	20%	1,970
Three-bedroom	10%	985
	100%	**9,850**

[5] The transportation and other analysis in this document addresses a total of 3.6 million feet of new office development, which includes all the office and commercial development currently being considered in North Bayshore.

[6] "Micro" units are defined as approximately 300-350 square feet in size, with some shared common areas.

The amended Precise Plan does not propose a change to the total non-residential square footage allowed under the adopted 2014 Precise Plan. The amended Precise Plan includes an increase in retail and supporting services over the existing plan, and would include neighborhood-serving retail in several locations along Shoreline Boulevard and regional retail in the Gateway Character Area. The existing and proposed land uses are shown in Table 3.3-2, below. The Public Draft of the amended North Bayshore Precise Plan is attached to this Draft SEIR as Appendix C.

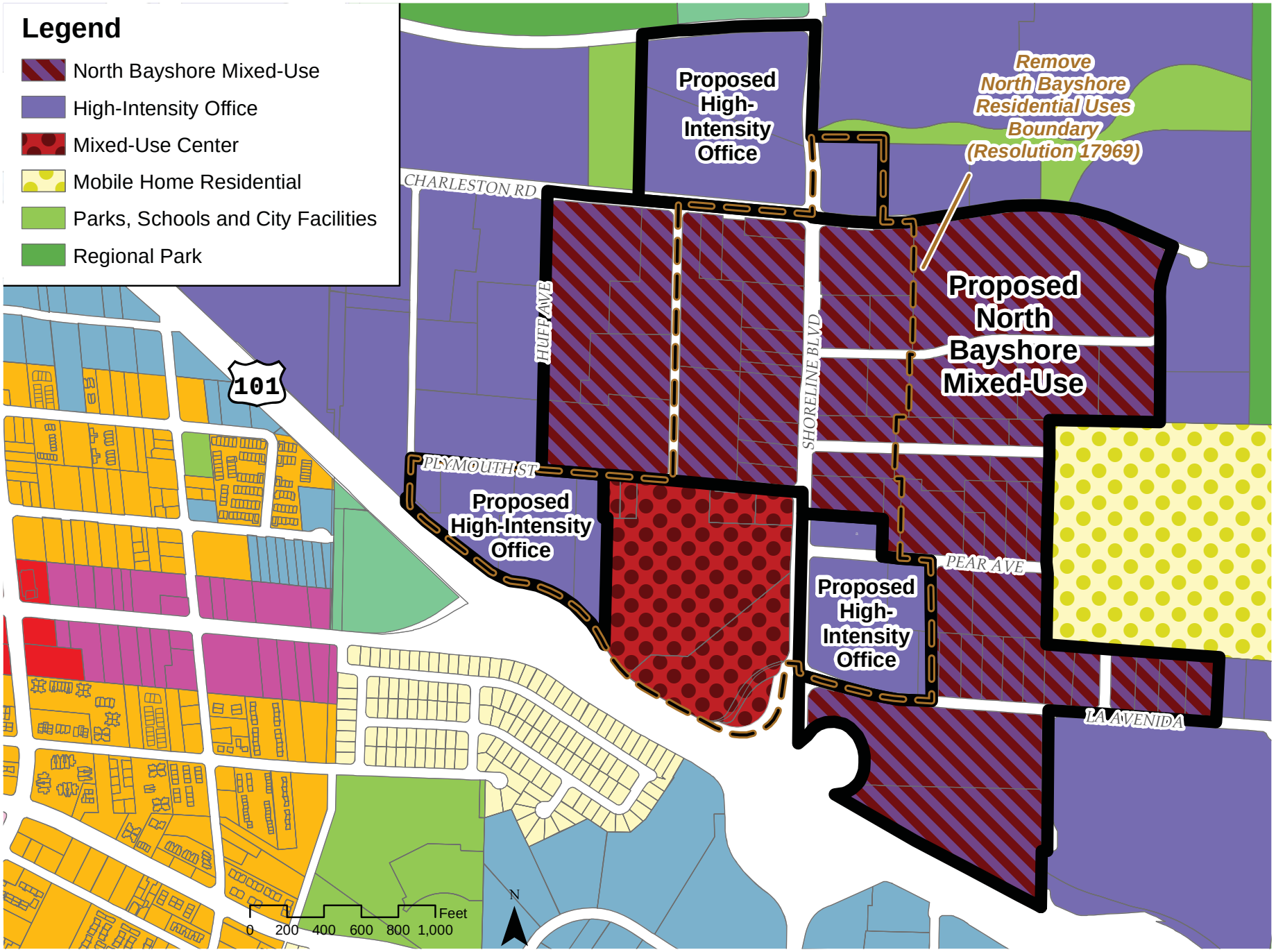
Table 3.3-2:
Approximate Allocation of Buildable Area by Land Use
North Bayshore Precise Plan Area

Land Use Type	Units	2014 Precise Plan Allocation[1]	Existing Land Uses (2015)[2]	Amended Precise Plan Allocation[2,4]
Office	Square Feet	4,230,000	413,849	5,948,796
R&D Office	Square Feet	6,100,000	6,406,798	4,544,684
Industrial	Square Feet	170,000	250,774	148,033
Services	Square Feet	120,000	91,188	26,138
Restaurant	Square Feet	10,000	69,300	198,538
Retail	Square Feet	70,000		
	Total Square Feet	**10,700,000**	**7,231,909**	**10,866,189**
Single-family Residential	Dwelling Units	2	1	1
Multi-family Residential	Dwelling Units	4	4	9,854
Hotel Rooms	Rooms	290	0	400
Institutional/ Recreational	Building/ Square Feet	1	211,670[3]	298,170

[1] From the *North Bayshore Precise Plan EIR.* November 2014.
[2] Based on total building size. Fehr & Peers. *Transportation Impact Analysis, North Bayshore Precise Plan*. Appendix G., Table 2.
[3] Source: Raimi & Associates.
[4] The transportation and other analysis in this document addresses a total of 3.6 million feet of new office development, which includes all the office and commercial development currently being considered in North Bayshore.

3.3.2 General Plan Amendment

The project proposes to amend the Mountain View 2030 General Plan to allow an increase in residential uses, consistent with the proposed revisions to the North Bayshore Precise Plan. The proposed residential uses would be located in the central portion of the Precise Plan area, and would have a 2030 General Plan land use designation of either *North Bayshore Mixed-Use* or *Mixed-Use Center* (Figure 3.3-1: Proposed General Plan Land Use Designations). The existing North Bayshore Residential Uses Boundary would be removed from the General Plan land use map.



PROPOSED GENERAL PLAN LAND USE MAP FIGURE 3.3-1

The proposed General Plan amendment would allow the development of up to 9,850 multi-family residential units within the area. This amount of potential development reflects an increase of 8,750 more residential units than allowed in the existing Mountain View 2030 General Plan for the North Bayshore Change Area. This would be in addition to the existing 362 residential units in the Santiago Villa Mobile Home Park, which is adjacent to, but not within, the North Bayshore Precise Plan study area. The addition of 9,850 housing units would bring the total number of housing units in the North Bayshore area (North Bayshore Precise Plan area and the Santiago Villa Mobile Home Park), to approximately 10,210 at full buildout.

The 2030 General Plan's *North Bayshore Mixed-Use* land use designation would be amended with adoption of the proposed General Plan amendment. The allowed land uses, floor area ratios, densities, and building heights within this designation would be amended to be consistent with the proposed revisions to the North Bayshore Precise Plan. The proposed amendments to the *North Bayshore Mixed-Use* designation are as follows:

> North Bayshore Mixed-Use promotes a vibrant mix of retail, including restaurants and services, along with residential, offices, lodging, entertainment and small businesses along the North Shoreline Boulevard corridor. Pedestrian and bike paths connect this area to surrounding office campuses and other areas.
>
> - *Allowed Land Uses:* Office, commercial, lodging, entertainment~~;~~ and residential ~~allowed east of North Shoreline Boulevard between La Avenida and the flood retention basin, between North Shoreline Boulevard and Joaquin Road, and south of Plymouth Street, as shown on the General Plan Land Use Map~~
>
> - *Intensity (office):* 0.35 FAR; ~~office~~ intensities ~~above~~ between 0.35 FAR and up to 1.5-FAR may be permitted with measures for highly sustainable development and public benefits specified within zoning ordinance or precise plan standards~~; residential and lodging intensities up to 1.85 FAR permitted, inclusive of other uses in mixed-use projects (approximately 70 DU/ac or 60 – 150 residents per acre)~~
>
> - *Intensity (residential):* 1.0 FAR (approximately 40 DU/ac or 40 – 80 residents per acre)
>
> - *Intensity (lodging):* 1.85 FAR
>
> - *Intensity (mixed-use)*: Mixed use intensities are defined within Precise Plan or zoning ordinance standards
>
> - *Height Guideline:* Up to 8 stories for office and lodging; up to 15 stories for residential

The 2030 General Plan's *Mixed-Use Center* land use designation would also be amended with adoption of the proposed General Plan amendment. The allowed land uses, floor area ratios, densities, and building heights within this designation would be amended to be consistent with the proposed revisions to the North Bayshore Precise Plan. The proposed amendments to the *Mixed-Use Center* designation are as follows:

Mixed-Use Center promotes pedestrian-oriented mixed-use centers with integrated, complementary uses such as entertainment, restaurants, residential, department stores and other retail, office, hotels, convention/assembly and/or civic uses and public spaces that draw visitors from surrounding neighborhoods and the region.

San Antonio

- *Allowed Land Uses:* Office, retail and personal services, multi-family residential, lodging, entertainment, parks and plazas
- *Intensity:* 2.35 FAR (approximately 70 DU/acre or 60 - 150 residents/acre), of which up to 0.75 FAR can be office or commercial.

- *Height Guideline:* Up to 8 stories

North Bayshore

- *Allowed Land Uses:* Office, retail and personal services, multi-family residential, lodging, entertainment, parks and plazas

- *Intensity (office):* 1.0 FAR; intensities between 1.0 FAR and up to 2.35 FAR may be permitted with measures for highly sustainable development and public benefits specified defined within zoning ordinance or precise plan standards

- *Intensity (residential):* 1.0 FAR (approximately 40 DU/ac or 40 – 80 residents per acre)

- *Intensity (lodging):* 1.85 FAR

- *Intensity (mixed-use)*: Mixed use intensities are defined within Precise Plan or zoning ordinance standards

- *Height Guideline:* Up to 8 stories for office and lodging; up to 15 stories for residential

The proposed changes to the General Plan map will change the distribution of acreage within the land use designations, as follows:

Table 3.3-3:
Areas in Mountain View 2030 General Plan
Proposed Land Use Designations

General Plan Land Use Designation	Acreage
High-Intensity Office	450.3
North Bayshore Mixed-Use (Residential)	157.4
Mixed-Use Center	28.7
Total Acreage	**636.4**

Additional text changes to the 2030 General Plan are included as Appendix D, and the proposed General Plan Land Use Designations are shown on Figure 3.3-1.

3.3.3 Mountain View Zoning Ordinance and Precise Plans

The amended North Bayshore Precise Plan would represent a rezoning of the North Bayshore area to allow an increased density of residential uses. The Precise Plan represents the implementation of the General Plan's goals and policies for the North Bayshore Change Area. The North Bayshore Precise Plan amends the 2014 Precise Plan that codifies the area's land use and development regulations contained in the Mountain View City Code (Chapter 36, Zoning Ordinance).

The North Bayshore Precise Plan guides all land use and development decision-making processes for the area. The Precise Plan does not replace or augment building safety codes or other non-planning related codes. All applications for new construction, substantial modifications to existing buildings, and changes in land use will be reviewed for conformance with the proposed amended Precise Plan. The Precise Plan would be adopted under the authority of the City's Zoning Ordinance, which establishes Precise Plans as a tool to regulate land use and development.

3.3.3.1 *Development Standards and Guidelines*

The North Bayshore Precise Plan is the implementing mechanism for broad policy direction provided by the General Plan, utilizing specific standards and guidelines to transform the area. The Precise Plan is guided by the vision, goals, policies, and urban design direction articulated in the General Plan. Each chapter of the Precise Plan contains "standards" and "guidelines" that reflect the Plan's vision and objectives and directs future development and infrastructure in North Bayshore.

Standards are requirements that must be followed by project applicants, unless an exception to a standard is otherwise noted. Standards are typically written with "shall" statements. Some standards include numeric requirements (such as floor area ratio) that cannot be exceeded.

Guidelines are the City's expectations for how site, building, and infrastructure design and improvements should be designed. Projects should demonstrate how they would address each guideline, however there is flexibility in how projects meet each guideline depending on project specific design and location. These guidelines are typically written with a "should" statement. In some instances, guidelines allow an activity to occur but do not mandate its implementation. These guidelines are written with a "may" statement.

3.3.4 Amended Precise Plan Land Use and Design Descriptions

3.3.4.1 *Complete Neighborhoods*

The proposed amended North Bayshore Precise Plan includes the development of "Complete Neighborhoods," which have been envisioned to include a mix of land uses, amenities and services. These areas are planned around walkable access to transit, open space, and services. Complete neighborhood areas are an overlay of the Plan's four existing Character Areas (Figure 3.3-2). The Precise Plan standards and guidelines in the amended Precise Plan would help existing areas transition to complete, pedestrian-oriented neighborhoods over time. These areas would be known as

the Joaquin, Shorebird, and Pear Neighborhoods, and their geographic limits are shown on Figure 3.3-3. The description of these proposed neighborhoods is as follows:

Joaquin Neighborhood

This neighborhood is centered on Joaquin Road and is bounded by Shoreline Boulevard, Charleston Road, Huff Avenue, and US 101. The area is envisioned to include:

- A Gateway area with a mix of retail, entertainment, recreational, office, hotel, and residential uses.
- A mix of higher-intensity residential, office, and mixed-use buildings.
- A neighborhood-serving retail core area, accessible from Shoreline Boulevard and adjacent to the mixed-use Gateway area.
- Ground-floor retail extending from the Gateway area retail core into the adjoining neighborhood.
- A central public open space and a publicly-accessible, smaller neighborhood park.
- New street and pedestrian and bicycle connections that subdivide large blocks and create a fine-grained network of human-scale streets.
- A reconfigured Plymouth Street and Space Park Way intersection.
- A pedestrian and bicycle bridge over US 101.

Shorebird Neighborhood

This neighborhood is bounded by Shoreline Boulevard, Charleston Road, Shorebird Way, and Space Park Way. The area is centered around Shorebird Way. The area is envisioned to include:

- A mix of high- to moderate-intensity residential and office buildings, with building scale and intensity decreasing towards the egret rookery habitat overlay zone (HOZ) at the eastern edge of the neighborhood.
- A more “campus-like” character than the Joaquin Neighborhood, with a higher proportion of carless streets and even higher levels of pedestrian activity, but with a similar mix of uses.
- A publicly-accessible neighborhood park located near Shorebird Way.
- New street and pedestrian and bicycle connections that break large blocks and create a fine-grained network of human-scale streets.
- A new north-south connection from La Avenida Avenue to Charleston Road.
- A transit boulevard along Charleston Road connecting a new transit/pedestrian bridge over Stevens Creek into NASA Ames.

Pear Neighborhood

This neighborhood includes parcels bordered by Shoreline Boulevard, Space Park Way, and Highway 101. The area is envisioned to include:

- A mix of high- to moderate-intensity residential and office buildings.
- A cultural hub with art, theatre, and institutional uses near the Computer History Museum.
- A publicly-accessible neighborhood park.

- A new north-south street connection from La Avenida Avenue to Charleston Road.
- Pedestrian-oriented frontages and connections to link the existing VTA site to other residential uses.
- New street and pedestrian and bicycle connections that break large blocks and provide a fine-grained network of human-scaled streets.
- A reconfigured Plymouth Street and Space Park Way intersection.

The development targets for these complete neighborhoods are shown in Table 3.3-4. These are not rigid requirements or maximums, but are intended to guide decision-making to ensure complete neighborhoods include a balance of different uses.

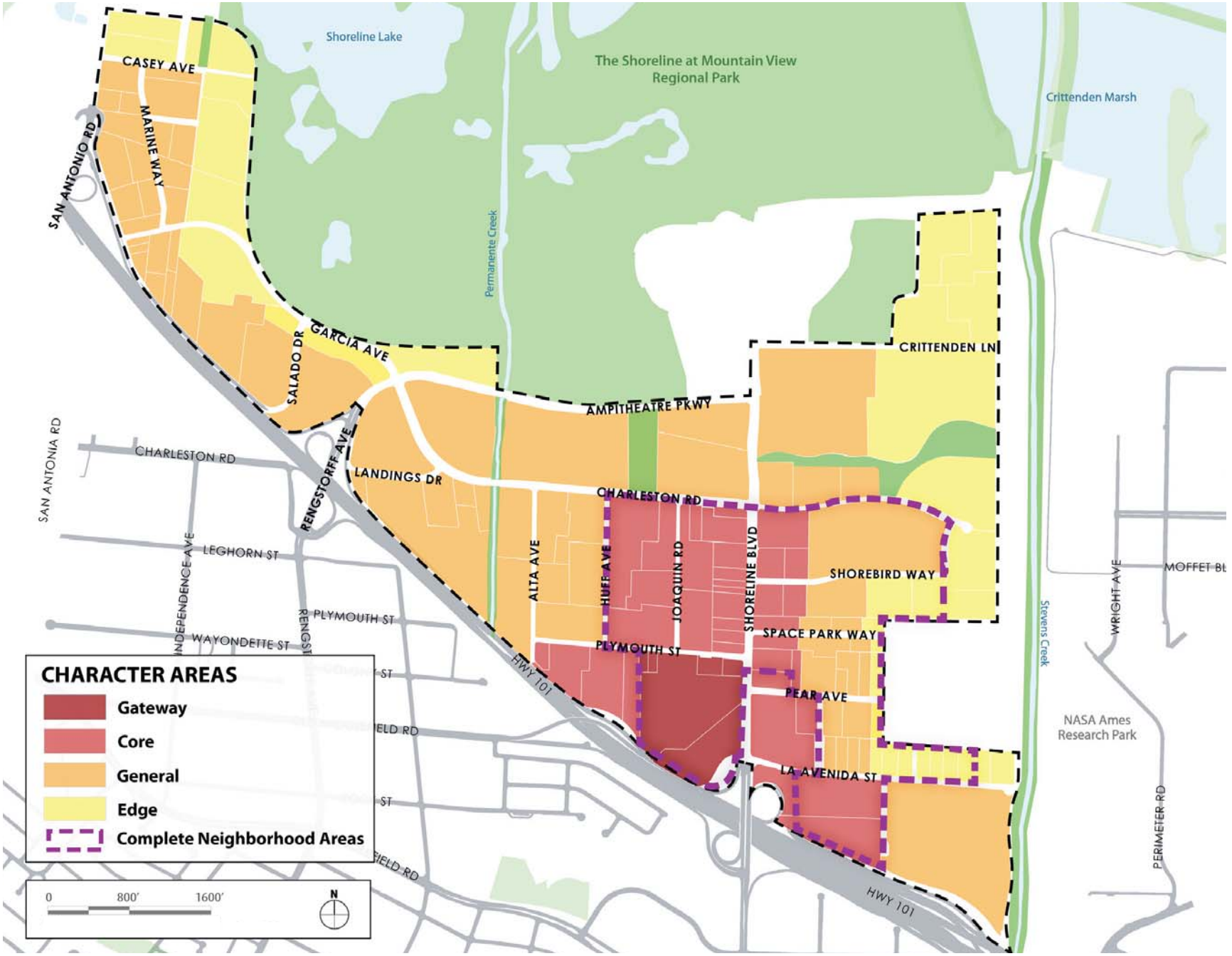
Table 3.3-4:
Targets for Complete Neighborhood Areas

	Joaquin Neighborhood	Shorebird Neighborhood	Pear Neighborhood
Size in Acres	68 acres	43 acres	43 acres
Residential Units	3,950 units	2,950 units	2,950 units
Affordable Housing Units[1]	790 units	590 units	590 units
Employment[2]	2,500,000 square feet	1,500,00 square feet	1,000,000 square feet
Retail and Entertainment[3,4]	240,000 square feet	15,000 square feet	35,000 square feet
Hotel	200 rooms	No rooms	200 rooms
Public Open Space (minimum)	Community park; Neighborhood park	Neighborhood park	Neighborhood park

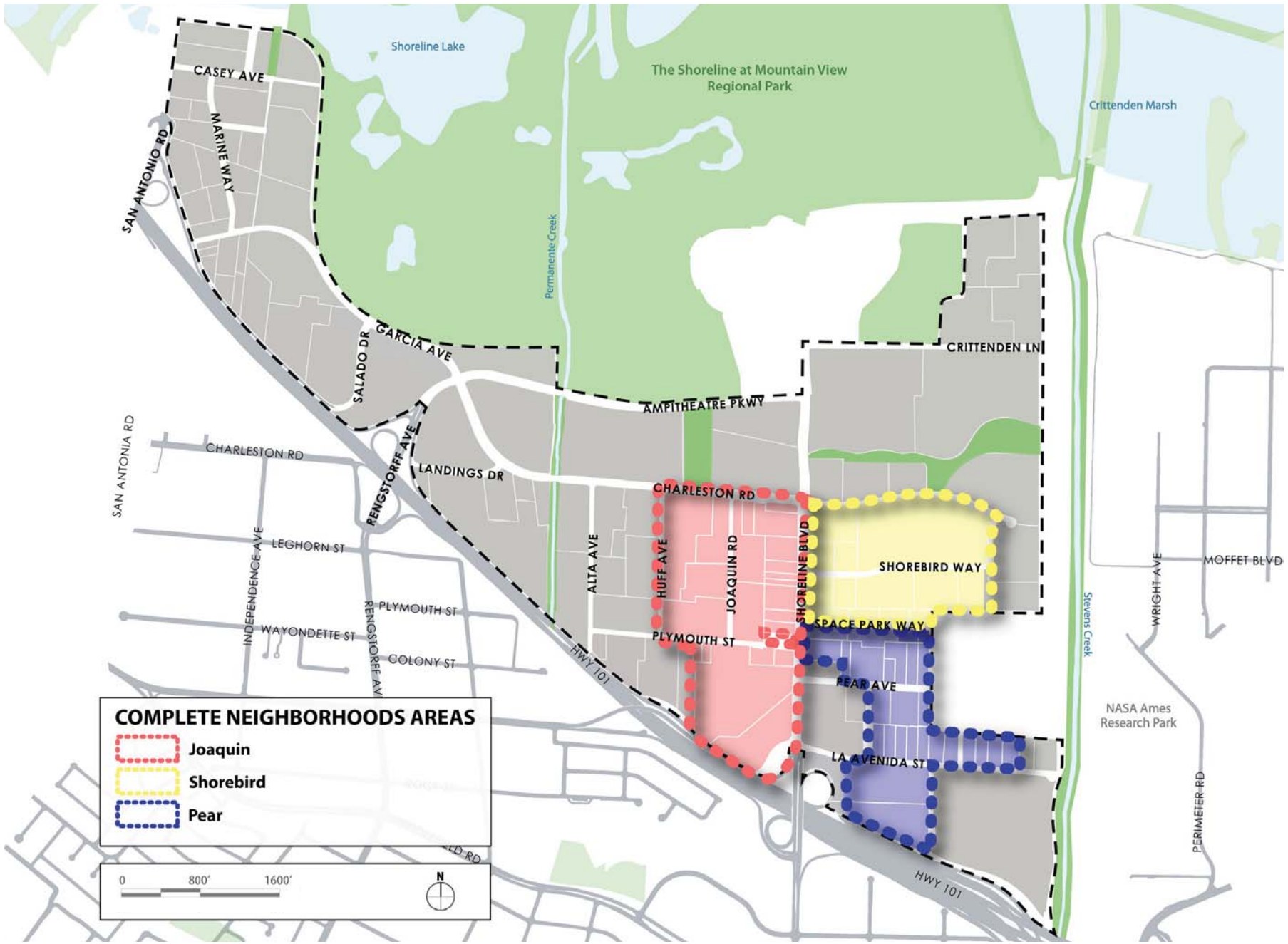
[1]Assumes 20 percent of the residential units are built as affordable units.
[2] Includes office, R&D, industrial, and service uses. Square footage amounts do not exceed the 3.4 million square feet analyzed in the 2030 General Plan and 2014 Precise Plan EIR.
[3] Includes retail, restaurant, and movie theatre uses.
[4] Includes new and existing building square footage.

3.3.4.2 *Character Areas*

While the North Bayshore Precise Plan area has one *P(39) North Bayshore Precise Plan* zoning designation, the Plan is organized into four different areas, each with distinct building forms and character: the Gateway, Core, General, and Edge (refer to Figure 3.3-2). The character areas differ in their physical character, interfaces with habitat and open space, allowed uses, and building intensity and scale. The Plan's urban design standards and guidelines will guide the creation of cohesive and well-designed complete neighborhoods.



PRECISE PLAN CHARACTER AREAS FIGURE 3.3-2



PROPOSED COMPLETE NEIGHBORHOODS AREAS FIGURE 3.3-3

Gateway Character Area

Located to the north of US 101 and to the west of Shoreline Boulevard, the Gateway Character Area is envisioned as a mixed-use urban center. The area supports a broad range of office, residential, entertainment, retail, restaurant, service, and hotel uses. The Gateway Character Area allows the highest intensities and greatest building heights in North Bayshore. It will be structured into walkable and inter-connected blocks with new pedestrian and bicycle connections to surrounding neighborhoods, Shoreline Boulevard, and adjoining neighborhoods. The Gateway Character Area is located within the Joaquin Neighborhood. New buildings will support these new pedestrian-oriented blocks with minimal setbacks, active ground floor retail uses, and human-scale, pedestrian-oriented frontages.

Core Character Area

The Core Character Area is similar in character to the Gateway Area but lower in non-residential intensity. Development will be focused near high-frequency transit – both public and private – to support the Precise Plan's single-occupancy vehicle target (refer to *Section 4.14, Traffic and Transportation*). The Core Character Area is located within portions of all three complete neighborhood areas. New residential uses within the Core Area may include ground-floor services and retail. Properties will also include office and research and development (R&D) uses.

Over time, the Core's finer-grained blocks with new Neighborhood Streets, Service Streets, and bicycle and pedestrian connections will result in a more pedestrian-oriented environment. Buildings will contribute to this transformed environment with smaller setbacks and active ground-floor frontages integrated with adjacent public streets. Massing is located towards the front of the site.

General Character Area

Within the Complete Neighborhood Areas, the General Character Area will accommodate mixed-used development with building forms and character that are similar to those of the Core Area. New development will include mixed-use buildings, office and R&D buildings, and residential-only buildings, as well as new shared and public open spaces. Buildings will be organized within new smaller blocks, close to and oriented to walkable streets with active ground floor. New public Neighborhood Streets, Service Streets, and bicycle and pedestrian connections will help break up the large existing blocks, improve access, and connect to a fine-grained, multimodal transportation network. Parking will be well screened from public spaces and located in structures.

Outside of the complete neighborhood areas, the General Character Area is envisioned more employment-focused, with a more campus-like environment than the Core and Gateway Areas. New public streets will be inserted in select locations to break up larger blocks, improve access, and generate a finer-grained network of pedestrian and bicycle connections.

Edge Character Area

The Edge Area will maintain a campus character compatible with adjacent natural open space areas and existing residential uses. Buildings will be set back from the Precise Plan area's edge to provide more landscaping adjacent to sensitive habitat areas. The Edge Area permits lower development intensities than the other character areas. Surface parking is allowed in the Edge Area but requires

setbacks from natural areas adjacent to the Habitat Overlay Zones. Residential uses in the Edge Character Area would located adjacent to the Santiago Mobile Home Park.

Bonus Floor Area Ratio

Base floor area ratios (FAR) and Maximum FAR have been defined for each Character Area, with the highest intensities in the Gateway and Core Areas and the lowest intensities in the Edge Area. Bonus FAR for non-residential projects, up to the Maximum FAR, may be granted to projects that 1) meet the requirements for higher building level environmental performance, 2) contribute to public benefits or district-level improvements, and/or 3) transfer development rights from the Edge Area to the Core Area. Bonus FAR for residential projects, up to the Maximum FAR, may be granted to projects that 1) provide a minimum amount of the residential units onsite at affordable rent or sales price, and 2) implement additional green building and site design measures.

A summary of the floor area ratio standards of each of the four Character Areas is shown in Table 3.3-3, and the residential standards for FAR are shown in Table 3.3-5.

Table 3.3-5:
Floor Area Ratio Standards

Character Area	Land Uses	Non-Residential Project	Residential Project	Mixed-use Non-Residential and Residential Project	Hotel
Gateway	Base	1.00	1.00	1.00	1.00
	Maximum	2.35	4.20	4.20, with the non-residential area equal to or less than 2.35	2.35
Core	Base	0.45	1.0	1.0	0.45
	Maximum	1.50	4.20	4.20, with the non-residential area equal to or less than 1.5	1.85
General	Base	0.45	1.0	1.0	N/A
	Maximum	1.0	3.50	3.50, with the non-residential area equal to or less than 1.0	N/A
Edge	Base	0.45	1.0	N/A	N/A
	Maximum	0.65	1.85	1.85, with the non-residential area equal to or less than 0.65	N/A

Table 3.3-6: Maximum Residential Building FAR by Tier			
Character Area	**Base FAR**	**Tier 1 FAR Bonus 15% Affordable Housing Units**	**Tier 1 FAR Bonus 20% Affordable Housing Units**
Gateway and Core	1.0	3.50	4.20
General	1.0	2.50	3.50
Edge	1.0	1.85	N/A

Building Heights

To support the vision of the North Bayshore, the Precise Plan tapers development height away from sensitive habitat and existing residential uses and seeks to preserve views of Shoreline at Mountain View Regional Park and the Santa Cruz Mountains. The Precise Plan allows non-residential buildings up to eight stories along US 101 and Shoreline Boulevard, ensuring that adequate development intensity can be achieved to support the vision for a walkable, mixed-use core in the area. The lowest height buildings of two- and three-stories are located nearest to sensitive habitat and the Santiago Villa mobile home park to the east of the Precise Plan area. The maximum building heights for non-residential uses are shown on Figure 3.3-4.

The maximum building heights for residential uses are 15 stories in the western part of the residential overlay area (Joaquin Neighborhood) and the VTA property near 101, and four- to eight-stories in the Shorebird and Pear Neighborhoods (Figure 3.3-5).

3.3.4.3 *Other Land Uses of the Precise Plan*

Public Open Space

The North Bayshore Precise Plan has been designed to provide a comfortable, accessible, human-scale network of public open spaces woven throughout the area's mixed-use employment districts and Complete Neighborhoods. The network would contribute to the area's quality of life and meet the needs of residents, workers, and visitors. Public open spaces would be designed for active and passive recreation, and include public parks both large and small, plazas, linear parks, passive open spaces, and recreational facilities. Open spaces would connect to each other and the regional open space network, including Shoreline Regional Park, via pedestrian and bicycle connections. In general, open spaces would be located along greenways easily accessible by walking or bicycling. North Bayshore residential uses are planned within a short walking distance of a public open space, and each neighborhood will have a minimum of one "anchor" neighborhood park located near its center. Figure 3.3-6 shows a conceptual open space network with the general location and character of the open space.

Retail Centers

The North Bayshore Precise Plan area's retail areas will create active, vital places with goods and services for residents, visitors, employees, and workers, as well as regional-serving entertainment and recreational uses. Ground-floor retail shops will be incorporated into mixed-use residential and office buildings. Retail shopfronts will be designed to help define lively and human-scale public

areas by locating shopfronts near the sidewalk, with transparent windows and recognizable building entrances. Retail and entertainment uses should be oriented towards public streets and open spaces.

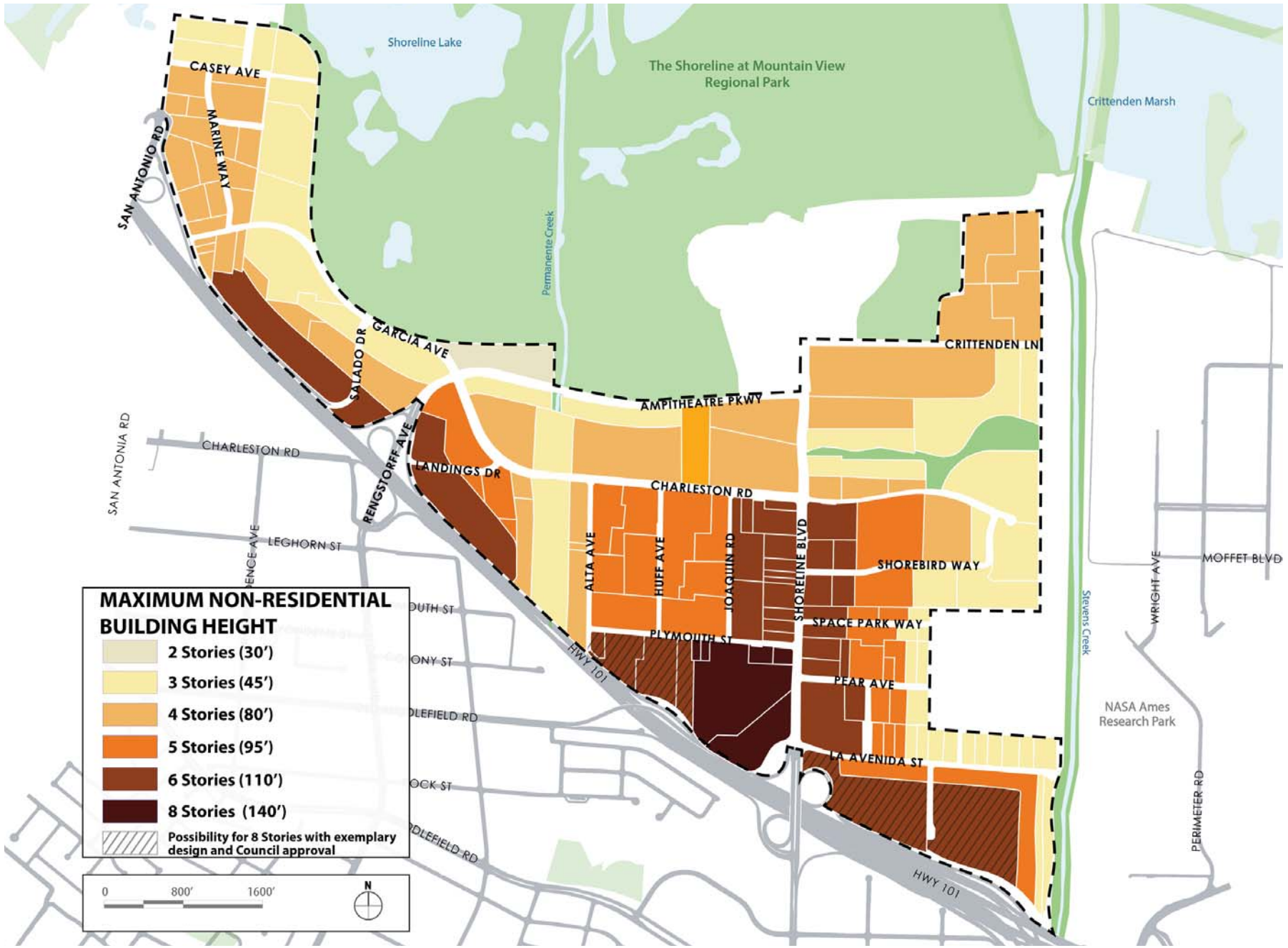
Figure 3.3-7 shows potential retail locations and frontages in North Bayshore. These include the regional-serving Gateway area retail and entertainment district; a locally-serving, convenience retail area adjacent to the central public open space; and smaller retail areas at Charleston Road/Shoreline Boulevard and Pear Avenue/Shoreline Boulevard.

Affordable Housing Strategy

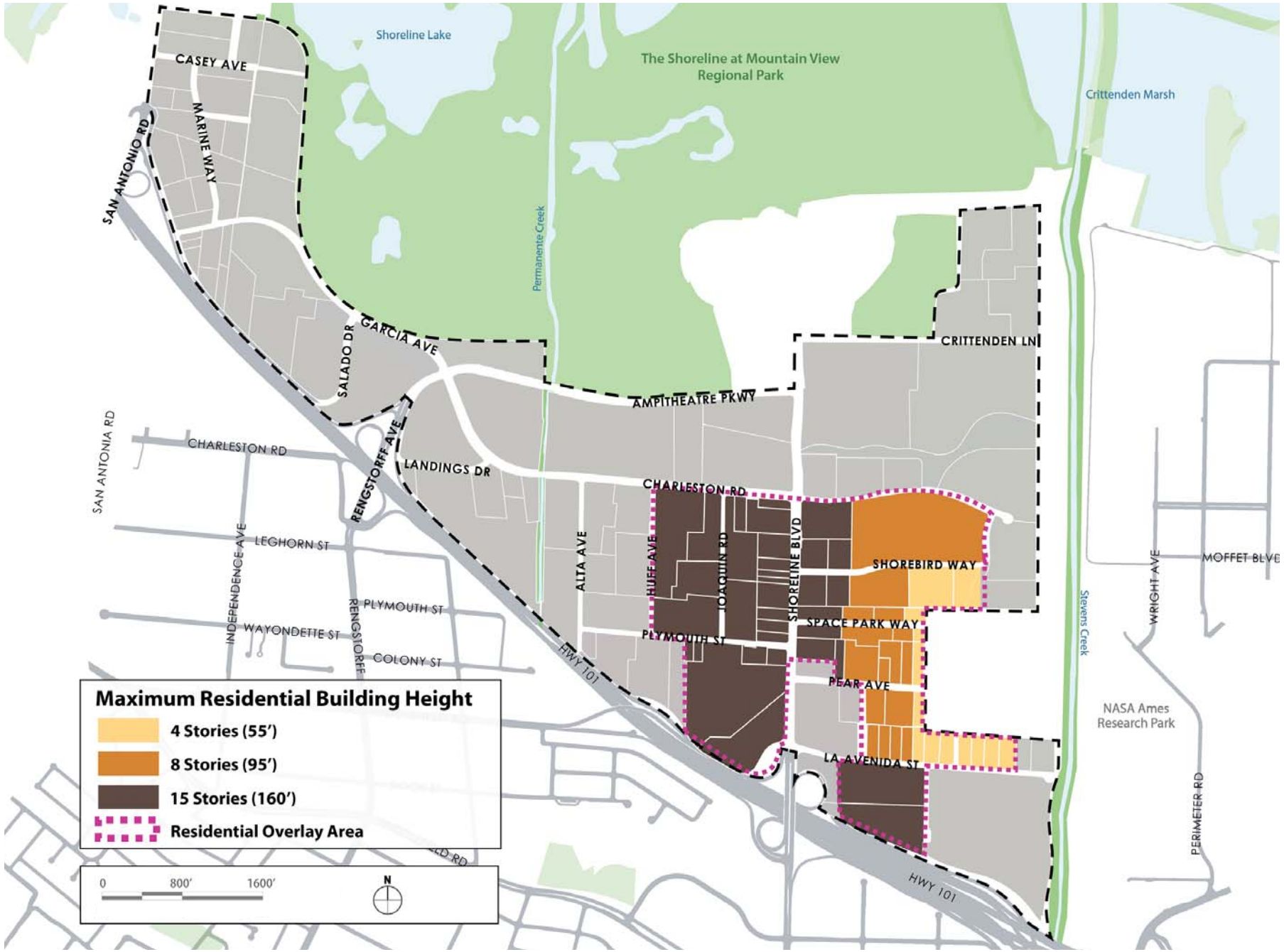
It is the City's goal to provide housing in North Bayshore that is affordable to a diverse workforce at all income levels. The Precise Plan includes a goal of a minimum of 20 percent affordable housing units within the North Bayshore district. The City's key strategies for creating affordable housing in North Bayshore are, in priority order: 1) incentivizing land donation for affordable housing development; 2) including affordable units within market-rate developments; and 3) collecting rental housing impact fees from market-rate housing development.

Transfer of Development Rights

The Precise Plan allows transfer of non-residential development rights (TDR) from parcels in the Edge Character Area to parcels in the Core Character Area. The purpose of TDR is to minimize the amount of development near sensitive habitat to focus more intensive development near transit and commercial services on or near Shoreline Boulevard in the Core Character Area. TDR is a voluntary program. The TDR program requirements are described in Section 3.4.2 of *Chapter 3: Land Use and Design* of the draft Precise Plan in Appendix D. The sending and receiving sites for the transfer of development rights program are shown on Figure 3-3.8.



PROPOSED MAXIMUM NON-RESIDENTIAL BUILDING HEIGHT MAP FIGURE 3.3-4



PROPOSED MAXIMUM RESIDENTIAL BUILDING HEIGHT MAP FIGURE 3.3-5

Note: Locations of new and open space areas are conceptual. Exact locations will be determined as the Plan is implemented.

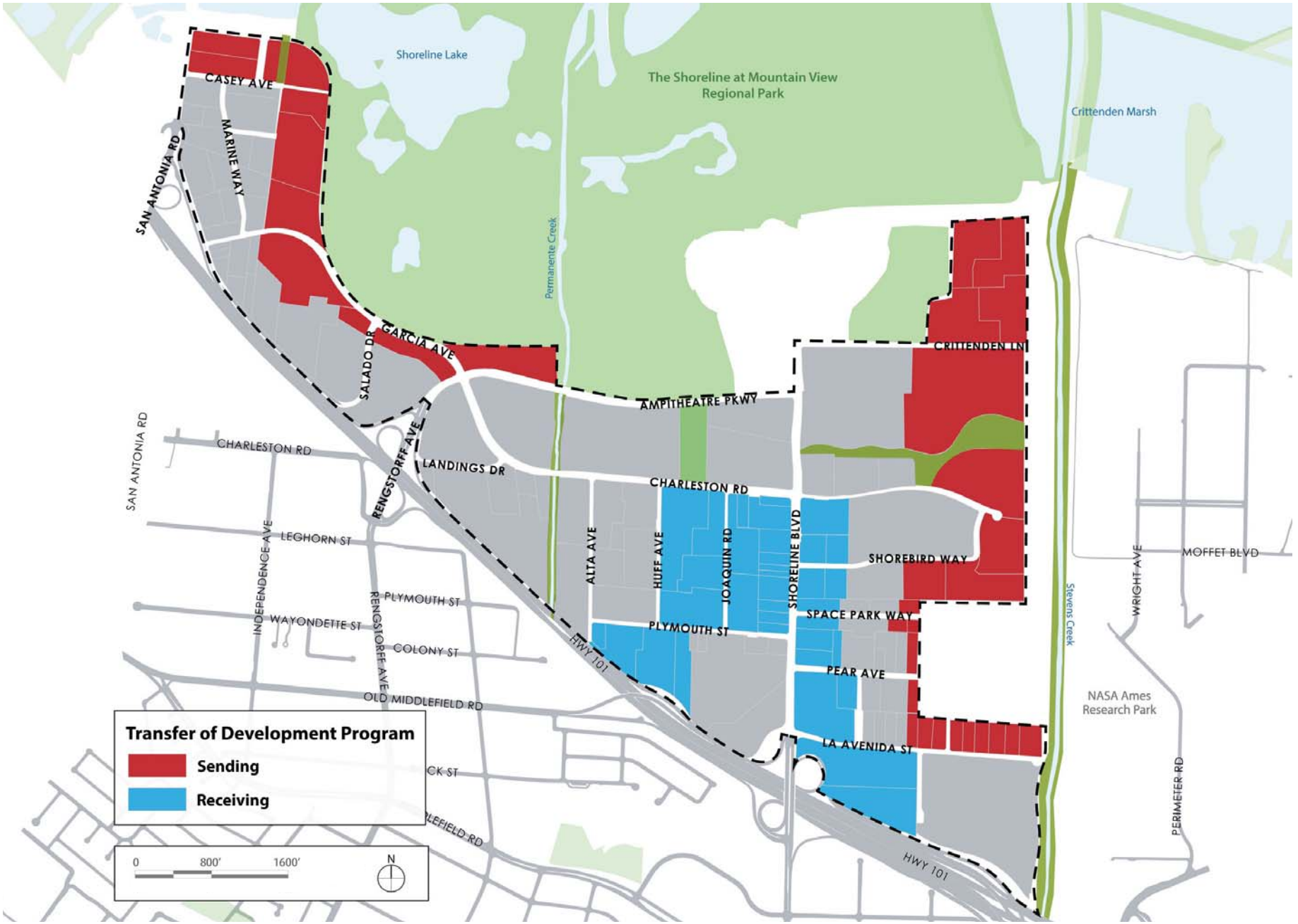
PROPOSED PUBLIC OPEN SPACE PLAN

FIGURE 3.3-6

Note: Locations of retail areas are conceptual. Exact locations will be determined as the Plan is implemented.

PROPOSED RETAIL CENTERS

FIGURE 3.3-7



PROPOSED TRANSFER OF DEVELOPMENT RIGHTS SITES FIGURE 3.3-8

3.3.5 Other Elements of the Precise Plan

3.3.5.1 *Environmental Sustainability Framework*

The Mountain View community identified sustainability as a major 2030 General Plan theme and strategy. The General Plan describes sustainability as the ability to meet current needs without compromising future generations' ability to meet their own needs.

The Environmental Sustainability Framework builds upon the Environmental Sustainability Action Plan, the Mountain View Green Building Code (MVGBC), and the Greenhouse Gas Reduction Program, and includes standards and guidelines to achieve higher levels of environmental performance. The framework includes a series of integrated topics, including land use and design, green building, mobility, habitat and biological resources, and resource use, among other topics. The Sustainability Framework is incorporated throughout the Precise Plan, and will guide the planning, design, construction, and management of future development in the area, while also protecting and enhancing biological resources and ecosystem functions.

3.3.5.2 *Green Building and Site Design*

The North Bayshore Precise Plan outlines specific standards and guidelines for sustainable planning, building, and design, and encourages new construction to achieve increasingly higher levels of environmental performance. Environmental sustainability includes a series of integrated topics, including land use and design, green building, transportation, habitat, energy and water conservation, and waste management, among other topics. In the Green Building and Site Design chapter of the Precise Plan, standards and guidelines build on the California Green Building Standards Code (CALGreen), the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, GreenPoint Rated, and the Living Building Challenge. These green building programs outline performance-based targets and prescriptive measures for site planning and design, energy efficiency, and renewable energy, among other topics.

3.3.5.3 *Habitat and Biological Resources*

The Precise Plan presents an opportunity to improve habitat and biological resources within and adjacent to North Bayshore. The objectives of the Precise Plan related to habitat include:

- Expand existing habitat areas in North Bayshore;
- Improve the quality of existing habitat areas;
- Ensure that future development limits impacts to wildlife, particularly the area's burrowing owls.

To achieve these objectives, the Precise Plan outlines a series of standards, guidelines, and district improvement projects to protect and enhance habitat and biological resources. This includes requirements for development adjacent to sensitive habitat areas inside and outside the Precise Plan area. These elements include creation of Habitat Overlay Zones (HOZ) (Figure 4.3-1), which provides specific standards and guidelines to direct site development adjacent to sensitive habitat, bird-safe design standards, and landscape design standards. It also describes a series of district-improvement projects to enhance and protect sensitive habitat within and adjacent to the Precise Plan area. These standards and guidelines are discussed further in *Section 4.3, Biological* Resources of this Draft SEIR.

3.3.5.4 *Mobility – Traffic and Transportation*

Based on the potential impacts to area traffic identified by the 2030 General Plan process, the *Shoreline Regional Community Transportation Study* (STS) was completed by the City in June 2013. This study was undertaken to develop a set of transportation strategies that could accommodate the planned long-term growth identified for the North Bayshore area, while minimizing the traffic impacts of new development. A key component of the STS was the development of mode share targets to address the limited capacity on the existing roadway network, and the ability of the network to accommodate additional vehicular traffic resulting from planned long-term growth. Table 3.3-7 shows the existing mode split and the proposed mode share targets under the study, which includes a 45 percent single-occupancy vehicle (SOV) target.

Table 3.3-7:
City Council Directed Transportation Mode Share Targets

Mode	Existing (2013)	Shoreline Study
Single-occupancy vehicle	61%	45%
Rideshare vehicle	6%	10%
Transit	26%	35%
Walking and Biking	7%	10%

To achieve a reduction in single-occupancy vehicle trips and an increase in other transportation modes, the STS identified a range of transportation strategies with a focus on connectivity and circulation within the plan area as well as to the City's multi-modal Downtown Transit Center. The Precise Plan builds on the Study's strategies and provides standards, guidelines, infrastructure improvements, and transportation demand management programs and policies that together will help reduce single-occupancy vehicle trips and increase the share of trips made using other transportation modes. The Mobility chapter of the Precise Plan focuses on the infrastructure and programs to improve the safety and comfort of other travel modes such as transit, carpooling, walking and biking. The Precise Plan provides standards and guidelines to:

- Make walking and biking mobility attractive options;
- Eliminate physical barriers and provide facilities to support short-, medium- and long-range bicycle trips within and to and from North Bayshore;
- Actively manage congestion to enable continued auto access for vehicle trips;
- Utilize available transportation demand management strategies to reduce new and existing vehicle trips;
- Provide a fast, frequent, reliable, and cohesive transit system to serve both local and regional trips;
- Create a connected street grid to improve connectivity and ease of movement within the district; and
- Improve transit connections between regional transit service such as Caltrain, VTA, and North Bayshore.

Key transportation policies and metrics of the Precise Plan include the following:

- Setting a district wide single occupancy vehicle mode share target of 45 percent;
- Establishing a district-wide vehicle trip cap of 18,900 inbound vehicle trips during the morning peak period (7:00 am to 10:00 am);
- Implementation of Transportation Management Association programs;
- Eliminating minimum parking requirements and setting parking maximums;
- Development of new street typologies and design guidelines for each typology;
- Identification of key transportation infrastructure improvements to support SOV target and mode shift; and
- Development of a complete bicycle network.

Transportation Demand Management Program

The 2030 General Plan includes policies to develop, adopt and monitor transportation demand management (TDM) strategies for land development projects in the North Bayshore change area. In addition to policies from the General Plan, the Precise Plan specifies an extensive set of TDM measures and strategies, along with implementation and monitoring requirements, required to support future growth in North Bayshore (*Chapter 6: Mobility* of Appendix C).

Employer TDM Approach: The City has set an ambitious single-occupancy vehicle (SOV) target of 45 percent for North Bayshore. Achieving this goal will require implementing TDM requirements at the individual employer/property owner level and district-wide[7] level. The following strategies are the focus of the North Bayshore TDM program:

- Many existing large employers have implemented a number of TDM measures. However, as North Bayshore develops more extensive transportation facilities and services, mode split targets may need to be increased to achieve the district's single occupancy vehicle (SOV) mode share target and reduce traffic congestion.
- New development will be encouraged to expand their existing TDM programs to all their holdings in North Bayshore.
- Establish a district-wide vehicle trip cap based on the capacity of the three entry points to North Bayshore during the AM peak period.
- Utilize the Transportation Management Association to coordinate services amongst employers and to offer services to those employees who do not have employer sponsored TDM programs and services.
- Monitor ongoing efforts and results at the district-wide level. Review information on transportation choices, traffic congestion, parking availability, transit ridership and bicycle access.

Project-Level TDM Plans: Each individual employer/property owner that applies for development entitlements will be required to develop a TDM Plan. This shall apply to new commercial development projects greater than 1,000 square feet and all residential projects. For commercial

[7] When used in the context of the Precise Plan, "district-wide" refers to standards, guidelines, or improvements that would be implemented throughout the North Bayshore Precise Plan area.

projects, the TDM Plan will be designed so the proposed package of measures will achieve the SOV mode split goal of 45 percent over time. Based on the proposed employee density per 1,000 square feet for their site, a total daily vehicle trip cap will be established assuming a 45 percent SOV mode share and 10 percent carpool mode share, unless the applicant can demonstrate their proposed TDM program will likely result in a high carpool mode share. Residential TDM Plans will include TDM measures as required by the Precise Plan.

North Bayshore Trip Cap: A district-wide trip cap of 18,900 vehicle trips has been established for the AM inbound peak period, based on the analysis conducted of the roadway network capacity at the three primary entry points to North Bayshore. *Section 8.3, Monitoring Programs*, of the Precise Plan, includes additional information on the monitoring and implementation of the North Bayshore Trip Cap.

Congestion Pricing: Congestion pricing involves charging motorists a user fee to drive in specific, congested areas during periods of peak demand to help discourage vehicle use, and thereby, eliminate or reduce related delays to acceptable levels. The revenues generated can be used to fund transportation improvements to accommodate shifts in travel behavior, such as transit service, roadway improvements, and bicycle and pedestrian projects. The congestion pricing system can be designed to exempt certain groups as necessary. For example, license plate recognition can exempt North Bayshore residents or Shoreline Park visitors.

If the employer TDM program requirement and trip cap do not reduce the number of vehicle trips to less than the established AM peak period vehicle trip cap, the City may implement a congestion pricing system. Prior to the implementation of a congestion pricing system further study and community outreach will be required.

Further details of the North Bayshore Precise Plan's Transportation Demand Management Program, with guidelines and standards that will be required of future development projects are detailed in *Chapter 6, Mobility*, of the draft Precise Plan (Appendix C), and *Section 4.14, Traffic and Transportation* and Appendix J of this Draft SEIR.

Proposed Precise Plan Transportation Improvements

To accommodate the potential land use growth, increase usage of transit and active modes of travel, and improve local vehicle circulation, the North Bayshore Precise Plan identifies 16 priority transportation improvements. These improvements include two-way cycle tracks along Shoreline Boulevard, Charleston Road, Garcia Avenue and others, additional local street connections, and an enhanced transit connection at or near the Shoreline Boulevard and US 101 interchange. These improvements are discussed further in detail in *Chapter 6: Mobility* and *Chapter 8: Implementation* of the Precise Plan (Appendix C). Priority infrastructure improvements have been assumed in the transportation impact analysis (refer to *Section 4.14, Traffic and Transportation* and Appendix J of this Draft EIR).

Stevens Creek Bridge Crossings

The amended North Bayshore Precise Plan includes the potential construction of one or two bridge crossing(s) over Stevens Creek. No formal bridge project is currently proposed. The Precise Plan

could include a conceptual location for a new bridge into North Bayshore, based on policy direction from the City Council. A new bridge would serve transit vehicles, bicycles, and pedestrians only. Any bridge would be designed to clear span the creek, and no permanent or temporary structures would be built or placed within Stevens Creek.

One potential location could be at Charleston Road, and another additional or alternative location could be near La Avenida Avenue. A potential Charleston Road bridge would continue the roadway from the intersection of Charleston Road and Shorebird Way across Stevens Creek on to federal property on the NASA Ames campus. A potential bridge crossing at La Avenida Avenue would be of similar length as a Charleston Road bridge.

The Santa Clara Valley Transportation Authority (VTA) is currently studying transit connections through the area, including potential location of a new bridge in either the Charleston Avenue or La Avenida Avenue locations. The potential impacts of a bridge to biological resources is described in further detail in *Section 4.3, Biological Resources* of this SEIR, and also discussed in *Section 4.14, Transportation and Traffic* of this SEIR.

Further project-level environmental review would be required before approval of a bridge project. Since a bridge would connect to federal property, in addition to CEQA environmental review, a bridge project would also require environmental review and analysis under the National Environmental Policy Act (NEPA).

3.3.5.5 *Utilities and Service Systems*

Utility improvements are required in North Bayshore to support existing and future land uses. Utility assessments were completed for the updated Precise Plan to ensure the appropriate scope of water, sewer, and stormwater infrastructure were identified for the Precise Plan implementation to the year 2030. To serve this new development, new and upgraded utilities and infrastructure are required in several locations, as described in *Section 4.15, Utilities and Service Systems* of this Draft SEIR, and in *Chapter 8: Implementation* of the Precise Plan (Appendix C). Additional infrastructure upgrades that will be located in North Bayshore have been identified as part of City-wide Capital Improvement Program activities.

In addition to future land use growth, demand for future utilities is directly related to the effectiveness of the sustainability measures in North Bayshore. The Precise Plan includes measures to reduce potable water use, increase recycled water use, reduce energy demand, and capture and treat stormwater runoff, as described in subsequent sections of this Draft SEIR.

3.3.5.6 *Project Implementation and Phasing*

As described previously, the amended North Bayshore Precise Plan will implement the development allowed by the Mountain View 2030 General Plan, as amended. Individual projects will be evaluated for their conformance with the North Bayshore Precise Plan, and any necessary, site-specific analysis to conform with CEQA will be completed at that time.

Implementation of the Precise Plan will require a comprehensive approach that combines future development from the private sector with City actions and resources. Development standards will

guide future development, with larger projects contributing to public benefit/district-wide improvements. Section 3.5.2 of the Precise Plan allows for Master Plans to be used to provide a coordinated approach to larger developments under certain conditions. These projects will incrementally transform North Bayshore into a more active and innovative place. New capital improvements to support existing and future development will be funded by a variety of sources with future development contributing to infrastructure costs.

The capital improvement funding principles include:

- Ensure future development contributes to the cost of on-site and off-site impacts to the City's infrastructure system;
- Provide for a fair allocation of costs among different land uses through a nexus study; and
- Identify funding sources for existing deficiencies, aging infrastructure, and General Plan CIPs.

The following implementation actions will implement the North Bayshore Precise Plan, including City implementation actions and capital improvement projects. The time frame for these actions includes five phases: immediate, short-term, medium-term, long-term, and ongoing. Each phase may be shorter or longer in duration, and the City action or capital improvement project may overlap or fall into different phases depending on development timing and funding availability.

- Immediate (2017 and 2018). This phase will ensure the appropriate funding mechanisms, governance structures, and monitoring programs are in place and that the transportation network is prepared to support future development in North Bayshore. The actions in this phase include start-up functions such as a establishing a district vehicle trip monitoring program, conducting a district utilities feasibility study, and preparing nexus and other fee studies for future development.

- Short-term (2019 to 2024). Implementation actions will focus on improving connections to North Bayshore and developing distinct Gateway and Core Character Areas. Construction of key priority transportation improvements will begin during this period.

- Medium-term (2025 to 2030). Immediate and short-term actions include many of the highest priority projects and establishing the funding mechanisms, monitoring programs, and governance structures. Once established these activities will guide development and capital improvement projects in the medium-term. This time period may include the completion of capital improvement projects started in the short-term and the construction of additional projects.

- Long-term (Beyond 2030). These actions extend beyond 2030 and include sea level rise projects to be implemented over a longer planning horizon.

- On-going. These actions include programs to cover the life of the Precise Plan, including ongoing monitoring and maintenance.

Funding Strategy

To implement the Precise Plan, a combination of funding sources will be needed to fund the proposed transportation, sea level rise (SLR) improvements and utility infrastructure required to accommodate intensified development in North Bayshore. As noted in the Precise Plan, a broader set of new improvements will be needed to enhance and improve the North Bayshore and Shoreline Community area, but only those improvement costs that specifically benefit the North Bayshore area are included within the implementation strategy, which is detailed in *Chapter 8: Implementation* of the Precise Plan (Appendix C of the SEIR).

Environmental Review: Infrastructure Activities

Many of the infrastructure and transportation improvements will be funded by the development in the Precise Plan area and will be built in existing roadways and utility rights-of-way. These improvements will be constructed as the North Bayshore area is redeveloped, or during the implementation of infrastructure plans. All infrastructure improvement projects will be reviewed by the City on a case-by-case basis at the time project plans for the infrastructure upgrades are available, and the City will determine if additional environmental review is required, or if the project is entirely within the scope of future activities analyzed in this North Bayshore Precise Plan SEIR.

Many of the infrastructure improvements, including water and wastewater pipeline upgrades in City streets, and minor transportation improvements, are not expected to impact sensitive habitat areas or result in other environmental impacts. Short-term construction disturbances may occur, including temporary construction noise and air quality impacts.

Other infrastructure improvements, including the sea-level rise projects and transportation improvements projects outside of the Precise Plan area, will be funded in part by the Precise Plan development. This SEIR does not provide CEQA review for these improvements, which would require separate and specific environmental review at time they are proposed.

3.4 PROJECT GOALS AND OBJECTIVES

Pursuant to CEQA Guidelines Section 15124, the SEIR must include a statement of the objectives sought by the proposed project. The overall objective of the City of Mountain View, as the project proponent, is to amend Mountain View 2030 General Plan and the existing *North Bayshore Precise Plan* zoning district to incorporate the development of residential uses.

The amended Precise Plan provides new residential development standards and design guidelines for future development projects within the Precise Plan area, and also updates standards and guidelines for the development of office and commercial uses.

The objectives of the City of Mountain View for the North Bayshore Precise Plan project, approved in 2014, were as follows:

- Create four distinct character areas within North Bayshore, differing their physical character, form, interfaces with habitat and open space, building intensity and scale, and building massing.
- Make the area a model for a highly sustainable and innovative development area, which will

be implemented by building-, site-, and district-scale improvements.

- Concentrate growth to support transit, directing higher intensity development towards Gateway and Core Areas.
- Enhance ecosystems and habitat areas within and adjacent to the Precise Plan area.
- Promote transit, carpools, biking, and walking for access to and between the businesses of North Bayshore.
- Create walkable, human-scale blocks to promote bike and pedestrian transportation.
- Improve connectivity to North Bayshore through more effective connections to Downtown and across US 101.
- Improve infrastructure in the area, including a new transit, bicycle, and pedestrian connection over US 101 and the improved design of existing facilities such as the North Bayshore off-ramp from US 101.
- Allow for new and emerging technologies such as Intelligent Transportation Systems and autonomous vehicles that maximize the functionality of roadways even as more vehicles are added to the network.
- Construct buildings that support public areas and support the safety, comfort, and use of the transportation network and community open spaces.
- Encourage and support a diverse economic base to ensure the long-term fiscal health of the area and the City.
- Promote retail, entertainment and the arts through expanded retail, civic, lodging, arts and entertainment uses.
- Proactively address climate change.
- Minimize the potential consequences of sea-level rise through strategies, including improving levees, upgrading stormwater facilities, and elevating development.
- Expand and improve recreation and open spaces, creating a diverse network of public and private open spaces.

The additional objectives of the City of Mountain View for the amended North Bayshore Precise Plan (residential uses), are as follows:

- Blend residential, commercial, and office uses to create complete neighborhoods with services, open space, and transportation options for residents and area employees.
- Improve the jobs-housing balance of the area and City by including residential uses in North Bayshore.
- Promote housing affordability, with an affordable housing goal of 20 percent or more for new housing within the area.
- Improve connections to/from NASA-Ames and North Bayshore.
- Develop residential urban design principles to help create an urban neighborhood with buildings up to 15 stories in certain locations and under specific circumstances.
- Incentivize new housing through an affordable housing strategy that allows increased FAR (floor area ratio) and more affordable units, and allowing demolished office FAR to be rebuilt.
- Support vehicle trip reduction and reduced parking standards for residential uses to reduce private car usage and increase other transportation modes.
- Create new residential street standards to make biking/walking for area residents more convenient and comfortable.

3.5 USES OF THE SEIR

This SEIR provides program-level review, that, in conformance with CEQA Guidelines Section 15168, is being prepared to address a series of actions that can be characterized as one large project and will be carried out as individual activities under the same authorizing statutory and regulatory authority and have generally similar environmental effects which can be mitigated in similar ways.

Program-level measures to mitigate impacts are also identified in this SEIR. This SEIR is intended to be an informational document and is subject to public review, agency review, and consideration by the City of Mountain View. The purpose of this SEIR is to identify potentially significant effects of the project on the physical environment, to determine the extent to which these effects could be reduced or avoided, and to identify feasible alternatives to the project. The SEIR is an informational document and in itself does not determine whether a project should or will be approved.

This SEIR would provide decision-makers in the City of Mountain View (the CEQA Lead Agency), responsible agencies, and the general public with relevant environmental information to use in considering the project. Future development projects and other activities proposed under the North Bayshore Precise Plan will be examined in light of this Program SEIR to determine whether or what additional environmental review is needed. If the amended North Bayshore Precise Plan project is approved, the SEIR could be used by the City in conjunction with future land use approvals including, but not limited to, the following:

- Planned Community Permits
- Development Review Permits
- Building Permits
- Demolition Permits
- Grading Permits
- Heritage Tree Removal Permits

In addition to the City of Mountain View, various responsible governmental agencies will use this SEIR when reviewing, approving, and/or permitting various components of the amended North Bayshore Precise Plan, as shown in Table 3.5-1.

Table 3.5-1: CEQA Responsible and Trustee Agencies	
Agency	**Role(s)**
U.S. Environmental Protection Agency (EPA)	Oversight of federal hazardous materials cleanup sites.
U.S. Army Corps of Engineers (USACE)	Oversight of Clean Water Act, permitting dredge/fill of wetlands
U.S. Army Reserve	Environmental review and permits for Stevens Creek Bridges.
U.S. Fish and Wildlife Service (USFWS)	Oversight of federally-listed wildlife (Endangered Species Act)
National Aeronautics and Space Administration (NASA)	Environmental review and permits for Stevens Creek Bridges.
National Marine Fisheries Service (NMFS)	Oversight of federally-listed marine species and anadromous fish.
Federal Aviation Administration (FAA)	Compliance with Part 77 of Federal Aviation Regulations
California Department of Fish and Wildlife (CDFW)	Streambed Alteration Agreement for any work within the bed and banks of creeks. Special status species oversight and permits.
California Department of Transportation (Caltrans)	Encroachment Permit for any work within the Caltrans right-of-way.
California Department of Toxic Substances Control	Oversight of Hazardous Materials cleanup sites.
San Francisco Bay Regional Water Quality Control Board	Oversight of Hazardous Materials cleanup sites.
San Francisco Bay Conservation and Development Commission (BCDC)	Permits for projects within the BCDC's jurisdiction.
Santa Clara Valley Transportation Authority/Joint Powers Board	Roadway system improvements, transit system improvements.
Santa Clara County, Department of Roads and Airports	Acceptance and construction of traffic mitigation.
Santa Clara County, Airport Land Use Commission	Consistency determination with Comprehensive Land Use Plan
Santa Clara County, Department of Environmental Health	Oversight of Hazardous Materials cleanup, including Leaking Underground Storage Tank (LUST) sites.
Santa Clara County, Parks and Recreation Department	Permits for any improvements to County Parks trails and facilities.
Santa Clara Valley Water District (SCVWD)	Permit(s) for any work within 50 feet of creeks.

SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

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

4.1	Aesthetics	4.9	Hydrology and Water Quality
4.2	Air Quality	4.10	Land Use and Planning
4.3	Biological Resources	4.11	Noise and Vibration
4.4	Cultural Resources	4.12	Population and Housing
4.5	Energy	4.13	Public Services and Recreation
4.6	Geology, Soils, and Minerals	4.14	Transportation and Traffic
4.7	Greenhouse Gas Emissions	4.15	Utilities and Service Systems
4.8	Hazards and Hazardous Materials		

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.

IMPACTS

This subsection: 1) includes thresholds of significance for determining impacts, 2) discusses the project's consistency with those thresholds, and 3) discusses the project's consistency with applicable plans. 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 using an alphanumeric system that identifies the environmental issue. For example, **Impact HAZ-1** denotes the first potentially significant impact discussed in the Hazards and Hazardous Materials section. Mitigation measures are also numbered to correspond to the impact they address. For example, **MM NOI-2.3** refers to the third mitigation measure for the second impact in the Noise section.

Cumulative Impacts: The project's cumulative impact on each resource area is also discussed in each impact section. 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 Guidelines 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 SEIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. 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. The analysis must then determine whether the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guidelines Section 15065(a)(3).

The cumulative discussion for each environmental issue addresses two aspects of cumulative impacts: 1) would the effects of all of the pending development listed result in a cumulatively significant impact on the resource in question? And, if that cumulative impact is likely to be significant, 2) would the contributions to that impact from the proposed project make a cumulatively considerable contribution to those cumulative impacts?

For the North Bayshore Precise Plan SEIR, the cumulative analysis reflects the buildout of the 2030 General Plan, as adopted in July 2012, and periodically updated and amended.

The discussion below address two aspects of cumulative impacts: 1) would the effects of all of the past, present, and reasonably foreseeable development listed result in a cumulatively significant impact on the resources in question? And, if that cumulative impact is likely to be significant, 2) would the project's contributions to that impact make a "cumulatively considerable" contribution to those cumulative impacts?

For each environmental issue, cumulative impacts may occur over different geographic areas. For example, emissions of regional pollutants affect pollutant concentrations within the regulatory limits of the San Francisco Bay Air Basin, but the influence will be more substantial downwind of the sources. Noise impacts, in contrast, would primarily be localized to the surrounding area.

As appropriate, geographic considerations will be discussed in individual issue areas, such as transportation and construction noise. It is assumed that future development projects in the City of Mountain View will comply with existing regulations and statutes, and will incorporate mitigation and avoidance measures to reduce potential impacts to a less than significant level, if feasible and necessary. For example, all projects are required to incorporate best management practices and comply with local and regional regulations to reduce impacts to hydrology and water quality to the maximum extent feasible.

Consistency with Applicable Plans: The project's consistency with applicable plans (such as general plans, specific plans, and regional plans) is discussed within this subsection pursuant to CEQA Guidelines Section 15125(d). Plans relevant to implementation of the project, and references to the sections of the Draft SEIR where they are discussed are listed in Table 4.0-1.

Table 4.0-1: Consistency with Plans and Programs	
Relevant Plan	**Section Where Discussed**
2030 General Plan *City of Mountain View*	Section 4.10, Land Use and Planning
Greenhouse Gas Reduction Program *City of Mountain View*	Section 4.7, Greenhouse Gas Emissions
Airport Comprehensive Land Use Plans *Santa Clara County Airport Land Use Commission*	Section 4.8, Hazards and Hazardous Materials Section 4.10, Land Use Section 4.11, Noise and Vibration
Water Quality Control Plan/Basin Plan *SF Regional Water Quality Control Board*	Section 4.9, Hydrology and Water Quality
Clean Air Plan *Bay Area Air Quality Management District*	Section 4.2, Air Quality
Plan Bay Area *Metropolitan Transportation Commission, ABAG, BAAQMD, MTC*	Section 4.7, Greenhouse Gas Emissions Section 4.14, Transportation and Traffic
Congestion Management Program *Santa Clara County*	Section 4.14, Transportation and Traffic
Pedestrian and Bicycle Master Plans	Section 4.14, Transportation and Traffic
Santa Clara Valley Habitat Plan *Local Partners and Wildlife Agencies*	Section 4.3, Biological Resources

CONCLUSION: This subsection provides a summary of the project's impacts on the resource, with the inclusion of any proposed mitigation measures.

Important Note to the Reader

The California Supreme Court in a December 2015 opinion [*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478)] 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 Mountain View currently has policies that address existing conditions (e.g., air quality, noise, and hazards) affecting a proposed project, which are also addressed in this section. This is consistent with one of the primary objectives of CEQA and this document, which is to provide objective information to decision-makers and the public regarding a project as a whole. The CEQA Guidelines and the courts are clear that a CEQA document (e.g., EIR or Initial Study) can include

information of interest even if such information is not an “environmental impact” as defined by CEQA.

Therefore, where applicable, in addition to describing the impacts of the project on the environment, this chapter will discuss Planning Considerations that relate to policies pertaining to existing conditions. 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, in a geologic hazard zone, in a high noise environment, or on/adjacent to sites involving hazardous substances.

4.1 AESTHETICS

4.1.1 Environmental Setting

4.1.1.1 *Regulatory Framework*

This section describes applicable state and local regulations that pertain to visual and aesthetic resources.

California Scenic Highway Program

The intent of the California Scenic Highway Program (Streets and Highway Code Section 260) is to protect and enhance California's natural beauty and to protect the social and economic values provided by the State's scenic resources. The California Department of Transportation (Caltrans) defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality.

Suitability for designation as a State Scenic Highway is based on vividness, intactness, and unity. There are no officially designated highways within the City of Mountain View.[8]

City of Mountain View 2030 General Plan

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocate necessary resources to support fulfillment of the City vision. Particular General Plan policies related to visual and aesthetic resources include the following:

Land Use and Design	
Policy LUD 6.1	***Neighborhood character***. Ensure that new development in or near residential neighborhoods is compatible with neighborhood character.
Policy LUD 6.3	***Street presence***. Encourage building facades and frontages that create a presence at the street and along interior pedestrian paseos or pathways.
Goal LUD-9	**Buildings that enhance the public realm and integrate with the surrounding neighborhood.**
Policy LUD 9.1	***Height and setback transitions***. Ensure that new development includes sensitive height and setback transitions to adjacent structures and surrounding neighborhoods
Policy LUD 9.3	***Enhanced public space.*** Ensure that development enhances public spaces through these measures: • Encourage strong pedestrian-oriented design with visible, accessible entrances and pathways from the street.

[8] California Department of Transportation. *California Scenic Highway Mapping System, Santa Clara County*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed November 2, 2016.

	• Encourage pedestrian-scaled design elements such as stoops, canopies and porches. • Encourage connections to pedestrian and bicycle facilities. • Locate buildings near the edge of the sidewalk. • Encourage design compatibility with surrounding uses. • Locate parking lots to the rear or side of buildings. • Encourage building articulation and use of special materials to provide visual interest. • Promote and regulate high-quality sign materials, colors and design that are compatible with site and building design. • Encourage attractive water-efficient landscaping on the ground level.
Policy LUD 9.5	***View preservation***. Preserve significant viewsheds throughout the community.
Policy LUD 9.6	***Light and glare***. Minimize light and glare from new development
Policy LUD 16.5	***Preserve views***. Limit heights of buildings in North Bayshore to preserve significant views of surrounding mountains.

City of Mountain View Municipal Code

The City of Mountain View addresses visual considerations for development in many City documents, including the Municipal Code. The City Zoning Ordinance (Title 36) sets forth specific design guidelines, height limits, building density, building design and landscaping standards, architectural features, sign regulations, and open space and setback requirements.

The Zoning Ordinance promotes good design and careful planning of development projects to enhance the visual environment. The City's development review process includes the review of preliminary plans, the consideration of public input at the Development Review Committee, Zoning Administrator, Environmental Planning Commission and the City Council. The City's Planning Division reviews private and public development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, subdivision, and CEQA. The Zoning Administrator makes recommendations to the City Council for large development projects and makes final decisions for permits and variances, and the Development Review Committee reviews the architecture and site design of new development, and provides project applicants with appropriate design comments. The development review process ensures that the architecture and urban design of new developments would protect the City's visual environment.

4.1.1.2 *Existing Conditions*

North Bayshore Precise Plan Area

The North Bayshore Precise Plan area is located in the northernmost portion of the City. This area is bordered by Shoreline at Mountain View Regional Park and San Francisco Bay to the north, the NASA Ames Research Center to the east, US 101 to the south, and Palo Alto to the west. The site is visible from the immediate surrounding area and roadways, including North Shoreline Boulevard, San Antonio Road, Charleston Road, Amphitheater Parkway, US 101, and Shoreline at Mountain View Regional Park.

The approximately 650-acre Precise Plan area is relatively flat and is located within a developed, urban area of Mountain View. The area may be visible from the higher areas of the Santa Cruz Mountains, but generally the area is not from other locations, apart from US 101. The Precise Plan area is comprised of large scale office, research and development, and light industrial buildings. This area is characterized by almost entirely large building footprints that reflect the industrial and office uses in the area (Photos 1 and 2). Buildings tend to have large front and side setbacks occupied by surface parking and landscaped areas, with floor area ratios of less than 0.3 (i.e., low-intensity). The North Bayshore Precise Plan area contains numerous (likely thousands) of mature landscaping trees and shrubs throughout the parking lots and landscaped areas.

Office buildings in the Precise Plan area exhibit a variety of styles depending on when they were constructed. Many of the older buildings from the 1960's and 1970's are one- or two-stories and made of brick and stucco, while newer buildings from the 1980's and 1990's are characterized by more streamlined architecture. Older retail along Shoreline Boulevard is characterized by fairly nondescript buildings with no identifiable architectural style. Recent retail uses at Shoreline Boulevard and Pear Avenue are more distinct, with a contemporary style and stone architectural detailing (Photo 3). A large undeveloped 18-acre disked field is located in the Precise Plan area at 2000 North Shoreline Boulevard (this property is also known as "Charleston East") (Photo 4).

The Precise Plan area is not located on a scenic view corridor, nor is it visible from a designated or eligible State scenic highway. The Santa Cruz Mountains are visible to the south and west of the North Bayshore area, and the Diablo Range is visible to the east.

Surrounding Area

The Santiago Villa mobile home park is located along the eastern boundary of the Precise Plan area (Photo 5). Permanente Creek and the Permanente Creek Trail bisect the Precise Plan area. Permanente Creek is channelized in sections. Stevens Creek and the Stevens Creek Trail, a north-south bicycle and pedestrian trail, are located directly east and adjacent to the Precise Plan area (Photo 6).

A number of open spaces, trails, and landmarks contribute to the visual character of the surrounding North Bayshore area. Shoreline at Mountain View Regional Park sits atop a former landfill and provides regional recreation opportunities, such as trails, play fields, sailing, and access to the Bay. Open spaces areas such as Shoreline Golf Links located directly north of the Precise Plan area, Charleston Park (Photo 7) located in the Precise Plan area, and Crittenden Hill located adjacent to the Precise Plan area offer a range of active and passive open spaces. A segment of trail has also been constructed along Permanente Creek. San Francisco Bay is generally not visible from the Precise Plan area.

Gateways and Landmarks

Gateways

Gateways are the entries to a city, district, or neighborhood. They act as a point of distinction between different areas and contribute to a sense of place by announcing a threshold or a passage into a place while also reinforcing the unique identity of that place. For the most part, gateways in

Mountain View are associated with the City's major transportation corridors, particularly those which cross the jurisdictional boundaries of Palo Alto, Los Altos, and Sunnyvale.

As defined in the General Plan Draft EIR, two gateways into the City are located within the North Bayshore Precise Plan. Shoreline Boulevard serves as a gateway into downtown Mountain View from US 101, and also acts as a gateway into the North Bayshore area (Photo 8). Rengstorff Avenue also serves as a gateway into downtown and functions as a primary gateway to the North Bayshore area.

Landmarks

Landmarks are external points of reference that are usually simply defined physical objects (e.g., building or sign). The prominent visual features of the city are its landmarks. Some landmarks are very large and seen at great distances, and some landmarks are very small (e.g. a tree within an urban square) and can only be seen close up. Landmarks are an important element of urban form because they help people to orient themselves in the city and help identify an area.

Many of the City's landmarks are historical in nature or were identified as landmarks in the General Plan. The City of Mountain View's major landmarks are key elements of the visual environment that establish orientation within the City in addition to a sense of identity and place. Four landmarks identified in the 2030 General Plan are located adjacent to the Precise Plan area and are visible from various locations throughout the project site.

- **Rengstorff House.** The Rengstorff House is a significant historic building that serves as a landmark for the City. The house was one of the first to be built in Mountain View, by Henry Rengstorff. The house's striking Victorian Italianate architecture and location within Shoreline Park make it a landmark for the City. The Rengstorff House is located north of the Precise Plan area, and tall buildings in the Precise Plan area might be seen from the vicinity of the Rengstorff House.

- **Shoreline Amphitheatre.** This amphitheater was built in 1985 by a private developer and a joint partnership agreement with the City of Mountain View as part of the Shoreline Park project. It is distinguished by its large white tent structures.

- **Moffett Federal Airfield Hangar One.** Built during the depression era, Hangar One at Moffett Federal Airfield remains one of the largest unsupported structures in the country. The unique shape and scale of the hangar makes it a visual landmark from US 101 and many neighborhoods in Mountain View. Hanger One is located on the Moffett Federal Air Station, east of the project site across Stevens Creek.

- **NASA Wind Tunnels.** The world's largest wind tunnel is housed in a large multi-roofed building at the NASA Ames Research Center, east of the Precise Plan area across Stevens Creek. This tunnel, which is used to test planes with wing spans of up to 100 feet, is over 1,400 feet long and 180 feet high.

PHOTO 1: Office building on Charleston Road, currently occupied by Google, Inc. View from Charleston Road towards the north.

PHOTO 2: Office campus in the southeast portion of the Precise Plan area, currently occupied by Microsoft, Inc. View from Macon Avenue towards the east.

PHOTOS 1 AND 2

PHOTO 3: Retail uses at the corner of Shoreline Boulevard and Pear Avenue, view from Shoreline Boulevard to the east.

PHOTO 4: Undeveloped 10-acre disked field, west of Shoreline Boulevard between Amphitheatre Parkway and Charleston Road in the northern portion of the Precise Plan area.

PHOTOS 3 AND 4

PHOTO 5: Edge of Santiago Villa Mobile Home park, located directly east of the Precise Plan area. View from the terminus of Pear Avenue, looking towards the east.

PHOTO 6: Stevens Creek Trail bicycle and pedestrian path, view to the south from La Avenida Avenue entrance.

PHOTOS 5 AND 6

PHOTO 7: Charleston Park, located in the northern portion of the Precise Plan area, between Charleston Road and Amphitheater Parkway. View to the north from Charleston Road.

PHOTO 8: Shoreline Boulevard Gateway to North Bayshore, view to the north.

PHOTOS 7 AND 8

4.1.2 Aesthetic Impacts

4.1.2.1 *Thresholds of Significance*

For the purposes of this SEIR, an aesthetic impact is considered significant if the project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Aesthetic values are, by their nature, very subjective. Opinions as to what constitutes a degradation of visual character will differ among individuals. One of the best available means for assessing what constitutes a visually acceptable standard for new buildings are the City's design standards and implementation of those standards through the City's design process. The following discussion addresses the proposed changes to the visual setting of the project area and factors that are part of the community's assessment of the aesthetic values of a project's design.

4.1.2.2 *North Bayshore Precise Plan*

The purpose of the North Bayshore Precise Plan is to implement the vision described in the Mountain View 2030 General Plan. The General Plan outlines major themes and strategies that support and enable the community's preferred future. These themes relate to quality of life, sustainability, diversity, health and wellness, and economic prosperity. The vision articulated by the General Plan for North Bayshore builds on these themes and describes how this area may change, develop, look and feel over time.

Chapter 3, Land Use and Design of the Precise Plan describes the vision of North Bayshore evolving over time from an auto-oriented, suburban office area into an innovative and mixed-use employment district with new complete neighborhoods. The Joaquin, Shorebird, and Pear neighborhoods adjacent to Shoreline Boulevard would become highly walkable and bikable places with a mix of new and expanded office, housing, retail and services, civic, lodging, arts, and entertainment uses. These mixed-use neighborhoods would include a new network of neighborhood streets, pedestrian and bicycle greenways, and new neighborhood parks and plazas.

New residential neighborhoods, urban parks and plazas, and supportive retail uses would be integrated into North Bayshore along with large, established high-tech companies and smaller start-up companies to create a seamless fabric of complete neighborhoods. Future development would include highly-sustainable buildings located and designed to enhance the urban character and human scale of streets and other open spaces. New development would also be organized within smaller blocks scaled for walkability, with streets that provide convenient and pleasant walking and biking routes to connect each business and residence to transit, services, and surrounding natural areas. To achieve this vision, the Land Use and Design Chapter includes the following objectives:

- Create complete neighborhoods that integrate and connect residential uses with office, retail and service uses, and open spaces;
- Focus development near high-frequency transit and away from sensitive habitat;
- Allow building height, form, and scale to vary across the area;
- Encourage a variety of streetscape and building frontage character throughout the area;
- Create a walkable block pattern; and
- Provide opportunities for small businesses

Standards and guidelines provided in Chapter 3 enforce the desired visual and aesthetic character (refer to Appendix C).

Character Areas

The North Bayshore Precise Plan is organized into four different areas, each with a distinct urban form and character: Gateway, Core, General, and Edge. These character areas differ in their physical character, urban form, interfaces with habitat and open space, and building intensity and scale. The draft Precise Plan provides guidelines for what the desired look and feel of each area should be.

Chapter 3: Land Use and Design of the Precise Plan includes standards and guidelines for limiting building heights near sensitive habitat and existing area residential uses, and seeks to preserve views of Shoreline at Mountain View Regional Park and surrounding mountains. Chapter 3 contains additional guidelines and standards for the visual character of buildings, structures, parking lots, and street frontage proposed in the Precise Plan area.

Chapter 5: Habitat and Biological Resources of the Precise Plan incorporates Bird Safe Design guidelines. The Bird Safe Design guidelines will help reduce the likelihood of bird collision fatalities through façade treatments and light pollution reduction. Although the intent is to limit bird strike impacts, the guidelines also limit the amount of glare and lighting within the North Bayshore area to reduce the likelihood of lighting and glare impacts.

4.1.2.3 *Impacts to Scenic Vistas and Scenic Resources*

There are no officially designated State Scenic Highways in the Precise Plan area, and no portions of the Precise Plan encompass the viewshed of a State Scenic Highway. Therefore, future development within the Precise Plan area would not damage scenic resources within a State Scenic Highway.

Key scenic resources within the Precise Plan vicinity include the baylands, historic structures, and views to the Santa Cruz and Diablo mountain ranges. The Santa Cruz Mountains are located to the south and west of the Precise Plan and can be viewed from various locations throughout the North Bayshore area.

The Precise Plan does not specifically propose any new development, however, the Precise Plan would allow increased building heights in portions of the North Bayshore area, and future projects allowed by the Precise Plan may propose development or redevelopment with the potential to affect scenic resources.

Conformance with General Plan Policy LUD 9.5 and Policy LUD 16.5 would ensure that significant viewsheds would be preserved. In addition, *Chapter 3: Land Use and Design* of the Precise Plan includes measures to limit building heights and preserve views. Development Standard 7 of the Building Height and Massing section of Chapter 3 states that when new development 95 feet or higher in height is proposed, a site-specific view and shadow study is required to help assess how new development impacts views of the mountains from surrounding public spaces or properties.

Impact AES-1: Future development projects in the North Bayshore Precise Plan area must be consistent with General Plan Policies LUD 9.5, LUD 16.5, and *Chapter 3: Land Use and Design* of the Precise Plan. Accordingly, implementation of the Precise Plan would not result in significant impacts to scenic vistas or scenic resources. **[Less Than Significant Impact]**

4.1.2.4 *Impacts to Visual Character and Quality*

The policies in the 2030 General Plan would ensure that the pedestrian-level of design of new development is of a high quality that would be site-sensitive and would not adversely affect the visual character of adjacent areas. The General Plan also contains numerous policies designed to protect and enhance visual character. These include Policy LUD 6.3, which encourages building facades and frontages that create a presence at the street and along pathways, Policy LUD 9.1 ensures that new development includes sensitive height and setback transitions, and Policy LUD 9.3 encourages enhanced public spaces. Policies LUD 9.5, 9.6, and 16.5 seek to preserve views and viewsheds, and minimize light and glare from new development.

The City's development review process, which includes the City Zoning Administrator and the Development Review Committee, would ensure that the architecture and urban design of new developments would protect the City's visual environment. The Zoning Administrator makes recommendations to the City Council for large development projects and makes final decisions for permits and variances, and the Development Review Committee reviews the architecture and site design of new development and improvements, and provides project applicants with appropriate design comments. As a result, implementation of the Precise Plan would result in less than significant impacts to the City's visual character.

Chapter 3: Land Use and Design, of the amended Precise Plan contains detailed development standards and guidelines for North Bayshore to ensure that future development fits the intended form and character of the area and achieves the overall vision.

The amended Precise Plan would allow for development of up to 3.6 million square feet of commercial and office space and up to 9,850 multi-family dwelling units.[9] The proposed amendments to the Precise Plan include a maximum residential building height of 15 stories (160 feet). Currently, the maximum height of buildings allowed under the adopted Precise Plan is eight stories (140 feet) for non-residential buildings, which would not change (refer to Appendix C and Figures 3.3-4 and 3.3-5).

[9] A total of 3.6 million feet of new office development includes all the office and commercial development currently being considered in North Bayshore.

The standards and guidelines in Section 3.3.5, Building Height and Massing of the Precise Plan include:

North Bayshore Precise Plan Standards

1. Maximum non-residential building heights. The maximum permitted heights of new non-residential buildings shall not exceed the heights shown on Figure 13 (Figure 3.3-4 of the EIR). Where non-residential building height areas do not follow parcel boundaries, the Zoning Administrator shall determine the exact location of allowed building heights based on Figure 13 (Figure 3.3-4).

2. Exemplary non-residential buildings. Hatched parcels identified on Figure 12 may construct non-residential buildings up to 8-stories (140 feet) with exemplary design, subject to approval from the City Council.

3. Maximum residential building heights. The maximum permitted heights of new residential buildings shall not exceed the heights shown on Figure 14 (Figure 3.3-5 of the EIR).

4. Moffett Field Comprehensive Land Use Plan Height Limits. All new buildings shall conform to the height limits established by the Moffett Field Comprehensive Land Use Plan.

5. High-rise residential building forms. Building masses greater than 95 feet in height shall meet the following requirements to preserve views and exposure to light and air:

- No facades shall be greater than 190 feet in length.
- No floor plate shall be greater than 16,000 square feet in area.

6. High-rise residential building spacing. High-rise residential building masses shall be spaced no less than 175 feet apart to minimize shadowing of streets, open space, and other residential units. This distance shall be measured by a 175 feet circular offset from the building perimeter at its outermost points on the building form, as shown on Figure 12.

7. View and shadow study. Proposed projects with building elements greater than 95' in height shall submit a view and shadow study. This study shall include information, including but not limited to, 3D massing models, digital simulations, or other methods, that evaluate both building shadows and impacts to views of mountain ranges surrounding the City. The view study shall provide views from several public locations in North Bayshore, including, but not limited to, Shoreline Park, Charleston Park, Charleston Retention Basin, Stevens Creek trail, Vista Slope, and the North Shoreline Boulevard corridor.

North Bayshore Precise Plan Guidelines

3. Preserving views. Upper stories should be designed to preserve significant views to surrounding mountains and the bay as viewed from public streets.

The Precise Plan does not specifically propose any new development; however, future projects in the North Bayshore Precise Plan area may propose development or redevelopment that has the potential to affect the existing visual character or quality of the site and its surroundings. Currently, few

buildings in North Bayshore are taller than two stories, so new buildings up to 15 stories under the amended Precise Plan would be more visible from throughout the area. The tallest buildings could be located near US 101 or Shoreline Boulevard, changing the visual impression of the area from generally a suburban office park to a more urban development.

All future development projects would be required to be consistent with the Precise Plan standards and guidelines included in Chapter 3 of the Precise Plan. In addition to the maximum height limits, the amended Precise Plan standards and guidelines describe lot coverage, building placement, building frontages, blocks, signs, and parking access and design. Consistency with these standards and guidelines, and conformance with General Plan policies, would ensure that the amended North Bayshore Precise Plan would not substantially degrade the existing visual character or quality of the site and its surroundings.

Impact AES-2: Future development projects in the North Bayshore area shall be consistent with General Plan Policies and Chapter 3 of the Precise Plan, and be reviewed through the City's development review process. Accordingly, implementation of the Precise Plan would not substantially degrade the existing visual character or quality of the site and its surroundings. **[Less Than Significant Impact]**

4.1.2.5 *Lighting and Glare*

Future development projects within the Precise Plan could result in increased amounts of lighting associated with more intensive uses. It is anticipated that any new lighting would be more efficient in energy use and light pollution than existing lighting in the area. Section 4.6 of the amended Precise Plan provides standards and guidelines for outdoor lighting; which would minimize energy use, provide adequate lighting for pedestrian safety, minimize light trespass, reduce light pollution, and protect the surrounding natural environment from outdoor lighting impacts.

North Bayshore Precise Plan Standards

1. Light pollution. Illumination levels for all new construction shall meet the standards outlined by Title 24 and / or the "Light Pollution" credit as defined by the current LEED for BD+C rating system, whichever is more stringent.

2. Outdoor Lighting. For all new construction and additions, outdoor luminaires shall be energy efficient fixtures controlled by motion sensors, and incorporate cut-off controls and outdoor lighting controls.

North Bayshore Precise Plan Guidelines

1. Inward Lighting. For new construction and additions, all lighting adjacent to Shoreline Park, Permanente Creek, Stevens Creek, the Coast Casey Forebay, and the Charleston Retention Basin should be designed and oriented so lighting projects inward toward the Precise Plan area, minimizing light trespass into adjacent natural areas.

Bird Safe Design

Chapter 5: Habitat and Biological Resources of the Precise Plan incorporates Bird Safe Design requirements and guidelines, including façade treatments, occupancy sensors, and bird collision best management practices (refer to Section 5.2). Bird Safe Design standards and guidelines in the Precise Plan will help diminish the likelihood of bird collision fatalities through window coverings, façade treatments and light pollution reduction. While the intent is to limit bird strike impacts, the guidelines also limit the amount of glare and lighting within the North Bayshore area. The Bird Safe Design guidelines will reduce the likelihood of lighting and glare impacts.

Impact AES-3: Future development projects in the Precise Plan area must be consistent with General Plan Policies LUD 9.6, and with *Chapter 3: Land Use and Design* and the Bird Safe Design Guidelines. Accordingly, implementation of the Precise Plan would not create a new source of substantial light or glare. **[Less Than Significant Impact]**

4.1.2.6 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant aesthetic impacts with the implementation of standard City of Mountain View conditions of approval. The proposed amendments to the General Plan would not result in additional aesthetics impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow and regulate the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.1.2.7 *Cumulative Impacts*

The cumulative projects analyzed in this Draft SEIR in Mountain View and neighboring jurisdictions may demolish existing buildings, construct taller buildings, remove Heritage trees, and possibly affect views of the Santa Cruz Mountains and other scenic resources. As discussed previously, the amended Precise Plan includes standards and guidelines to reduce impacts to scenic views or scenic resources.

All of cumulative projects occurring within Mountain View or nearby cities would be subject to the design guidelines, lighting standards, and signage regulations of their respective jurisdictions. Implementation of these measures and requirements would minimize or reduce visual impacts associated with community or urban design to a less than significant level. For these reasons, the cumulative projects, including the amended North Bayshore Precise Plan, would not result in significant cumulative aesthetic or visual impacts.

Impact C-AES-1: The amended North Bayshore Precise Plan, along with the cumulative projects in the area, would not result in significant cumulative aesthetic or visual impacts. **[Less Than Significant Cumulative Impact]**

4.1.3 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
AES-1: Future development projects in the North Bayshore Precise Plan area must be consistent with General Plan Policies LUD 9.5, LUD 16.5, and Chapter 3: Land Use and Design of the Precise Plan. Accordingly, implementation of the Precise Plan would not result in significant impacts to scenic vistas or scenic resources.	Less Than Significant	No mitigation required	Less Than Significant
AES-2: Future development projects in the North Bayshore area must be consistent with General Plan Policies and Chapter 3 of the Precise Plan, and must successfully complete the City's development review process. Accordingly, implementation of the Precise Plan would not substantially degrade the existing visual character or quality of the site and its surroundings.	Less Than Significant	No mitigation required	Less Than Significant
Impact AES-3: Future development projects in the Precise Plan area must be consistent with General Plan Policies LUD 9.6, and with Chapter 3: Land Use and Design and the Bird Safe Design Guidelines. Accordingly, implementation of the Precise Plan would not create a new source of substantial light or glare.	Less Than Significant	No mitigation required	Less Than Significant
C-AES-1: The amended North Bayshore Precise Plan, along with the cumulative projects in the area, would not result in significant cumulative aesthetic or visual impacts.	Less Than Significant	No mitigation required	Less Than Significant

4.2 AIR QUALITY

The discussion in this section is based on the air quality analysis prepared by *Illingworth & Rodkin* on February 14, 2017, which is attached to this EIR as Appendix E. The discussion also relies on the Section IV.D Air Quality, of the 2030 General Plan EIR.

4.2.1 Environmental Setting

Air quality is determined by the concentration of various pollutants in the atmosphere. The amount of a given pollutant in the atmosphere is determined by the amount of pollutants released within an area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, and the surrounding topography of the air basin. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sunlight.

4.2.1.1 *Regulatory Framework*

In recognition of the adverse effects of degraded air quality, Congress and the California Legislature enacted the Federal and California Clean Air Acts, respectively. The requirements of these acts are administered by the U.S. Environmental Protection Agency (EPA) at the federal level, the California Air Resources Board (CARB) at the state level, and the Bay Area Air Quality Management District (BAAQMD) at the regional level.

Federal and State Air Quality Standards

Ambient Air Quality Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the U.S. Environmental Protection Agency (EPA) established national ambient air quality standards (NAAQS). The NAAQS were established for major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and CARB have established ambient air quality standards for common pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, California has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. The ambient air quality standards cover what are called "criteria" pollutants.

Federal standards include both primary and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

In Santa Clara County, ozone and particulate matter are the pollutants of greatest concern since measured air pollutant levels exceed these concentrations at times. Both state and federal standards for these criteria pollutants are summarized in Table 4.2-1.

Table 4.2-1: Ambient Air Quality Standards					
Pollutant	**Averaging Time**	**California Standards**		**National Standards**	
		Concentration	**Attainment Status**	**Concentration[3]**	**Attainment Status**
Carbon Monoxide (CO)	8-Hour	9 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	Annual Mean	0.030 ppm (57 mg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
	1-Hour	0.18 ppm (338 µg/m^3)	Attainment	0.100 ppm	Unclassified
Ozone (O_3)	8-Hour	0.07 ppm (137 µg/m^3)	Nonattainment	0.070 ppm	Nonattainment
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	Not Applicable
Suspended Particulate Matter (PM_{10})	Annual Mean	20 µg/m^3	Nonattainment	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Sulfur Dioxide (SO_2)	Annual Mean	Not Applicable	Not Applicable	80 µg/m^3 (0.03 ppm)	Attainment
	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	365 µg/m^3 (0.14 ppm)	Attainment
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment

A = Attainment, N = Nonattainment, U = Unclassified

Lead (Pb) is not listed in the above table because it has been in attainment since the 1980s.
ppm = parts per million
mg/m^3 = milligrams per cubic meter
µg/m^3 = micrograms per cubic meter

Source: BAAQMD. 2016.

Criteria Pollutants

Major criteria pollutants, listed in "criteria" documents by the EPA and CARB include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and suspended particulate matter (PM). These pollutants can have health effect such as respiratory impairment and heart/lung disease symptoms. The health effects and typical sources for the major criteria pollutants of ground level ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and suspended particulate matter (PM_{10} and $PM_{2.5}$) are summarized in Table 4.2-2, and described below.

Table 4.2-2: Common Sources of Health Effects for Criteria Air Pollutants		
Pollutants	**Source**	**Health Effects**
Ozone	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort
Particulate Matter ($PM_{2.5}$ and PM_{210})	Stationary combustion of solid fuels; construction activities; industrial processes; atmospheric chemical reactions	Reduced lung function; aggravation of respiratory and cardiovascular diseases; increases in mortality rate; reduced lung function growth in children
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	Aggravation of respiratory illness
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; natural events, such as decomposition of organic matter	Aggravation of some heart diseases; reduced tolerance for exercise; impairment of mental function; birth defects; death at high levels of exposure
Sulfur Dioxide (SO_2)	Combination of sulfur-containing fossil fuels; smelting of sulfur bearing metal ore; industrial processes	Aggravation of respiratory diseases; reduced lung function
Lead (Pb)	Contaminated soil	Behavioral and hearing disabilities in children; nervous system impairment
Source: BAAQMD. CEQA Air Quality Guidelines. 2011. Appendix C, Table C-2.		

The project is located in the northern portion of Santa Clara County, which is in the San Francisco Bay Area Air Basin. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$); which are described further below.

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is pollutant that exceeds state Air Quality Standards in the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both

region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, criteria air pollutants. TACs are commonly found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM). Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles. The regulation requires affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

Regional Air Quality Standards

The Bay Area Air Quality Management District (BAAQMD) is primarily responsible for ensuring that the national and state ambient air quality standards are attained and maintained in the nine-county Bay Area. These ambient air quality standards specify levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called criteria pollutants because the health and other effects of each pollutant are described in criteria documents.

As the regional government agency responsible for regulating air pollution within the air basin, BAAQMD must prepare air quality plans specifying how state air quality standards will be met. The *Bay Area 2010 Clean Air Plan* (2010 CAP), which has been adopted by BAAQMD and takes into account future growth projections to 2035, serves to:

- Update the *Bay Area 2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement all feasible measures to reduce ozone;
- Provide a control strategy to reduce ozone, particulate matter (PM), TACs, and Greenhouse Gasses (GHGs) in a single, integrated plan; and
- Review progress in improving air quality in recent years.

Determining a project's consistency with the 2010 CAP involves assessing whether applicable control measures contained within the 2010 CAP are implemented. Implementation of control measures improve air quality and protect public health. Control measures in the 2010 CAP are organized into five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. The 2010 CAP is currently being updated by BAAQMD staff.

BAAQMD issued a *2017 Draft Clean Air Plan* on January 10, 2017. The Draft 2017 CAP aims to lead the region to a post-carbon economy, to continue progress toward attaining all State and Federal air quality standards, and to eliminate health risk disparities from exposure to air pollution among Bay Area communities. BAAQMD is currently preparing a Draft Programmatic EIR and will be holding public meetings to provide input on the draft plan.

Local Air Quality Regulations

City of Mountain View 2030 General Plan

The following General Plan policies were adopted to promote clean, breathable air and control sources of air pollution in the City of Mountain View. These policies also bring the General Plan into compliance with the measures outlined in the BAAQMD 2010 Clean Air Plan, as discussed in Section 4.2.3.

Infrastructure and Conservation	
GOAL INC-20	**Clean, breathable air and strongly controlled city sources of air pollution.**
Policy INC 20.1	Pollution prevention. Discourage mobile and stationary sources of air pollution.
Policy INC 20.2	Collaboration. Participate in state and regional planning efforts to improve air quality.
Policy INC 20.3	Pollution-reduction technologies. Encourage the use of non-fossil fuels and other pollution-reduction technologies in transportation, machinery and industrial processes.
Policy INC 20.4	Freight routes. Identify and maintain primary freight routes that provide direct access to industrial and commercial areas.
Policy INC 20.5	Truck access. Plan industrial and commercial development to avoid truck access through residential areas, and minimize truck travel on streets designated primarily for residential access by the General Plan.
Policy INC 20.6	Air quality standards. Protect the public and construction workers from construction exhaust and particulate emissions.

Policy INC 20.7	Protect sensitive receptors. Protect the public from substantial pollutant concentrations.
Policy INC 20.8	Offensive odors. Protect residents from offensive odors.
	Mobility
GOAL MOB-1	**Streets that safely accommodate all transportation modes and persons of all abilities.**
Policy MOB-1.1	Multi-modal planning. Adopt and maintain master plans and street design standards to optimize mobility for all transportation modes.
Policy MOB 1.2	Accommodating all modes. Plan, design and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.
Policy MOB-1.3	Pedestrian and bicycle place making. Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for placemaking, and foster a greater sense of community.
Policy MOB 1.4	Street design. Ensure street design standards allow a variety of public and private roadway widths.
Policy MOB-1.5	Public accessibility. Ensure all new streets are publicly accessible.
Policy MOB 1.6	Traffic calming. Provide traffic calming, especially in neighborhoods and around schools, parks and gathering places.
GOAL MOB-3	**A safe and comfortable pedestrian network for people of all ages and abilities at all times.**
Policy MOB 3.1	Pedestrian network. Provide a safe and comfortable pedestrian network.
Policy MOB 3.2	Pedestrian connections. Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the City.
Policy MOB 3.3	Pedestrian and bicycle crossings. Enhance pedestrian and bicycle crossings at key locations across physical barriers.
Policy MOB 3.4	Avoiding street widening. Preserve and enhance citywide pedestrian connectivity by limiting street widening as a means of improving traffic.
Policy MOB 3.5	Walking and bicycling outreach. Actively engage the community in promoting walking and bicycling through education, encouragement, and outreach on improvement projects and programs.
GOAL MOB-4	**A comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill levels.**
Policy MOB 4.1	Bicycle network. Improve facilities and eliminate gaps along the bicycle network to connect destinations across the City.
Policy MOB 4.2	Planning for bicycles. Use existing planning processes to identify or implement improved bicycle connections and bicycle parking facilities.
Policy MOB 4.3	Public bicycle parking. Increase the amount of well-maintained, publicly accessible bicycle parking and storage throughout the City.

Policy MOB 4.4	Bicycle parking standards. Maintain bicycle parking standards and guidelines for well-sited bicycle parking and storage in private development to enhance the bicycle network.
Policy MOB 4.5	Promoting safety. Educate bicyclists and motorists on bicycle safety.
GOAL MOB-5	**Local and regional transit that is efficient, frequent, convenient and safe.**
Policy MOB 5.1	Transit agencies. Coordinate with local and regional transit agencies, including MTC, VTA, JPB (Caltrain), SamTrans, and the California High-Speed Rail Authority, to improve transportation service, infrastructure and access in the city.
Policy MOB 5.2	California High Speed Rail. Actively participate with the High Speed Rail Authority in planning any future high-speed rail service to address urban design, traffic, noise and compatibility issues.
Policy MOB 5.3	Local transportation services. Create or partner with transit providers, employers, educational institutions, and major commercial entities and event organizers to improve local transportation services.
Policy MOB 5.4	Connecting key areas. Identify and implement new or enhanced transit services to connect Downtown, El Camino Real, San Antonio, North Bay- shore, East Whisman and NASA Ames Research Center.
Policy MOB 5.5	Access to transit services. Support right-of-way design and amenities consistent with local transit goals to facilitate access to transit services and improve transit as a viable alternative to driving.
Policy MOB 5.6	Emerging technologies. Explore emerging transit technologies such as Personal Rapid Transit and their citywide applicability.
GOAL MOB-6	**Safe and convenient pedestrian and bicycling access to schools for all children.**
Policy MOB 6.1	Safe routes to schools. Promote safe routes to schools programs for all schools in the City.
Policy MOB 6.2	Prioritizing projects. Ensure bicycle and pedestrian safety improvements include projects to enhance safe accessibility to schools.
Policy MOB 6.3	Connections to trails. Connect schools to the citywide trail systems.
Policy MOB 6.4	Education. Support education programs that promote safe walking and bicycling to schools.
GOAL MOB-7	**Innovative strategies to provide efficient and adequate vehicle parking.**
Policy MOB 7.1	Parking codes. Maintain efficient parking standards that consider reduced demand due to development conditions such as transit accessibility.
GOAL MOB-8	**Transportation performance measures that help implement larger City goals.**
Policy MOB 8.3	Multi-modal transportation monitoring. Monitor the effectiveness of policies to reduce vehicle miles traveled (VMT) per service population by establishing transportation mode share targets and periodically comparing travel survey data to established targets.

GOAL MOB-9	**Achievement of state and regional air quality and greenhouse gas emission reduction targets.**
Policy MOB 9.1	Greenhouse gas emissions. Develop cost-effective strategies for reducing greenhouse gas emissions, in coordination with the Greenhouse Gas Reduction Program.
Policy MOB 9.2	Reduced vehicle miles traveled. Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita vehicle miles traveled.
Policy MOB 9.3	Low-emission vehicles. Promote use of fuel-efficient, alternative fuel and low-emissions vehicles.
GOAL MOB-10	**The most effective use of the city's transportation networks and services.**
Policy MOB 10.1	Efficient automobile infrastructure. Strive to maximize the efficiency of existing automobile infrastructure and manage major streets to discourage cut-through traffic on neighborhood streets.
Policy MOB 10.2	Reducing travel demand. Promote effective Transportation Demand Management programs for existing and new development.
Policy MOB 10.3	Avoiding street widening. Limit widening of streets as a means of improving traffic, and focus instead on operational improvements to preserve community character.
Land Use and Design	
GOAL LUD-3	**A diverse, balanced and flexible mix of land uses that supports a strong economy, complete neighborhoods, transit use and community health.**
Policy LUD 3.1	Land use and transportation. Focus higher land use intensities and densities within ½ mile of public transit service and along major commute corridors.
Policy LUD 3.2	Mix of land uses. Encourage a mix of land uses, housing types, retail and public amenities, and public neighborhood open spaces accessible to the community.

4.2.1.2 *Existing Conditions*

Regional Air Quality

The Precise Plan area is located within the San Francisco Bay Area Air Basin. The Air Basin includes the counties of San Francisco, Santa Clara, San Mateo, Marin, Napa, Contra Costa, and Alameda, along with the southeast portion of Sonoma County and the southwest portion of Solano County.

The North Bayshore Precise Plan area is within the jurisdiction of the BAAQMD. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants, and the number of days during which the region exceeds air quality standards, have fallen dramatically. Exceedances of air quality standards

occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Ozone and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter. Most of Santa Clara County is well south of the cooler waters of the San Francisco Bay and far from the cooler marine air which usually reaches across San Mateo County in summer. Ozone frequently forms on hot summer days when the prevailing seasonal northerly winds carry ozone precursors southward across the county, causing health standards to be exceeded. Santa Clara County experiences many exceedances of the $PM_{2.5}$ standard each winter. This is due to the high population density, wood smoke, industrial and freeway traffic, and poor wintertime air circulation caused by extensive hills to the east and west that block wind flow into the region.

Existing Air Pollutant Levels

BAAQMD monitors air pollution at various sites within the Bay Area. The nearest official monitoring station to Mountain View is located in Cupertino at 22601 Voss Avenue. Pollutant monitoring results for the years 2010 to 2013 at the Cupertino ambient air quality monitoring station are shown in Table 4.2-3. The Cupertino station closed in 2013, so data from San Jose are shown for years 2014 and 2015.

Table 4.2-3:
Ambient Air Quality at the Cupertino and San Jose Monitoring Stations

Pollutant	Average Time	Measured Air Pollutant Levels				
		Cupertino			San Jose	
		2011	2012	2013	2014	2015
Ozone (O_3)	1-Hour	0.086 ppm	0.083 ppm	0.091 ppm	0.089ppm	0.094 ppm
	8-Hour	0.067 ppm	0.067 ppm	**0.077 ppm (1 day)**	0.066ppm	**0.081 ppm (2 days)**
Carbon Monoxide (CO)	8-Hour	1.0 ppm	0.8 ppm	1.3 ppm	1.9 ppm	1.8 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.043 ppm	0.045 ppm	0.042 ppm	0.058 ppm	0.049 ppm
	Annual	0.009 ppm	0.008 ppm	0.009 ppm	0.013 ppm	0.013 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	28.9µg/m^3	41.5µg/m^3	34 µg/m^3	**56µg/m^3 (1 day)**	**58µg/m^3 (1 day)**
	Annual	14.2µg/m^3	13.5µg/m^3	14.6µg/m^3	19.9 µg/m^3	**22.0µg/m^3**
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Data Available (ND)	ND	**57.7µg/m^3 (6 days)**	**60.4 µg/m^3 (2 days)**	**49.4µg/m^3 (2 days)**
	Annual	ND	ND	**12.4µg/m^3**	8.4 µg/m^3	10.0 µg/m^3

Notes: ppm = parts per million and µg/m^3 = micrograms per cubic meter.
Values reported in **bold** exceed ambient air quality standard.
Source: BAAQMD. Air Pollution Summaries (2011-2015). Available at: http://www.baaqmd.gov/about-air-quality/air-quality-summaries.

The Bay Area (including the Precise Plan area) meets state and federal ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Sensitive Receptors

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, child-care centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive receptors in the project area include six residential units located within the Precise Plan area, and the Santiago Villa Mobile home residential neighborhood located adjacent to the eastern boundary of the Precise Plan area.

Odors

Common sources of odors and odor complaints include wastewater treatment plants, transfer stations, coffee roasters, painting/coating operations, and landfills. Significant sources of offending odors are typically identified based on complaint histories received and compiled by BAAQMD. Typical large sources of odors that result in complaints are wastewater treatment facilities, landfills including composting operations, food processing facilities, and chemical plants. Other sources, such as restaurants, paint or body shops, and coffee roasters typically result in localized sources of odors.

The City of Mountain View does not operate a wastewater treatment facility.[10]

4.2.2 Air Quality Impacts

4.2.2.1 *Thresholds of Significance*

For the purposes of this SEIR, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

4.2.2.2 *CEQA Thresholds Used in the Analysis*

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 Mountain View,

[10] The former Shoreline Landfill, last operated in 1988 for waste collection, is discussed in greater detail in Sections 4.10.2.2 and 4.15.1.9.

and other jurisdictions in the San Francisco Bay Area Air Basin, often utilize the thresholds and methodology for assessing air emissions and/or health effects adopted by the BAAQMD based upon the scientific and other factual data prepared by BAAQMD in developing those thresholds. Thresholds prepared and adopted by BAAQMD in May 2011 were the subject of a lawsuit by the California Building Industry Association[11] and a subsequent appeal by BAAQMD.[12]

The Appellate Court decision on August 13, 2013 upheld the threshold adoption process as valid. Subsequently, the Appellate Court's decision was appealed to the California Supreme Court, which granted limited review and issued a ruling in December 2015. The determination of whether a project may have a significant effect on the environment is subject to the discretion of each lead agency, based upon substantial evidence. The City has carefully considered the thresholds prepared by BAAQMD in May 2011 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin. Evidence supporting these thresholds has been presented in the following documents:

- BAAQMD. CEQA Air Quality Guidelines. Updated May 2011.
- BAAQMD. Revised Draft Options and Justification Report California Environmental Quality Act Thresholds of Significance. October 2009.
- California Air Pollution Control Officers Association (CAPCOA). Health Risk Assessments for Proposed Land Use Projects. July 2009.
- Cal EPA, CARB. Air Quality and Land Use Handbook: A Community Health Perspective. 2005.

The following screening thresholds and significance criteria would be applicable to the North Bayshore Precise Plan update.

Consistency with Clean Air Planning Efforts

According to the BAAQMD Air Quality Guidelines, proposed plans must show over the planning period of the plan that:

- The plan supports the primary goals of the current air quality plan;
- The plan incorporates current air quality plan control measures as appropriate to the plan area;
- The plan does not disrupt or hinder implementation of any air quality plan control measures; and
- The rate of increase in vehicle miles traveled or vehicle trips (either measure may be used) within the plan area is equal to or lower than the rate of increase in population projected for the proposed plan.

[11] *California Building Industry Association v. BAAQMD*, Alameda County Superior Court (Case No. RG10548693).
[12] *California Building Industry Association v. BAAQMD*, Cal. Ct. App. 1st, Case No. A135335, August 13, 2013.

Air Quality Violations or Exceedances

The BAAQMD Air Quality Guidelines do not have thresholds related to direct and indirect criteria pollutant emissions resulting from plan implementation.

Traffic resulting from the implementation of the plan would cause a significant local air quality impact if emissions of CO cause a projected exceedance of the ambient CO State standard of 9.0 parts per million (ppm) for 8-hour averaging period. This would be considered to cause or contribute substantially to an existing or projected air quality violation.

Exposure of New Residences to Toxic Air Contaminants

Unlike industrial or stationary sources of air pollution, residential development and other development where sensitive receptors would be located do not require air quality permits. Nonetheless, this type of development can expose people to unhealthy conditions. The BAAQMD Air Quality Guidelines Thresholds of Significance for plans with regard to community risk and hazard impacts are:

- Identify special overlay zones around existing and planned sources of TACs and PM (including adopted risk reduction plan areas), and special overlay zones on each side of all freeways and high-volume roadways; and
- The plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones around sources of TACs, PM, and hazards.

Odors

Odors are assessed based on the potential of development in the plan area to result in odor complaints. The BAAQMD Air Quality Guidelines Thresholds of Significance for plans with regard to odor impacts are:

- Identify special overlay zones around existing and planned sources of odors; and
- The plan must identify goals, policies, and objectives to minimize potential impacts and create buffer distances between sources of odors and receptors.

4.2.2.3 *Implementation of Air Quality Plan*

Consistency of the amended Precise Plan with Clean Air Plan control measures is demonstrated by assessing whether the proposed Plan implements the applicable 2010 CAP control measures. The 2010 CAP includes 55 control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. The control measures are divided into five categories that include:

- 18 measures to reduce stationary and area sources;
- Ten mobile source measures;
- 17 transportation control measures;
- Six land use and local impact measures; and
- Four energy and climate measures.

In developing the control measures, BAAQMD identified the full range of tools and resources available, both regulatory and non-regulatory, to develop each measure. Implementation of each control measure will rely on some combination of the following actions:

- Adoption and enforcement of rules to reduce emissions from stationary sources, area sources, and indirect sources
- Revisions to the BAAQMD's permitting requirements for stationary sources
- Enforcement of CARB rules to reduce emissions from heavy-duty diesel engines
- Allocation of grants and other funding by the Air District and/or partner agencies
- Promotion of best policies and practices that can be implemented by local agencies through guidance documents, model ordinances, and other measures
- Partnerships with local governments, other public agencies, the business community, non-profits, and other groups
- Public outreach and education
- Enhanced air quality monitoring
- Development of land use guidance and CEQA guidelines, and Air District review and comment on Bay Area projects pursuant to CEQA
- Leadership and advocacy

This approach relies upon lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities.

BAAQMD has a developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality impacts. The BAAQMD CEQA Air Quality Guidelines set forth criteria for determining consistency with the 2010 CAP. In general, a plan is considered consistent with the 2010 CAP if it supports the primary goals of the CAP, includes control measures, and does not interfere with implementation of the CAP. The amended Precise Plan would be consistent with CAP measures intended to reduce automobile use and conserve energy, which are discussed below in Table 4.2-4.

Table 4.2-4:
BAAQMD Control Strategy Measures

Measure	Consistency Discussion
Transportation Control Measures	
TCM B-2: Improve Transit Efficiency	While this is mostly a regionally implemented Transportation Control Measure (TCM), the North Bayshore Precise Plan would improve connectivity to the region and City through investments in non-automobile infrastructure and transportation demand management measures promoting transit use, walking and biking. Improved transportation services would connect to the Mountain View Transit Center and other City and regional destinations.

Table 4.2-4: BAAQMD Control Strategy Measures	
Measure	**Consistency Discussion**
TCM C-1: Support Voluntary Employer-Based Trip Reduction Program	The City has an aggressive drive-alone target rate of 45 percent by 2030 for North Bayshore. To achieve this goal, the Precise Plan would promote the use of transit, carpools, walking and biking in the area. From priority pedestrian and bicycle networks to TDM programs, the North Bayshore Precise Plan would make it easier, more comfortable, and more efficient for employees and residents to walk, bike, carpool, or use transit. The North Bayshore Precise Plan acknowledges that businesses should continue to lead the way with innovative vehicle trip reduction strategies. The Mountain View Transportation Management Association would oversee coordinating and expanding employer-sponsored shuttles.
TCM C-2: Safe Routes to School and Safe Routes to Transit	The North Bayshore Precise Plan would require that developers ensure access to school through support of Safe Routes to Schools programs. Neighborhoods would be close to transit facilities.
TCM C-3: Promote Rideshare Services and Incentives	The City has an aggressive drive-alone target rate of 45 percent by 2030 for North Bayshore. To achieve this goal, the Precise Plan would promote the use of transit, carpools, walking and biking in the area. From priority pedestrian and bicycle networks to TDM programs, the North Bayshore Precise Plan would make it easier, more comfortable, and more efficient for employees and residents to walk, bike, carpool, or use transit. The Precise Plan acknowledges that businesses should continue to lead the way with innovative vehicle trip reduction strategies.
TCM C-4: Conduct Public Outreach	The North Bayshore Precise Plan would include TDM strategies to reduce auto trips and vehicle miles traveled by increasing travel options and providing information to encourage and help individuals modify their travel behavior. The City may implement a congestion pricing system and, if so, community outreach would be required.
TCM C-5: Promote Smart Driving/Speed Moderation	Under the North Bayshore Precise Plan, neighborhood streets, access streets, and service streets are designated as “shared” streets and will be designed for both cards and bicycles to share the road at a more moderate speed.
TCM D-1: Improve Bicycle Access and Facilities	The North Bayshore Precise Plan would include new complete mixed-use neighborhoods within comfortable walking distance to services and open space. Neighborhoods are also close to bicycle and transit facilities to make it easy for residences to live in North Bayshore without a car.

Table 4.2-4: BAAQMD Control Strategy Measures	
Measure	**Consistency Discussion**
TCM D-2: Improve Pedestrian Access and Facilities	The North Bayshore Precise Plan would include new complete mixed-use neighborhoods within comfortable walking distance to services and open space. Neighborhoods are also close to bicycle and transit facilities to make it easy for residences to live in North Bayshore without a car. North Bayshore's large blocks would be broken down into a more walkable, finer grained set of blocks with new pedestrian and bicycle connections. These new blocks would make it easier, and more comfortable, efficient, and sustainable for residents, employees, and visitors to move around.
TCM D-3: Support Local Land Use Strategies	The North Bayshore Precise Plan area would transition into an innovative, sustainable, and complete mixed-use district that protects and stewards biological habitat and open space. It would include new complete mixed-use neighborhoods within comfortable walking distance to services and open space and sustainable transportation systems.
TCM E-2: Parking Pricing and Management Strategies	The North Bayshore Precise Plan would improve connectivity to the region and City through investments in non-automobile infrastructure and transportation demand management measures promoting transit use, walking and biking. The Plan would encourage smaller units to unbundle parking costs from the housing unit costs. Shared parking will also be implemented.
Land Use and Local Impact Control Measures	
LUM 3: Enhanced CEQA Program	While this Transportation Control Measure addresses BAAQMD actions, the City requires the appropriate air quality evaluation of projects during CEQA review using the BAAQMD CEQA Air Quality Guidelines.
LUM 5: Reduce Risk in Impacted Communities	This issue is addressed in this EIR, in which the impact of existing or new TAC sources upon sensitive receptors is evaluated and mitigation measures to reduce any substantial TAC exposures are identified.
Energy and Climate Measures	
ECM 1: Energy Efficiency	Environmental sustainability will be implemented by building-, site-, and district-scale improvements. Strategies will enable the City and North Bayshore developers to proactively address climate change, sea level rise, and water demand reduction strategies, for example. The North Bayshore Precise Plan includes an Environmental Sustainability Framework which builds upon the Environmental Sustainability Action Plan, the Mountain View Green Building Code, and the *Greenhouse Gas Reduction Program* and new development would incorporate highly-sustainable design features and materials. For example, the Precise Plan includes increased floor-area-ratio incentives for buildings that meet LEED Platinum or zero-net energy.

Table 4.2-4: BAAQMD Control Strategy Measures	
Measure	**Consistency Discussion**
ECM 2: Renewable Energy	Under the North Bayshore Precise Plan, new construction and renovations should offset a proportion of building energy use with on-site renewable energy. In addition, construction would be designed to be solar-ready and electric-vehicle-ready.
ECM 3: Urban Heat Island Mitigation	Under the North Bayshore Precise Plan, new construction, additions and alterations should use cool exterior siding, roofing, and paving material with relatively high solar reflectivity and shading to reduce solar heat gain. Parking lots shall implement a combination of strategies to reduce the heat island effect.
ECM 4: Tree-Planting	The North Bayshore Precise Plan would include provisions for street tree plantings in Section 6.4, Streetscape Design.

As discussed above in Table 4.2-4, the amended Precise Plan would include implementing policies and measures that are consistent with the 2010 CAP. Therefore, there would be no conflict with the CAP nor any interference with its implementation and the impact would be less than significant.

VMT Increase

The amended *North Bayshore Precise Plan* would result in up to an additional 9,850 multi-family residential units between 2015 and 2030. As described in Section 4.2.2.2, above (*CEQA Thresholds Used in the Analysis – Consistency with Clean Air Planning Efforts*), a project would not be consistent with the Clean Air Plan if vehicle miles traveled (VMT) would increase at a rate greater than the rate of population growth.

Daily VMT for 2015 and 2030 were obtained from the project traffic consultant (total VMT accounting method). Table 4.2-5 identifies the projected VMT and population increases for the North Bayshore Precise Plan. Using 2015 as a baseline year, VMT attributable to implementation of the North Bayshore Precise Plan is anticipated to increase 65 percent. The increase in population is estimated to be 2,268 percent. VMT would not increase at a higher rate than population with implementation of the North Bayshore Precise Plan. Thus, the rate of increase of VMT would be less than significant and consistent with clean air planning efforts.

Table 4.2-5: Existing and Future VMT and Service Population			
Metric/Variable	**Existing Condition**	**2030 Cumulative with Amended North Bayshore Precise Plan***	**Increase with Precise Plan**
Total VMT	1,001,640	1,655,690	65%
Population (Persons)	760	18,000	2,268%

*Includes all proposed residential and commercial vehicle miles traveled.

Source: Illingworth & Rodkin. *North Bayshore Precise Plan Air Quality and Greenhouse Gas Emissions Assessment.* February 14, 2017.

Impact AQ-1: The amended Precise Plan would include implementing policies and measures that are consistent with the 2010 CAP. In addition, implementation of the Precise Plan would not increase VMT at a rate faster than population growth. There would be no conflict with the CAP nor any interference with its implementation, and thus the impact would be less than significant. **[Less than Significant Impact]**

4.2.2.4 *Criteria Pollutant Emissions - Air Quality Violations or Exceedances*

Construction

Implementation of the amended *North Bayshore Precise Plan* would result in short-term emissions from construction activities associated with subsequent development, including site grading, asphalt paving, building construction, and architectural coating. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips. During construction, fugitive dust (the dominant source of PM_{10} and $PM_{2.5}$ emissions) is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby (potential health risks are addressed in detail in Section 4.2.2.5). Demolition and renovation of buildings can also generate these PM_{10} and $PM_{2.5}$ emissions.

Off-road construction equipment is often diesel-powered and can be a substantial source of NO_X emissions, in addition to PM_{10} and $PM_{2.5}$ emissions. Worker commute trips and architectural coatings are dominant sources of ROG emissions. The BAAQMD CEQA Air Quality Guidelines do not identify plan level thresholds that apply to construction. Although construction activities at individual project sites are expected to occur during a relatively short time period, the combination of temporary dust from activities and diesel exhaust from construction equipment poses both a health and nuisance impact to nearby receptors. In addition, NO_X emissions during grading and soil import/export for large projects may exceed the BAAQMD NO_X emission thresholds. Without application of appropriate control measures to reduce construction dust and exhaust, construction period impacts would be considered a potentially significant impact.

Impact AQ-2: Unless properly controlled, project construction activities could result in impacts as a result of temporary dust from activities and diesel exhaust from construction equipment. **[Significant Impact]**

Mitigation Measures: The following mitigation measures are included in the project to reduce emissions during project construction to a less than significant level.

MM AQ-2.1: Measures to reduce diesel particulate matter (DPM) and PM_{10} from construction shall be implemented to ensure that short-term health impacts to nearby sensitive receptors are avoided.

- Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times.
- Cover all hauling trucks or maintain at least two feet of freeboard.
- Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (i.e., previously-graded areas that are inactive for 10 days or more).
- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles.
- Limit traffic speeds on any unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Suspend construction activities that cause visible dust plumes to extend beyond the construction site.
- Post a publically visible sign(s) with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

MM AQ-2.2: The following additional measures to reduce exhaust emissions from large construction projects shall be implemented:

- The developer or contractor shall provide a plan for approval by the City or BAAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent particulate reduction compared to the most recent CARB fleet average for the year 2011.

- Clear signage at all construction sites will be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite or adjacent to the construction site.
- The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors).
- Properly tune and maintain equipment for low emissions.

[Less than Significant Impact with Mitigation Measures Incorporated in the Project]

Implementation of **MM AQ-2.1** and **MM AQ-2.2** during development of future projects under the Precise Plan would reduce construction dust emissions to a less than significant level.

Operation

Implementation of the amended Precise Plan would result in long-term area and mobile source emissions from operation and use of subsequent development. Implementation of the Precise Plan could also include stationary sources of pollutants that would be required to obtain permits to operate in compliance with BAAQMD rules. These sources include, but are not limited to, gasoline stations, dry cleaners, internal combustion engines, and surface coating operations. The BAAQMD permit process ensures that these sources would be equipped with the required emission controls and that, individually, these sources would result in a less than significant impact.

The BAAQMD Air Quality Guidelines do not have thresholds related to direct and indirect regional criteria pollutant emissions resulting from plan implementation; rather, they only require emissions computations for project-level analysis. From a planning standpoint, this impact would be considered less than significant, since the Precise Plan would not cause significant increases in vehicle trips compared to population growth and would not interfere with 2010 CAP control measures. However, for informational purposes, estimated operational period emissions in tons per year and pounds per day are summarized in Table 4.2-6. These emissions were computed using CalEEMod. Appendix E contains the CalEEMod output data and CARB EMFAC2014 emission factors, VMT-by-speed-bin calculations, and overall mobile emissions calculations.

Table 4.2-6: 2030 Operational Air Pollutant Emissions				
Scenario	**ROG**	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Precise Plan Operational Emissions (tons)	157.30 tons	371.92 tons	86.19 tons	20.96 tons
Existing Operational Emissions (tons)	72.81 tons	246.63 tons	58.17 tons	13.16 tons
Net Operational Emissions (tons)	84.49 tons	125.29 tons	28.02 tons	7.80 tons
Average Daily Net Operational Emissions (pounds)[1]	463.0 lbs.	686.5 lbs.	153.5 lbs.	42.7 lbs.

Notes: [1]Assumes 365-day operation.
Source: Illingworth & Rodkin. *North Bayshore Precise Plan Air Quality and Greenhouse Gas Emissions Assessment.* February 14, 2017.

Carbon Monoxide (CO)

Monitoring data from all ambient air quality monitoring stations in the Bay Area indicate that existing carbon monoxide levels are currently below national and California ambient air quality standards. Monitored CO levels have decreased substantially since 1990 as newer vehicles with greatly improved exhaust emission control systems have replaced older vehicles. The Bay Area has been designated as an attainment area for the CO standards. The highest measured levels in Cupertino and San Jose (the closest monitoring stations to the Planning Area) during the past five years are less than 1.0 ppm for 8-hour averaging periods, compared with state and federal criteria of 9.0 ppm.

Even though current CO levels in the Bay Area are well below ambient air quality standards, and there have been no exceedances of CO standards in the Bay Area since 1991, elevated levels of CO still warrant analysis. CO hotspots (occurrences of localized high CO concentrations) could still occur near busy congested intersections. Recognizing the relatively low CO concentrations experienced in the Bay Area, the BAAQMD's CEQA Air Quality Guidelines state that a project would have a less than significant impact if it would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour. 2030 Precise Plan peak hour traffic volumes would be far less. Since intersections affected by the project would have volumes less than the threshold of 44,000 vehicles per hour, the impact of the project related to localized CO concentrations would therefore be less than significant.

4.2.2.5 *Sensitive Receptor Pollution Exposure*

Construction

Implementation of the Precise Plan would result in the construction of a variety of projects. This construction would result in short-term emissions of DPM, a TAC. Construction would result in the generation of DPM emissions from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. The amount to which receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-

related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The calculation of cancer risk associated with exposure to TACs is typically based on a long-term exposure (e.g., 30- or 70-year period). The use of diesel-powered construction equipment for Precise Plan implementation projects would be temporary and episodic and would occur over a relatively large area. Cancer risk and $PM_{2.5}$ exposure from construction of individual projects would have to be analyzed through project-level analysis to identify the potential for significant impacts and measures to reduce those impacts to less than significant. Health risks associated with temporary construction would, therefore, be considered potentially significant.

Impact AQ-3: Health risks associated with exposure to TACs during temporary construction activities could significantly impact sensitive receptors. **[Significant Impact]**

Mitigation Measure: The following mitigation measure is included in the project to reduce TAC emissions impacts during future construction of projects under the Precise Plan to a less than significant level.

MM AQ-3.1: Construction health risk assessments shall be required on a project-by-project basis, either through screening or refined modeling, to identify impacts and, if necessary, include effective mitigation measures to reduce exposure and significant risks to health, based upon BAAQMD-recommended thresholds for TACs (e.g., 10 in one million cancer cases). Reduction in health risk can be accomplished through, though is not limited to, the following measures:

- Construction equipment selection;
- Use of alternative fuels, engine retrofits, and added exhaust devices;
- Modify construction schedule; and
- Implementation of BAAQMD Basic and/or Additional Construction Mitigation Measures for control of fugitive dust.

[Less than Significant Impact with Mitigation Measures Incorporated in the Project]

Implementation of **MM AQ-3.1** as part of the Precise Plan would reduce health risks as a result of construction TACs to a less than significant level.

Operation

Stationary Pollutant Sources

The BAAQMD CEQA Air Quality Guidelines consider exposure of sensitive receptors to air pollutant levels that result in an unacceptable cancer risk or hazard, to be significant. For cancer risk, which is a concern with DPM and other mobile-source TACs, the BAAQMD Risk Management Policy considers an increased risk of contracting cancer that is 10 in one million chances or greater, to be significant risk from a single source. The BAAQMD CEQA Air Quality Guidelines also consider exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 micrograms per cubic meter

($\mu g/m^3$) to be significant. Non-cancer risk would be considered significant if the computed Hazard Index is greater than 1.0.[13] For cumulative sources, the BAAQMD CEQA Air Quality Guidelines consider 100 in one million excess cancer risk, $PM_{2.5}$ concentrations that exceed 0.8 $\mu g/m^3$, and non-cancer Hazard Index greater than 10.0 to be significant.

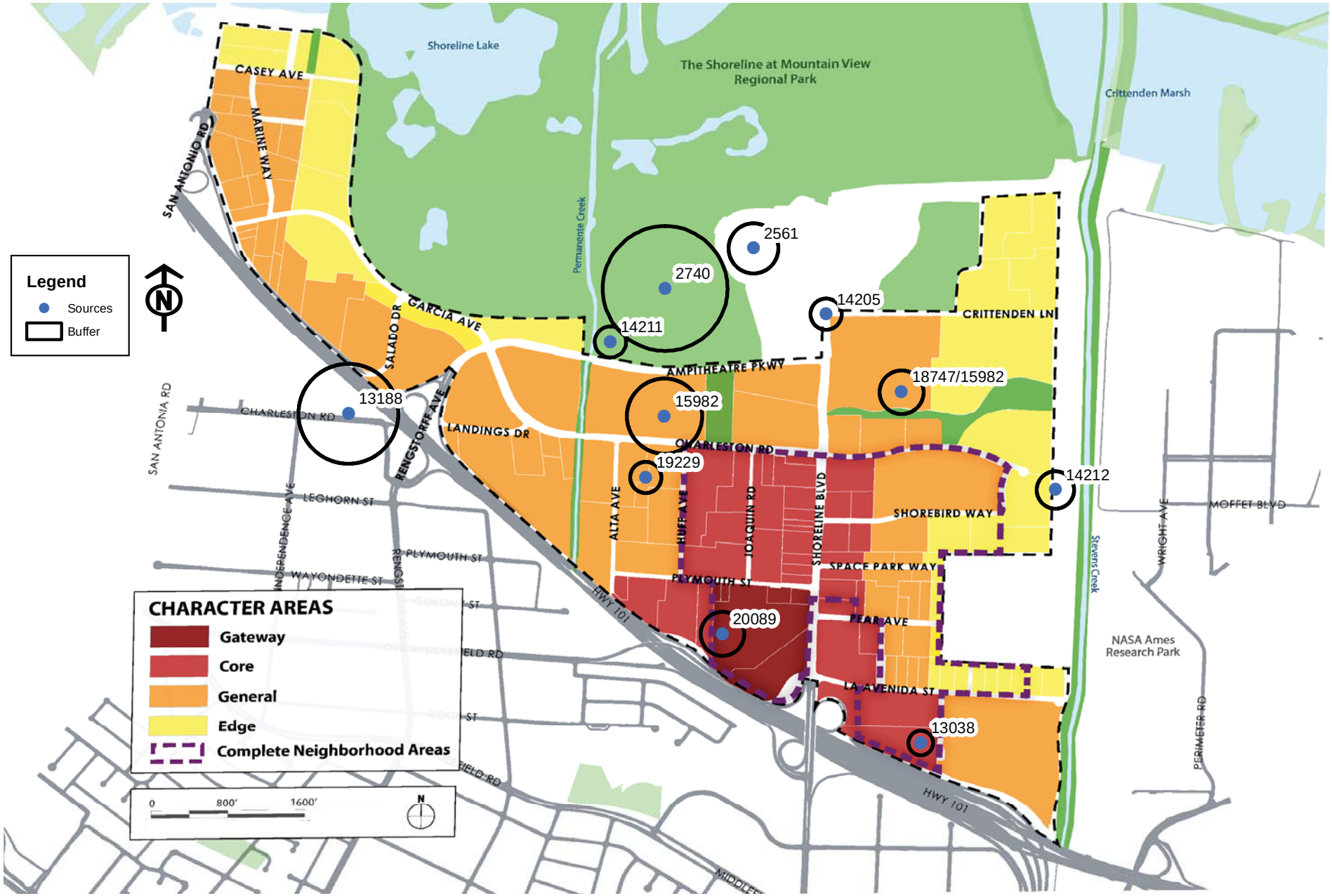
The Precise Plan would permit and facilitate the development of new sensitive receptors, such as new homes, in locations near arterial and collector roadways, highways, and stationary sources of TAC emissions. Screening levels indicate that sensitive receptors within the Precise Plan area would be exposed to levels of TACs and/or $PM_{2.5}$ that could cause an unacceptable cancer risk or hazard near highways and stationary sources. Though not necessarily a CEQA issue due to the *CBIA v. BAAQMD* decision, the potential effect of existing TAC sources on future projects is discussed to comply with General Plan Policy INC 20.7 to "protect the public from substantial pollutant concentrations."

TAC sources were identified within a 1,000 foot radius from the Precise Plan area. These sources include: stationary sources permitted by BAAQMD, roadways with more than 10,000 annual average daily traffic, and highways or freeways. Then, using the screening analysis tools – the stationary source screening analysis tool, the highway screening analysis tool, and the roadway screening analysis tool – potential risk and hazard impacts were assessed.

The Precise Plan area has numerous permitted stationary sources (as shown in Figure 4.2-1), which are located throughout the area, primarily within industrial and commercial developments. The impact of these sources can only be addressed on a project-by-project basis, since impacts are generally localized. To assist lead agencies, BAAQMD has provided a database of permitted sources for each county in order to determine conservative screening levels of cancer risk, hazards and $PM_{2.5}$ concentrations.

Stationary sources that show the potential for significant community risk impacts after this first level of review are further analyzed by contacting BAAQMD for additional information and applying distance adjustment factors. A refined modeling analysis would be required if there are sources that still have potentially significant impacts after this level of review. A refined analysis would include dispersion modeling of the source using emissions and source information provided by BAAQMD. If the source still has significant community risk impacts following this level of effort, then risk reduction strategies would have to be implemented by the project on a case-by-case basis.

[13] The Hazard Index is the ratio of the computed receptor exposure level to the level known to cause acute or chronic adverse health impacts, as identified by BAAQMD.



STATIONARY AIR POLLUTANT SOURCES FIGURE 4.2-1

When siting new sensitive receptors, the BAAQMD Guidelines advise that lead agencies examine existing or future proposed sources of TAC and/or $PM_{2.5}$ emissions that would adversely affect individuals within the planned project. New residences and sensitive receptors could be located near stationary sources of TACs located throughout the Precise Plan area, such as gasoline dispensing stations, emergency back-up diesel generators, and dry cleaners. Without proper setbacks or mitigation measures, these sources could result in TAC levels that are considered significant for new sensitive receptors. The setbacks for various uses are described below.

Gasoline Stations: The *Draft Plan Bay Area Environmental Impact Report* (Plan Bay Area DEIR)[14] recommends a screening setback of 300 feet for large gasoline dispensing facilities (3.6 million gallons of throughput a year) and 50 feet for small facilities.

Emergency Back-Up Generators: Electricity generators that are powered by diesel engines are common. They are typically located at facilities where uninterrupted electricity is necessary. Common facilities include fire and police stations, hospital or medical treatment facilities, pump stations, schools, offices, and data centers.

Diesel engines powering these generators are regulated by BAAQMD and CARB. CARB has established strict emissions limits and operating restrictions for engines larger than 50 horsepower. BAAQMD has developed criteria (Regulation 2 Rule 5) for approval of projects with new or modified emission sources of TACs. As a result, all new engines have very localized impacts and would not be permitted if they would cause significant cancer risks or hazards. Existing engines are permitted to operate for a maximum of 50 hours per year for maintenance or routine testing.

Moffett Airfield: Located to the east of the Precise Plan area, Moffett Federal Airfield contains multiple sources of TACs. The Plan Bay Area DEIR does not provide a screening distance for airfield sources and would require project-specific review.

Table 4.2-6 identifies the approximate setback distances from stationary sources that have potentially significant impacts using the screening data provided by BAAQMD and the *Cancer Risk and Hazard Distance Adjustment Multiplier* tool. However, a refined analysis of the effects of these sources through emissions and dispersion modeling would likely show lower TAC exposure. It should be noted that certain stationary sources could be removed as part of implementation of the Precise Plan, thus removing their associated community risk.

Instances where $PM_{2.5}$ screening concentrations exceed the threshold have been marked in Table 4.2-7 as "project-specific analysis required." For example, the City of Mountain View Shoreline Landfill exceeds the screening threshold for $PM_{2.5}$, and project-specific analysis is required throughout the Precise Plan area for new residential uses. Stationary sources that do not have potentially significant impacts at 50 feet or greater were not included in Table 4.2-7. Additionally, BAAQMD was contacted through a Stationary Source Inquiry Form to determine which facilities are still operational.[15] In cases where BAAQMD has indicated closed facilities, these were not included in the table.

[14] Association of Bay Area Governments, Metropolitan Transportation Commission, 2013. *Draft Plan Bay Area Environmental Impact Report*. State Clearinghouse No. 2012062029.
[15] Correspondence between Alison Kirk, BAAQMD and Josh Carman, Illingworth and Rodkin, December 22, 2016.

Table 4.2-7: Screening Setback Distances for Stationary TAC Sources (in Feet)			
Facility	**Source**	**Screening Distance to Cancer Risk Threshold**	**Screening Distance to $PM_{2.5}$ Threshold**
Space Systems/Loral, Plant 13188 2288 Charleston Road	Standby diesel engine, solvents	525	<50
City of Mountain View Fleet Services, Plant 14211, Amphitheatre Parkway A	Three standby diesel engines	164	<50
City of Mountain View Shoreline Landfill, Plant A-2740, 2600 Shoreline Boulevard	Landfill gas collection system, standby diesel engine	656	Project-specific analysis required
American Century Investments, Plant 19229, 1665 Charleston Road	Standby diesel engine	164	<50
Google Inc., Plant 15982, 1600 Amphitheatre Parkway	Multiple standby diesel engines	394	<50
Shoreline Amphitheatre, Plant 2561, One Amphitheatre Parkway	Landfill gas collection system, standby diesel engine	262	426
Layer42 Net, Inc., Plant 20089, 1555 Plymouth Street	Two standby diesel engines	230	<50
City of Mountain View Fleet Services, Plant 14205, 2100 Crittenden Lane	Standby diesel engine	164	<50
Google, Inc., Plant 15982 (formerly Alexa Pharmaceuticals, Plant 18747), 2023 Stierlin Court	Multiple standby diesel engines	230	<50
City of Mountain View Fleet Services, Plant 14212, End of Charleston Road	Two standby diesel engines	197	<50
Santa Clara Valley Transportation Authority, Plant 13038, 1235 La Avenida Avenue	Standby diesel engine, paint applications	131	<50

Local Surface Streets

Traffic on high volume roadways (such as San Antonio Road, Amphitheatre Parkway, North Shoreline Boulevard, and Charleston Road) is a source of TAC emissions that may adversely affect sensitive receptors in close proximity to the roadway. For roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to determine if roadways with traffic volumes of over 10,000 vehicles per day may have a significant effect. Table 4.2-8 identifies the approximate screening setback distance to the threshold, using the roadway calculator along with cumulative plus Precise Plan traffic data and roadway direction.

Table 4.2-8: Approximate Screening Setback Distances for Surface Street TAC Sources		
Source	**Distance in Feet to Cancer Risk Threshold**	**Distance in Feet to $PM_{2.5}$ Threshold**
San Antonio Road (east of)	35	35
Charleston Road (north of)	10	10
Charleston Road (south of)	15	15
Amphitheatre Parkway (south of)	55	65
North Shoreline Boulevard (east of)	125	125
North Shoreline Boulevard (west of)	65	45

Source: Illingworth & Rodkin. *North Bayshore Precise Plan Air Quality and Greenhouse Gas Emissions Assessment.* February 14, 2017.

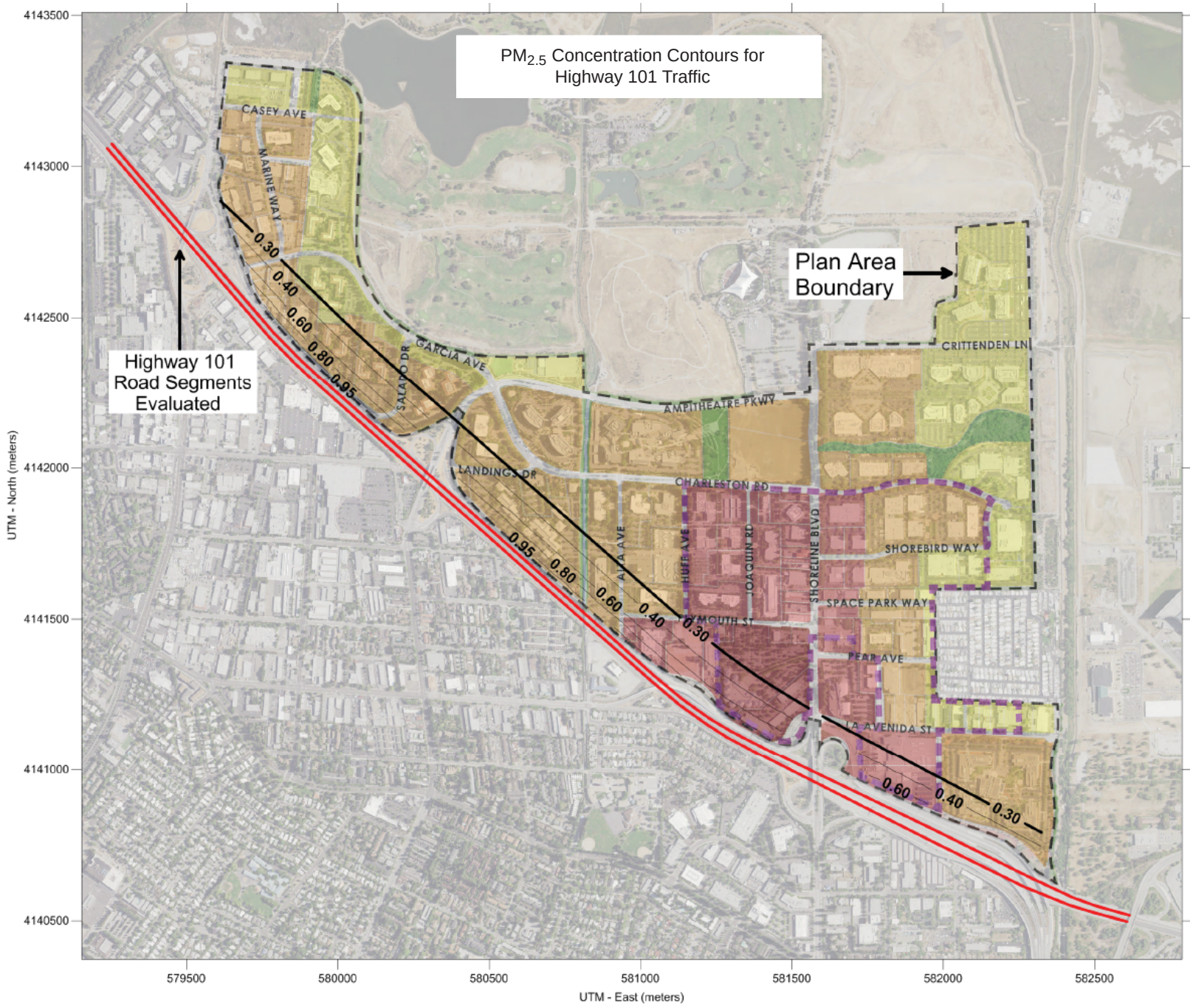
US Highway 101

United States Highway 101 (US 101) is adjacent to the southern boundary of the Precise Plan area. The primary source of TAC emissions is from diesel trucks that emit DPM. Additional TAC emissions come from gasoline fueled vehicles which emit organic TAC compounds. $PM_{2.5}$ (which is also a pollutant of concern) is emitted from vehicle exhaust, tire and brake wear, and from re-suspended roadway dust. A review of the traffic information reported by Caltrans for 2015 indicates that in the vicinity of the Precise Plan area, US 101 has 227,000 average daily trips. About 4.5 percent of these trips are made by trucks.

To assess potential health impacts in the Precise Plan area from traffic on US 101, a refined analysis was conducted to evaluate potential cancer risks and $PM_{2.5}$ concentrations from traffic. The refined analysis involved developing traffic emissions for the traffic volume and mix of vehicle types on US 101. Then using these emissions as input to an atmospheric dispersion model for roadways, TAC and $PM_{2.5}$ concentrations were calculated throughout the Precise Plan area. Based on the modeled concentrations, potential exposure to TACs was calculated and associated cancer risks were computed.

Increased cancer risks were calculated using the modelled maximum annual DPM and total organic gas concentrations, and BAAQMD recommended risk assessment methods.[16] These methods evaluate cancer risk due to a 30-year exposure period and incorporate age sensitivity factors methods for infant (third trimester to two years of age) and children (two years of age to 16 years). The increased cancer risks in the Precise Plan area from traffic on US 101 were calculated to be less than the BAAQMD significance threshold of an increased cancer risk of more than 10 in one million. The maximum infant cancer risk in the Precise Plan area from US101 was 3.7 in one million.

[16] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment Guidelines*.



INCREASED $PM_{2.5}$ CONCENTRATIONS FROM US 101 TRAFFIC FIGURE 4.2-2

In addition to evaluating the cancer risks from TACs, potential $PM_{2.5}$ impacts from vehicle traffic were evaluated. Annual average $PM_{2.5}$ concentrations were computed at each receptor location. To evaluate potential non-cancer health effects due to $PM_{2.5}$, the BAAQMD adopted a significance threshold of an annual average $PM_{2.5}$ concentration greater than 0.3 $\mu g/m^3$. For distances within 650 feet of US 101, potentially significant $PM_{2.5}$ concentrations would occur (refer to Figure 4.2-2).

The amended Precise Plan would allow growth of new residential land uses that would be sensitive receptors and new non-residential land uses that are potential new emissions sources. Typically, these new sources would be evaluated through the BAAQMD permit process or the CEQA process to identify and mitigate any significant exposures. However, some sources that would not undergo such a review, such as truck loading docks or truck parking areas, may have the potential to cause significant increases in TAC exposure.

Impact AQ-4: Health risks associated with exposure to TACs as a result of operation of future uses could significantly impact sensitive receptors. **[Significant Impact]**

Mitigation Measure: The following mitigation measure is included in the project to reduce potential future operational TAC emissions in the Precise Plan are to a less than significant level.

MM AQ-4.1: The following measures shall be utilized in site planning and building designs to reduce TAC and $PM_{2.5}$ exposure where new sensitive receptors are located within 650 feet of US 101:

- Future development under the Precise Plan that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located within 650 feet of US 101, local roadways, and stationary sources shall require site-specific analysis to quantify the level of TAC and $PM_{2.5}$ exposure. This analysis shall be conducted following procedures outlined by BAAQMD. If the site-specific analysis reveals significant exposures, such as cancer risk greater than 10 in one million acute or chronic hazards with a Hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 $\mu g/m^3$, or a significant cumulative health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a Hazard Index greater than 10.0, or annual $PM_{2.5}$ exposures greater than 0.8 $\mu g/m^3$, additional measures such as those detailed below shall be employed to reduce the risk to below the threshold. If this is not possible, the sensitive receptors shall be relocated.

- Future developments that would include TAC sources would be evaluated through the CEQA process or BAAQMD permit process to ensure that they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a Hazard Index greater than 1.0, or annual $PM_{2.5}$ exposures greater than 0.3 $\mu g/m^3$, or a significant cumulative health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a Hazard Index greater than 10.0, or annual $PM_{2.5}$ exposures greater than 0.8 $\mu g/m^3$.

- For significant cancer risk exposure, as defined by BAAQMD, indoor air filtration systems shall be installed to effectively reduce particulate levels to a less than significant level. Project sponsors shall submit performance specifications and design details to demonstrate that lifetime residential exposures would result in less than significant cancer risks (less than 10 in one million chances or 100 in one million for cumulative sources), Hazard Index or $PM_{2.5}$ concentration.

- Air filtration systems installed shall be rated MERV-13 or higher and a maintenance plan for the air filtration system shall be implemented.

- Trees and/or vegetation shall be planted between sensitive receptors and pollution sources, if feasible. Tree species that are best suited to trapping particulate matter shall be planted, including the following: Pine (*Pinus nigra var. maritime*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).

- Sites shall be designed to locate sensitive receptors as far as feasible from any freeways, roadways, refineries, diesel generators, distribution centers, and rail lines.

- Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods.

[Less than Significant Impact with Mitigation Measures Incorporated in the Project]

Implementation of **MM AQ-4.1** during implementation of the Precise Plan would reduce health risks as a result of air pollutant emissions from stationary sources, roadways, and freeways to a less than significant level.

4.2.2.6 *Odors*

Future construction activities in the Precise Plan area could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and the highly diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited.

Subsequent land use activities associated with implementation of the Precise Plan could allow for the development of uses that have the potential to produce odorous emissions either during the construction or operation of future development. Additionally, subsequent land use activities may allow for the construction of sensitive land uses (i.e., residential development, schools, parks, offices, etc.) near existing or future sources of odorous emissions. However, significant sources of odors are

not proposed as part of the Precise Plan. Further, the City would implement General Plan Policy INC 20.8 as part of the development review process to ensure that residents are protected from odors that might be associated with implementation of the Precise Plan.

Impact AQ-5: The Precise Plan area includes potential odor sources that could impact sensitive receptors; however, implementation of General Plan Policy INC 20.8 as part of the development review process would protect residents from offensive odors. **[Less than Significant Impact]**

4.2.3 Consistency with Plans

4.2.3.1 *Regional Plans*

2010 Clean Air Plan

The amended Precise Plan's consistency with the 2010 CAP is discussed in detail Section 4.2.2.3. Projects constructed in the Precise Plan area would implement the relevant control measures, would not increase VMT faster than population growth, and would not interfere with overall implementation of the 2010 CAP. Thus, the amended Precise Plan would be consistent with the 2010 CAP.

4.2.3.2 *Local Plans and Policies*

Mountain View 2030 General Plan

The project is also subject to the City of Mountain View 2030 General Plan. The General Plan air-quality related measures listed in Section 4.2.2.1 were adopted to promote clean, breathable air and control sources of air pollution within the City. The Precise Plan includes an aggressive drive-alone rate of 45 percent by 2030 for North Bayshore and promotes the use of transit, carpools, walking and biking in the area. From priority pedestrian and bicycle networks to TDM programs, the Precise Plan would make it easier, more comfortable, and more efficient for employees and residents to walk, bike, carpool, or use transit. The amended Precise Plan includes an increased number of residences in the area that would allow increased opportunities for internalized trips. Mitigation measures designed to protect new residents and the public from substantial pollutant concentrations during construction and operations are also included in the proposed project. These features are consistent with pollution prevention and pollution-reduction policies in the General Plan as well as transportation policies and measures that would help to implement larger City goals related to reduction in vehicle miles traveled per service population. The project, therefore, would not conflict with General Plan policies designed to reduce or avoid air quality impacts.

4.2.4 Cumulative Impacts

4.2.4.1 *Regional Air Quality*

Air pollution is a regional issue affected by climate, land uses, and topography. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis because air pollutants, once emitted at a particular location, move throughout the atmosphere and air basin.

Regional air quality analyses are cumulative by nature because the thresholds of significance are intended to accommodate a level of growth within the air basin that would still allow the region to attain air quality standards. According to BAAQMD Guidelines, it can be concluded that plans that are consistent with the CAP and thresholds of significance would not result in a significant cumulative impact to regional air quality.

As described in Section 4.2.2.3 above, implementation of the amended North Bayshore Precise Plan would not conflict with the 2010 Clean Air Plan or increase VMT at a higher rate than population growth. Therefore, cumulative regional air quality impacts (also identified as Impact AQ-1) would be less than significant.

Impact C-AQ-1: Implementation of the amended North Bayshore Precise Plan would not conflict with the 2010 Clean Air Plan or increase VMT at a higher rate than population growth. Therefore, cumulative regional air quality impacts (also identified as Impact AQ-1) would be less than significant. **[Less than Significant Cumulative Impact]**

4.2.4.2 *Local Air Quality (Carbon Monoxide)*

Future development allowed under the amended Precise Plan could contribute to cumulative increases in carbon monoxide concentrations at local intersections due to increases in traffic. The CO analysis described in Section 4.2.3.2 above is based on the Cumulative conditions scenario in the TIA to evaluate the highest traffic volumes that could occur at the study intersections in the long-term. Given that the concentrations would not approach or exceed state standards for CO concentrations, the proposed project would not result in or contribute to a cumulative impact associated with carbon monoxide.

Buildout of the amended Precise Plan would not result in or contribute to a significant cumulative impact related to carbon monoxide standards.

Impact C-AQ-2: Buildout of the amended Precise Plan would not result in or contribute to a significant cumulative impact related to carbon monoxide standards. **[Less than Significant Cumulative Impact**

4.2.4.3 *Construction-Related Impacts*

As discussed previously, the project could contribute to cumulative impacts on sensitive receptors by generating substantial construction emissions (i.e., dust, TACs) that affect sensitive receptors within the Precise Plan area. Construction emissions could also combine to result in significant short-term impacts to sensitive receptors due to dust fall or elevated concentrations of TACs. The potential for construction activities to cause a local air quality impact would be greatest if multiple construction projects occur simultaneously in the vicinity.

The timing of construction projects will be considered during supplemental review to ensure that a given sensitive receptor will not be significantly affected by multiple projects. Furthermore, all future development and transportation projects will be required to implement dust and exhaust control measures during demolition and construction activities (per Mitigation Measures AQ-2.1,

AQ-2.2, AQ-3.1, and AQ-4.1). For these reasons, implementation of the proposed amended Precise Plan would not result in a new cumulative impact or make a cumulatively considerable contribution to a previously identified construction-related significant cumulative air quality impact.

Impact C-AQ-3: Implementation of the amended Precise Plan would not result in a new cumulative impact or make a cumulatively considerable contribution to a previously identified construction-related significant cumulative air quality impact. **[Less than Significant Cumulative Impact**

4.2.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
AQ-1: The amended Precise Plan would include implementing policies and measures that are consistent with the 2010 CAP. In addition, implementation of the Precise Plan would not increase VMT at a rate faster than population growth. There would be no conflict with the CAP nor any interference with its implementation, and thus the impact would be less than significant.	Less Than Significant	No mitigation required	Less Than Significant
AQ-2: Unless properly controlled, project construction activities could result in impacts as a result of temporary dust from activities and diesel exhaust from construction equipment.	Significant	**MM AQ-2.1**, **MM AQ-2.2**	Less Than Significant
AQ-3: Health risks associated with exposure to TACs during temporary construction activities could significantly impact sensitive receptors.	Significant	**MM AQ-3.1**	Less Than Significant
AQ-4: Health risks associated with exposure to TACs as a result of operation of future uses could significantly impact sensitive receptors.	Significant	**MM AQ-4.1**	Less Than Significant
AQ-5: The Precise Plan area includes potential odor sources that could impact sensitive receptors; however, implementation of General Plan Policy INC 20.8 as part of the development review process would protect residents from offensive odors.	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
C-AQ-1: Implementation of the amended North Bayshore Precise Plan would not conflict with the 2010 Clean Air Plan or increase VMT at a higher rate than population growth. Therefore, cumulative regional air quality impacts (also identified as Impact AQ-1) would be less than significant.	Less Than Significant	No mitigation required	Less Than Significant
C-AQ-2: Buildout of the amended Precise Plan would not result in or contribute to a significant cumulative impact related to carbon monoxide standard	Less Than Significant	No mitigation required	Less Than Significant
C-AQ-3: Implementation of the amended Precise Plan would not result in a new cumulative impact or make a cumulatively considerable contribution to a previously identified significant cumulative construction-related air quality impact.	Less Than Significant	No mitigation required	Less Than Significant

4.3 BIOLOGICAL RESOURCES

The discussion in this section is based on the following biological reports:

- Appendix F: H.T. Harvey & Associates. *North Bayshore Precise Plan Biological Resources Repor*t, completed in July 2014; with an update memorandum completed on May 10, 2016.

- Appendix G: H.T. Harvey & Associates. *Stevens Creek Crossing Project Biological Resources Report.* September 14, 2016

4.3.1 Introduction and Regulatory Background

4.3.1.1 *Federal Regulations*

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) prohibits the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval. "Take" is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct (16 USC, Section 1532(19), 50 CFR, Section 17.3). Take can also include habitat modification or degradation that directly results in death or injury of a listed wildlife species.

Although federally listed animal species are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction of individuals on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act. The National Marine Fisheries Service (NMFS) has jurisdiction over federally listed, threatened and endangered, marine species and anadromous fish.

Clean Water Act

Areas meeting the regulatory definition of "waters of the U.S." are subject to jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the 1972 Clean Water Act and Section 10 of the 1899 Rivers and Harbors Act. These waters include all waters used, or potentially used, for interstate commerce, waters subject to the ebb and flow of the tide, all other waters (including intrastate lakes, rivers, streams, mudflats, playa lakes, natural ponds, etc.), all impoundments or tributaries of waters otherwise defined as "waters of the U.S.," the territorial seas, and wetlands adjacent to "waters of the U.S." (33 CFR, Part 328)

A project proponent must obtain a Section 404 permit from the USACE before placing fill material or grading in wetlands or any water of the U.S. All USACE permits also require water quality certification under Section 401 of the Clean Water Act from the regional water quality board. In the San Francisco Bay Area, the regulatory program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB).

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA: 16 USC Section 703, Supp. I, 1989) 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. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, a violation of the MBTA.

4.3.1.2 *State Regulations*

Threatened and Endangered Species

Special status species include plants or animals that are listed as threatened or endangered under the California Endangered Species Act (CESA), species identified by the California Department of Fish and Wildlife (CDFW) as California Species of Special Concern, as well as plants identified by the California Native Plant Society (CNPS)[17] as rare, threatened, or endangered.

The CESA (Fish and Game Code of California, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal listed or proposed for listing as rare, threatened, or endangered. The CDFW has jurisdiction over state-listed species and regulate activities that may result in take of individuals. 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 (California Fish and Game Code, Section 86).

Porter-Cologne Water Quality Control Act

The RWQCB is responsible for protecting surface, ground, and coastal waters within its boundaries, and is authorized to regulate the discharge of waste that could affect the quality of the State's waters, pursuant to the Porter-Cologne Water Quality Control Act of the California Water Code (Sections 13000-14920). The RWQCB has jurisdiction under Section 401 of the Clean Water Act for activities that could result in a discharge of dredged or fill material to a water body.

Under the Porter-Cologne Water Quality Control Act, the State Water Resource Control Board (SWRCB) and the nine RWQCB's have the responsibility of issuing National Pollution Discharge Elimination System (NPDES) permits and water discharge requirements for certain point-source and non-point discharges to waters.

California Fish and Game Code

The California Fish and Game Code includes regulations governing the use of, or impacts on, many of the state's fish, wildlife, and sensitive habitats. The CDFW has jurisdiction over the bed and banks of rivers, lakes, and streams (Sections1601-1603 of the California Fish and Game Code). Streambed Alteration Agreements are required for the fill or removal of material within the beds and banks of a watercourse or waterbodies, and for removal of riparian vegetation.

[17] The California Native Plant Society (CNPS) is a non-profit organization that maintains lists and a database of rare and endangered plant species in California. Plants in the CNPS "Inventory of Rare and Endangered Plants of California" are considered "Special Plants" by the CDFW Natural Diversity Database Program.

Certain sections of the Fish and Game Code describe regulations that pertain to specific wildlife species. Fish and Game Code Section 3503, 2513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Birds of prey, such as owls and hawks, are protected in California under provisions of the state Fish and Game Code, Section 3503.5 (1992), which 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.

4.3.1.3 *Habitat Conservation Plan/Natural Community Conservation Plan*

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (SCV Habitat Plan), which encompasses a study area of 519,506 acres (or approximately 62 percent of Santa Clara County), was adopted by six local entities in Santa Clara County. The plan went into effect in October 2013 and the newly created Santa Clara Valley Habitat Agency is charged with implementing the plan. The area for which development activities are covered by the plan is located south and east of Mountain View, primarily within the Llagas/Uvas/Pajaro, Coyote Creek, and Guadalupe Watersheds. The SCV Habitat Plan was developed through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, the Santa Clara Valley Water District, and the Santa Clara Valley Transportation Authority (collectively termed the 'Local Partners'), the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife.

The SCV Habitat Plan is a conservation program to promote the recovery of endangered species in portions of Santa Clara County while accommodating planned development, infrastructure and maintenance activities. The species of concern identified in the SCV Habitat Plan include, but are not limited to, the California tiger salamander, California red-legged frog, western burrowing owl, Bay Checkerspot butterfly, and a number of species endemic to serpentine grassland and scrub. Projects and activities of the jurisdictions in Santa Clara County, such as the City of Mountain View, which are not Permittees, are not covered under the SCV Habitat Plan.

The North Bayshore Precise Plan is located outside the SCV Habitat Plan area. There are two aspects of the SCV Habitat Plan that relate to development and conservation activities in the North Bayshore Precise Plan area. These issues are described below.

1. <u>Expanded SCV Habitat Plan Area for Burrowing Owl Conservation</u>

   In addition to the area covered by the SCV Habitat Plan noted above, an expanded study area for burrowing owl conservation was identified to the north and west in portions of the cities of San José, Santa Clara, Mountain View, Milpitas, and Sunnyvale; in Fremont in Alameda County; and a small portion of San Mateo County. The expanded study area for burrowing owl conservation that falls outside of the primary SCV Habitat Plan study area is 48,464 acres in size and includes the project area within the City of Mountain View (e.g., area north of US 101). The allowable activities covered by the SCV Habitat Plan in this expanded study area are limited only to conservation actions for western burrowing owl.

2. Indirect Impacts to Sensitive Serpentine Habitats Identified in the SCV Habitat Plan

The U.S. Fish and Wildlife Service (USFWS) has identified critical habitat for the federally threatened Bay Checkerspot butterfly (73 FR 50406) south of US 101 and Yerba Buena Road in the City of San José. The conservation of critical habitat is considered essential for the conservation of a federally listed species. Critical habitat for the Bay Checkerspot butterfly occurs on nutrient-poor serpentine or serpentine-like grasslands that support at least two of the three butterfly's larval host plants, California plantain, dense flower owl's clover, and purple owl's clover. Non-native grasses have been reported to increase in these habitats, crowding out the native forbs needed by the Bay Checkerspot butterfly, due to increased nitrogen deposition from human sources.

Nitrogen deposition contribution estimates in Santa Clara County were made as a part of the development of the SCV Habitat Plan (Appendix E of the SCV Habitat Plan). About 46 percent of nitrogen deposition on habitat areas of concern for the base years (2005-2007) was estimated to come from existing development and traffic generated locally *within* the SCV Habitat Plan study area. The remainder of Santa Clara County (which includes the City of Mountain View) was estimated to contribute a substantially smaller amount (17 percent of the nitrogen deposition) while the other eight Bay Area counties account for about 11 percent. Nitrogen deposition modeling completed for future years (2035 and 2060) as a part of the SCV Habitat Plan process assumed that urban and rural development in the County and broader San Francisco Bay Area is expected to increase air pollutant emissions due to an increase in passenger and commercial vehicle trips and other new industrial and nonindustrial sources.

The closest serpentine grasslands to the Precise Plan area that are covered by the SCV Habitat Plan are located in the Silver Creek Hills and Coyote Ridge in the Edenvale, Evergreen and San Felipe Planning Areas of San José. The Silver Creek Hills and Coyote Ridge are approximately 18 to 31 miles southeast of the project.

A conservation strategy in the SCV Habitat Plan includes collection of fees within the SCV Habitat Plan area based upon the generation of new vehicle trips to fund acquisition and management of serpentine grasslands in the Coyote Ridge area. The goal of this strategy is to improve the viability of existing Bay Checkerspot butterfly populations, increase the number of populations, and expand the geographic distribution to ensure the long-term persistence of the species in the SCV Habitat Plan area.

A nexus study was completed for the SCV Habitat Plan to assist with identifying appropriate fees to fund measures in the SCV Habitat Plan.[18] The nitrogen deposition fee was calculated based on SCV Habitat Plan costs related to mitigating the impacts of airborne nitrogen deposition from covered activities in the SCV Habitat Plan area. The nexus study does not include projects or jurisdictions outside the SCV Habitat Plan area, as these projects outside the area are not covered activities; nor are these jurisdictions participating as Local Partners.

[18] Willdan Financial Services. 2012. *Santa Clara Valley Habitat Plan Development Fee Nexus Study.* June 30, 2012.

As described in the SCV Habitat Plan, funding to implement the conservation strategy of the Plan will come from a number of different sources, including the previously noted fees on private development and public infrastructure, conservation actions by various agencies, and state and federal funding. In general, non-fee funding sources identified in the Plan's funding strategy will contribute to the conservation needs of the Plan (i.e., the contribution to species recovery). The funding strategy provides for the full and successful implementation of the SCV Habitat Plan related to sensitive serpentine habitat and the Bay Checkerspot butterfly and does not rely on contributions from cities outside of the SCV Habitat Plan area.

The potential cumulative impacts of the Precise Plan on special status species in the Santa Clara Valley Habitat Plan area are discussed further in *Section 4.3.4.15, Cumulative Biological Resources Impacts.*

4.3.1.4 *General Plan Policies*

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocated necessary resources to support fulfillment of the City vision. Implementing actions are the specific to-do steps required to carry out the General Plan's broader goals and policies and are included in a companion Action Plan. Particular General Plan policies related to biological resources include the following:

Land Use and Design	
Goal LUD 10	**High-quality, sustainable and healthful building design and development.**
Policy LUD 10.2	***Low impact development.*** Encourage development to minimize or avoid disturbing natural resources and ecologically significant features.
Goal LUD-16	**A diverse area of complementary land uses and open space resources.**
Policy LUD 16.1	***Protected open space***. Protect and enhance open space and habitat in the North Bayshore area.
Infrastructure and Conservation	
Goal INC-5	**Effective and comprehensive programs utilizing water use efficiency, water conservation and alternative water supplies to reduce per capita potable water use.**
Policy INC 5.5	***Landscape efficiency.*** Promote water-efficient landscaping including drought-tolerant and native plants, along with efficient irrigation techniques.
Goal INC-8	**An effective and innovative stormwater drainage system that protects properties from flooding and minimizes adverse environmental impacts from stormwater runoff.**
Policy INC 8.4	***Runoff pollution prevention.*** Reduce the amount of stormwater runoff and stormwater pollution entering creeks, water channels and the San Francisco Bay through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program.
Policy INC 8.5	***Site-specific stormwater treatment.*** Require post-construction stormwater

	treatment controls consistent with MRP requirements for both new development and redevelopment projects.
Policy INC 8.6	***Green streets.*** Seek opportunities to develop green streets and sustainable streetscapes that minimize stormwater runoff, using techniques such as on-street bio-swales, bio-retention, permeable pavement or other innovative approaches.
Policy INC 8.7	***Stormwater quality.*** Improve the water quality of stormwater and reduce flow quantities.
Goal INC-16	**Rich and biologically diverse ecological resources which are protected and enhanced.**
Policy INC 16.1	***Natural areas.*** Work with regional agencies to protect and enhance natural areas.
Policy INC 16.2	***Shoreline at Mountain View.*** Manage Shoreline at Mountain View Regional Park to balance the needs of recreational, open space, habitat, commercial and other uses.
Policy INC 16.3	***Habitat.*** Protect and enhance nesting, foraging and other habitat for special-status species and other wildlife.
Policy INC 16.4	***Invasive species.*** Contain and reduce the amount of invasive species.
Policy INC 16.5	***Wetland habitat.*** Collaborate with and support regional efforts to restore and protect wetlands, creeks, tidal marshes and open-water habitats adjacent to San Francisco Bay.
Policy INC 16.6	***Built environment habitat.*** Integrate biological resources, such as green roofs and native landscaping, into the built environment.
Goal INC-19	**Effective and ecologically sensitive programs to control invasive species and plants.**
Policy INC 19.1	***Municipal integrated pest management.*** Control and prevent invasive weeds and pests using integrated pest management on all City property, including the following principles: • A focus on control of pests at established acceptable levels, instead of eradication. • Preventive cultivation practices appropriate for local conditions. • Monitoring. • Mechanical controls such as hand-picking, barriers, traps and disruption. • Biological controls such as beneficial insects or biological insecticides. • Chemical controls only as required or during targeted times during a pest's life cycle
Policy INC 19.2	***Herbicides and pesticides.*** Discourage the use of herbicides and pesticides on City property.
Policy INC 19.3	***Citywide integrated pest management.*** Encourage and educate residents and businesses to implement integrated pest management principles and reduce the use of pesticides and herbicides.

Parks, Open Space, and Community Facilities

Goal POS-3	**Open space areas with natural characteristics that are protected and sustained.**
Policy 3.1	***Collaboration on sea-level rise impacts***. Collaborate with regional, state and federal agencies to address the effects of potential rises in sea levels through

	assessing vulnerabilities and creating adaptation strategies.
Goal POS-12	**A healthy urban forest and sustainable landscaping throughout the City.**
Policy 12.1	***Heritage trees.*** Protect trees as an ecological and biological resource.

4.3.1.5 *Mountain View Heritage Tree Preservation Ordinance*

The City of Mountain View tree regulations protect all trees designated as "Heritage" trees (Chapter 32, Article 2). Under this ordinance, a Heritage tree is defined as any one of the following:

- A tree which has a trunk with a circumference of forty-eight (48) inches or more measured at fifty-four (54) inches above natural grade;
- A multi-branched tree which has major branches below fifty-four (54) inches above the natural grade with a circumference of forty-eight (48) inches measured just below the first major trunk fork.
- Any *Quercus* (oak), *Sequoia* (redwood), or *Cedrus* (cedar) tree with a circumference of twelve (12) inches or more when measured at fifty-four (54) inches above natural grade;
- A tree or grove of trees designated by resolution of the City Council to be of special historical value or of significant community benefit.

A tree removal permit is required from the City of Mountain View for the removal of Heritage trees. It is unlawful to willfully injure, damage, destroy, move or remove a Heritage tree.

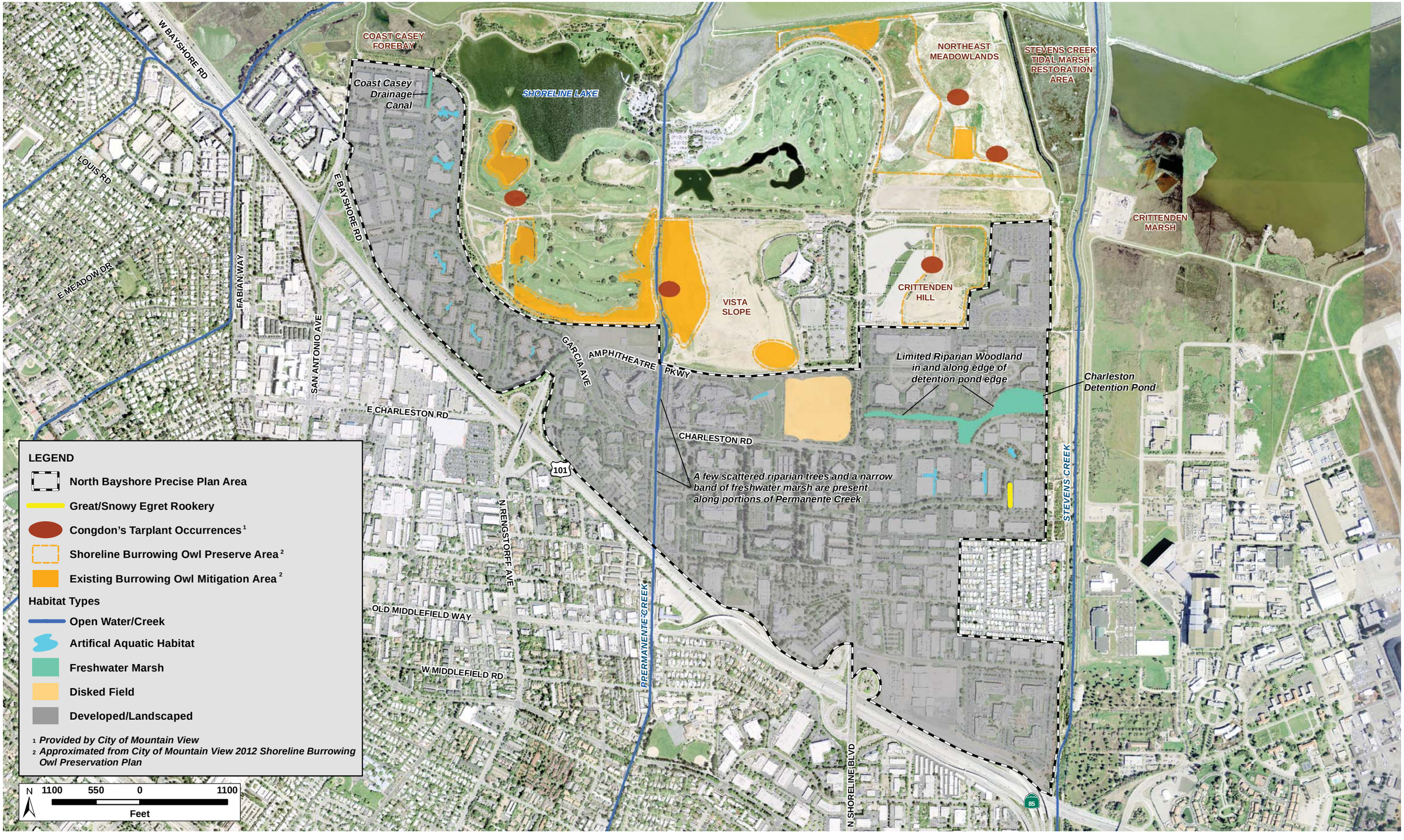
4.3.2 Existing Setting

The North Bayshore Precise Plan area contains several biological habitat types, as show in Figure 4.3-1 and described below. While Stevens Creek is outside of the boundaries of the Precise Plan area, this EIR includes a discussion of potential bridge(s) over the creek, and for this reason habitats and species near and within the creek are also described.

4.3.2.1 *Developed and Landscaped*

The majority of the Precise Plan area consists of developed or landscaped features. Developed areas include buildings, bridges, paved walkways and roadways, parking lots, and athletic fields. Park-like landscaping and tree-lined roads and pathways are present in a number of areas. Developed and landscaped areas are dominated by lawn grasses and a wide variety of ornamental street trees. Native vegetation is very limited throughout the majority of the developed/landscaped areas, with the exception of limited areas between developed areas and Stevens Creek in the southeastern portion of the Precise Plan area and along portions of Permanente Creek. Approximately 96 percent of the project area is considered developed/landscaped habitat.

Developed and landscaped areas in the project area provide habitat for common, urban-adapted wildlife species, especially birds. A number of migrating birds and wintering species occur seasonally throughout the predominantly ornamental vegetation that dominates the project area.



BIOLOGICAL HABITATS MAP

FIGURE 4.3-1

PHOTO 9: Stick nests in egret rookery located along Shorebird Way in the eastern portion of the Precise Plan area.

PHOTO 10: Shorebird Way, showing the London plane trees that host egret rookery. View to the southeast.

PHOTOS 9 AND 10

A great egret (*Ardea alba*)/snowy egret (*Egretta thula*) rookery occurs in London plane (*Platanus x acerfolia*) trees along Shorebird Way in the eastern portion of the Precise Plan area. The egret rookery is regionally significant as it is one of the largest egret colonies in the South Bay (Photos 9 and 10).

4.3.2.2 *Disked Field*

The largest undeveloped area within the Precise Plan area is an eighteen-acre field located between Amphitheatre Parkway and Charleston Road, at 2000 North Shoreline Boulevard. The parcel is routinely disked and thus supports predominantly bare soil and is not likely to support substantial vegetation, other than non-native species, due to the frequency of disking. This site is planned for commercial office development.

4.3.2.3 *Artificial Aquatic*

At least eleven artificial water features are scattered throughout the project area that have been installed as ornamental pools within light industrial and commercial complexes (Figure 4.3-1). The majority of these features are small ponds and shallow pools (approximately 0.05-0.25 acres in size) and are located in landscaped areas between buildings. Hydrology in these ponds is artificial and supported by circulating pumps. The artificial features are likely chlorinated, lined with concrete, and do not support any vegetation.

4.3.2.4 *Freshwater Marsh*

Freshwater marsh habitat is found in two locations in the North Bayshore Precise Plan project area. The first location is an unnamed channel north of Casey Avenue and east of Broderick Way. The channel is an extension of the Coast Casey storm drain system. The channel drains into Coast Casey Forebay to the north of the Precise Plan area (Photo 11).

The second location is a large retention basin known as the Charleston Retention Basin, located on the eastern edge of the project area, between Charleston Road and Amphitheatre Parkway (Photo 12). Stormwater is delivered via storm drain pipelines to the west end of the retention basin, however the marsh is perennially wet and likely receives some hydrologic input from local groundwater as well. Marsh habitat is limited in the project area and provides valuable wildlife habitat. Dominant species in the freshwater marsh habitat include broad-leaved cattails (*Typha latifolia*) and California bulrush (*Schoenoplectus californicus*).

In September 2015, the City approved the Charleston Retention Basin Improvement Project.[19] The purpose of the project was to improve the natural habitat, pedestrian access, and recreational opportunities in and around the basin. The primary goal of the project was to remove non-native vegetation (including trees) and expand the riparian habitat of the basin. Construction of the project has started and is anticipated to be completed over five years. Habitat improvements included in the Charleston Retention Basin Improvement Project would result in a net increase of 0.13 acres of freshwater marsh habitat and 3.76 acres of riparian habitat. The improvements are intended to have an ecological benefit on the wetland and riparian habitat at the basin and the wildlife species that utilize it.

[19] City of Mountain View. *Charleston Retention Basin Improvement Project Initial Study.* September 2015.

PHOTO 11: Coast Casey Forebay, located north of the northwest corner of the Precise Plan area, near Terminal Boulevard and San Antonio Road.

PHOTO 12: Charleston Retention Basin, located on the east side of the Precise Plan area between Stierlin Court and Charleston Road.

PHOTOS 11 AND 12

4.3.2.5 *Open Water and Creek*

Open water/creek habitat is found in only one location in the project area, within Permanente Creek. The creek originates on Black Mountain, south of the project area in Palo Alto, and historically flowed north from its origin before emptying into the marshlands of Charleston Slough. A diversion channel constructed in 1959 now diverts most of the winter flow east to Stevens Creek. The lowermost portion of Permanente Creek is now severely depleted of natural flows, and the hydrology has been altered. Currently, saltwater is pumped from Charleston Slough into Shoreline Lake, then into Permanente Creek (well downstream from the project area), where it flows back into San Francisco Bay via the Mountain View Slough.

Riparian habitat occurs along the banks of rivers, streams, lakes, and ponds, and is dependent, at least in part, by the soil moisture associated with these features and is considered a sensitive resource that is regulated by the CDFW.

Although the Precise Plan area does not support any high-quality native riparian woodland habitat, it does support some limited riparian habitat in the form of a few scattered trees within the banks of Permanente Creek and trees in and around the periphery of the Charleston Retention Basin (Photo 12).

4.3.2.6 *Adjacent Land Uses, Natural Communities, and Habitats*

A number of sensitive habitat areas and biological resources are present in areas adjacent to the North Bayshore Precise Plan area. Stevens Creek is adjacent to the east side of the Precise Plan area, and is separated from the North Bayshore commercial uses by a powerline easement and levee.

Stevens Creek flows south to north, entering San Francisco Bay several miles to the north. This reach of the creek supports a strip of riparian woodland habitat and attracts moderately large numbers of migrant birds in the fall. Fish species may migrate through this reach of creek between upstream spawning areas and downstream estuarine/marine habitats.

Crittenden Marsh and the Stevens Creek Tidal Marsh Restoration Area are located northeast of the project area. These areas provide high quality salt marsh habitat and are utilized by foraging waterfowl and shorebirds from fall through spring.

Shoreline at Mountain View Regional Park is located immediately north of the Precise Plan area. The 750-acre park occurs on a former landfill that has been converted to a variety of recreational uses, including a golf course and miles of public walkways, as well as habitat management areas. Shoreline at Mountain View Regional Park is actively managed as nesting and foraging habitat for burrowing owls. Grassland habitat immediately adjacent to the Precise Plan area provides important habitat for the species. Shoreline at Mountain View Regional Park also supports several occurrences of Congdon's tarplant, a rare plant species.

Farther north, San Francisco Bay is one of the most important estuaries on the west coast of North America. The San Francisco Bay estuary is an extremely productive, diverse ecosystem, yet one that has been degraded considerably since the 1800's. The estuary has lost more than 90 percent of its original wetlands to diking, draining, and filling, and it has been more heavily invaded by nonnative

species than any other aquatic ecosystem in North America. Despite this degradation, the estuary supports very high wildlife diversity, with more than 250 species of birds, 120 species of fish, 81 species of mammals, 30 species of reptiles, and 14 species of amphibians regularly occurring in the estuary. San Francisco Bay supports populations of a number of species that are of regional, hemispheric, or even global importance, and a number of endemic, endangered, threatened, and rare wildlife species or subspecies reside in the San Francisco Bay Area.

Two large managed ponds are present between Shoreline Park and San Francisco Bay. Formerly managed for salt production, these ponds were purchased by the federal government and are now part of the South Bay Salt Ponds Restoration Project area. Phase 2 restoration activities of the South Bay Salt Ponds Restoration Project include the proposed breaching of these two ponds to restore tidal aquatic, mudflat, and marsh habitats to these areas. Charleston Slough, located to the north of Coast Casey Forebay, already provides such tidal habitats and is heavily used by a variety of waterbirds. Northwest of the Plan Area, the Palo Alto Flood Control Basin provides a vast area of open water and vegetated fresh, brackish, and salt marsh that is home to a wide variety of waterbird species and that supports a large colony of California gulls.

4.3.3 Special Status Species

4.3.3.1 *Special Status Plants*

The North Bayshore Precise Plan area does not contain high quality habitat for any special-status plant species. Of the species reviewed, only Congdon's Tarplant (*Centromadia parry ssp. Congdonii*), a CNPS 1B.1 listed plant, is considered to have a low potential to occur in the Precise Plan area based on general habitat requirements and known distribution.

The species has been documented approximately 1,000 feet from the northeast corner of the Precise Plan area. The plant has not been observed at this location since 2002, and was not observed during site visits in July and August, 2013. City of Mountain View biologists have also reported five known populations just north of the Precise Plan area (see Figure 4.3-1) on Crittenden Hill. No substantial grassland habitat is present in the Precise Plan area, and most ruderal areas are either too overgrown or too dry to support Congdon's tarplant.

Focused surveys conducted in July 2016 during the flowering period of Congdon's tarplant off-site at the Charleston Road Bridge and La Avenida Avenue Bridge study areas did not detect the species.

Based on the proximity of the Precise Plan area to known occurrences of the species and the ability to grow in disturbed habitats, potentially suitable habitat for Congdon's tarplant could exist within the Precise Plan area.

4.3.3.2 *Special Status Animals*

Burrowing Owls

The burrowing owl (*Athene cuniculara*) is a small, ground-dwelling bird and a California Species of Special Concern. Burrowing owls are typically found in flat, open annual and perennial grassland habitat, gentle slopes, and sparse shrubland habitat types. In California, burrowing owls are found in close association with California ground squirrels (*Spermophilus beecheyi*), whose nests they use for

shelter and nesting. Currently, habitat loss and fragmentation are the greatest threats to burrowing owls and have caused populations to decline state-wide in recent decades. Burrowing owls are now often encountered as single pairs rather than small colonies, and in increasingly marginal habitats, such as levee banks, landfills, dedicated open spaces, and landscaped medians associated with parking lots.

Burrowing owls are known to nest directly adjacent to the northern edge of the Precise Plan area in Shoreline at Mountain View Regional Park. This recreational and open space area supports an ongoing burrowing owl monitoring and management program, and burrowing owls have been documented actively using the area over the past decade. Burrowing owls have been observed regularly by City biologists foraging, wintering, and successfully nesting at Shoreline at Mountain View Regional Park. The park is managed for year-round use by owls and supports 438 acres of upland habitat that is considered high to moderate quality burrowing owl habitat. Within the Precise Plan, owls have a low probability of nesting and/or roosting in the 18-acre disked field and along the northern border of the Google Athletic and Recreational Fields.

Raptors and Other Avian Species

Three additional special-status bird species currently nest in the Precise Plan area. The San Francisco common yellowthroat (*Geothlypis trichas sinuosa*), a state-listed Species of Special Concern, nests in Charleston Retention Basin and the Coast Casey Drainage Canal within the Precise Plan area. The loggerhead shrike (*Lanius ludovicianus*), a state-listed Species of Special Concern, and white-tailed kite (*Elanus leucurus*), a state-listed Fully Protected Species, use trees and shrubs along the northern and eastern edge of the Precise Plan area for nesting because open grassland habitat and marsh areas are located directly adjacent to the Precise Plan area in these locations. The peregrine falcon (*Falco peregrinus anatum*), a state-listed Fully Protected Species, is not currently nesting in the Precise Plan area, but the possibility of future nesting on electrical transmission towers or on buildings cannot be ruled out. Other Falconiforms and birds of prey nest in the Precise Plan area in trees, buildings, or on transmission towers.

Reptiles

The western pond turtle (*Actinemys marmorata*), a state-listed Species of Special Concern, occurs in ponds, streams, and other wetland habitats. The nearest documented western pond turtle observation to the Precise Plan area is located near Moffett Federal Airfield and the NASA Ames Research Center within the Lockheed Channel and Moffett Channel, approximately 1.2 miles east of the Precise Plan. It is possible western pond turtle individuals could infrequently disperse to the Precise Plan area, including Permanente Creek and nearby Stevens Creek. However, cumulative stressors of urbanization, including the release of non-native turtles, predation and harassment by pets and non-native mammals, capture by humans, degradation of water quality, loss of upland nesting habitat due to development, and the construction of barriers between creeks and nesting areas have reduced western pond turtle populations. For these reasons, pond turtle numbers are expected to be low or absent in the Precise Plan area and adjacent areas of Stevens Creek in the bridge study areas.

Fish

The federally threatened green sturgeon (*Acipenser medirostris*), the state threatened longfin smelt (*Spirinchus thaleichthys*), the federally threatened Central California Coast Steelhead (*Oncorhynchus*

mykiss), and the state-listed Species of Special Concern Central Valley fall-run Chinook salmon all occur in tidal waters of San Francisco Bay, and the Central Coast steelhead and Chinook salmon spawn in some South Bay streams. These species do not spawn in Permanente Creek and are not expected to occur farther upstream than the limit of tidal influence due to the very shallow, warm, and structurally simple conditions presence in the non-tidal portions of Permanente Creek. Due to the narrow and shallow nature of the channel even at and below Amphitheatre Parkway, the probability of occurrence of these species in Permanente Creek is low.

There is limited potential for small numbers of green sturgeon and longfin smelt to occasionally occur in the lower, tidal reaches of Permanente and Stevens Creeks. The tidal portion of Permanente Creek extends upstream just to Amphitheatre Parkway at the edge of the Precise Plan area, and thus these species are not expected to occur in the Precise Plan area itself. The Central California Coast steelhead and Central Valley fall-run Chinook salmon, however, are likely to be found east of the Precise Plan in Stevens Creek, in the study areas of a possible bridge.

Bats

Two bat species designated as California species of special concern, the western red bat (*Lasiurus blossevillii*) and pallid bat (*Antrozous pallidus*) may be present along Stevens Creek in low numbers as foragers and winter migrants. The Hoary bat (*Lasiurus cinereus*), a common bat species, may also roost in foliage in trees and forage in the Precise Plan area.

Hoary bats have the potential to roost or breed along Stevens Creek, in the area of a potential bridge. All bat species are protected under the California Fish and Game Code.

4.3.3.3 *City of Mountain View Trees*

The North Bayshore Precise Plan area is primarily developed with commercial and industrial uses. Over the years, landscaping and ornamental trees have been installed throughout the Precise Plan area as part of the development process. A majority of urban planted trees in the Precise Plan area are ornamental, non-native tree species that have matured over time and now represent an urban forest. Common non-native landscape trees in the area include Brisbane box (*Lophostemon confertus*), chitalpa (*x Chitalpa tashkentensis*), Chinese pistache (*Pistacia chinensis*), London plane (*Platanus x acerifolia*), sweetgum (*Liquidambar styraciflua*), ash (*Fraxinus* spp.), silver birch (*Betula pendula*), weeping willow (*Salix babylonica*), and flowering plum (*Prunus cerasifera*). Cultivated varieties of several native species are also present, including redwood (*Sequoia sempervirens*), Monterey pine (*Pinus radiata*), and coast live oak (*Quercus agrifolia*).

Some redwood, oak, and cedar trees within the Precise Plan area likely meet the definition of "Heritage" trees as defined by the City of Mountain View Heritage Tree Ordinance. A Heritage Tree Removal Permit would need to be obtained prior to the removal of any ordinance-sized Heritage Tree with the Precise Plan area.

4.3.4 Biological Resources Impacts

4.3.4.1 *Thresholds of Significance*

For the purposes of this SEIR, a biological resource impact is considered significant if the project would:

- 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 (CDFW) of Fish and Wildlife or United States Fish and Wildlife Service (USFWS);
- 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;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal filling, hydrological interruption, or other means?
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.3.4.2 *North Bayshore Precise Plan Project*

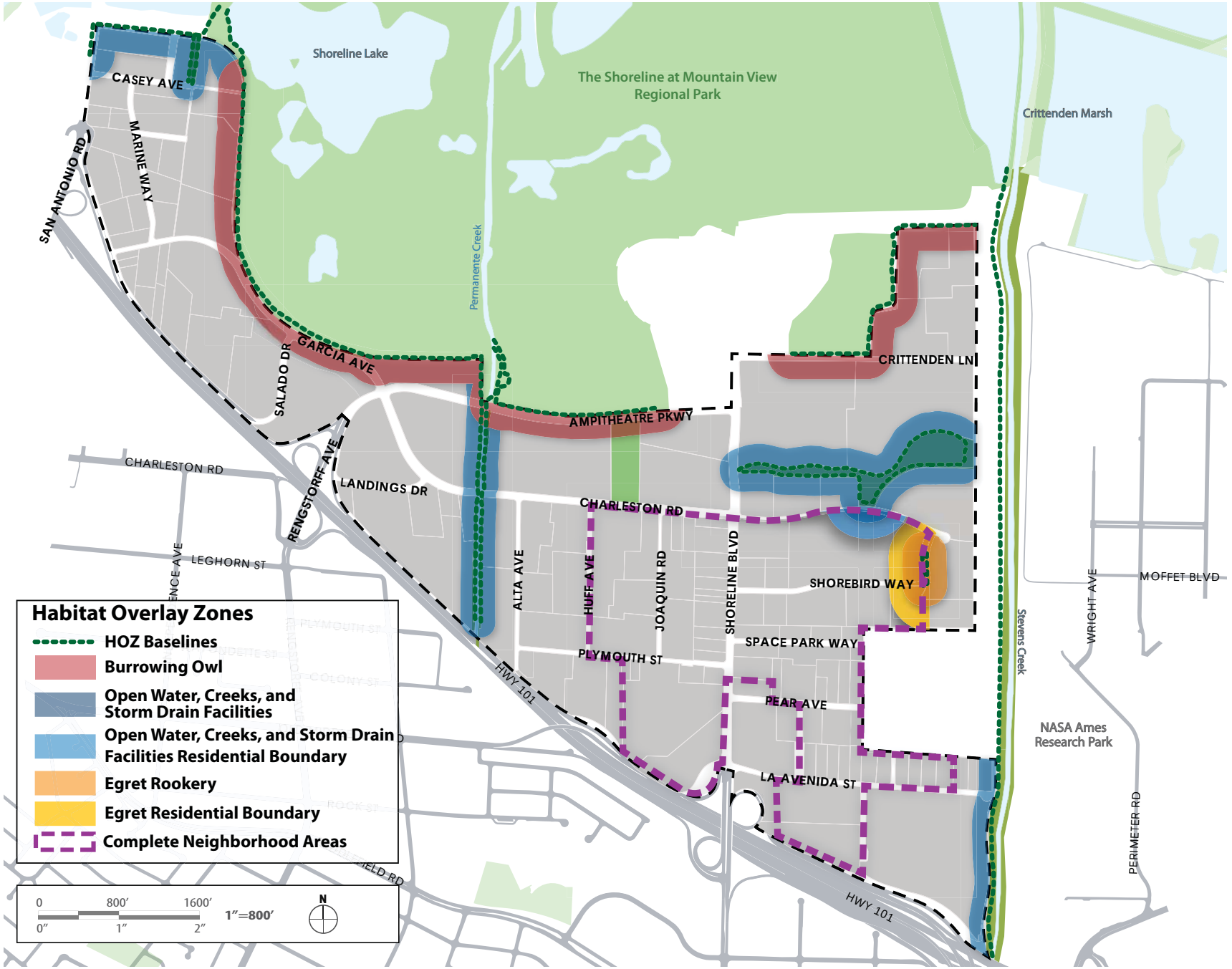
The North Bayshore Precise Plan area is adjacent to a number of sensitive habitats and special-status species, many of which are protected by state or federal law. While a vast majority of the Precise Plan area consists of urban developed or landscaped features, the Precise Plan presents an opportunity to improve habitat within and adjacent to North Bayshore. *Chapter 5: Habitat and Biological Resources* of the Precise Plan includes the following objectives:

- Expand existing habitat areas in North Bayshore;
- Improve the quality of existing habitat areas; and
- Ensure that new development limits impacts to wildlife, particularly the area's burrowing owls.

To achieve these objectives, the Precise Plan outlines standards, guidelines, and district improvement projects to protect and enhance habitat and biological resources, including requirements for development adjacent to sensitive habitat areas.

Habitat Overlay Zones

The Habitat Overlay Zone (HOZ) provides standards and guidelines to regulate site development adjacent to sensitive habitat. The intent is to protect sensitive habitat by guiding building placement adjacent to high-value habitat locations, limiting new impervious surface, minimizing light pollution, and guiding landscape design.



PROPOSED HABITAT OVERLAY ZONES

FIGURE 4.3-2

There are three distinct sensitive habitat types within and adjacent to North Bayshore: burrowing owl; egret rookery; and open water, creeks, and storm drain facilities. For each habitat type, there are requirements for site development, which apply to all new construction and additions in that zone. The size of the HOZ varies depending on the importance and sensitivity of the habitat, with larger buffers adjacent to burrowing owl habitat and smaller buffers adjacent to Permanente Creek.

In some areas, the HOZ standards and other measures to protect biological resources also vary depending on the proposed land use. Residential land uses may potentially have greater impacts on sensitive biological resources than commercial or office land uses, due to higher number of people and pets present at night and throughout the week. The HOZ standards and guidelines are listed below.

North Bayshore Precise Plan Standards

1. **Habitat Overlay Zone.** All new construction proposed within an overlay zone shall comply with the overlay zone standards. Figure 4.3-2 shows the approximate boundaries of each HOZ. Project applicants shall work with the City to determine the precise edge of habitat[20] from which to measure the edge of the HOZ boundary.

2. **Burrowing owl HOZ.** In Shoreline Park immediately north of the Precise Plan area, the City supports an ongoing burrowing owl monitoring and management program. The following are standards for new construction and renovations designed to protect and enhance burrowing owl habitat adjacent to North Bayshore.

    a. Overlay District Boundaries. Boundaries shall be 250 feet as measured from the edge of the burrowing owl habitat.[21]
    b. Building placement in the HOZ. New construction shall not be placed inside the HOZ, except where allowed by exceptions included in the Precise Plan.
    c. Impervious surface. New impervious surface shall not be constructed closer to burrowing owl habitat than existing impervious surfaces, and no net increase in impervious surface shall occur within the HOZ.
    d. Landscape design. No new trees or shrubs capable of exceeding 15 feet in height that could provide perches for avian predators of burrowing owls, and no dense woody vegetation that could hide mammalian predators, shall be planted in the HOZ. New landscaping in the HOZ should consist of herbaceous plants.
    e. Low intensity outdoor lighting. Outdoor lighting shall be low intensity (LZ 2) and shall utilize full cutoff fixtures to reduce the amount of light reaching these sensitive habitats.
    f. Raptor perch deterrents adjacent to burrowing owl habitat. For new construction in the HOZ, raptor perch deterrents shall be placed on the edges of building roofs or other structures (e.g., light poles or electrical towers) facing the burrowing owl habitat and with a clear view of burrowing owls.
    g. Construction near burrowing owl habitat. A preconstruction survey for burrowing owls

[20] The HOZ boundary is defined as the extent of the overlay zone. The boundary is calculated by measuring a straight-line distance from the edge of habitat of each HOZ type. The distance is defined by the standards of each HOZ type.
[21] This buffer is consistent with the standard construction buffer for occupied burrowing owl burrows that is required by the Santa Clara Valley Habitat Plan. August 2012.

shall be conducted by a qualified biologist[22] according to the latest California Department of Fish and Wildlife protocol prior to any external construction or large-scale/intensive landscaping, involving heavy equipment or loud noise occurring within the HOZ. If nesting burrowing owls are detected, the HOZ should be free from any external construction or large-scale/intensive landscaping, involving heavy equipment or loud noise until the young have fledged and are independent of the adults, or until monitoring by a qualified biologist determines the nest is no longer active. During the non-breeding season, the HOZ should be free from any external construction or large-scale/intensive landscaping, involving heavy equipment or loud noise around active burrows unless the procedures for monitoring burrowing owls during construction, as described by the Santa Clara Valley Habitat Plan are implemented.

h. Rodenticides. No rodenticides will be used within the burrowing owl HOZ. Elsewhere in the Precise Plan area, rodenticide use should be limited to that necessary to protect infrastructure and human health, but otherwise, non-chemical means of rodent management should be used to avoid secondary poisoning of burrowing owls and other raptors.

3. **Egret rookery HOZ.** A rookery (or nesting areas) of great egrets, snowy egrets, and black-crowned night-herons exists along Shorebird Way. This rookery is regionally significant as one of the largest egret colonies in the South Bay, and is an important natural resource. The following outlines standards for new construction and renovations to protect the egret rookery. The following standards shall apply unless the rookery has been inactive for a minimum of five years.

   a. HOZ boundary. The boundary shall be measured from the edge of the rookery. Buffer distances vary depending on the particular condition, as noted in (b) through (f) below.
   b. Building placement in the HOZ. New residential construction shall not be placed within 300 feet of the rookery, and new non-residential construction shall not be placed within 200 feet of the rookery, except where allowed based on exceptions included in the Precise Plan.
   c. 1201 Charleston Road. The western façade and roof of 1201 Charleston Road may not be modified in such a way that would reduce suitability of the rookery site for egrets. This includes adding new entrances, façade improvement, or other similar actions.
   d. Landscape design. No vegetation other than turf, low-growing grasses, or other herbaceous plants may be planted within 100 feet of the rookery to minimize cover for mammalian predators and avoid entanglement in shrubs of young egrets that have fallen from nests.
   e. Low intensity outdoor lighting. Outdoor lighting within 200 feet of the rookery shall be low intensity (LZ 2) and shall utilize full cutoff fixtures to reduce the amount of light reaching these sensitive habitats.
   f. Construction near the egret colony. No external construction or large-scale/intensive landscaping involving heavy equipment or loud noise shall occur within 200 feet of the rookery during the March 1 to August 31 period unless a survey by a qualified biologist

[22] A qualified biologist is a person with experience and training in wildlife biology or a related science, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject. A qualified biologist must have obtained a B.S. or B.A. or equivalent degree in biology, environmental studies, fisheries, or related field, and two years of related work experience. Qualifications are subject to City approval.

has demonstrated that, after June 1, egrets have either not nested that year or that all young have fledged and departed the rookery area.

4. **Open water, creeks, and storm drain facilities HOZ.** To protect habitat and preserve water quality, the following outlines standards for areas adjacent to the Coast Casey Forebay, Shoreline Lake, Stevens Creek, the Charleston Retention Basin, Permanente Creek, and the Coast Casey channel.

   a. HOZ boundary. The distances from each boundary are as follows[23]:
      i. Coast Casey Forebay: 250 feet as measured from the boundary edge.
      ii. Charleston Retention Basin: 200 feet for non-residential land uses, and 300 feet for residential uses, as measured from the boundary edge.
      iii. Stevens Creek: 200 feet as measured from the inner edge of the top of the bank.
      iv. Permanente Creek and Coast Casey channel: 150 feet as measured from the inner edge of the top of the bank.
      v. Shoreline Lake: 200 feet as measured from the lake edge.
   b. Building placement in the HOZ. New construction shall not be placed inside the HOZ, except where allowed based on the exceptions included in the Precise Plan.
   c. Impervious surface. No new impervious surface shall be constructed closer to open water or creek habitat than existing impervious surfaces, and no net increase in impervious surface can occur within the HOZ associated with these areas.
   d. Bioswales. Bioswales shall be constructed for any new or reconstructed impervious surface draining directly toward creek areas to treat runoff before it enters a creek or open water.
   e. Landscape design. All woody vegetation planted in the HOZ shall consist of native species or non-natives that provide valuable resources (e.g., food, structure, or cover) for native wildlife.
   f. Low intensity outdoor lighting. Within the HOZ, outdoor lighting shall be of low intensity (LZ 2) and shall utilize full cutoff fixtures to reduce the amount of light reaching these sensitive habitats.

5. **Overlapping HOZ zones.** When HOZ overlay zones overlap, new construction shall meet the most restrictive standards.

6. **Conflicting provisions.** The standards outlined in this Chapter apply to new construction in addition to all other applicable Precise Plan requirements. In the event of a conflict between the standards of this Chapter and other Precise Plan provisions, the City shall determine which standards apply.

North Bayshore Precise Plan Guidelines

1. **Minimize building height near sensitive areas**. No building taller than 55 feet should be constructed within 100 feet of any HOZ boundary to provide additional buffer between sensitive resources and taller buildings. This guideline applies to both residential and non-residential development.

[23] Because the boundaries of these features may change somewhat in the future, these buffer distances apply from the boundary that exists in 2014.

Additional HOZ standards, including details on the exception process to HOZ requirements for building placement, impervious surface, and construction requirements, are listed in *Chapter 5: Habitat and Biological Resources* of the Precise Plan (Appendix C).

Bird Safe Design

To minimize adverse effects on native and migratory bird species, new construction and major renovations in the Precise Plan will incorporate design measures to promote bird safety. Bird Safe Design measures included in the Precise Plan are intended to help diminish the likelihood of building collision fatalities through façade treatments and light pollution reduction. These measures apply to both residential and non-residential land uses, except where specified. Additional details regarding these standards can be found in Chapter 5 of the Precise Plan.

North Bayshore Precise Plan Standards

1. **Bird Safe Design requirements.** All new non-residential construction, building additions, and/or building alterations in North Bayshore shall adhere to the following Bird Safe Design standards (refer to Appendix C for more details). All new residential construction within 300 feet of the Charleston Retention Basin shall adhere to these standards.

2. **Façade treatments**. No more than 10% of the surface area of a building's total exterior façade shall have untreated glazing between the ground and 60 feet above ground.[24] Examples of bird-friendly glazing treatments include the use of opaque glass, the covering of clear glass surface with patterns, the use of paned glass with fenestration patterns, and the use of external screens over non-reflective glass.[25]

3. **Occupancy sensors**. For non-residential development, occupancy sensors or other switch control devices shall be installed on non-emergency lights. These lights should be programed to turn off during non-work hours and between 10:00 p.m. and sunrise.

4. **Funneling of flight paths.** New construction shall avoid the funneling of flight paths along buildings or trees towards a building façade.

5. **Skyways, walkways, or glass walls.** New construction and building additions (both residential and non-residential) shall avoid building glass skyways or walkways, freestanding glass walls, and transparent building corners. New construction and building additions should reduce glass at top of buildings, especially when incorporating a green roof into the design.

[24] The portion of the building most likely to sustain bird strikes is the area between the ground and 60 feet above ground.
[25] Bird-friendly glazing treatments must include vertical elements of the window patterns that are at least 1/4 inch wide at a maximum spacing of 4 inches, or have horizontal elements at least 1/8 inch wide at a maximum spacing of 2 inches.

6. **Exceptions to the bird safe design requirements.** The City may waive or reduce any of the bird safe design requirements based on analysis by a qualified biologist indicating that proposed construction will not pose a collision hazard to birds.

The guidelines in this section include several bird collision guidelines and voluntary best management practices to promote bird safety, including:

- collision monitoring,
- window coverings,
- work station lighting and window coverings,
- daytime maintenance, and
- appropriate handling of food waste.

Landscape Design

The Precise Plan proposes landscaping guidelines and standards to support a diversity of native species, enhance habitat quality, improve landscape and building performance, and limit damage to local ecosystems. All new residential and non-residential construction and landscaping projects in North Bayshore shall adhere to the Landscape Design standards and guidelines described below. Additional landscape design details can be found in Chapter 5 of the Precise Plan.

North Bayshore Precise Plan Standards

1. **Invasive species planting**. Planting new invasive species identified on the California Invasive Plant Council list shall be prohibited.

2. **Control and manage invasive plants found on site**. Best management practices (BMPs) shall be implemented during construction and subsequent site maintenance to manage and control invasive species found on site. BMPs may include clearing infested areas prior to construction, planting native seed from a local source, and avoiding seed dispersal through construction equipment use.

3. **Planting.** During new construction and landscape renovations, the total area of high-water-use plants (e.g., turf and water features) shall not exceed 25 percent of the landscape area. Xeriscaping, low-water-use plants, native plants, and/or salt-tolerant plants compatible with recycled water use for the remainder of the landscaped areas. Non-native plants may only be used if they support habitat useful to native wildlife.

4. **Protect special status plants.** If State or Federal special status plants are found onsite such as Congdon's tarplant, the project applicant shall work with the California Department of Fish and Wildlife to determine the appropriate protocol to survey, protect, and/or manage special status species.

The guidelines in this section include landscape design practices, including:

- Removal of non-native plants,
- Preserving native plants,

- Configuring landscaping in multi-layered clusters,
- Operational policies restricting herbicide and pesticide use are encouraged, and
- Using vegetation for building shading.

Habitat Enhancements

North Bayshore is envisioned as a district that supports and enhances wildlife, trees, and habitat areas. To help conserve sensitive biological resources, the Precise Plan includes habitat enhancement that can be implemented by the City. In particular, measures are needed to protect and conserve burrowing owl populations at Shoreline Park. The following are examples of potential area habitat enhancements:

1. **Educational Signage**. Add or increase signage around sensitive habitats explaining the ecological value of these habitats and prohibiting entry by humans and their pets. Such signage shall be placed along the inner edges of the Permanente Creek and Stevens Creek levees; along the Coast Casey Channel; around the Charleston Retention Basin, the portions of Shoreline Lake and the Coast Casey Forebay closest to the Precise Plan area; and along the edges of Shoreline Park burrowing owl habitat. Signs at the points where trails enter Shoreline Park from the Precise Plan area will clearly indicate the prohibition against taking pets (including leashed dogs) into the park or near burrowing owl preserves. Signs near the egret/heron rookery will discourage people from bringing pets (even leashed dogs) into the egret/heron rookery HOZ while the colony is active.

2. **Burrowing owl habitat enhancements**. Burrowing owl habitat in Shoreline Park will be enhanced by the following management and operational changes.

    a. Fencing. Add chain-link fencing around burrowing owl habitat preserves within Shoreline Park to inhibit entry by humans and dogs into owl habitat.
    b. Patrols. Increase patrols within Shoreline Park and enforcement of prohibitions against off-trail human activities and dogs in the park.
    c. Habitat Improvements. Enhance burrowing owl habitat within Shoreline Park through improved vegetation management, predator management, provision of artificial burrows, targeted tree removal, and other measures to increase the owl population.
    d. Release or feeding of animals near sensitive habitat. The feeding and release of any animals including cats should be discouraged.

In addition, the Precise Plan includes some possible habitat enhancement opportunities and management activities that exceed the requirements for new construction and renovations described in the HOZs, Bird Safe Design, and Landscape Design guidelines. The Precise Plan identifies areas and provides guidelines for habitat enhancement opportunities within the Precise Plan area (Figure 4.3-3). Additional enhancements may be pursued by the City as appropriate. Habitat enhancement activities may be implemented by private property owns and/or the City. Additional enhancement opportunities in the Precise Plan area include:

3. **Permanente Creek improvements.** Landscaping design, channel reconfiguration, and natural area expansion should be explored to improve habitat along Permanente Creek.

PROPOSED HABITAT ENHANCEMENT OPPORTUNITIES FIGURE 4.3-3

4. **Enhancement of the Coast Casey drainage channel.** Open areas on the edges of the channel could be planted with a dense, multi-layered canopy of native vegetation.

5. **Increased areas of open water and drainages within developed areas.** Small areas of interconnected open water, drainages (e.g., by daylighting areas of underground drainage), riparian habitats, and pools could be interspersed within developed areas.

Habitat enhancement opportunities identified in Chapter 5 of the Precise Plan will ultimately maintain and improve the biological quality in the Precise Plan area, but because these enhancements are voluntary (i.e., they are not currently funded, mandatory components of the Precise Plan), they are not considered in the assessment of net effects on biological resources in the Precise Plan area.

A full description and discussion of all the standards and guidelines included to improve and protect sensitive habitats and biological resources can be found in *Chapter 5: Habitat and Biological Resources* of the Precise Plan.

4.3.4.3 *Impacts to Special Status Plants*

One special-status plant, Congdon's tarplant, is known to occur, or could potentially occur, in the Precise Plan area or in immediately adjacent areas. This species occurs in Shoreline at Mountain View Regional Park immediately north of the Precise Plan area, and it is possible that the species could occur in ruderal grassland areas, particularly along the northern edge of the Precise Plan area where it abuts ruderal/grassland habitat associated with Shoreline at Mountain View Regional Park. If the species is present along the northern edge of the Precise Plan area, then in the absence of protective measures, development or landscaping activities could destroy individual plants or modify habitat to reduce its suitability. Planting of invasive non-native species could further degrade habitat, both in the Precise Plan area and in Shoreline at Mountain View Regional Park (i.e., if invasives were to spread from the Precise Plan area).

The amended Precise Plan incorporates elements that would minimize the potential for impacts on this species along the northern edge of the site and in Shoreline at Mountain View Regional Park. The Landscape Design elements of the Precise Plan include a prohibition on planting invasive species, implementation of best management practices to manage and control invasive species found on the site, and preservation of native plants, including special-status plants. The Precise Plan measures would avoid substantial impacts on Congdon's tarplant both on and adjacent to the Precise Plan area. Future development projects in the Precise Plan area must adhere to the Landscape Design element of the Precise Plan. Accordingly, implementation of the Precise Plan would have a less than significant impact on special-status plants.

Impact BIO-1: Special status plants are unlikely to occur in the Precise Plan area. Future development projects in the Precise Plan area must adhere to the Landscape Design guidelines of the Precise Plan. Accordingly, implementation of the Precise Plan would not result in a significant impact to special-status plant species. **[Less Than Significant Impact]**

4.3.4.4 *Impacts to Special Status Animals*

The North Bayshore Precise Plan area supports mature trees and vegetation that may be utilized by a variety of avian species, including some special-status bird species. Within the Precise Plan area, a few pairs of San Francisco common yellowthroats nest in the Charleston Retention Basin and the Coast Casey Drainage Canal. One or two pairs of loggerhead shrikes and white-tailed kites nest along the northern and eastern edges of the Precise Plan area. A pair of white-tailed kites were observed building a nest at the Charleston Retention Basin in March 2016, but the nest was never observed to be active.

Impacts to Burrowing Owls

Burrowing owls are known to nest directly north of Precise Plan area in Shoreline at Mountain View Regional Park, and the park provides regionally important habitat for the species.

Proposed Precise Plan Activities:

The amended Precise Plan includes areas that would allow residential development. Residential land uses could potentially have several additional impacts on sensitive biological resources, or could have greater incremental impacts on these resources than non-residential land uses. Impacts could result from:

- An increase in the number of people present in the Precise Plan area at night and on weekends.
- An increase in nighttime noise and lighting due to greater occupancy of the Precise Plan area at night.
- An increase in pets, particularly dogs and cats, in the vicinity of sensitive resources.
- Presence of children, who may be less likely to comply with guidelines to protect resources than adults.
- An increase in the number of people who will use Shoreline Park.
- An increase in human food waste from residential land uses may increase the abundance of urban-adapted nuisance species such as American crow and Norway rat.

Residential land uses are expected to result in greater human use of Shoreline Park, which may include an increase in dogs and cats within Shoreline Park. Although dogs are not allowed within Shoreline Park, even on-leash, and human activities are supposed to be restricted to existing trails, infringement on these regulations would likely increase with residential uses in the Precise Plan area. Increased human activity, dog activity, and visits by pet cats to Shoreline Park is expected to result in increased disturbance of and possible predation of burrowing owls in the park. Over time, such impacts would likely result in a decline in burrowing owl populations in the park.

In addition, all development in accordance with the amended Precise Plan could impact burrowing owls at Shoreline at Mountain View Regional Park by increasing the abundance and quality of hunting perches for avian predators such as common ravens, golden eagles, and red-tailed hawks as new buildings, taller buildings, and associated infrastructure and landscaping are added to the area. These features could provide perches from which avian predators could hunt burrowing owls on the adjacent portions of Shoreline at Mountain View Regional Park. The presence of taller buildings or

trees adjacent to the park could also inhibit owls from using the border of the park, reducing the use of otherwise suitable burrowing owl habitat.

Construction near occupied habitat could potentially cause owls to avoid the use of otherwise suitable habitat areas and could cause owls to abandon burrows (including nests) near areas where construction noise and the movement of heavy equipment and construction personnel occur close to occupied burrows.

In general, the closer residential development is to a given sensitive biological resource area, the greater the number of visits to that area by humans, pets, or predatory/nuisance wildlife and, therefore, the greater the potential for impact on the biological resource.

Amended Precise Plan Standards and Guidelines:

Chapter 5: Habitat and Biological Resources, of the Precise Plan incorporates standards and guidelines to protect and enhance biological resources, including the development of a burrowing owl Habitat Overlay Zone (HOZ) (Figure 4.3-2). The amended Precise Plan also includes development measures that are specifically intended to minimize the potential for impacts on this species along the northern edge of the site and in Shoreline at Mountain Regional View Park. These Precise Plan standards are described in Section 5.1, Habitat Overlay Zone, and are listed in *Section 4.3.4.2* of the EIR, above.

These measures are intended to avoid and minimize the potential impacts on burrowing owls that could result from implementation of the amended Precise Plan. Although exceptions to HOZ requirements can be allowed by the City, such exceptions would be rare and limited in the case of burrowing owl HOZ measures and would only be permitted if the applicant provided enhancements resulting in a net benefit to burrowing owls.

The Bird Safe Design guidelines also included in the Precise Plan provide further protection by providing for appropriate handling of food waste, which would minimize the attraction of non-native and nuisance wildlife species.

*Section 5.5: Habitat Enhancement*s, of the amended Precise Plan includes measures to protect and conserve burrowing owl populations at Shoreline Park. Measures for the City to implement include increasing signage in Shoreline Park and around burrowing owl habitat, fencing around burrowing owl habitat preserves, increased patrols, habitat improvement opportunities, and a prohibition on releasing or feeding animals near sensitive habitat. These measures are also listed as Implementing Actions in Chapter 8 of the Precise Plan, with the responsibility of implementation by the City's Community Services Department.

Impact BIO-2: Residential land uses included in the amended Precise Plan are expected to increase human activity, domestic pet activity, and visits to Shoreline Park which, overtime, may result in impacts to the burrowing owl population at Shoreline Park. With implementation of the applicable Precise Plan standards and guidelines by the City of Mountain View and future project applicants, the impacts from Precise Plan activities on burrowing owls would be less than significant. **[Less Than Significant Impact]**

Other Special Status Animals

Within the Precise Plan area, a few pairs of San Francisco common yellowthroats nest in the Charleston Retention Basin, the Coast Casey Drainage Canal and potentially along Stevens Creek. One or two pairs of loggerhead shrikes and white-tailed kites nest along the northern and eastern edges of the Precise Plan area or potentially in the Charleston Retention Basin. No western pond turtle populations are expected to be present in the Precise Plan area due to the intensity of urbanization in northern Mountain View. It is possible that western pond turtles are absent, but the species could potentially occur in Permanente Creek, or possibly in the Charleston Retention Basin, the Coast Casey Drainage Canal, and habitats along Stevens Creek.

Future development within the Precise Plan could impact San Francisco common yellowthroats by removing nesting and foraging habitat; however, the HOZ associated with aquatic habitats would help to minimize loss of habitat for, and disturbance of individuals of, this species. Loggerhead shrikes and white-tailed kites forage in open grasslands and ruderal habitat, which are limited in the Precise Plan area. These species likely use the Precise Plan area only by nesting along or near the edges of the Precise Plan area while foraging primarily in adjacent open space habitat. Although development or landscaping changes could result in the loss of nesting habitat for these species, the HOZ included in the Precise Plan would help to protect loggerhead shrikes and white-tailed kites using areas along the border with Shoreline at Mountain View Park.

Development or landscaping changes could result in the loss of nesting habitat for these species. Increased development, including the noise and increased activity associated with construction, and increased human activity in general, could result in disturbance of all three nesting birds possibly to the point of abandonment of active nests or reduction in their use of the Precise Plan area. Western pond turtles may also be disturbed by increased human activity adjacent to waterbodies such as Permanente Creek and Stevens Creek, and there is some potential for individuals to be injured or killed due to construction or vehicle use near such waterbodies. The HOZ associated with aquatic habitats would help to minimize loss of habitat for, and disturbance of individuals of, the western pond turtle.

The number of individuals of these species that use the Precise Plan area is very limited, representing only a very small proportion of regional populations of these species. And, the Precise Plan area only represents a small portion of the potential habitat for these species in the region. As a result, impacts of Precise Plan activities on these species would not reach the threshold of a substantial adverse effect, and thus these impacts are considered less than significant.

Moreover, the Precise Plan incorporates standards and guidelines to protect and enhance biological resources during future development activities, including the development of Habitat Overlay Zones (HOZ). Adherence to these standards would help to protect loggerhead shrikes and white-tailed kites using areas along the border with Shoreline at Mountain View Regional Park, and the HOZ associated with open water and creeks would help to minimize loss of habitat for, and disturbance of individuals of, the San Francisco common yellowthroat and western pond turtle. (The potential impact on these species of a bridge over Stevens Creek is discussed in Section 4.3.5, below.)

Impact BIO-3: Implementation of the Precise Plan, including HOZ standards and guidelines to protect biological resources, would not result in impacts to other special

status animal species occurring in the project area. **[Less Than Significant Impact]**

Special Status Fish Species

The Central California Coast steelhead occurs in Stevens Creek to the east of the Precise Plan area, but due to a lack of suitable spawning habitat, this species is unlikely to occur in Permanente Creek (i.e., within the Precise Plan area itself) except possibly as a stray to the tidal portions of the creek. Possibly on occasion the Central Valley fall-run Chinook salmon may occur in Stevens Creek. The green sturgeon is very rare in the South Bay, and the state threatened longfin smelt is not known to occur in Permanente or Stevens Creeks, so both species are likely absent from these creeks. There is limited potential for small numbers of Central Coast steelhead, green sturgeon, and smelt to occasionally occur in the lower, tidal reaches of these creeks. The tidal portion of Permanente Creek extends upstream just to Amphitheatre Parkway at the edge of the Precise Plan area, and thus these species are not expected to occur in the Precise Plan area itself.

Future Precise Plan activities would not occur in these species' habitats, since these species are absent from the Precise Plan area. These species are not expected to occur close enough to Precise Plan activities, such as new construction, to be directly disturbed by noise or heavy equipment. Although an increase in the number of people using the Precise Plan area is expected to result in increased human presence along Permanente and Stevens Creeks downstream from the Precise Plan area, human activity on trails along these creeks is already fairly high; humans infrequently stray into saltmarsh habitat along lower Stevens Creek (instead using the established levee trail); and along Permanente Creek, the lowermost reaches of the creek where these species are most likely to occur are not accessible to the public.

Increased human activity is not expected to result in a substantial impact to special status fish species. Construction within the banks of Permanente Creek upstream from these species' habitats, or runoff from the Precise Plan area, could result in increased mobilization of sediments or chemicals into these species' habitats. No construction is expected to occur within Permanente Creek itself, and the Precise Plan includes measures to improve treatment of stormwater runoff and avoid increases in impervious surfaces near creeks. Precise Plan activities would not result in significant impacts on these species. (The potential impact on these species of a bridge over Stevens Creek is discussed in Section 4.3.5, below.)

Impact BIO-4: Implementation of the Precise Plan would not result in impacts to special status fish species. **[Less Than Significant Impact]**

4.3.4.5 *Impacts to Nesting and Migratory Birds*

The Precise Plan area supports buildings, mature trees, and vegetation that provide foraging and nesting opportunities for a variety of bird species. Raptors (birds of prey) and nesting birds are protected by the MBTA and California Department of Fish and Wildlife Code. Urban-adapted raptors or other avian nests present during construction activities could result in the loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment could constitute an impact.

The Precise Plan does not propose any specific development or landscape changes, however, future development projects within the North Bayshore Precise Plan are likely to result in changes to the existing landscape and removal of trees or changes to existing buildings. The Precise Plan incorporates standards and guidelines that will avoid, minimize, or ameliorate potential impacts to nesting birds. *Chapter 5: Habitat and Biological Resources*, of the Precise Plan includes standards such as avoidance of construction during the nesting season, preconstruction surveys for nesting birds during breeding-season work, and maintenance of buffers around active nests, that would minimize the potential for such impacts, as described below.

Most of the birds that nest in North Bayshore are native species protected by the federal Migratory Bird Treaty Act and the California Fish and Game Code. New construction, building additions, building alterations, and tree/shrub removal should incorporate measures to avoid destruction and disturbance of active nests of these species. The measures below apply to birds other than burrowing owls and nesting egrets, which are addressed elsewhere in this section. (The potential impact on these species of a bridge over Stevens Creek is discussed in Section 4.3.5, below.) The following standards are included in Section 5.3 of the Precise Plan.

North Bayshore Precise Plan Standards

1. **Pre-activity surveys.** If construction, building additions, building alterations, or removal of trees and shrubs occurs between February 1 and August 31, pre-activity surveys for nesting birds shall be conducted by a qualified biologist. These surveys shall be conducted no more than seven days prior to the initiation of these activities in any given area. During each survey, the biologist shall inspect all potential nesting habitats (e.g., trees, shrubs, and buildings) within the work area; within 300 feet of the work area for raptor nests; and within 100 feet of the work area for nests of non-raptors.

2. **Nest Buffers.** If an active nest (i.e., a nest with eggs or young, or any completed raptor nest attended by adults) is found sufficiently close to work areas to be disturbed by these activities, the biologist, in coordination with the California Department of Fish and Wildlife, shall determine the extent of a disturbance-free buffer zone to be established around the nest. Typical buffer zones are 300 feet for raptors and 100 feet for non-raptors. However, the biologist, in consultation with the California Department of Fish and Wildlife, may determine that a reduced buffer is appropriate in some instances. For example, topography, buildings, or vegetation that screen a nest from the work area, or very high existing levels of disturbance (indicating the birds' tolerance to high levels of human activity), may indicate that a reduced buffer is appropriate. No new activities (i.e., work-related activities that were not ongoing when the nest was established) will occur within the buffer as long as the nest is active.

Future development projects and activities within the North Bayshore Precise Plan should also implement the following guidelines included in the Chapter 5 of the Precise Plan to reduce or avoid impacts to nesting birds.

North Bayshore Precise Plan Guidelines

1. **Avoidance of the nesting season.** If construction, building additions, building alterations, or removal of trees and shrubs is scheduled to take place outside the nesting season, impacts to protected nesting birds would be avoided. The nesting season for most birds in the North Bayshore area extends from February 1 through August 31. Work activities performed during the September 1 to January 31 period would not be subject to the preactivity surveys and nest buffers described above.

Impact BIO-5: Future development projects in the Precise Plan area must be consistent with the Nesting Bird Protection standards of the Precise Plan. Accordingly, implementation of the Precise Plan would not result in a significant impact to nesting birds. **[Less Than Significant Impact]**

4.3.4.6 *Impacts due to Potential Bird Collisions from Precise Plan Activities*

To minimize adverse effects on native and migratory birds colliding with new and renovated structures, the Precise Plan includes Bird Safe Design measures, as described in *Section 4.8.5.2* above, to promote bird safety. All new construction and major renovations in the Precise Plan will incorporate these measures to reduce the likelihood of building collision fatalities through façade treatments and light pollution reduction. These measures will apply to residential land uses within 300 feet of the Charleston Retention Basin.

Future development projects and activities within the North Bayshore Precise Plan shall implement Bird Safe Design measures included in the Chapter 5 of the Precise Plan to reduce or avoid the potential for bird collisions.

Impact BIO-6: Future development projects in the Precise Plan area must be consistent with the Bird Safe Design standards of the Precise Plan. Implementation of the Precise Plan would not result in a significant impact to birds due to collisions. **[Less Than Significant Impact]**

4.3.4.7 *Impacts on Aquatic and Fresh Water Marsh Habitats from Precise Plan Activities*

Aquatic habitats in the Precise Plan area occur in Permanente Creek, the Coast Casey Drainage Canal, the Charleston Retention Basin, and along Stevens Creek, adjacent to the plan area. A jurisdictional delineation to determine whether these features are jurisdictional, and if so, the precise locations and boundaries of USACE jurisdiction, has not been performed for the Precise Plan area. These features possess characteristics that may meet the definition of waters of the U.S. and are also likely to be regulated as waters of the state by the RWQCB. Freshwater marsh and/or riparian habitat associated with these features may be regulated by USFWS and CDFW.

Other waterbodies in the Precise Plan area consist of ornamental pools and artificial ponds that appear to be supported entirely by pumped and circulated water, rather than runoff or groundwater. These features are unlikely to be considered jurisdictional by the USACE or RWQCB (though this is subject to those agencies' determinations).

Impacts on aquatic habitats from Precise Plan activities are expected to be limited. The Precise Plan incorporates standards and guidelines to protect and enhance biological resources, including the development of the Open Water, Creeks, and Storm Drain Facilities HOZ (Figure 4.3-2). The Open Water, Creeks, and Storm Drain Facilities HOZ outlines specific development standards intended to protect habitat and preserve water quality. Standards including setbacks, limits on impervious surfaces, requirements for bioswales, and prohibitions on non-native landscaping are included in the HOZ.

The amended Precise Plan would include multi-family residential land uses. The residential development would not occur near Shoreline Lake or Coast Casey Forebay, and would be set back more than 400 feet from the Stevens Creek levee. The proposed residential uses would also be set back more than 1,000 feet from Permanente Creek. Based on these setback distances, residential uses are not expected to result in substantial direct impacts to these sensitive resources.

Aquatic, stream, riparian, and wetland habitat located along Stevens Creek, Permanente Creek, and the Charleston Retention Basin may be degraded over time by off-trail user trampling, and wildlife using those areas could receive more direct disturbance by humans and pets than is expected to occur without residential development. Over time, this may result in a reduction in habitat that supports certain sensitive species and the number of species that can be supported by the habitat.

Measures to reduce impacts to aquatic and wetland habitat include expanding enhancement plantings of native vegetation around wetland, stream, and riparian habitat to provide a buffer from adjacent land uses and to increase resources available to wildlife. In addition, signage should be placed around sensitive habitats explaining the ecological value of these areas and prohibiting entry by humans and their pets. Signage would be placed along the inner edge of Permanente Creek and Stevens Creek levees, along the Coast Casey Channel, around the Charleston Retention Basin, and portions of Shoreline Lake closest to the Precise Plan area. These measures have been included in Section 5.5, Habitat Enhancements of the Precise Plan, and are listed as Implementing Actions in the Precise Plan, Chapter 8, with the responsibility of implementation by the City's Community Services Department.

Adherence to the Open Water, Creeks, and Storm Drain Facilities HOZ conditions would also avoid and/or minimize impacts on aquatic, open water, and creek habitats. In addition, the Precise Plan Landscape Design guidelines also prohibit the planting of invasive plants and encourages removal of invasive species, further protecting these habitat types.

Because there is an HOZ exceptions process, there is some potential for aquatic habitats to be impacted if development on a particular parcel could not be accommodated while adhering to HOZ restrictions. Even in the event of an HOZ exception, such as a buffer reduction, it is unlikely that development would encroach so close to open water that riparian habitat would be impacted. In addition, were such an exception granted, the applicant would have to propose enhancements resulting in an ecological benefit and prepare a habitat enhancement plan documenting the enhancements to be undertaken as well as the monitoring and management plan for the enhancements. As a result, in the unlikely event that riparian habitats were impacted by Precise Plan activities, the HOZ exceptions requirements would ensure that enhancement resulting in an ecological benefit would occur. The impacts of the Precise Plan on riparian, wetland, and aquatic

habitats would therefore be less than significant. (The potential impact of a bridge on these habitats is discussed in *Section 4.3.5*, below.)

Any proposed fill of jurisdictional aquatic habitats would require a Clean Water Act Section 404 permit from the USACE and 401 certification from the RWQCB. Impacts to aquatic or riparian habitat may require a Streambed Alteration Agreement per Section 1602 of the California Fish and Game Code. As a condition of such permits, the USACE and RWQCB are expected to impose compensatory mitigation requirements (such as creation of additional wetlands) for any impacts on aquatic habitats.

Impact BIO-7: With the implementation of the Open Water, Creeks, and Storm Drain Facilities HOZ, Habitat Enhancements and Landscape Design Guidelines, the Precise Plan would have a less than significant impact on aquatic habitats. **[Less Than Significant Impact]**

4.3.4.8 *Impacts on Wildlife Corridors and Nursery Sites*

The Precise Plan area is not a particularly important area for movement by non-flying wildlife, and it does not contain any high-quality corridors allowing dispersal of such animals through the area.

The only feature within the Precise Plan area that is considered an important nursery site is the egret rookery along Shorebird Way. As one of few such rookeries in the South Bay, this feature has regional importance in maintaining populations of great and snowy egrets. Development and other Precise Plan activities could result in impacts to the rookery through modification of the habitat conditions, including both vegetation and buildings, around the trees that support this colony, which could reduce the site's attractiveness to the species. Disturbance of nesting birds from construction, including noise and vibration, in nearby areas and increases in night lighting may reduce the site's attractiveness to egrets and/or increase predation by nocturnal predators.

The Precise Plan incorporates standards and guidelines to protect and enhance biological resources, including the development of egret rookery HOZ (Figure 4.3-2). The egret rookery HOZ outlines specific measures and guidelines to avoid and minimize impacts. The HOZ for the egret rookery restricts new residential construction within 300 feet and non-residential construction within 200 feet of the colony; restricts modification of the façade and roof of the building immediately adjacent to the colony (1201 Charleston Road) in such a way that would reduce suitability of the rookery site for egrets; restricts the type of landscaping that can be performed within 100 feet of the colony; restricts outdoor lighting; and prohibits construction activities within the HOZ during the season when the colony is active.

In addition, the amended HOZ now includes the following guideline to further reduce potential direct impacts to sensitive resources from residential land uses:

North Bayshore Precise Plan Guidelines

- **Minimize building height near sensitive areas.** No buildings taller than 55 feet should be constructed within 100 feet of any HOZ boundary to provide an additional buffer between

sensitive resources and taller buildings. This guideline applies to both residential and non-residential development.

The Bird Safe Design guidelines included in the Precise Plan provide further protection of the colony by providing for appropriate handling of food waste, which would minimize the attraction of non-native and nuisance wildlife species.

The habitat conditions where the colony is located are unremarkable in terms of specific habitat resources or their uniqueness; many areas in the South Bay provide London plane trees in configurations similar to those currently used by this colony. The colony has only been present since 2005, and egret colonies at other locations in the South Bay have been ephemeral, persisting for a few years before relocating to other areas.

Even the protections afforded by the Precise Plan's measures may not guarantee continued existence of this colony, which may relocate for reasons unrelated to Precise Plan activities. Implementation of the HOZ and Bird Safe Design measures would ensure that Precise Plan impacts on the egret rookery are less than significant.

Impact BIO-8: With implementation of the egret rookery HOZ and Bird Safe Design guidelines for future development measures, the Precise Plan would have a less than significant impact on important nursery sites in the area. **[Less Than Significant Impact]**

4.3.4.9 *Impacts from Conflict with Local Policies and Ordinances*

Construction of buildings and improvements to roads and other infrastructure associated with the amended Precise Plan, including construction associated with planned infrastructure and traffic mitigation improvements (refer to *Section 3.0 Background and Project Description, Section 4.14, Transportation and Traffic,* and *Section 4.15, Utilities and Service Systems* of this SEIR), could potentially necessitate the removal of Heritage trees. A Heritage Tree Removal Permit would need to be obtained prior to the removal of any Heritage trees by future development projects.

The removal of Heritage trees as a result of Precise Plan activities would not cause a substantial ecological impact. Redwood and cedar trees that could be removed are not native to the North Bayshore area, and thus provide limited ecological functions and values as compared to local native trees such as oaks, cottonwoods, and willows. No large-scale removal of large trees is proposed or envisioned by the amended Precise Plan. The City will require compliance with the Heritage tree ordinance, and accompanying tree replacement and maintenance, as conditions of approval of any project within the Precise Plan area. The removal of Heritage trees, therefore, would be a less than significant impact.

Impact BIO-9: All future projects within the Precise Plan area, as well as planned infrastructure and traffic improvements, will be required to comply with the City of Mountain View Heritage tree ordinance as a standard condition of approval. **[Less Than Significant Impact]**

4.3.5 Stevens Creek Bridge Crossings

The 2030 General Plan includes Policy LUD 17.1 that supports a new connection between the North Bayshore area and the NASA Ames Research Center. The City Council previously requested additional information on the potential transportation and biology impacts of two off-site potential bridge crossing locations.

The amended Precise Plan includes a potential policy supporting a new bridge crossing over Stevens Creek in two general vicinities: Charleston Road and/or La Avenida Avenue. These potential bridges are discussed below at a program-level; implementation of one or both of these bridges would require project-specific environmental review at the time detailed bridge plans are available for analysis. Since the eastern end of either bridge would be located on federal property, both CEQA and NEPA environmental review would be required before project approval.

The potential biological impacts from a bridge project are described in Appendix G, "Stevens Creek Crossing Project Biological Resources Report," prepared by *H.T. Harvey & Associates* on September 14, 2016.

4.3.5.1 *Charleston Road Bridge – Project Description*

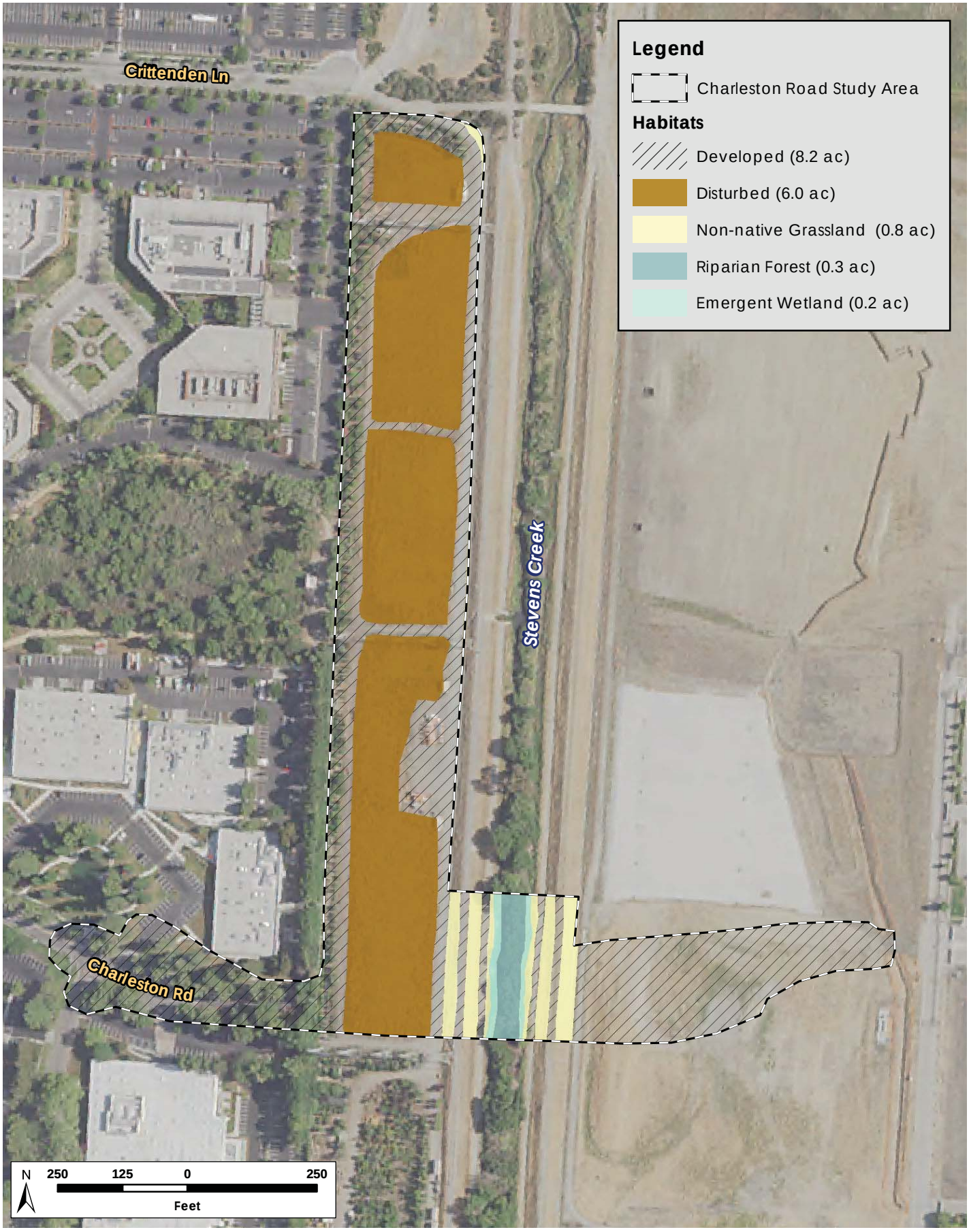
A potential Charleston Road area vehicular bridge over Stevens Creek would extend Charleston Road from the intersection of Charleston Road and Shorebird Way approximately 1,620 feet east across Stevens Creek to the intersection of Allen Road and Wright Avenue on federal property.

A Charleston Road vehicular bridge could include construction of a new prefabricated pedestrian and bicycle bridge adjacent to the south side of the vehicular bridge. A bridge could be designed to clear span the creek, and no permanent or temporary structures would be built or placed within Stevens Creek.

The potential impacts associated with a potential Charleston Road bridge crossing were previously described and analyzed in the *Stevens Creek Crossings Project Initial Study/Environmental Assessment* (IS/EA), prepared in 2012.[26] Since the exact alignment and design is unknown at this time, an approximately 15.5-acre study area was established to evaluate potential biological impacts associated with construction of a bridge (Figure 4.3-4). The IS/EA identified mitigation measures necessary to reduce potential impacts to a less than significant level, as well as "biological commitments" that were incorporated into the bridge project to avoid and minimize impacts to sensitive resources. These measures, as it is assumed a future bridge in this location could likely include similar bridge elements as previously studied, are incorporated into this SEIR as program-level mitigation measures, and will be required of a future bridge project at either location.

The study area includes an area near the creek between Crittenden Road and Charleston Road where it is assumed a construction staging area would be located. A majority of the Charleston Road bridge study area consists of developed and disturbed habitat but also includes small areas of emergent wetland (0.2 acres), non-native grassland (0.8 acres), and riparian forest (0.3 acres) habitat.

[26] City of Mountain View. *Stevens Creek Crossings Project Initial Study/Environmental Assessment*. January 2012. The Mitigated Negative Declaration for this project was not adopted by the City of Mountain View, and the project was not approved.



Source: H.T. Harvey & Associates., 9/2016.

CHARLESTON ROAD BRIDGE STUDY AREA HABITAT MAP FIGURE 4.3-4

Source: H.T. Harvey & Associates., 9/2016.

LA AVENIDA AVENUE BRIDGE STUDY AREA HABITAT MAP

FIGURE 4.3-5

4.3.5.2 *La Avenida Avenue Bridge - Project Description*

Unlike the previous Charleston Road bridge proposal, a bridge crossing at La Avenida Avenue has not yet been formally designed, but could be similar in scope and design. Therefore, an approximately 12.4-acre study area was established to evaluate potential biological impacts associated with construction of a bridge.

The study area is of similar length to the Charleston Road study area and is conservatively wider north and south along Stevens Creek to encompass the potential construction impact area for a bridge and its approaches (Figure 4.3-5). A bridge would be designed to clear span the creek and no permanent or temporary structures would be built or placed within Stevens Creek.

A majority of the La Avenida Avenue bridge study area consists of developed and non-native grassland habitat but also contains small areas of seasonal wetland (0.5 acres), riparian forest (0.4 acres), perennial channel (0.2 acres), and emergent wetland (0.1 acres) habitat.

4.3.5.3 *Impacts on Biological Resources from Bridge Construction*

The construction of a bridge across Stevens Creek at either Charleston Road or La Avenida Avenue could result in impacts to biological resources during construction. These impacts include the biological impacts described above for the North Bayshore Precise Plan project as a whole, in addition to the following impacts.

Special Status Animals

Special-status animal species that have the potential to occur or breed on or immediately adjacent to a Charleston and La Avenida Avenue Bridge Study Areas include the Central California coast steelhead, Central Valley fall-run Chinook salmon, western pond turtle, burrowing owl, loggerhead shrike, San Francisco common yellowthroat, and white-tailed kite.

Special Status Plants

The only special-status plant with the potential to occur in the bridge study areas is Congdon's tarplant, which was determined to have a low potential to occur due to low quality habitat. Focused surveys conducted in July 2016 during the flowering period of Congdon's tarplant did not detect the species. The species is not expected to occur in the study areas and construction of a bridge would have a less than significant impact on special-status plants.

Wetland and Aquatic Habitats

A formal jurisdictional delineation has not been performed and the precise amount of aquatic and wetland habitat to be impacted by a bridge has not been quantified. Since a bridge(s) will span Stevens Creek, it is anticipated that some permanent impacts to wetland and aquatic habitat may occur from placement of hardscape, abutments, or piers for bridge support and from shading from new bridge deck.

Impact BIO-10: Construction of a bridge across Stevens Creek could result in impacts to biological resources. **[Potentially Significant Impact]**

The following program-level mitigation measures will be required of any future bridge project to avoid and minimize impacts to biological resources.

Program-level Mitigation Measures

MM BIO-10.1: Nesting Birds:

- A qualified biologist shall be retained to conduct preconstruction nest surveys of appropriate nesting habitat prior to any construction activity during the nesting/breeding season (February 1st through August 31st). If an active nest (i.e., a nest with eggs or young, or any completed raptor nest attended by adults) is found sufficiently close to work areas to be disturbed by construction activities, the biologist, in coordination with the California Department of Fish and Wildlife, shall determine the extent of a disturbance-free buffer zone to be established around the nest. These requirements are detailed in the standards and guidelines in Section 5.3 of the Precise Plan (refer to *Section 4.3.4.5* of the Draft SEIR).

MM BIO-10.2: Burrowing Owl:[27]

- Prior to construction, staging, or site preparation activities, a qualified biologist will conduct a preconstruction survey for burrowing owl. Because burrowing owls occupy burrows year-round, the survey will be required regardless of the time of year. The biologist will coordinate with City and NASA biologists prior to conducting surveys. The purpose of the preconstruction survey is to document the presence or absence of burrowing owls on the project site and within 250 feet of construction activity.

- To maximize the likelihood of detecting owls, the preconstruction survey will last a minimum of three (3) hours. The survey will begin one (1) hour before sunrise and continue until two (2) hours after sunrise or begin two hours before sunset and continue until one hour after sunset. Additional time may be required for large project sites. A minimum of two surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their locations will be mapped.

- Surveys will conclude no more than two (2) calendar days prior to construction. Therefore, the project proponent must begin surveys no more than four (4) days prior to construction (two days of surveying plus up to two days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, the project proponent may also conduct a preliminary survey up to

[27] **Please note:** Program-level mitigation measures for impacts to burrowing owls have been updated to be consistent with the preconstruction survey requirements included in the Santa Clara Valley Habitat Plan.

14 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than two (2) calendar days in advance of construction.

- If evidence of burrowing owls is found during the breeding season (February 1–August 31), the project will avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance will include establishment of a 250-foot non-disturbance buffer zone around nests. Construction may occur outside of the 250-foot non-disturbance buffer zone. Construction may occur inside of the 250-foot non-disturbance buffer during the breeding season if:

  - The nest is not disturbed, and
  - The project proponent develops an avoidance, minimization, and monitoring plan that will be reviewed by the Habitat Agency and the Wildlife Agencies prior to project construction based on the following criteria.
  - The Habitat Agency and the Wildlife Agencies approve of the avoidance and minimization plan provided by the project proponent.
  - A qualified biologist monitors the owls for at least three (3) days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).
  - The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.
  - If there is any change in owl nesting and foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until the adults and juveniles from the occupied burrows have moved out of the project site.
  - If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the non-disturbance buffer zone may be removed. The biologist will excavate the burrow to prevent reoccupation after receiving approval from the Wildlife Agencies.
  - The Habitat Agency and the Wildlife Agencies have 21 calendar days to respond to a request from the project proponent to review the proposed avoidance, minimization, and monitoring plan. If these parties do not respond within 21 calendar days, it will be presumed that they concur with the proposal and work can commence.

- If evidence of burrowing owls is found during the non-breeding season (September 1–January 31), the project will establish a 250-foot non-

disturbance buffer around occupied burrows as determined by a qualified biologist. Construction activities outside of this 250-foot buffer are allowed. Construction activities within the non-disturbance buffer are allowed if the following criteria are met in order to prevent owls from abandoning important overwintering sites.

- A qualified biologist monitors the owls for at least three (3) days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
- The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.
- If there is any change in owl foraging behavior as a result of construction activities, these activities will cease within the 250-foot buffer.
- If the owls are gone for at least one (1) week, the project proponent may request approval from the Habitat Agency that a qualified biologist excavate usable burrows to prevent owls from reoccupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue.

- Based on the avoidance, minimization, and monitoring plan developed, during construction, the non-disturbance buffer zones will be established and maintained as applicable. A qualified biologist will monitor the site consistent with the requirements described above to ensure that buffers are enforced and owls are not disturbed. The biological monitor will also conduct training of construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl enters an active construction zone.

- If impacts to occupied burrowing owl burrows shall be avoided to the greatest extent feasible. Passive relocation of burrowing owls is prohibited until positive growth trends described in Section 5.4.6 of the SCVHP have been achieved. Once the burrowing owl positive growth trend included in the SCVHP occurs, passive relocation of owls may occur with the approval of the Wildlife Agencies (CDFW and USFWS), on project sites during the non-breeding season (September 1-January 31) if mitigation measures described above do not allow for work to continue. Passive relocation would only be proposed if the occupied burrow needed to be removed or had the potential to collapses as a result of construction activities. The project may apply for an exception to the passive relocation prohibition if owls continually persist on a site where avoidance is not feasible. Exceptions may be requested through the application process described in Section 6.8 of the SCVHP and must be reviewed and approved by the SCVHP Habitat Agency and Wildlife Agencies.

MM BIO-10.3: Hoary Bat Maternity Roosts

- A qualified biologist will examine all trees that could contain potential maternity roosts of hoary bats within 100 feet of all proposed construction activities. Surveys for maternity roosts of hoary bats will take place no more than 30 days before any initial vegetation, woody debris, or tree removal or other initial ground-disturbing activities during the period of April 1st to August 31st. If a hoary bat with young is observed roosting, a buffer will be established by a qualified biologist (typically 50 feet, or as otherwise determined dependent upon the habitat present and proposed level of disturbance).

MM BIO-10.4: Central California Coast Steelhead and Central Valley Fall-run Chinook Salmon.

- All construction activities that require dewatering or pile driving within Stevens Creek will be limited to the summer low flow period (June 1 to October 15).

- Night lighting on the bridge will be minimized, with the exception of lighting needed for safety and compliance with regulations. To the extent feasible, all lighting will be directed at the bridge deck (not outwards into natural areas).

- Before any construction activities begin, a qualified biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the Central California Coast steelhead, the Central Valley fall-run Chinook salmon, and their habitat, the importance of these species, the general measures that are being implemented to conserve them as they relate to the project, their legal protections, and the boundaries within which the project may be accomplished.

- If cofferdams are necessary, then during cofferdam installation, a block net will be positioned at the upstream end of the reach to be dewatered. Where feasible (e.g., where the channel configuration permits), and where sufficient water to support fish is present downstream from the dewatering area, two biologists will then walk from this net in a downstream direction while carrying a block net or nets in order to encourage fish to move downstream and out of the area to be dewatered. The downstream block net will then be positioned to prevent fish from re-entering the dewatering area. The cofferdam will then be constructed. If insufficient water is present downstream from the dewatering area to support fish, then fish will be relocated to another location providing suitable conditions for fish as described in the next bullet.

- A qualified biologist will be present during dewatering to relocate all native fish to a suitable habitat location as needed. Within the area to be

dewatered, any fish remaining in the work area will be captured by seine, dip net, and/or electrofisher, and then transported and released to suitable in stream locations outside of the work area. All captured fish will be kept in cool, shaded, aerated water protected from excessive noise, jostling, or overcrowding any time they are not in the stream, and fish will not be removed from this water except when released. To avoid predation, the biologist will use at least two containers to separate young-of-year fish from larger age-classes and other potential aquatic predators. Captured salmonids will be relocated, as soon as possible, to an instream location in which suitable habitat conditions are present to allow for adequate survival of transported fish and fish already present.

- All pumps used for dewatering where salmonids may be present will be screened according to the National Marine Fisheries Service (NMFS) criteria for juvenile salmonids.

- Following construction of the temporary cofferdam, water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate.

- According to the Fisheries Hydroacoustic Working Group (2008), fish may be injured or killed when underwater pile driving sound levels exceed the peak threshold of 206 decibels (dB) or cumulatively exceeds 187 dB sound exposure level. With conservative estimates, only where impact pile driving occurs within 20 feet of aquatic habitat in Stevens Creek could underwater sound levels cumulatively exceed the 187 dB sound exposure level threshold. Thus, the project will site the dewatering area to extend a minimum of 30 feet from pile driving locations to avoid the injury or death of special-status fish due to pile driving. No pile driving will occur within 30 feet of aquatic habitat in Stevens Creek.

MM BIO-10.5: <u>Western Pond Turtle</u>

- If vegetation or tree removal or other initial ground-disturbing activities will begin during the western pond turtle nesting season (April 1st through July 31st), a qualified biologist will examine the study area for pond turtles and their nests 48 hours before proposed activities begin. If impacts within the study area occur in the bed and banks of Stevens Creek, a preconstruction survey for western pond turtles will be conducted within 48 hours prior to the start of work year-round. If a western pond turtle is observed within the work area at any time before or during proposed project activities, all activities will cease until such time that either (1) the pond turtle leaves the area or (2) the qualified biologist can capture and relocate the animal to suitable habitat away from construction activity.

MM BIO-10.6: Wetland and Aquatic Habitats.

- All temporary and permanent impacts on wetland and riparian habitats within the bed and banks of Stevens Creek will be avoided to the extent feasible.

- All construction staging shall be above the top of bank and outside the riparian canopy of Stevens Creek.

- An assessment of impacts (jurisdictional delineation) shall be completed prior to any construction activities that maps all wetlands and streams impacted by ground disturbance, access, fill, and structure placement. All wetlands that will be permanently impacted by construction or through shading from the new bridge deck will be mitigated through the purchase of credits at a wetland mitigation bank at 1:1 ratio or through the creation or restoration of wetlands at a 2:1 ratio. Any loss of non-wetland stream habitat from permanent fill placed within the ordinary high water mark of the stream will be mitigated through purchase of credits or creation of similar aquatic habitat at a 1:1 ratio.

- Created or restored wetlands or aquatic habitat will be designed and monitored in accordance with a wetlands mitigation and monitoring plan (MMP) that includes specific success criteria and monitoring for at least five years. The plan would be subject to approval by the City. The MMP will be prepared by a qualified restoration ecologists.

- Regulatory permits will be required for all impacts to wetland and streams from the USACE, RWQCB, and CDFW. The construction of a bridge would comply with all permit conditions required by these approvals.

MM BIO-10.7: Riparian Habitat and Trees.

- The project will be designed to minimize impacts to riparian habitat to the maximum extent practicable.

- Trees to be removed as well as trees to be avoided, as determined by a qualified arborist, will be clearly marked on the project plans. Trees to be avoided will be protected during construction by a tree protection zone fence placed around the drip line of the tree, as determined by a qualified arborist.

- Riparian tree removal should be carefully considered on an individual tree basis and in coordination with the City. Riparian trees that will be permanently removed shall be mitigated by providing in-kind riparian plantings at a 5:1 ratio for oaks 16 inches in diameter at breast height

(dbh) or greater and 3:1 for smaller oaks and all other native riparian tress.

- A mitigation and monitoring plan (MMP) shall be prepared by a qualified biologist that describes the location, manner of planning, planting species, success criteria, and a reporting schedule covering at least 10 years of post-planting monitoring. The MMP will be developed by a qualified biologist and approved by the City.

- Regulatory permits will be required for all impacts to riparian habitat from the CDFW and the RWQCB. The construction of a bridge would comply with all permit conditions required by these approvals.

MM BIO-10.8: Heritage Trees

- Trees that will be removed during construction of the project will be surveyed by a qualified arborist. A tree report shall be and a tree preservation and mitigation plan will be produced and implemented to avoid impacts to City regulated trees.

MM BIO-10.9: Invasive Plants

- Invasive non-native plants shall not be used in any landscaping. Any imported soil used for landscaping must be certified as weed-free. Erosion control materials that contain hay or other dried plant materials must be certified weed-free. Any construction equipment operating within 250 feet of jurisdictional wetlands or other sensitive habitats shall be washed off-site to remove potential weed seeds prior to use.

MM BIO-10.10: Water Quality

- Construction activities shall conform to the permit requirements specified in the State of California Construction General Stormwater Permit. This includes filing of a notice of intent and preparation of a stormwater pollution prevention plan (SWPPP) and implementation of best management practices (BMPs) to reduce stormwater runoff.

- Post-construction stormwater controls will be installed in accordance with the Santa Clara Valley Urban Runoff Pollution Program, implemented pursuant to the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit.

- BMP's and post-construction water quality measures will be reviewed and approved by the NASA Ames Environmental Management Division and the City of Mountain view Public Works.

- All areas disturbed by construction on the banks of Stevens Creek will be seeded following construction with a native grassland-type seed mix.

- If construction equipment access is required within the bed of Stevens Creek or construction activities could result in materials falling into the creek, the creek channel work area shall be dewatered. A dewatering plan shall be prepared if dewatering is necessary.

- All construction work within the banks of Stevens Creek shall be restricted to the dry season between April 15 and October 15.

[Less Than Significant Impact with Mitigation Measures Included in the Project]

Impacts due to Potential Bird Collisions from Construction of Bridges

The North Bayshore Precise Plan project could include a policy supporting the potential construction of one to two bridge crossings over Stevens Creek, although no specific bridge is proposed at this time.

Stevens Creek provides habitat for numerous bird species, some of which may make north-south movements along the creek corridor at elevations similar to that of the proposed bridges. Migrating birds, such as songbirds, can also be affected by human built structures because of their tendency to migrate at night and susceptibility to be disoriented by artificial light making them vulnerable to collisions.

The following program-level mitigation measure would be required of any future Charleston Road and/or La Avenida Avenue bridge project to avoid and minimize potential impacts from bird strikes and to reduce the risk of avian collisions with a bridge.

Impact BIO-11: Construction of a Charleston Road and/or La Avenida Avenue Bridge could result in in bird strikes from avian collisions with bridge structures. **[Significant Impact]**

Program-Level Mitigation Measures:

MM BIO-11.1: The following program-level mitigation measure would be required of any future bridge project to avoid and minimize potential impacts from bird strikes and to reduce the risk of avian collisions with a bridge.

- No power lines shall be suspended above the bridge deck
- High reflective surfaces will not be used.
- Night lighting on the bridge will be minimized, with the exception of lighting needed for safety and compliance with regulations. To the extent feasible, all lighting will be directed at the bridge deck (not outwards into natural areas).
- If suspension cables are proposed, then spiral-shaped Bird Flight

Diverters (BFDs), shall be installed on all suspension cables on the bridge. The BFDs shall be designed to increase the diameter of each cable to at least eight inches over a length of at least four-to-eight inches, placed at least every 16-32 feet. A minimum of 60 percent of each cable will be marked with BFDs. Where multiple cables are parallel, the BFDs will be staggered to increase visual density, this strategy can be used to reduce the number of markers needed on each individual cable.

With implementation of biological commitments included in the project and program level mitigation measures, construction of the Charleston Road and/or La Avenida Avenue Bridges would reduce the potential for avian bridge strikes with bridge structures to a less than significant level. **[Less Than Significant Impact With Mitigation Measures Incorporated in the Project]**

Impacts on Wildlife Corridors and Nursery Sites from Bridges

Impacts on wetland or aquatic habitats are expected to be minimal for the construction of a Charleston Road Bridge and/or the La Avenida Avenue Bridge. Stevens Creek serves as a movement pathway and nursery site for a variety of wildlife species.

A bridge crossing would affect a segment of Stevens Creek that supports low quality habitat and is highly fragmented due to an existing crossing and urban location. Construction of a bridge(s) would result in a minor amount of habitat loss along Stevens Creek, and ample riparian habitat would remain along Stevens Creek that would provide habitat value and movement pathways for wildlife species.

Impact BIO-12: Construction of a Charleston Road and/or La Avenida Avenue Bridge would result in a less than significant impact on important nursery sites and wildlife corridors. **[Less Than Significant Impact]**

4.3.5.4 *Comparison of Bridge Locations*

The discussion of impacts above are based on two potential bridge locations across Stevens Creek at Charleston Road and La Avenida Avenue. The design for either of these bridges has not been finalized, although a preliminary design for a Charleston Road bridge was reviewed in 2012. The discussion in the following section is provided for informational purposes – a more complete assessment of a proposed bridge would require further design and construction information.

For the purposes of discussion, and with the following assumptions: 1) the proposed Charleston Road bridge clear spans the creek (as it did in the earlier design), and 2) the La Avenida Avenue bridge's abutments are within the bed and banks of the creek, the following impacts can be estimated.

Potential Impacts	Charleston Road	La Avenida Avenue
Habitats	No permanent impacts.	Wetland, creek, and riparian habitats.
Aquatic habitat	No impacts.	Direct impacts to aquatic habitats for special-status fish and turtles.
Special-status fish and reptile species	No dewatering/impacts from dewatering.	Direct impacts during dewatering to Central California Coast steelhead, Central Valley fall-run Chinook salmon, western pond turtle.

Similar to the previously-proposed Charleston Road bridge, if the La Avenida Avenue bridge is designed to avoid placement of structures within the bed or banks of Stevens Creek, the following relative impacts may be estimated.

Potential Impacts	Charleston Road	La Avenida Avenue
Habitats	No significant impacts.	Some riparian forest impacts.
Indirect Impacts from Shading	Higher, due to more extensive riparian canopy.	Lower, due to gap in riparian canopy.
Bird Collisions	Collision risk from suspension bridge cables in potential design.	Could be lower if bridge is designed without cables or reflective surfaces.

If the City proceeds with construction of either bridge, biological resources impacts would be reduced by the selection of a design that completely spans the channel. If the proposed bridge avoids the channel, the biological impacts of the bridges would be roughly equivalent. If, however, the La Avenida Avenue bridge were designed to completely span the channel and it was not a suspension bridge with cables, the biological impacts of a bridge at the La Avenida Avenue location would be slightly less.

4.3.5.5 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval and program- and project-level mitigation measures. The proposed amendments to the General Plan would not result in additional biological

resources impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.3.5.6 *Cumulative Biological Resources Impacts: Special Status Species, and Nesting and Migratory Birds*

The North Bayshore Precise Plan area is adjacent to a number of sensitive habitat areas, special-status species, and other native species, many of which are protected by state or federal law. While a majority of the Precise Plan area consists of developed or landscaped features, the Precise Plan area contains small areas of riparian habitat along Permanente Creek and Charleston Retention Basin, and an urban forest containing a variety of mature landscaping and ornamental trees that provide habitat for special status species. *Chapter 5: Habitat and Biological Resources* of the Precise Plan includes development standards and guidelines to improve habitat quality and limit impacts to special status species in the North Bayshore area, which are also described in the project impact section of this SEIR. These development standards would ensure that impacts to special status species would be less than significant.

As described in previously in this section, there is a potential for nesting and migratory birds to occur in the Precise Plan area. All future development projects following the amended Precise Plan would implement required standard conditions of approval that would avoid impacts or reduce them to a less than significant level. Such would be the case for other cumulative projects that remove existing mature trees. For these reasons, the cumulative projects, including the proposed project, would not result in significant impacts to special status species or nesting birds.

Impact C-BIO-1: The cumulative projects, including the proposed project, would not result in significant cumulative impacts to special status species, nesting birds, and migratory birds. **[Less Than Significant Cumulative Impact]**

4.3.5.7 *Cumulative Impacts of Indirect Nitrogen Deposition*

The Santa Clara Valley Habitat Plan (SCVHP) identified nitrogen deposition as an indirect cause of impacts to rare species in southern Santa Clara County, particularly those located on serpentine soils. Nonpoint air pollution sources such as automobiles emit nitrogen compounds into the air. Because serpentine soils tend to be nutrient poor, and nitrogen deposition artificially fertilizes serpentine soils, nitrogen deposition from vehicle traffic and other sources facilitates the spread of invasive plant species. Non-native annual grasses grow rapidly, enabling them to out-compete serpentine species. The displacement of these species, and subsequent decline of the several federally-listed species, including the Bay Checkerspot butterfly and its larval host plants, has been documented on Coyote Ridge in central Santa Clara County (the last remaining major population of these butterflies). The invasion of native grasslands by invasive and/or non-native species is now recognized as one of the major causes of the decline of the federally endangered Bay Checkerspot butterfly.

Modeling completed as a part of the development of the SCVHP identifies cumulative effects to serpentine habitats and serpentine species on Coyote Ridge and other areas in central and southern Santa Clara County. As discussed in *Section 4.3.4.9, Habitat Conservation Plan/Natural Community*

Conservation Plan, nitrogen deposition on the effected serpentine habitats from areas of Santa Clara County not covered by the SCV Habitat Plan is about 17 percent. New development and redevelopment projects occurring within the Precise Plan would represent an extremely small portion of these emissions. Conservation strategies included in the adopted SCV Habitat Plan account for the indirect impacts of nitrogen deposition (existing and future) and identify measures to conserve and manage serpentine areas over the term of the SCV Habitat Plan such that cumulative impacts to this habitat and Bay Checkerspot butterfly would not be significant and adverse.[28]

A mitigation program for indirect impacts on Bay Checkerspot butterfly habitat is being implemented independently by others (i.e., SCV Habitat Agency) and there is no requirement for an individual project outside of the area covered by the SCV Habitat Plan to pay impact fees to this mitigation program.[29]

While not necessary to mitigate the impacts, future project applicants in the Precise Plan area could choose to provide a voluntary contribution towards the mitigation of indirect nitrogen deposition impacts. These contributions could be used to protect and enhance sensitive habitat in the Coyote Ridge and South County area that is subject to degradation due to nitrogen deposition (related primarily to vehicle emissions). Contributions could be paid to the Santa Clara Valley Habitat Agency, which is a Joint Powers Authority made up of the Cities of Gilroy, Morgan Hill, and San Jose, and Santa Clara County.[30]

Impact C-BIO-2: The cumulative projects, including the amended North Bayshore Precise Plan, would not result in significant cumulative impacts from indirect nitrogen deposition. **[Less Than Significant Cumulative Impact]**

4.3.5.8 *Cumulative Impacts to Heritage Trees*

The City of Mountain View Tree Preservation Ordinance defines "Heritage" trees based on their size, species, or special designation. A tree removal permit is required from the City for the removal of any Heritage trees, and it is unlawful to willfully injure, damage, destroy, move, or remove a Heritage tree without a tree removal permit. Each of the projects construction in Mountain View under the General Plan buildout would be required to mitigate the removal of Heritage trees, and protect any trees that remain from potential construction damage. These projects, which may also include tree removal for infrastructure improvements, would entail removal of most of the existing trees on site, however, the trees are typically parking lot or landscape trees planted in connection with the current development on each site, and not of substantial habitat value, i.e., native trees and plants critical to survival of special status species. For this reason, the amended North Bayshore Precise Plan would not result in a significant cumulative loss of Heritage trees.

[28] The Santa Clara Valley Habitat Plan Final EIR/EIS (August 2012) identifies a beneficial cumulative effect of implementing the Santa Clara Valley Habitat Plan.
[29] The CEQA Guidelines recognize in Section 15190 (a)(2) that a finding regarding significant environmental effects can be made that "…changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency."
[30] Santa Clara Valley Habitat Agency. http://scv-habitatagency.org/31/Governance. Accessed July 17, 2014.

Impact C-BIO-3: The amended North Bayshore Precise Plan, together with the 2030 General Plan buildout, would not result in significant cumulative loss of Heritage trees. **[Less Than Significant Cumulative Biological Resources Impact]**

4.3.6 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
BIO-1: Special status plants are unlikely to occur in the Precise Plan area. Future development projects in the Precise Plan area must adhere to the Landscape Design guidelines of the Precise Plan. Accordingly, implementation of the Precise Plan would not result in a significant impact to special-status plant species.	Less Than Significant	No mitigation required	Less Than Significant
BIO-2: Residential land uses included in the amended Precise Plan are expected to increase human activity, domestic pet activity, and visits to Shoreline Park which, overtime, may result in impacts to the burrowing owl population at Shoreline Park. With implementation of the applicable Precise Plan standards and guidelines by the City of Mountain View and future project applicants, the impacts from Precise Plan activities on burrowing owls would be less than significant.	Less Than Significant	No mitigation required	Less Than Significant
BIO-3: Implementation of the Precise Plan, including HOZ standards and guidelines to protect biological resources, would not result in impacts to other special status animal species occurring in the project area.	Less Than Significant	No mitigation required	Less Than Significant
BIO-4: Implementation of the Precise Plan would not result in impacts to special status fish species.	Less Than Significant	No mitigation required	Less Than Significant
BIO-5: Future development projects in the Precise Plan area must be consistent with the Nesting Bird Protection standards of the Precise Plan. Implementation of the	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Precise Plan would not result in a significant impact to nesting birds.			
BIO-6: Future development projects in the Precise Plan area must be consistent with the Bird Safe Design standards of the Precise Plan. Implementation of the Precise Plan would not result in a significant impact to birds due to collisions.	Less Than Significant	No mitigation required	Less Than Significant
BIO-7: With the implementation of the Open Water, Creeks, and Storm Drain Facilities HOZ, Habitat Enhancements and Landscape Design Guidelines, the Precise Plan would have a less than significant impact on aquatic habitats.	Less Than Significant	No mitigation required	Less Than Significant
BIO-8: With implementation of the egret rookery HOZ and Bird Safe Design guidelines for future development measures, the Precise Plan would have a less than significant impact on important nursery sites in the area.	Less Than Significant	No mitigation required	Less Than Significant
BIO-9: All future projects within the Precise Plan area, as well as planned infrastructure and traffic improvements, will be required to comply with the City of Mountain View Heritage tree ordinance as a standard condition of approval.	Less Than Significant	No mitigation required	Less Than Significant
BIO-10: Construction of a bridge across Stevens Creek could result in impacts to biological resources. .	Significant Impact	**MM BIO-10.1 to MM BIO-10.10**	Less Than Significant
BIO-11: Construction of a Charleston Road and/or La Avenida Avenue Bridge could result in in bird strikes from avian collisions with bridge structures.	Potentially Significant Impact	**MM BIO-11.1**	Less Than Significant
BIO-12: Construction of a Charleston Road and/or La Avenida Avenue Bridge would result in a less than significant	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
impact on important nursery sites and wildlife corridors.			
C-BIO-1: The cumulative projects, including the proposed project, would not result in significant cumulative impacts to special status species, nesting birds, and migratory birds.	Less Than Significant	No mitigation required	Less Than Significant
C-BIO-2: The cumulative projects, including the amended North Bayshore Precise Plan, would not result in significant cumulative impacts from indirect nitrogen deposition**.**	Less Than Significant	No mitigation required	Less Than Significant
C-BIO-3: The amended North Bayshore Precise Plan, together with the 2030 General Plan buildout, would not result in significant cumulative loss of Heritage trees.	Less Than Significant	No mitigation required	Less Than Significant

4.4 CULTURAL RESOURCES

The following discussion is based in part upon an archaeological literature review and Native American consultation report completed for the North Bayshore Precise Plan area by *Holman & Associates* in June 2015 and May 2016, respectively.

4.4.1 Regulatory Background

4.4.1.1 *Federal Statutes and Regulations*

National Register of Historic Places

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. The National Register was developed under the National Historic Preservation Act of 1966 and is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect the country's historic and archeological resources. Administered by the National Park Service, the National Register includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Criteria for determining eligibility for listing can be found in Title 36 Code of Federal Regulations (CFR) Part 60.

The National Register includes:

- All historic areas in the National Park System;
- National Historic Landmarks that have been designated by the Secretary of the Interior for their significance to all Americans; and
- Properties significant to the nation, state, or community which have been nominated by state historic preservation offices, federal agencies, and tribal preservation offices, and have been approved by the National Park Service. (National Park Service website).

To be considered eligible, a property must meet the National Register Criteria for Evaluation, found in Title 36 CFR Part 60.4. This involves examining the property's age, integrity, and significance as follows:

- Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?
- Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archeological investigation about our past?

Archaeological site evaluation assesses the potential of each site to meet one or more of the criteria for NRHP eligibility based on visual surface and subsurface evidence (if available) at each site's location, information gathered during the literature and records searches, and the researcher's knowledge of and familiarity with the historic or prehistoric context associated with each site.

The American Indian Religious Freedom Act, Title 42 U.S. Code Section 1996, protects Native American religious practices, ethnic heritage sites, and land uses.

National Historic Landmarks

National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. Today, fewer than 2,500 historic places bear this national distinction. National Historic Landmarks are places where nationally significant historical events occurred, are associated with prominent Americans that represent those pivotal ideas that shaped the nation, teach Americans about their ancient past, or are premier examples of design or construction. While many historic places are important locally or at a state level, a lesser number have meaning for all Americans. National Historic Landmarks are places that "possess exceptional value or quality in illustrating and interpreting the heritage of the United States."[31]

4.4.1.2 *State Statutes and Regulations*

California Register of Historical Resources (California Register)

The California Register is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (Pub. Resources Code, Section 5024.1(a)). The California Register is administered through the State Office of Historic Preservation (OHP) that is part of the California State Parks system.[32]

A cultural resource is evaluated under four California Register criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in CEQA Guidelines Section 15064.5(a)(3):

1) It is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;
2) It is associated with the lives of persons important in our past;
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4) It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource according to OHP publications. The California Register also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association." Archaeological resources can sometimes qualify as "historical resources" (CEQA Guidelines, Section 15064.5, subd. (c)(1)). In

[31] U.S. Department of the Interior, National Park Service. National Register of Historic Places. https://www.nps.gov/nhl/. Accessed October 28, 2016.
[32] California State Office of Historic Preservation. http://ohp.parks.ca.gov/. Accessed October 28, 2016.

addition, Public Resources Code Section 5024 requires consultation with the OHP when a project may impact historical resources located on State-owned land.

Two other programs are administered by the state: California Historical Landmarks and California "Points of Interest." California Historical Landmarks are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. California Points of Interest are buildings, sites, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.

CEQA Guidelines

CEQA Guidelines Section 15064.5(a) defines what constitutes a "historical resource" for purposes of CEQA. That section provides that the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1.

CEQA Regulations Regarding Human Remains

Section 15064.5 of the State CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on nonfederal land. These procedures are outlined in PRC Sections 5097 and 5097.98. These codes protect such remains from disturbance,

vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

California Native American Historical, Cultural and Sacred Sites Act

The California Native American Historical, Cultural and Sacred Sites Act applies to both state and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the county coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The Act stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Assembly Bill (AB) 52

Assembly Bill (AB) 52 was approved by the Governor on September 25, 2014. It adds a new category of resources to CEQA that must be considered during project planning – Tribal Cultural Resources. It also establishes a framework and timeline for consultation. AB 52 applies to projects that have a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015.

AB 52 requires lead agencies to conduct formal consultations with California Native American tribes during the CEQA process 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. This consultation requirement applies only if the tribes have sent written requests for notification of projects to the lead agency.

California Health and Safety Code

California Health and Safety Code Section 7050.5 regulates the procedure to be followed in the event of human remains discovery. Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the County Coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are determined to be Native American, the Coroner is required to contact the NAHC. The NAHC is responsible for contacting the most likely Native American descendent, who would consult with the local agency regarding how to proceed with the remains. According to Section 15064.5 of the CEQA Guidelines, all human remains are considered a significant resource.

4.4.1.3 *General Plan Policies*

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocated necessary resources to support fulfillment of the City vision. Implementing actions are the specific to-do steps required to carry out the General

Plan's broader goals and policies and are included in a companion Action Plan. The following 2030 General Plan policies are applicable to cultural resources in the North Bayshore area.

Land Use and Design Element	
Goal LUD-11	**Preserved and protected important historic and cultural resources.**
Policy LUD 11.1	Historical Preservation. Support the preservation and restoration of structures and cultural resources listed in the Mountain View Register of Historic Resources, the California Register of Historic Places or National Register of Historic Places.
Policy LUD 11.2	Adaptive re-use. Encourage the adaptive re-use of historic buildings in ways that retain their historical materials and character-defining features.
Policy LUD 11.3	Incentives. Encourage historical preservation through incentives and opportunities.
Policy LUD 11.5	Protect important archaeological and paleontological sites. Utilize the development review process to identify and protect archaeological and paleontological deposits.
Policy LUD 11.6	Protect Human Remains. Utilize the development review process to identify and protect human remains and follow the appropriate procedures outlined under Health and Safety Code Section7050.5 and Public Resources Code Section 5097.98.

4.4.1.4 *City of Mountain View Zoning Ordinance*

The City's Zoning Ordinance is in Chapter 36, Article 16 of the City's Code of Ordinances (City Code) and consists of land use regulations, based on policies of the General Plan, that have been enacted in order to promote the public health, safety, morals, comfort and general welfare throughout the City of Mountain View.

Division 15, Designation and Preservation of Historic Resources of the City's Zoning Ordinance includes a process for recognizing, preserving, and protecting historical resources. Division 15, Section 36.54.55 establishes the Mountain View Register of Historic Resources as the City's official list of historically significant buildings, structures, and sites that are considered during the development review process. The Mountain View Register has similar criteria for listing as the State of California Register and consists of historic resources that meet one or more of the following criterion (refer to Division 15, Section 36.54.65):

1. Is strongly identified with a person who, or an organization which, significantly contributed to the culture, history or development of the City of Mountain View;
2. Is the site of a significant historic event in the City's past;
3. Embodies distinctive characteristics significant to the City in terms of a type, period, region, or method of construction or representative of the work of a master or possession of high artistic value;
4. Has yielded, or may be likely to yield, information important to the City's prehistory or history.

4.4.2 Existing Conditions

4.4.2.1 *Historic Resources*

Based on a review of historic-era maps and literature for the Precise Plan area, there are no known historical resources located within the North Bayshore Precise Plan area. The Henry A. Rengstorff House, a historic residence listed on the National Register of Historic Places, California Register, and City Register of Historic Resources, is located within Shoreline at Mountain View Park at 3070 North Shoreline Boulevard, approximately 0.5 miles north of the Precise Plan area. The house was constructed in 1867 and was originally located on 1737 Stierlin Court (within the North Bayshore Precise Plan area), and was relocated to the park in the 1980's. Since the Rengstorff House was on the historic listings prior to its relocation, the house is listed under the Stierlin Court address.

In 2000, one potential historic structure, a wooden barn, was identified at 1800 Landings Avenue. The barn was not further evaluated and has not been recorded as a historic resource.

In addition to the original location of the Henry Rengstorff House (1737 Stierlin Court), a pre-1900 house was previously located on Alta Avenue, and two early 20th century houses were previously located along North Shoreline Boulevard (between Stierlin Court/Amphitheatre Parkway and Pear Avenue). The vicinities of these late 19th and early 20th century houses have a moderate to high potential to contain historic-era subsurface archaeological deposits.

4.4.2.2 *Archaeological Resources*

Previous cultural resource investigations have been completed for approximately 20 percent of the North Bayshore Precise Plan area. None of these investigations identified archaeological resources within the Precise Plan area.

One Native American (pre-historic period) archaeological deposit is located immediately adjacent to the Precise Plan area, to the east. The resource was originally recorded in 1978 with updated records in 2007 and 2008. This archaeological deposit consisted of the remains of clam and oyster shells in highly disturbed dark friable soils located in three vacant portions at the US 101 interchange ramp at North Rengstorff Avenue/Amphitheater Parkway. The two primary record updates in 2007 and 2008 indicate that surface inspection and subsurface testing at the three US 101 off-ramp areas resulted in the finding of no cultural materials. Since only areas within the Caltrans legal right-of-way were evaluated in this investigation, it is possible that archaeological deposits could occur outside of the right-of-way, adjacent to US 101 and the Precise Plan boundary.

4.4.2.3 *Paleontological Resources*

With regards to paleontological resources, there have been no recorded fossils discovered within the City of Mountain View; two fossils have been discovered within two miles of the City's sphere of influence (which is outside of Mountain View's City limits). In Mountain View, the presence of geological formations known to contain fossils indicates that the Precise Plan area could have moderate paleontological sensitivity.

4.4.2.4 *Tribal Resources: Native American Consultation*

No tribes have sent written requests for notification of projects to the City of Mountain View, therefore, formal tribal consultations will not be required during the CEQA process.

On April 13, 2016, notification letters regarding the proposed project were sent to a list of five Native American tribal representatives provided by the Native American Heritage Commission. Based on consultation with the tribal representatives, no Native American cultural resources have been identified within or near the Precise Plan area. During the preliminary consultation process, two tribal representatives requested to be contacted should any Native American deposit or cultural materials be identified within the Precise Plan area. The tribal requests for notification were consistent with the City's standard conditions of approval and AB 52 requirements. There were no other notification requests from the tribal representatives.

4.4.3 Cultural Resources Impacts

4.4.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a cultural resources impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- Disturb any human remains, including those interred outside of dedicated cemeteries;
- 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:
  - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or
  - 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 this criteria, the significance of the resource to a California Native American tribe shall be considered.

4.4.3.2 *Historic Resource Impacts*

As previously discussed, there are no known historic structures on or adjacent to the project site. The City will review future development proposals on a project-by-project basis to ensure that that historic and cultural resources are identified early in the development review process. Based on the cultural resources literature review completed for the Precise Plan area, the wooden barn structure on 1800 Landings Avenue could be historic and shall be evaluated at the time of specific development

(if development or redevelopment is proposed at this property), which is consistent with the below standard conditions of approval.

If historic resources are identified in the future during the buildout of the North Bayshore Precise Plan, they will be subject to Mountain View 2030 General Plan policies and standard conditions of approval, which could include the following:

Standard Conditions of Approval

- SECRETARY OF THE INTERIOR STANDARDS: All construction activities, including maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, shall be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Weeks and Grimmer 1995).

- DOCUMENTATION OF HISTORIC RESOURCE: Prior to issuance of building permit for any work being done on the historic structure, the applicant shall provide the following documentation: (1) two copies of each historical assessment, printed on archival paper; and (2) two complete sets of photographs of the existing property (including the immediate neighborhood to establish context), the site (including any nonhistoric structures), all exterior elevations and features, and all interior spaces and features. The applicant shall utilize a 35-mm camera with black and white film only. The photographs shall be printed on fiber paper, and all negatives and prints must meet the Historic American Building Survey Photographic Standards for archival processing. All documentation shall be forwarded to the Planning Division (one copy of which will be forwarded to the Mountain View History Center) prior to the issuance of any building or demolition permits for the property.

- SALVAGE PROGRAM: The applicant shall undertake a salvage program to save and promote reuse of the building's historically significant materials and features to the extent reasonably feasible. Salvage allows for the removal of individual architectural elements for potential reuse. Salvaged elements could be reused at the project site or another project, or be given to an architectural salvage company. Salvage has the added benefit of landfill and waste diversion.

For these reasons, the implementation of the Precise Plan would not result in impacts to historic resources.

Impact CR-1: Implementation of the amended North Bayshore Precise Plan project would not result in impacts to historic resources. **[Less Than Significant Impact]**

4.4.3.3 *Archaeological Resource Impacts*

The majority of the Precise Plan area has already been developed, and it is unlikely that buried historical or prehistoric resources are present in most developed areas. Although no prehistoric or historic archaeological resources have been identified in the North Bayshore Precise Plan area, the vicinities of these late 19th and early 20th century houses have a moderate to high potential to contain historic-era subsurface archaeological deposits.

The likelihood of prehistoric archaeological deposits being encountered during future development/ redevelopment is low. Prehistoric archaeological deposits could, however, occur near the US 101/North Rengstorff/Amphitheatre Parkway interchange adjacent to the Precise Plan area and areas within the Precise Plan area that have not been surveyed (e.g., areas near Permanente and Stevens Creeks).

In accordance with Policy LUD 11.5 and the following General Plan Actions, City staff shall review future development proposals in the North Bayshore Precise Plan area on a project-by-project basis to determine if further studies are required, as follows:

- **Action LUD 11.5.1**: Review Historic Property Directory List. Prior to approval of development permits for projects that include ground-disturbing activities, City staff shall review the most recent and updated Northwest Information Center list: Historic Property Directory for the County of Santa Clara, to determine if known archaeological and paleontological sites underlie the proposed project. If it is determined that known cultural resources are within one quarter mile of the project site, the City shall require the project applicant to conduct a records search at the Northwest Information Center (NWIC) at Sonoma State University to confirm whether there are any recorded cultural resources within or adjacent to the project site. Based on that research, the City shall determine whether field study by a qualified cultural resources consultant is recommended.

- **Action LUD 11.5.2**: Pre-construction cultural resource surveys. Should City staff determine that field study for cultural resources is required, the project applicant shall have a cultural resource professional meeting the Secretary of the Interior's Standards in history and/or archaeology conduct a preconstruction survey to identify significant cultural resources – including archaeological sites, paleontological resources, and human remains – in the project site and provide project-specific recommendations, as needed. Coordination with local Native American communities should be done when significant cultural resources and remains are identified as part of pre-approval site analysis.

In addition, future development proposals in the North Bayshore Precise Plan area shall comply with the following measures, which are imposed on projects in the City as standard conditions of approval. These measures are consistent with the CEQA requirements set forth in CEQA Guidelines Section 15064.5.

Standard Conditions of Approval: If archaeological resources or human remains are discovered on-site during ground-disturbing activities, the following standard conditions of approval would reduce the project's impacts on these resources to a less than significant level. The following conditions would be applicable to the future development in the Precise Plan area:

- CONSTRUCTION PRACTICES AND NOTICING: DISCOVERY OF ARCHAEOLOGICAL RESOURCES - If prehistoric or historic-period cultural materials are unearthed during ground-disturbing activities, it is recommended that all work within 100' of the find be halted until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert-flaked stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally

darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, capping, or data recovery.

- CONSTRUCTION PRACTICES AND NOTICING: DISCOVERY OF HUMAN REMAINS
  In the event of the discovery of human remains during construction or demolition, there shall be no further excavation or disturbance of the site within a 50' radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his/her authority, he/she shall notify the Native American Heritage Commission, which shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the landowner shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report shall be submitted to the City's Community Development Director prior to release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results, including a description of the monitoring and testing resources analysis methodology and conclusions, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the City's Community Development Director.

Impact CR-2: With the implementation of General Plan policies and standard City conditions of approval for all future development projects, the amended North Bayshore Precise Plan project would result in a less than significant impact to subsurface archaeological resources and human remains. **[Less Than Significant Impact]**

4.4.3.4 *Paleontological Resource Impacts*

Future development and redevelopment activities under the Precise Plan, including excavation, construction, and infrastructure improvements could result in the discovery of paleontological resources.

If paleontological resources are identified in the future during the buildout of the North Bayshore Precise Plan, they will be subject to Mountain View General Plan policies, Actions LUD 11.5.2 and 11.5.3, and standard conditions of approval, which could include the following:

Standard Condition of Approval

- CONSTRUCTION PRACTICES AND NOTICING: PALEONTOLOGICAL RESOURCES
  In the event that a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a

qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

Implementation of the above standard condition of approval would reduce the impact of future development and redevelopment activities on paleontological resources to a less than significant level.

Impact CR-3: With the implementation of General Plan policies and standard City conditions of approval for all future development projects, the amended North Bayshore Precise Plan would result in a less than significant impact to unknown paleontological resources. **[Less Than Significant Impact]**

4.4.3.5 *Tribal Resources*

Based on consultation with the tribal representatives, no Native American tribal resources have been identified within or near the Precise Plan area. Therefore, future development and redevelopment under the Precise Plan would not cause a substantial adverse change in the significance of tribal resource.

Impact CR-4: Implementation of the amended North Bayshore Precise Plan project would not result in impacts to tribal resources. **[Less Than Significant Impact]**

4.4.3.6 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant cultural resources impacts with the implementation of standard City of Mountain View conditions of approval. The proposed amendments to the General Plan would not result in additional cultural resources impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.4.3.7 *Cumulative Impacts*

Cumulative Impacts: Historic Resources

The cumulative projects analyzed in this Draft SEIR in Mountain View and neighboring cities may contain historic resources, whether or not they are currently recognized. The project would,

however, not result in an impact to a historic resource, and, therefore, would not contribute to a cumulative impact to historic resources.

Impact C-CR-1: Implementation of the amended North Bayshore Precise Plan project would result in a less than significant cumulative impact to historic resources. **[Less Than Significant Cumulative Impact]**

Cumulative Impacts: Prehistoric Resources

The cumulative projects analyzed in this Draft SEIR in Mountain View and neighboring cities may require excavation and grading or other activities that may affect unknown prehistoric cultural resources. All cumulative projects occurring within Mountain View or neighboring cities, however, would be required to implement conditions of approval or mitigation measures that would avoid impacts to prehistoric resources and/or reduce them to a less than significant level. These projects would also be subject to federal, state, and county laws regulating cultural or paleontological resources. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative impacts to prehistoric resources.

Impact C-CR-2: Implementation of the amended North Bayshore Precise Plan project would result in a less than significant cumulative impact to prehistoric resources. **[Less Than Significant Cumulative Impact]**

4.4.4 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
CR-1: Implementation of the amended North Bayshore Precise Plan project would not result in impacts to historic resources.	Less Than Significant	No mitigation required	Less Than Significant Impact
CR-2: With the implementation of General Plan policies and standard City conditions of approval for all future development projects, the amended North Bayshore Precise Plan project would result in a less than significant impact to unknown archaeological resources and human remains.	Less Than Significant	No mitigation required	Less Than Significant
CR-3: With the implementation of General Plan policies and standard City conditions of approval for all future development projects, the amended North Bayshore Precise Plan would result in a less than significant impact to unknown paleontological resources.	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
CR-4: Implementation of the amended North Bayshore Precise Plan project would not result in impacts to tribal resources.	Less Than Significant	No mitigation required	Less Than Significant
C-CR-1: Implementation of the amended North Bayshore Precise Plan project would result in a less than significant cumulative impact to historic resources.	Less Than Significant	No mitigation required	Less Than Significant
C-CR-2: Implementation of the amended North Bayshore Precise Plan project would result in a less than significant cumulative impact to prehistoric resources.	Less Than Significant	No mitigation required	Less Than Significant

4.5 ENERGY

This section summarizes information on energy use in the state, Santa Clara County, and City of Mountain View and provides an evaluation of the effects the proposed project would have on energy demand. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(C) and Appendix F, EIRs are required to 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. The information in this section is based largely on data and reports produced by the California Energy Commission (CEC), the Bay Area Air Quality Management District (BAAQMD), and the United Regulatory Framework

4.5.1 Environmental Setting

4.5.1.1 *Regulatory Framework*

Federal

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

State of California

Renewable Energy Standards

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 2006, California's 20 percent by 2010 RPS goal was codified under Senate Bill (SB) 107. Under the provisions of SB 107, investor-owned utilities were required to generate 20 percent of their retail electricity using qualified renewable energy technologies by the end of 2010. In 2008, Executive Order S-14-08 was signed into law and required that retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Pacific Gas and Electric Company (PG&E's) is the electricity provider to the project site. PG&E's 2015 electricity mix was 30 percent renewable.[33]

In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 for retail sellers and publicly owned utilities, requires them to procure 50 percent of the state's electricity from renewable sources by 2030.

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.[34] Compliance

[33] PG&E. Exploring Clean Energy Solutions. Accessed February 6, 2017. https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page.
[34] California Building Standards Commission. "Welcome to the California Building Standards Commission". Accessed February 6, 2017. http://www.bsc.ca.gov/.

with Title 24 is mandatory at the time new building permits are issued by city and county governments.[35]

In January 2010, the state adopted the California Green Building Standards Code (CALGreen), which established mandatory green building standards for buildings in California. CALGreen was also updated and went in to effect on January 1, 2017. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality.

City of Mountain View

Green Building Code

At the local level, the Mountain View Green Building Code (MVGBC) amends the state-mandated CALGreen standards to include local green building standards and requirements for private development. The MVGBC applies green building requirements based on building type and size to new construction, residential additions, and commercial/industrial tenant improvements. The MVGBC requires projects to be designed and constructed to meet the intent of a third-party, green-building rating system, though formal certification is not required.[36] For residential projects proposing over five units, the MVGBC requires that those buildings meet the intent of 70 GreenPoint Rated points from the Build it Green certification program, as well as compliance with mandatory CALGreen requirements. Commercial office projects meet the intent of LEED[37] Silver and the mandatory CALGreen requirements.

North Bayshore Precise Plan

The North Bayshore Precise Plan builds on the 2030 General Plan vision identifying North Bayshore as a leader in highly sustainable and innovative development. The General Plan calls for sustainable planning, building, and design, and encourages new construction to achieve increasingly higher levels of environmental performance. The North Bayshore Precise Plan (specifically Chapter 4 Green Building and Site Design) contains standards and guidelines that build upon CALGreen, LEED, and GreenPoint Rated requirements, including additional performance-based targets and prescriptive measures for site planning and design, energy efficiency, renewable energy, and water conservation (among others). The objectives of the Precise Plan's green-building measures include:

- Reducing the overall environmental impact of building construction and operation;
- Improving the health, safety and welfare of residents, workers, and visitors;
- Lowering GHG associated with energy, water, and material use;
- Reducing operating expenses by minimizing waste of energy, water, materials, and other resources in the construction and operation of buildings; and
- Improving stormwater quality and reduce stormwater runoff from new construction.

[35] California Energy Commission (CEC). "2016 Building Energy Efficiency Standards". Accessed February 6, 2017. http://www.energy.ca.gov/title24/2016standards/index.html.
[36] City of Mountain View, Community Development Department. MVGBC. 2011. Accessed October 31, 2016. http://www.mountainview.gov/depts/comdev/building/construction/mvgbc.asp.
[37] U.S Green Building Council's Leadership in Energy and Environmental Design (LEED) program.

Commercial and office projects in the North Bayshore area proposing to utilize the Precise Plan's non-residential FAR bonus are encouraged to implement a progressively higher level of environmental performance focused on energy use and generation, water use, and materials management (meeting the intent of LEED BD+C Platinum in addition to other measures outlined in Appendix C of the Precise Plan).

Residential projects taking advantage of the North Bayshore Density Bonus Program are required to implement additional green building measures specified in Appendix B of the North Bayshore Precise Plan, including earning 120 GreenPoint Rated equivalent points, pre-plumbing for greywater systems, and use of green roofs or high-reflectance roof and paving materials to reduce the heat-island effect. Other residential projects not seeking the density bonus are required to meet the City's minimum green building requirements, mandatory CALGreen requirements, and other green building regulations, as outlined in the Precise Plan in Chapter 4.1, Green Building Design.

4.5.1.2 *Existing Conditions*

Energy Background

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases of energy use.

Energy usage is typically quantified using the British thermal unit (Btu).[38] As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 123,000 Btus, 1,000 Btus, and 3,400 Btus, respectively. Utility providers measure gas usage in therms. One therm is approximately equal to 100,000 Btus.

Electrical energy is expressed in units of kilowatts (kW) and kWh. One kW, a measurement of power (energy used over time), equals one thousand joules[39] per second. A kWh is a measurement of energy. If run for one hour, a 1,000 watt (one kW) hair dryer would use one kWh of electrical energy. Other measurements of electrical energy include the megawatt (1,000 kW) and the gigawatt (1,000,000 kW).

Total energy usage in California was approximately 7,600 trillion Btus in the year 2014 (the most recent year for which this specific data was available).[40] The breakdown by sector was approximately 18 percent for residential uses, 19 percent for commercial uses, 24 percent for industrial uses, and 39 percent for transportation.[41]

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[38] A Btu is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.

[39] As defined by the International Bureau of Weights and Measures, the joule is a unit of energy or work. One joule equals the work done when one unit of force (a Newton) moves through a distance of one meter in the direction of the force.

[40] United States Energy Information Administration (EIA). "California Energy Consumption Estimates 2014". December 7, 2016. http://www.eia.gov/state/?sid=CA#tabs-2.

[41] EIA. *Table C1. Energy Consumption Overview: Estimates by Energy Source and End-Use Sector, 2014.* Accessed December 7, 2016. http://www.eia.gov/beta/state/seds/data.cfm?incfile=/state/seds/sep_sum/html/sum_btu_1.html&sid=CA.

Electricity

The electricity supply in California involves a complex grid of power plants and transmission lines. In 2015, California produced approximately 75 percent of the electricity it consumed; it imported the remaining 25 percent from the Pacific Northwest (generated by wind), and the Southwest (generated at coal-fired and natural gas-fired power plants, and from nuclear power plants). Electricity supplied from out-of-state coal-fired power plants has decreased since 2006 after the enactment of a state law requiring California utilities to limit new long-term financial investments to power plants that meet California emissions.[42]

The bulk of California's electricity comes from power plants. In 2015, 44 percent the state's electricity was generated by natural gas, nine percent by nuclear, five percent by large hydroelectric, and six percent by coal. Renewable sources such as rooftop photovoltaic systems, biomass power plants, and wind turbines, accounted for 22 percent of California's electricity. Fourteen percent of California's power comes from unspecified sources. California also leads the nation in electricity generation from solar, geothermal, and biomass resources.[43]

In 2015, total electrical system power for California was 282,896 gigawatt-hours (GWh), about one percent lower than 2014. California's in-state electricity production decreased by 1.5 percent at 196,195 GWh compared to 199,193 GWh from 2014 levels. Growth in annual electricity consumption declined in 2015 reflecting increased energy efficiency. Per capita drops in electrical consumption are predicted through 2025 as a result of energy efficiency gains and increased self-generation (particularly for photovoltaic systems).[44] Due to population increases, however, it is estimated that future demand in California for electricity will grow at approximately one percent each year through 2025, and that 320,862 GWh of electricity would be utilized in the state in 2025.[45]

PG&E is the City of Mountain View's energy utility, providing both natural gas and electricity for residential, commercial, industrial, and municipal uses. PG&E generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. In 2015, natural gas facilities provided 25 percent of PG&E's electricity delivered to retail customers; nuclear plants provided 23 percent; hydroelectric operations provided six percent; renewable energy facilities including solar, geothermal, and biomass provided 30 percent; and 17 percent was unspecified.[46]

Electricity usage for differing land uses varies substantially by the type of uses in a building, the type of construction materials used, and the efficiency of the electricity-consuming devices used. Electricity in Santa Clara County in 2014 was consumed primarily by the commercial sector (77

[42] EIA. "California State Energy Profile". Accessed February 6, 2017. https://www.eia.gov/state/analysis.cfm?sid=CA.
[43] CEC. "Total Electricity System Power". Accessed December 7, 2016. http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html.
[44] CEC. *California Energy Demand 2016-2026, Revised Electricity Forecast*. Accessed February 6, 2017. http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-03/TN207439_20160115T152221_California_Energy_Demand_20162026_Revised_Electricity_Forecast.pdf.
[45] CEC. California Energy Demand Updated Forecast 2015-2025. Accessed February 6 2017. http://www.energy.ca.gov/2014publications/CEC-200-2014-009/CEC-200-2014-009-SD.pdf.
[46] PG&E. Delivering Low-emission Energy. Accessed October 31, 2016. https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page.

percent), the residential sector consuming 23 percent. In 2015, a total of approximately 16,812 GWh of electricity were consumed in Santa Clara County.[47]

Natural Gas

Approximately ten percent of California's natural gas supply came from in-state production, while 90 percent was imported from other western states and Canada.[48] In 2015, approximately 36 percent of the natural gas delivered for consumption in California was for electricity generation, 35 percent for industrial uses, 18 percent for residential uses, 10 percent for commercial uses, and less than one percent for transportation. As with electricity usage, natural gas usage depends on the type of uses in a building, the type of construction materials used, and the efficiency of gas-consuming devices. In 2015, the State of California consumed approximately 2.4 billion MBtu of natural gas (or 2.4 quadrillion Btu) of natural gas.[4950] In Santa Clara County, a total of 41 MBtu of natural gas were consumed in 2015.[51]

Overall demand for direct-service natural gas in the commercial and residential sectors in California is expected decrease by 1.1 percent between 2015 and 2026 as a result of overall energy efficiency. Demand for natural gas for at power plants for electricity generation is expected to decrease by 2.1 percent between 2015 and 2026 as a result of the implementation of state-mandated RPS targets.[52]

Gasoline for Motor Vehicles

California accounts for more than one-tenth of the United States' crude oil production and petroleum refining capacity.[53] In 2015, over 140 billion gallons of gasoline, diesel, and jet fuel were consumed in the United States and over 14 billion gallons of gasoline were consumed in California.[5455] The United States has seen low prices and high demand in the last few years due to low oil prices and a recovering economy, and this trend is expected to continue in the near term.[56]

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-1970s to 23.2 mpg in

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[47] CEC. Energy Consumption Data Management System. Electricity Consumption by County. Accessed February 6, 2017. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[48] CEC. Supply and Demand of natural Gas in California". Accessed February 6, 2017. http://www.energy.ca.gov/almanac/naturalgas_data/overview.html.
[49] U.S. EIA. "Natural Gas Summary". Accessed February 6, 2017. http://www.eia.gov/dnav/ng/ng_sum_lsum_dcu_SCA_a.htm.
[50] U.S. EIA. Natural Gas Conversion Calculator. Accessed February 6, 2017. https://www.eia.gov/kids/energy.cfm?page=about_energy_conversion_calculator-basics#natgascalc.
[51] CEC. Natural Gas Consumption by County. Santa Clara County 2015 Data. Accessed February 6, 2017. http://ecdms.energy.ca.gov/gasbycounty.aspx.
[52] CEC. *Electricity and Natural Gas Demand Forecast*. Accessed February 6, 2017. http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-03/TN206501_20151103T100153_Draft_Staff_Report_2015_Natural_Gas_Outlook.pdf.
[53] U.S. EIA. California State Energy Profile. Accessed February 6, 2017. http://www.eia.gov/beta/state/analysis.cfm?sid=CA.
[54] U.S. EIA. Frequently Asked Questions. Accessed February 6, 2017. https://www.eia.gov/tools/faqs/faq.cfm?id=23&t=10.
[55] California State Board of Equalization. Taxable Gasoline, Diesel Fuel, Jet Fuel Ten Year Reports. February 6, 2017. http://www.boe.ca.gov/sptaxprog/spftrpts.htm.
[56] U.S. EIA. Short-Term Energy Outlook. Accessed February 6, 2017. http://www.eia.gov/forecasts/steo/report/us_oil.cfm.

2014.[57] 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 mpg by the year 2020, applies to cars and light trucks of Model Years 2011 through 2020.[58,59] In 2012, the federal government raised the fuel economy standard to 54.5 mpg for cars and light-duty trucks by Model Year 2025.[60]

4.5.2 Energy Impacts

4.5.2.1 *Thresholds of Significance*

Based on Appendix F of the CEQA Guidelines, and for the purposes of this SEIR, a project will result in a significant energy impact if the project will:

- Result in a substantial increase in demand upon energy resources in relation to projected supplies; or
- Use fuel or energy in a wasteful manner.

4.5.2.2 *Energy Demand*

Electricity and Natural Gas

The operation of the proposed 3.6 million square feet of commercial/office uses[61] and occupation of the 9,850 residential units in the amended North Bayshore Precise Plan would consume energy (in the form of electricity and natural gas) for building heating and cooling, lighting, and water heating. Operational energy would also be consumed during each vehicle trip associated with the proposed uses.

Table 4.6-1 shows the estimated annual energy usage for the proposed project. It is estimated that the proposed project would have an annual energy use of approximately 88,423,197 kWh of electricity and 157,516,649 kBtu of natural gas.[62] This increase would represent less than one percent of Santa Clara County's overall usage of electricity and natural gas and would not be considered a substantial increase in demand for energy resources in relation to Santa Clara County's and State of California's overall use and projected supplies.

Additionally, the proposed project would be required to implement the standards and guidelines from Chapter 4, Green Building and Site Design of the amended North Bayshore Precise Plan, including

[57] U.S. EPA. Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles. Accessed February 6, 2017. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html.
[58] U.S. Department of Energy. Energy Independence & Security Act of 2007. Accessed December 7, 2016. http://www.afdc.energy.gov/laws/eisa.
[59] Public Law 110–140—December 19, 2007. Energy Independence & Security Act of 2007. Page 1449. Accessed December 7, 2016. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.
[60] National Highway Traffic Safety Administration. *Obama Administration Finalizes Historic 54.5 mpg Fuel Efficiency Standards*. Accessed December 7, 2016. http://www.nhtsa.gov/About+NHTSA/Press+Releases/2012/Obama+Administration+Finalizes+Historic+54.5+mpg+Fuel+Efficiency+Standards.
[61] A total of 3.6 million feet of new office development includes all the office and commercial development currently being considered in North Bayshore.
[62] This calculation does not account for any existing buildings being demolished and replaced.

measures related to energy efficiency, renewable energy, and water conservation. Further, residential and commercial/office projects taking advantage of the North Bayshore Density Bonus Program would be required to implement additional green building measures specified in Appendix B and Appendix C of the North Bayshore Precise Plan.

Table 4.6-1:
Estimated Project Annual Energy Use

Use	Use Factor	Electricity (kWh)	Natural Gas (kBtu)
3.6 million square feet of commercial office	14.67 kWh/square foot 19.53 kBtu/square foot	52,812,000	70,308,000
9,850 residential units	3,615.35 kWh/dwelling unit 8,853.67 kBtu/dwelling unit	35,611,197	87,208,649
	Total:	88,423,197	157,516,649

Source: CAPCOA. Cal *CalEEMod User's Guide, Version 2013.2*. July 2013. Appendix D, Table 8.1

Gasoline for Vehicle Trips

The proposed amended Precise Plan project would generate approximately 73,450 daily vehicle trips, and a total annual VMT of approximately 654,050 miles.[63,,64] Using EPA fuel economy estimates (for 2014, the estimated average fuel economy of 23.2 mpg), the amended Precise Plan would result in the consumption of approximately 28,192 additional gallons of gasoline per year.

This increase would not be substantial in the context of gasoline supply and demand in the State of California and the United States as a whole. New automobiles purchased by future residents of the proposed project would be subject to fuel economy and efficiency standards applied throughout the State of California, which means that over time the fuel efficiency of vehicles associated with the project site would continue to improve. Additionally, the Precise Plan area is located within walking or biking distance of existing and future office and commercial uses, and North Bayshore Precise Plan TDM requirements for those uses would further reduce gasoline use for individual automobiles. Lastly, the incorporation of residential uses in the amended Precise Plan is intended to reduce vehicle trips and related gasoline consumption.

Bus stops for Santa Clara Valley Transportation Authority lines 120 and 40 are located within the Precise Plan area, as are MVGo shuttle stops providing service to Caltrain and other area destinations. As a result, residents of the project site could commute to and from work without significantly increasing transportation-related energy use.

[63] Fehr & Peers. *Transportation Impact Analysis North Bayshore Precise Plan*. February 2017.
[64] Association of Bay Area Governments. *Plan Bay Area*. Table 2.1-5. Accessed April 18, 2016. http://planbayarea.org/pdf/Draft_EIR_Chapters/2.1_Transportation.pdf 10,529.

Impact EN-1: The amended Precise Plan would not result in a substantial increase in demand upon energy resources in relation to projected supplies. **[Less than Significant Impact]**

4.5.2.3 *Energy Waste or Inefficient Use*

Construction

The amended North Bayshore Precise Plan would allow up to 3.6 million square feet of office and commercial uses, in addition to 9,850 multi-family residential units. Construction of these uses would require energy for the manufacture and transportation of building materials, preparation of the project sites (e.g., grading), and the actual construction of the buildings. Construction activities of future development projects would be phased through the horizon of the Precise Plan (to the year 2030).

Construction processes are generally designed to be efficient in order to avoid excess monetary costs. That is, equipment and fuel are not typically used wastefully on the site because of the added expense associated with renting the equipment, as well as maintaining and fueling it. Therefore, the opportunities for increasing energy efficiency during construction are limited. Project development in urbanized areas with close access to construction and supplies and workers can be more efficient. Future projects constructed within the North Bayshore Precise Plan area would be required implement BAAQMD Best Management Practices (BMPs), as detailed in *Section 3.3, Air Quality*, restricting equipment idling times and requiring the applicant to post signs on the project site reminding workers to shut off idle equipment; thus, reducing the potential for energy waste.

Further, future projects constructed under the Precise Plan would be required to implement the standards and guidelines from the Materials Management Section (Section 4.5) of Chapter 4 Green Building and Site Design of the North Bayshore Precise Plan, including the following:

North Bayshore Precise Plan Standards

2. **Construction waste reduction.** Recycle or salvage 65 percent of nonhazardous construction and demolition debris generated at the site; thus, reducing inefficiencies and waste from the construction process.

North Bayshore Precise Plan Guidelines

2. **Material selection.** Construction materials for all new projects should be certified by third-parties e.g. the Forest Stewardship Council, and selected based on a lifecycle assessment of their embodied energy and/or greenhouse gas emissions.
3. **Regional materials.** All new construction, additions, and alterations are encouraged to use building materials or products extracted, harvested, recovered, or manufactured within 500 miles of North Bayshore for a minimum portion of the building value.

4. **Reused materials.** All new construction, additions, and alterations are encouraged to use salvaged, refurbished, refinished, or reused materials for a minimum portion of the building value

There would be unavoidable consumption of energy caused by construction because the use of fuels and building materials are fundamental to construction of new buildings. With implementation of the air quality-related BMPs and standards and guidelines from the Materials Management Section the North Bayshore Precise Plan, excessive demand on energy supply during construction would not occur and the impact would be less than significant.

Operation

The project proposes to develop up to 9,850 residential units and 3.6 million square feet of commercial uses within an infill, urban area. Under the North Bayshore Precise Plan, new construction shall meet the MVGBC requirements, mandatory CALGreen and LEED requirements, as well as other green building regulations outlined in Chapter 4 of the North Bayshore Precise Plan. As such, the proposed project would meet or exceed Title 24 energy efficiency standards. As described previously, residential and commercial/office projects taking advantage of the North Bayshore Density Bonus Program would implement additional green building measures specified in Appendix B and Appendix C of the North Bayshore Precise Plan. These measures would further decrease the potential for energy waste and increase building efficiency. In addition, development under the North Bayshore Precise Plan would occur within an infill area and would take advantage of existing infrastructure, which reduces the energy required to provide utilities and services to the site.

As required under the City of Mountain View Greenhouse Gas Reduction Program (GGRP), Transportation Demand Management (TDM) Plans are required to be prepared for commercial, office, and residential uses and would be implemented in the North Bayshore Precise Plan area. Examples of the trip reduction measures that are and would be included within TDM Plans include formal ride-sharing and bike-sharing programs; the provision of short-distance shuttles to and from offices, commercial uses, and the Mountain View Transit Center; pedestrian improvements; and bicycle amenities and infrastructure.

While future development under the North Bayshore Precise Plan would increase overall energy use in the City, the Precise Plan contains standards and guidelines to ensure that future development would not use fuel or energy in a wasteful manner, as described previously. The proposed project has a 2030 horizon, and energy fuel efficiency would improve over time. Implementation of TDM Plans required for development projects under the Precise Plan would also reduce energy consumption from traffic trips to and from the site.

Impact EN-2: The amended North Bayshore Precise Plan would not use energy in a wasteful manner. **[Less than Significant Impact]**

4.5.3 Consistency with Plans

4.5.3.1 *Mountain View 2030 General Plan*

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval, and consistency with the standards and guidelines in the Precise Plan. The proposed amendments to the General Plan would not result in additional energy impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The residential uses in the North Bayshore Precise Plan area have been proposed as a way to reduce vehicle miles traveled and overall vehicle trips. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.5.4 Cumulative Energy Impacts

Future development within the PG&E service area will increase residential, commercial, office, and other non-residential needs for electricity and gas. PG&E is expected to meet future energy demand through increasing reliance on renewable resources in response to regulatory requirements intended to address global climate change. If new large-scale power sources were to be implemented in the future, they would be subject to environmental review and permitting requirements.

The energy demand of the proposed project, together with the cumulative projects, would be considered less than significant due to the small increment of increased energy demand as compared to county-wide usage, as a result of energy conservation requirements and programs that have been established under the Mountain View 2030 General Plan and Greenhouse Gas Reduction Program and other energy conservation programs in neighboring jurisdictions. Additionally, with the implementation of AB 32 and Title 24 requirements, future development throughout California would be required to integrate energy efficiency measures that would reduce average demand per land use.

All cumulative development would be required to meet Title 24 energy efficiency standards and would not encourage wasteful or inefficient use of energy, cumulative development in the City of Mountain View and surrounding cities of Palo Alto and Sunnyvale would be required to conform to adopted green building standards. Therefore, implementation of the proposed project would not make a significant cumulative contribution to impacts on energy production and use, and cumulative energy impacts would be less than significant.

Impact C-EN-1: Implementation of the proposed project, in addition to the cumulative projects, would not result in significant cumulative impacts as a result of energy demand or waste. **[Less Than Significant Cumulative Energy Impact]**

4.5.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
EN-1: The proposed project would not result in a substantial increase in demand upon energy resources in relation to projected supplies.	Less Than Significant	No mitigation required	Less Than Significant
EN-2: The amended North Bayshore Precise Plan would not use energy in a wasteful manner.	Less Than Significant	No mitigation required	Less Than Significant
C-EN-1: Implementation of the proposed project, in addition to the cumulative projects, would not result in significant cumulative impacts as a result of energy demand or waste.	Less Than Significant	No mitigation required	Less Than Significant

4.6 GEOLOGY, SOILS, AND MINERAL RESOURCES

This section describes the existing geologic conditions, including geologic and seismic hazards, for the North Bayshore Precise Plan area, as well as the applicable regulatory framework and policies. This section identifies the potential impacts from the implementation of the amended North Bayshore Precise Plan and policies and measures to reduce impacts related to geology, soils, and seismicity. The background information for this section is drawn from information acquired from the United States Geological Survey (USGS), the California Geological Survey (CGS), the Natural Resources Conservation Service (NRCS), the Mountain View 2030 General Plan, and other sources.

4.6.1 Regulatory Background

A number of laws and regulations related to geology and soils apply to development projects in the North Bayshore Precise Plan area, including the following.

4.6.1.1 *Federal Programs*

National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95-124. In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic NEHRP goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology (NIST) of the Department of Commerce
- National Science Foundation (NSF)
- United States Geological Survey (USGS) of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

4.6.1.2 *State Statutes and Regulations*

Alquist-Priolo Earthquake Fault Zoning (AP) Act

The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive 1971 San Fernando earthquake. The AP Act provides a mechanism for reducing losses from surface

fault rupture on a statewide basis. The intent of the AP Act is to ensure 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.

Seismic Hazards Mapping Act (SHMA)

Following the 1989 Loma Prieta earthquake, the Seismic Hazards Mapping Act (SHMA) was passed by the California legislature in 1990 to protect the public from the effects of strong ground shaking, liquefaction, landslides and other seismic hazards. The SHMA established a state-wide mapping program to identify areas subject to violent shaking and ground failure; the program is intended to assist cities and counties in protecting public health and safety. The SHMA requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. As a result, the California Geological Survey (CGS) is mapping SHMA Zones and has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, ground shaking, and landslides: the central San Francisco Bay Area and Los Angeles basin.

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts including: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CALGreen Code), California Reference Standards Code. Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. It also regulates grading activities, including drainage and erosion control.

The California Building Code (CBC) refers to Part 2 of the California Building Standards Code in Title 24 of the California Code of Regulations. The 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 of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards. Buildings less than or equal to 4,000 square feet also are required to prepare a geologic engineering report, except for one-story, wood-frame and light-steel-frame buildings of Type V construction that are located outside of the Alquist-Priolo Earthquake Faults Zones.

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. Requirements for the geotechnical investigation are presented in Chapter 16 “Structural Design” and Chapter 18 “Soils and Foundation” of the CBC.[65]

[65] California Building Standards Commission and International Code Council. *2016 Building Code: Title 24, Part 2, Volume 2*. January 2017. Available at: http://codes.iccsafe.org/app/book/toc/2016/California/Building%20Volume%202/index.html The 2016 California

Surface Mining and Reclamation Act of 1975

The principal legislation addressing mineral resources in California is the State Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Sections 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. SMARA specifies that lead agencies require financial assurances of each mining operation to ensure reclamation is performed in accordance with the approved reclamation plan. The financial assurances may take the form of surety bonds, irrevocable letters of credit, trust funds, or similar mechanism.

4.6.1.3 *City of Mountain View 2030 General Plan*

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocated necessary resources to support fulfillment of the City vision. Implementing actions are the specific to-do steps required to carry out the General Plan's broader goals and policies and are included in a companion Action Plan.

Infrastructure and Conservation	
Goals INC-20	**Infrastructure systems planned and designed to function during interruptions, emergencies, disasters.**
Policy INC 2.3	***Emergency-prepared infrastructure design.*** Require the use of available technologies and earthquake-resistant materials in the design and construction of all infrastructure projects, whether constructed by the City or others.
Public Safety	
Policy PSA 4.2	***Natural disasters***. Minimize impacts of natural disasters.
Goal PSA-5	**The protection of life and property from seismic hazards.**
Policy PSA 5.1	***New development.*** Ensure new development addresses seismically induced geologic hazards.
Policy PSA 5.2	***Alquist-Priolo zones.*** Development shall comply with the Alquist-Priolo Earthquake Fault Zoning Act.
Policy PSA 5.3	***Technology.*** Use effective technologies to inform the community about potential hazards and emergency response.
Policy PSA 5.4	***Utility design.*** Ensure new underground utilities, particularly water and natural gas lines, are designed to meet current seismic standards.

4.6.1.4 *City of Mountain View Municipal Code*

The City of Mountain View has adopted the California Building Code (CBC), with amendments, as the reference building code for all projects in the City under Chapter 8 of the City's Code of

Building Standards Code (Cal. Code Regs., Tit. 24) was published as of July 1, 2016. The effective date of the 2016 Code is January 1, 2017. Accessed February 27, 2017.

Ordinances. The City of Mountain View's Building Inspection Department, which is part of the Community Development Department, is responsible for reviewing plans, issuing building permits, and conducting field inspections. Geotechnical investigation reports, as required by the CBC, would be reviewed by the City of Mountain View's Building Inspection Division prior to issuance of building permits to ensure compliance. Based on the CBC, Mountain View requires geotechnical reports as conditions of approval for projects in the City.

4.6.2 Existing Setting

4.6.2.1 *Geology, Soils, and Topography*

Regional Geology

The project site is located in the Santa Clara Valley, an alluvial basin bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, and the San Francisco Bay to the north. The Upper Quaternary sediments that comprise most of this basin consist of up to 1,000 feet of poorly sorted gravel, sand, and clay which were deposited in alluvial fan and deltaic depositional environments.

Soils

The North Bayshore Precise Plan area is primarily underlain by Urbanland-Hangerone complex soils of zero to two percent slopes.[66] These soils are clay alluvium soils derived from metamorphic or sedimentary rock.

The northwest portion of the Precise Plan area is mapped as Urbanland-Embarcadero complex soils of zero to two percent slopes, and comprised of silty loam alluvium soils. Soils associated with the 18-acre vacant property at 2000 North Shoreline Boulevard and Charleston Park are mapped as Hangerone clay loam with zero to two percent slopes comprised of clay and clay loam alluvium soils. Soils along the eastern edge of the Precise Plan area are mapped as Urbanland-Campbell complex of zero to two percent slopes and are primarily comprised of silt loam and silty clay loam alluvium soils.

Expansive soils shrink and swell as a result of moisture changes. These changes can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The soils on-site exhibit moderate to very high shrink-swell (i.e., expansive) behavior.

Site Topography

The North Bayshore Area is relatively flat and slopes gently north-northeastward. Based on the flat topography, there is a low erosion or landslide hazard. The elevation of the Precise Plan area is approximately five to 35 feet above mean sea level.

[66] United States Department of Agriculture, Natural Resources Conservation Service. *Web Soil Survey: Santa Clara Area, California, Western Part, North Bayshore Precise Plan Area*. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed October 3, 2016.

Groundwater

Groundwater resources for the North Bayshore Precise Plan area are located within the Santa Clara subbasin, which extends from the northern border of Santa Clara County to the groundwater divide near the town of Morgan Hill. The Santa Clara groundwater basin provides municipal, domestic, industrial, and agricultural water supply to the area. The Santa Clara Valley Water District (SCVWD) conducts an artificial groundwater recharge program that entails releasing locally conserved or imported water to in-stream and off-stream facilities.

Depth to groundwater will vary throughout the Precise Plan area depending on site-specific conditions. Wells drilled for previous projects located within the North Bayshore Precise Plan area have encountered groundwater from approximately six to 12 feet below ground surface.[67] Typical groundwater levels in the Precise Plan area range from five to 15 feet below ground surface.[68] Groundwater in the Precise Plan area flows generally northeast to southeast towards the nearby marshlands adjoining San Francisco Bay. Groundwater flow direction may deviate from the regional trend due to zones of higher or lower permeability and groundwater pumping or recharge.

4.6.2.2 *Seismic and Seismic-Related Hazards*

Earthquake Faults

The project site is located within the seismically active San Francisco Bay region, but is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. There are three known major active faults in the general project vicinity: the San Andreas Fault, located approximately eight miles to the west; the Calaveras Fault, located approximately 14 miles to the east; and the Hayward Fault, located approximately 10 miles to the northeast. There are no known earthquake faults crossing the project site. The project site is located outside of Alquist-Priolo special study zones and the likelihood of fault rupture is low.

Liquefaction

Liquefaction is the result of seismic activity and is characterized as the transformation of loose water-saturated soils from a solid state to a liquid state during ground shaking. During ground shaking, such as during earthquakes, cyclically induced stresses may cause increased pore water pressures within the soil voids, resulting in liquefaction. Liquefied soils may lose shear strength that may lead to large shear deformations and/or flow failure under moderate to high shear stresses, such as beneath foundations or sloping ground. The site is located within a State of California Seismic Hazard Zone for liquefaction, as well as a Santa Clara County Liquefaction Hazard Zone.[69,70]

[67] City of Mountain View. *2600 Marine Way Office Project Draft Environmental Impact Report*. February 2014.
[68] City of Mountain View. *Final Draft Shoreline Landfill Master Plan*. January 2013.
[69] California Geological Survey. *Seismic Hazard Zones: Mountain View Quadrangle.* October 2006. Available at: <http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_mview.pdf>. Accessed October 4, 2016.
[70] County of Santa Clara. *County Geologic Hazard Zones. Maps 2 and 10*. September 2002. Available at: <https://www.sccgov.org/sites/dpd/PlansOrdinances/GeoHazards/Pages/GeoMaps.aspx>. Accessed October 4, 2016.

Other Geologic Hazards

The Precise Plan area is not located within a Santa Clara County Geologic Hazard Zone for compressible soil, landslides, or fault rupture.[71]

4.6.2.3 *Mineral Resources*

Initial statewide mapping of aggregate resources includes a small area within the southern boundary of Mountain View along Stevens Creek that is classified MRZ-3, "Areas containing mineral deposits the significance of which cannot be evaluated from the available data." Based on subsequent mapping by the State of California for suitability of use as construction materials, however, it was determined that no minerals or aggregate resources of statewide importance are located within Mountain View. There are no natural gas, oil, or geothermal resources identified in or adjacent to Mountain View.

4.6.3 Geology and Soils Impacts

4.6.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a geology and soils impact is considered significant if the project would:

- Expose people or structures to 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 (refer to Division of Mines and Geology Special Publication 42);
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil; or
- 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;
- Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007), creating substantial risks to life or property;
- 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.

For the purposes of this SEIR, a mineral resource impact is considered significant if the project would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state; or

[71] Ibid.

- 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.

4.6.3.2 *Seismicity and Seismic Hazards*

As previously discussed, the project site is located in a seismically active region, and as such, strong ground shaking would be expected during the lifetime of the proposed project. While no active faults are known to cross the Precise Plan area (therefore fault rupture is not anticipated), ground shaking on the site could damage structures and threaten future occupants of the proposed development. In addition, the Precise Plan area is located in a liquefaction hazard area.

During implementation of the North Bayshore Precise Plan, individual projects will be reviewed on a project-by-project basis. During the development review process, projects will be required to demonstrate compliance with the California Building Code and General Plan policies PSA 5.1, PSA 5.2, PSA 5.3, PSA 5.4, PSA 4.2, and INC 2.3.

To avoid or minimize potential damage from seismic shaking and liquefaction, all future projects in the Precise Plan area would be designed and constructed in accordance with City of Mountain View requirements, standard conditions of approval, and seismic design guidelines for Seismic Design Category D in the current (2013) California Building Code.

Standard Condition of Approval

The following City of Mountain View condition of approval was developed in accordance with Action 4.2.6, and applies to all development projects in the City.

- GEOTECHNICAL REPORT: The applicant shall have a design-level geotechnical investigation prepared which includes recommendations to address and mitigate geologic hazards in accordance with the specifications of California Geological Survey (CGS) Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards, and the requirements of the Seismic Hazards Mapping Act. The report will be submitted to the City prior to the issuance of building permits, and the recommendations made in the geotechnical report will be implemented as part of the project. Recommendations may include considerations for design of permanent below-grade walls to resist static lateral earth pressures, lateral pressures causes by seismic activity, and traffic loads; method for backdraining walls to prevent the buildup of hydrostatic pressure; considerations for design of excavation shoring system; excavation monitoring; and seismic design.

Specific recommendations contained in the geotechnical report prepared for the future development projects shall also be implemented to the satisfaction of the City of Mountain View Building Inspection Division.

Impact GEO-1: There is a strong potential for seismic ground shaking to occur within the North Bayshore Precise Plan area. Potential seismic impacts to future development projects would be reduced to a less than significant level or avoided by conformance with the standard engineering and building practices and techniques specified in the California Building Code applicable at the

time of construction, and the design-level geotechnical investigation. **[Less Than Significant Impact]**

4.6.3.3 *Other Geologic Impacts*

Soil Erosion

The North Bayshore Precise Plan area would not be exposed to substantial slope instability, erosion, or landslide related hazards due to the relatively flat topography of the site and surrounding areas. Thus, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, and death involving landslide or erosion-related hazards.

During implementation of the North Bayshore Precise Plan, individual projects will be reviewed on a project-by-project basis. During the development review process, projects will be required to demonstrate compliance with the California Building Code and applicable General Plan policies, including PSA 4.2.

Action PSA 4.2.6 was developed as part of the City of Mountain View 2030 General Plan to reduce impacts related to expansive or corrosive soils.

> *Action PSA 4.2.6*. Geotechnical studies. Adopt and periodically update a set of standard mitigation measures and development conditions related to geotechnical/soils investigation and environmental site assessments.

Expansive Soils

Soils located throughout the Precise Plan area have a high potential for expansion. As discussed previously, expansive soils can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations.

Sewers are available for the disposal of wastewater in the Precise Plan area, and the project does not propose to install septic tanks or alternative wastewater disposal systems for the disposal of wastewater.

Impact GEO-2: All future projects within the North Bayshore Precise Plan are required to demonstrate compliance with the California Building Code and General Plan policies PSA 5.1, PSA 5.2, PSA, PSA 5.3, 5.4, PSA 4.2, INC 2.3, Action 4.2.6, and must incorporate the City's most recent geological standard conditions of approval.

Compliance with the California Building Code, General Plan policies, and the City's standard conditions of approval, as required by the City, will ensure that geological impacts related to implementation of the North Bayshore Precise Plan would be less than significant. **[Less Than Significant Impact]**

4.6.3.4 *Mineral Resources Impacts*

Based on mapping by the State of California, no minerals or aggregate resources of statewide importance are located in the vicinity of Mountain View, and there are no natural gas, oil, or geothermal resources identified as being located in or adjacent to the City. Implementation of the North Bayshore Precise Plan would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state; nor would it 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.

Impact MIN-1: Implementation of the North Bayshore Precise Plan would not result in an impact to mineral resources. **[No Impact]**

4.6.3.5 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval. The proposed amendments to the General Plan would not result in additional geology and soils impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.6.3.6 *Cumulative Impacts*

The cumulative projects in Mountain View and neighboring cities analyzed in this Draft SEIR will be subject to similar geology, soils, and seismicity impacts as the proposed project. All cumulative projects occurring within Mountain View and neighboring cities, would implement conditions of approval, mitigation measures, and consistency with State Building Code that would avoid impacts from geology and soils hazards, and/or reduce them to a less than significant level. These projects would also be subject to federal, state, city, or county laws for building and construction in seismic hazard areas. For these reasons, the cumulative projects, including the proposed project, would not result in significant cumulative geology and soils impacts.

Impact C-GEO-1: The proposed project, together with cumulative projects, would not result in significant cumulative geology and soils impact. **[Less Than Significant Cumulative Geology and Soils Impact]**

4.6.4 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
GEO-1: There is a strong potential for seismic ground shaking to occur on the project site. Potential seismic impacts to the project site would be reduced to a less than significant level or avoided by conformance with the standard engineering and building practices and techniques specified in the California Building Code applicable at the time of construction, and the design-level geotechnical investigation.	Less Than Significant	No mitigation required	Less Than Significant
GEO-2: All future projects that follow the North Bayshore Precise Plan shall be required to demonstrate compliance with General Plan policies PSA 5.1, PSA 5.2, PSA 5.3, PSA 5.4, PSA 4.2, INC 2.3, Action 4.2.6, and shall incorporate the City's most recent geological standard conditions of approval. Future proposed projects, developed in accordance with the recommendations in a design-level geotechnical report, as required by the City, would not result in significant geologic impacts.	Less Than Significant	No mitigation required	Less Than Significant
MIN-1: Implementation of the North Bayshore Precise Plan would not result in an impact to mineral resources.	No Impact	No mitigation required	No Impact
C-GEO-1: The proposed project, together with cumulative projects, would not result in significant cumulative geology and soils impact.	Less Than Significant	No mitigation required	Less Than Significant

4.7 GREENHOUSE GAS EMISSIONS

The discussion in this section is based on the greenhouse gas emissions analysis prepared by *Illingworth & Rodkin* on February 14, 2017, which is attached to this EIR as Appendix E.

4.7.1 Environmental Setting

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of Greenhouse Gases (GHGs) have a broader, global impact. Global warming associated with the greenhouse effect is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs contributing to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial and manufacturing, utility, residential, commercial, and agricultural sectors.

4.7.1.1 *Regulatory Framework*

State of California

Assembly Bill 32 and Executive Order S-3-05

Assembly Bill 32 (AB 32), also known as the Global Warming Solutions Act, was passed in 2006 and established a goal to reduce GHG emissions to 1990 levels by 2020. Prior to the adoption of AB 32, the Governor of California also signed Executive Order S-3-05 into law, which set a long term objective to reduce GHG emissions to 80 percent below 1990 levels by 2050. The California Environmental Protection Agency (CalEPA) is the state agency in charge of coordinating the GHG emissions reduction effort and establishing targets along the way.

In December 2008, the California Air Resources Control Board (CARB) approved the *Climate Change Scoping Plan*, which proposes a comprehensive set of actions designed to reduce California's dependence on oil, diversify energy sources, save energy, and enhance public health, among other goals. Per AB 32, the *Climate Change Scoping Plan*, must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. The First Update to the *Climate Change Scoping Plan*, was approved on May 22, 2014 and builds upon the previous plan with new strategies and recommendations. The First Update defines CARB's priorities over the next five years and lays the groundwork to reach long-term goals set forth in Executive Order S-3-05.[72]

As discussed below under *Senate Bill 32* and *AB 197*, a second update to the Climate Change Scoping Plan has been released in draft form and will be considered for adoption by CARB in spring 2017. It specifically addresses the 2030 mid-term target established under SB 32 and identifies local actions as well as State of California actions and programs to reduce GHG emissions.

[72] CalEPA. CARB. *First Update to the AB 32 Scoping Plan*. Accessed January 12, 2016. http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

Senate Bill 375

Senate Bill 375 (SB 375), known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. It builds on AB 32 by requiring CARB to develop regional GHG reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035 in comparison to 2005 emissions. The per capita GHG 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.[73] The four major requirements of SB 375 are:

- Metropolitan Planning Organizations (MPOs) must meet GHG emission reduction targets for automobiles and light trucks through land use and transportation strategies.
- MPOs must create a Sustainable Communities Strategy (SCS), to provide an integrated land use/transportation plan for meeting regional targets, consistent with the Regional Transportation Plan.
- Regional housing elements and transportation plans must be synchronized on eight-year schedules, with Regional Housing Needs Assessment allocation numbers conforming to the SCS.
- MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission.

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted *Plan Bay Area* in July 2013, which is currently being updated. The strategies in the plan are intended to promote compact, mixed-use development close to public transit, jobs, schools, shopping, parks, recreation, and other amenities, particularly within Priority Development Areas (PDAs) identified by local jurisdictions. The project site is located within a PDA.[74]

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15 establishing a GHG reduction target for California of 40 percent below 1990 levels by 2030. This is considered a mid-term target for implementation of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050. State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Climate Change Scoping Plan to reflect the 2030 target and is moving forward with the update process, as discussed under SB32 and AB 197, below.

SB 32 and AB 197

SB 32 and AB 197 were signed into law in September 2016. The recently signed SB 32 legislation amends provisions of AB 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code Division 25.5), to require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by December 31, 2030. This legislation incorporates the Executive Order B-30-15 target discussed above into state law. Changes to the California Health and Safety

[73] The emission reduction targets are for those associated with land use and transportation strategies only. Emission reductions due to the California Low Carbon Fuel Standards or Pavley emission control standards are not included.
[74] ABAG; MTC. *Plan Bay Area.* July 2013.

Code under the companion AB 197 legislation call for each scoping plan update to identify emissions reduction measures and include the range of projected GHG emissions reductions as well as the range of projected air pollution reductions that result from the emission reduction measures.

The mid-term target established under SB 32 is considered critical by the state to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing GHG emissions. CARB is charged with adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions to meet the new interim statewide GHG target. The framework for GHG emissions reductions will be provided through an update to the current Climate Change Scoping Plan. The draft *2030 Target Scoping Plan* was released for public comment in January 2017 and adoption is scheduled for consideration by CARB in spring 2017.[75]

Other Implementing Laws and Regulations

There are a number of laws that have been adopted as a part of the State of California's efforts to reduce GHG emissions and their contribution to climate change. State laws and regulations related to growth, development, planning and municipal operations in Mountain View include, but are not limited to:

- California Mandatory Commercial Recycling Law (AB 341)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Various Diesel-Fuel Vehicle Idling regulations in Chapter 13 of the California Code of Regulations
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Implementation of the policies in the 2030 General Plan as a part of the City's development permitting and other programs provides for meeting building standards for energy efficiency, recycling, and water conservation, consistent with the laws and regulations designed to reduce greenhouse gas emissions.

Regional

Bay Area 2010 Clean Air Plan

The *Bay Area 2010 Clean Air Plan* (2010 CAP) addresses air emissions in the San Francisco Bay Area Air Basin. One of the key objectives in the 2010 CAP is climate protection. The 2010 CAP includes emission control measures and performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce emissions of GHGs to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

[75]CARB. *Discussion Draft 2030 Target Scoping Plan, December 2, 2016*. Accessed December 2, 2016. Available at: https://www.arb.ca.gov/cc/scopingplan/2030target_sp_dd120216.pdf .

BAAQMD is updating the 2010 CAP in partnership with ABAG, the Bay Conservation and Development Commission, and MTC. The 2017 Clean Air Plan (2017 CAP), entitled *Spare the Air/Cool the Climate*, will be a blueprint for BAAQMD's efforts to reduce air pollution and protect public health and the global climate. The 2017 CAP aims to lead the region to a post-carbon economy, continue progress toward attaining all state and federal air quality standards, and eliminate health risk disparities from exposure to air pollution among Bay Area.[76] The draft 2017 CAP was released for public review on January 12, 2017.

BAAQMD CEQA Guidelines

BAAQMD identifies sources of information on potential thresholds of significance and mitigation strategies for operational GHG emissions from land-use development projects in its CEQA Air Quality Guidelines. The BAAQMD CEQA Guidelines also outline a methodology for estimating greenhouse gases. In jurisdictions where a qualified GHG Reduction Strategy has been reviewed under CEQA and adopted by decision-makers, compliance with the GHG Reduction Strategy would reduce a project's contribution to cumulative GHG emission impacts to a less than significant level. The BAAQMD CEQA Guidelines also outline a methodology for estimating GHG emissions.

City of Mountain View

2030 General Plan and Greenhouse Gas Reduction Program

The City of Mountain View certified the General Plan Program EIR and adopted the Mountain View 2030 General Plan and GGRP in July 2012. The General Plan is the guiding document for future growth of the City. The GGRP is a separate but complementary document and long-range plan that implements the GHG emissions reduction goals of the General Plan, and serves as a programmatic GHG reduction strategy for CEQA tiering purposes. The GGRP includes goals, policies, performance standards, and implementation measures for achieving GHG emission reductions, to meet the requirements of AB 32. The program includes a goal to improve communitywide emissions efficiency (per-service population – residents and full-time employees) by 15 to 20 percent over 2005 levels by 2020 and by 30 percent over 2005 levels by 2030.

The GGRP implements the following policy, and actions from the Mountain View General Plan Mobility Element:

Mobility Element	
Goal MOB-9	Achievement of state and regional air quality and greenhouse gas emission reduction targets.
Policy MOB 9.1	Develop cost-effective strategies for reducing greenhouse gas emissions in coordination with the Greenhouse Gas Reduction Program.
Action MOB 9.1.1	Maintain and regularly update the City's municipal and community Greenhouse Gas Inventory to track emissions.

[76] BAAQMD. "Plans Under Development". Accessed January 13, 2017. Available at: http://www.baaqmd.gov/plans-and-climate/air-quality-plans/plans-under-development.

Mobility Element	
Action MPB 9.1.2	Regularly update the Greenhouse Gas Reduction Program to address transportation emissions reductions.

North Bayshore Precise Plan

The North Bayshore Precise Plan builds on the 2030 General Plan vision identifying North Bayshore as a leader in highly sustainable and innovative development. The North Bayshore Precise Plan (specifically Chapter 4 Green Building and Site Design) contains standards and guidelines that build upon CALGreen, LEED, and GreenPoint Rated requirements, including additional performance-based targets and prescriptive measures for site planning and design, energy efficiency, renewable energy, and water conservation (among others). Commercial and office projects in the North Bayshore area proposing to utilize the Precise Plan's non-residential FAR bonus are encouraged to implement a progressively higher level of environmental performance focused on energy use and generation, water use, and materials management (meeting the intent of LEED BD+C Platinum in addition to other measures outlined in the Precise Plan). Residential projects in North Bayshore proposing to utilize the Plan's FAR Bonus provisions must also include enhanced green building standards, as described in Appendix B of the Precise Plan, to improve a project's environmental performance.

The Precise Plan also includes measures that can reduce transportation related GHG emissions and vehicle miles travelled. Each individual employer/property owner that applies for development entitlements is required to develop a TDM plan, which includes a total daily vehicle trip cap and implementation of a set baseline of TDM measures.

4.7.1.2 *Existing Conditions*

Existing development within the *North Bayshore Precise Plan* area results in GHG emissions from energy use and transportation. Existing GHG emissions are quantified and discussed further in *Section 4.7.2.2*, below.

4.7.2 Greenhouse Gas Emissions Impacts

4.7.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a greenhouse gas emissions impact is considered significant if the project would:

- Generate a greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close

the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets. The BAAQMD GHG recommendations include a specific plan-and project-level GHG emission efficiency metric of 4.6 metric tons (MT) of CO_2e per service population (future residences and full-time workers) per year. In addition, the City's GGRP established an efficiency metric of 4.5 MT of CO_2e per service population/year for 2030.[77] For the purposes of this CEQA analysis, the more conservative GGRP impact threshold (4.5 MT CO_2e /year/service population) reviewed and adopted by the City of Mountain View was utilized for projected emissions in 2030.

4.7.2.2 *GHG Emissions*

Construction

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. BAAQMD encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable, including, but not limited to: using alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet, using at least 10 percent local building materials, and recycling or reusing at least 50 percent of construction waste or demolition materials. The amended *North Bayshore Precise Plan* would require that all new construction, additions, and alterations recycle or salvage 65 percent of nonhazardous construction and demolition debris generated at the site. Therefore, any construction-related GHG impact would be less than significant.

Operation

The CalEEMod model was used to predict GHG emissions associated with operation of fully developed sites under the amended Precise Plan (aside from mobile emissions). Daily trip generation rates were not available by each specific land use proposed under the Precise Plan, so the VMT-by-speed bin data and the CARB EMFAC2014 emissions factor model was used to estimate vehicle emissions associated with operation of uses under the Precise Plan. Three analysis years were used for modeling: an existing 2015 run and two 2030 runs.

Mobile Emissions

Mobile emissions were calculated using daily vehicle miles traveled (VMT) provided in the traffic studies. For each project scenario, the daily VMT was provided, broken down by five-mph increments or speedbins. These data were combined with vehicle emissions factors for the corresponding speeds using the CARB EMFAC2014 emissions factor model. In addition, the total

[77] As described previously under Section 4.7.1.1, a draft update to the California Scoping Plan that addresses the new SB 32 mid-term or interim efficiency target (e.g., statewide emissions, population and employment in 2030) has been released by CARB for public review. In this document CARB recommends that local governments aim to achieve a per capita target of six MT of CO_2e by 2030 (and two MT of CO_2e per capita by 2050). They also note that per capita emission goals may not be appropriate in some jurisdictions, and that mass emissions and service population emissions are also important to discuss. Emissions from development in the North Bayshore Precise Plan are more heavily weighted to employment rather than residential population and therefore applying a per capita threshold or target does not appear appropriate. The draft update to the California Scoping Plan includes information on projected statewide population, employment and GHG emissions that could be used to update the City's adopted service population 2030 target communitywide; however, given the recent release of this information, a new efficiency metric (i.e., an efficiency metric that would not conflict with the 40 percent below 1990 by 2030 target in SB 32) has not yet been developed, reviewed or adopted by Mountain View decision-makers. It likely would be lower than the City's current target of 4.5 MT of CO_2e per service population/year for 2030.

number of traffic trips were used to estimate additional emissions from vehicle startup conditions. Dust entrainment from vehicles was also computed using methods developed by CARB and EPA that included silt loading factors specific to Santa Clara County. The VMT estimates were assumed to represent weekday conditions. The CalEEMod modeling defaults for the various proposed land use types were used to develop emissions for Saturday and Sunday traffic.

Electricity Generation

Default rates for energy consumption were assumed in the model. CalEEMod has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on Pacific Gas and Electric Company's (PG&E's) 2008 emissions rate. The Existing 2015 run updated the PG&E rate to the most recent rate reported in the California Climate Registry (for 2013), which is 429.6 pounds of CO_2 per megawatt of electricity produced.[78] For the 2030 runs, emissions rates associated with electricity consumption were adjusted to account for PG&E's projected 2020 CO_2 intensity rate in place of 2030, since 2020 is the latest year published to date. This 2020 rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. The derived 2020 PG&E rate was estimated at 289.84 pounds of CO_2 per megawatt of electricity delivered and is based on the California Public Utilities Commission GHG Calculator.[79] Default model assumptions for GHG emissions associated with area sources, solid waste generation and water/wastewater use were applied.

Service Population Rate

The service population rate in the Precise Plan area is the annual GHG emissions expressed in metric tons divided by the estimated number of new residents and employees. The estimated 2030 service population for the amended Precise Plan area is 56,910. For areas in 2030 without the amended Precise Plan, the estimated service population is 38,650. For existing conditions, the estimated service population for the area is 25,600.

GHG Operational Emissions

Table 4.7-1 shows the results of the CalEEMod model analysis in terms of annual metric tons of equivalent CO_2e emissions per year (MT of CO_2e/yr) and service population values. Under the 2030 full Precise Plan buildout, operation of uses under the North Bayshore Precise Plan would have annual service population emissions of 5.4 MT of CO_2e/yr/service population, which would exceed the City's established GGRP threshold of 4.5 MT of CO_2e/year/service population. This impact is, therefore, significant.

[78] See Climate Registry most current version of default emissions factors: http://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol. Accessed January 12, 2017.
[79] California Public Utilities Commission's GHG Calculator version 3c, October 7, 2010. Available at: http://ethree.com/public_projects/cpuc2.php. Accessed January 12, 2017.

Table 4.7-1: 2030 Precise Plan GHG Emissions (MT of CO_2e)			
Source Category	**Existing 2015**	**Adopted 2030 North Bayshore Precise Plan**	**Amended 2030 North Bayshore Precise Plan**
Area[1]	29	29	812
Energy Consumption	23,098	31,934	44,549
Mobile	151,247	205,034	250,537
Solid Waste Generation	1,362	3,388	6,060
Water Usage	8,041	7,078	8,091
Total	183,777	247,463	310,049
Efficiency Metric	7.2 [2]	6.4 [3]	5.4 [4]
City GGRP 2030 Threshold	4.5 MT CO_2e/year/service population		

[1] Area sources include natural gas, hearths, landscape fuel, and use of consumer products.
[2] Based on an existing service population of 25,600
[3] Based on a *North Bayshore Precise Plan* 2030 without project service population of 38,650.
[4] Based on a total proposed 2030 *North Bayshore Precise Plan* service population of 56,910.
Source: Illingworth & Rodkin. *North Bayshore Precise Plan Air Quality and Greenhouse Gas Emissions Assessment.* February 14, 2017.

Adding housing in the North Bayshore area (as part of the amended Precise Plan) will reduce GHG emissions per service population compared to the current Precise Plan, however; the state has ambitious goals for GHG emissions reduction between 2020 and 2030 under SB 32. The amended North Bayshore Precise Plan represents some improvement (qualitatively, in that new construction shall meet the green building requirements specified within the Precise Plan and potentially the increased requirements of the Density Bonus program) but still would exceed the emissions targets for the 2030 time period. Additional measures from state regulators and local agencies will be needed. Future projects may be subject to new measures in effect at the time discretionary and/or building permits are proposed.

Impact GHG-1: Under the 2030 full buildout under the amended North Bayshore Precise Plan, annual service population emissions of CO_2e/yr/service population would exceed the City's established GGRP threshold of 4.5 MT of CO_2e/year/service population, and would also exceed the mid-term 2030 target under SB 32. This impact is, therefore, significant. **[Significant Impact]**

Mitigation Measures

The North Bayshore Precise Plan provides Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these standards and guidelines, along with adopted State regulations, would not be sufficient to meet the City's targets for GHG

emissions by 2030. Achieving the substantial GHG emissions reductions needed by 2030 will require a substantial multiple-pronged approach that includes policy decisions citywide and additional emission controls at the federal and state level and new and substantially advanced technologies whose adoption cannot be predicted with accuracy at this time. It also will require substantial behavioral changes both to replace fuel sources and reduce single-occupant vehicle trips further, especially to and from work places.

As noted, the amended North Bayshore Precise Plan includes a Bonus FAR tiering system for commercial development, where additional FAR may be granted by the City in exchange for highly sustainable measures and community benefits. The Precise Plan also includes required green building measures for new residential development to help improve a project's sustainability performance. The City also has several policy documents to guide future sustainable development and further reduce GHG emissions over time, such as the Climate Protection Roadmap and the Environmental Sustainability Action Plan. As new strategies and measures are identified by these Plans, they may be incorporated into new development in North Bayshore in the future.

Both the Draft 2017 Climate Change Scoping Plan Update[80] and the BAAQMD Draft 2017 Clean Air Plan include standards, guidelines, and implementation measures that seek to reduce GHG emissions. Additional measures from these documents that could be included in North Bayshore Precise Plan Bonus FAR commercial applications, are noted below:

MM GHG-1.1: Bonus FAR commercial projects shall prepare an analysis of feasible energy efficiency and renewable energy, materials management, and mobility measures to reduce GHG emissions resulting from the project. Feasible measures shall be incorporated in the building design and/or TDM program. The analysis shall be prepared to the satisfaction of the Community Development Director. Measures to be considered and analyzed by applicants shall include those in the amended North Bayshore Precise Plan, including, but not limited to, the following added measures:

Green Building and Design
Materials Management

- **Super-GHGs reduction.[81]** Use low-global warming potential (GWP) refrigerants in new building cooling systems and replacement in existing buildings when renovated.

- **Zero-emission construction equipment (Resource Use).** Existing grid power for electric energy shall be used rather than operating temporary gasoline/diesel powered generators where available. Construction projects shall also increase use of electric and renewable fuel powered construction equipment where commercially available.

[80] California Air Resources Board. *The Draft 2030 Climate Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target*. January 20, 2017.
[81] Super-GHGs are defined as compounds with very high global warming potential, such as methane, black carbon, and fluorinated gases.

Other measures that may have increased GHG reduction benefits in the future include electricity produced using renewable energy and used for building heating and cooling.

To systematically identify effective, feasible measures for future development, the following implementation action will be added to the amended North Bayshore Precise Plan.

MM GHG-1.2: The City shall prepare a list of additional recommendations for effective GHG reductions in Transportation, Energy, and Building Operations that will be based upon adopted recommendations of CARB, BAAQMD, and relevant City policy documents. The recommendations will apply to both residential and commercial projects and are intended to reduce project GHG emissions to the point where they meet the City's adopted GGRP 2030 efficiency threshold. For residential uses in particular, potential GHG reductions relating to transportation will also include a vehicle trip reduction performance standard and/or reduced parking standard. The list of recommendations shall be updated regularly in conjunction with the review of the North Bayshore Precise Plan and/or with updates to the City's GGRP.

Given the uncertainties about the feasibility of achieving the needed 2030 timeframe emissions reductions, and despite the City's requirements for future development in North Bayshore to implement additional sustainability measures, the project's contribution to greenhouse gas emissions and climate change for the 2030 timeframe is conservatively determined to be cumulatively considerable. **[Significant Unavoidable Impact]**

4.7.2.3 *Global Climate Change Impacts to the Project*

Climate change effects expected in California over the next century could include reduced water supply, increased days per year when ozone pollution levels are exceeded, and increased electricity demand, particularly in the hot summer months. These effects are not likely to affect operation of the project during the foreseeable future.

Development under the amended Precise Plan would occur in areas affected by projected sea level rise under both an eight-inch sea level rise scenario and a 31-inch scenario, based on sea level rise projections included in the Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program. As described in *Section 3.6, Hydrology*, future development under the amended Precise Plan, along with other development in the City, would contribute to a capital improvement program to protect the area from the eight-inch sea level rise scenario. Individual development projects under the amended Precise Plan would contribute fair-share contributions to a capital improvement program to fund the construction of sea level rise protection measures.

Impact GHG-2: The project would not be substantially affected by the effects of global climate change, such as sea level rise. **[Less Than Significant Impact]**

4.7.2.4 *GHG Plan or Policy Conflict (Consistency with Plans)*

Consistency with Plan Bay Area (SB 375 Implementation)

North Bayshore is within a PDA identified by the City of Mountain View in the regional *Plan Bay Area* document. This PDA designation calls for an intensification of highly sustainable and innovative development and includes standards for environmental performance in the area of transportation. For example, development under the Precise Plan will be required to meet or exceed standards for a reduction in peak-hour drive alone vehicle trips. The amended Precise Plan specifically increases the amount of residential and commercial development allowed in the North Bayshore area, consistent with what is envisioned for PDAs in *Plan Bay Area* to concentrate growth in PDA's. The amended Precise Plan, therefore, is consistent with *Plan Bay Area*.

Consistency with the GGRP

As required under the City of Mountain View GGRP, Transportation Demand Management (TDM) Plans are required for commercial, office, and residential uses and would be implemented in the North Bayshore Precise Plan area. Examples of the trip reduction measures that would be included within TDM Plans include formal ride-sharing and bike-sharing programs; the provision of short-distance shuttles to and from offices, commercial uses, and the Mountain View Transit Center; pedestrian improvements; and bicycle amenities and infrastructure.

While future development under the North Bayshore Precise Plan would increase overall GHG emissions in the City, the Precise Plan contains standards and guidelines to ensure that future development use fuel or energy efficiently, consistent with the GGRP. The proposed project has a 2030 horizon, and energy fuel efficiency is expected to improve over time. Implementation of TDM Plans for development projects under the Precise Plan would also reduce GHG emissions from traffic trips to and from the site.

The GGRP identifies a series of GHG emissions reduction measures to be implemented by development projects that would help the City achieve its GHG reduction goals. The following GGRP measures in Table 4.7-2 would apply to future development within the proposed Precise Plan project area.

Table 4.7-2: GGRP Measures Applicable within the Precise Plan Area		
Mandatory/ Voluntary	**Measure**	**Consistency**
Mandatory	**Measure E-1.3:** Non-Residential Lighting Retrofit	Future Precise Plan development seeking an FAR bonus through implementing higher-performing green building standards will be required to exceed Title 24 requirements for energy efficiency by at least 10 percent (at a minimum), and in compliance with Mountain View Green Building Code.
Mandatory	**Measure E-1.7:** Exceed State Energy Standards in New Non-Residential Development	Future Precise Plan development seeking an FAR bonus through implementing higher-performing green building standards will be required to exceed Title 24 requirements for energy efficiency by at least ten percent (at a minimum), and in compliance with Mountain View Green Building Code.
Voluntary	**Measure E-2.2:** Non-Residential Solar Water Heaters	Installation of solar water heater systems would assist future applicants in attaining energy use and renewable energy goals leading to an FAR bonus.
Voluntary	**Measure E-2.4:** Non-Residential Solar Photovoltaic Systems	Installation of solar photovoltaic systems would assist future applicants in attaining energy use and renewable energy goals leading to an FAR bonus.
Mandatory	**Measure T-1.1:** TDM	As described in the GGRP, future development under the Precise Plan would be required to meet or exceed the required 12.7 percent reduction in peak-hour drive-alone vehicle trips for non-residential projects in the North Bayshore Strategy Area, as identified in the GGRP.

Chapter 6: Mobility of the amended Precise Plan includes a description of TDM measures, which are a set of strategies, measures and incentives to encourage people to walk, bicycle, use public transportation, carpool or use other alternatives to driving alone. TDM measures can reduce the amount of traffic generated by a land use and its associated traffic impacts. To reduce vehicle traffic and parking demand, projects over 1,000 square feet in the North Bayshore area are required to establish a set of TDM measures, including bicycle parking, employee shower facilities, and preferential carpool/vanpool parking.

TDM Approach: The City has set an ambitious single-occupancy vehicle target of 45 percent for North Bayshore for commercial office uses. Achieving this goal will require implementing TDM requirements at the individual employer/property owner level and district-wide[82] level. The following strategies are the focus of the North Bayshore TDM program:

[82] When used in the context of the Precise Plan, "district-wide" refers to standards, guidelines, or improvements that would be implemented throughout the *North Bayshore Precise Plan* area.

- Many existing large employers have implemented a number of TDM measures. However, as North Bayshore develops more extensive transportation facilities and services, mode split targets may need to be increased to achieve the district's single occupancy vehicle (SOV) mode share target and reduce traffic congestion.
- Establish a district-wide vehicle trip cap based on the capacity of the three gateways to North Bayshore during the AM peak period.
- Utilize the Transportation Management Association to coordinate services amongst employers and to offer services to those employees who do not have employer sponsored TDM programs and services.
- Monitor ongoing efforts and results at the district-wide level. Review information on district trip cap performance, transportation choices, traffic congestion, parking availability, transit ridership and bicycle access.

Employer Level TDM Plans: Each individual employer/property owner that applies for development entitlements is required to develop a TDM Plan. This applies to development projects greater than 1,000 square feet. The TDM Plan will be designed so the package of measures will achieve the SOV mode split goal of 45 percent. Project applicants will need to implement a set of baseline TDM measures. However, each applicant will be given the flexibility to combine required TDM measures with additional TDM measures best suited to their tenants/employees and location to meet the mode split goal.

Residential TDM Plans: New residential development is required to submit a TDM Plan with specific TDM standards as outlined on Page 195 of the Precise Plan. Some of these measures include required membership in the Mountain View Transportation Management Association, subsidized transit passes for residents, carshare parking requirements, unbundled parking, and bicycle parking.

North Bayshore Trip Cap: A district-wide trip cap of 18,900 vehicle trips will be established for the AM inbound peak period based on the analysis conducted of the roadway network capacity at the three gateways to North Bayshore.

Congestion Pricing: Congestion pricing involves charging motorists a user fee to drive in specific, congested areas during periods of peak demand to help eliminate congestion related delays or reduce them to acceptable levels. The revenues generated can be used to fund transportation improvements to accommodate shifts in travel behavior, such as transit service, roadway improvements, and bicycle and pedestrian projects.

The Precise Plan includes congestion pricing policies that the City could utilize if the employer TDM program requirement and trip cap do not reduce the number of vehicle trips to less than the established AM peak period vehicle trip cap. Prior to the implementation of any congestion pricing system, further study, community outreach, and City Council direction would be required.

As a condition of approval, future development projects in the North Bayshore area are required to provide monitoring reports to the City to identify the success of the various components of the TDM program to ensure that the Precise Plan meets its mode share goals.

Despite the inclusion of the applicable mandatory measures from the GGRP, the amended Precise Plan would increase the amount of development allowed in North Bayshore beyond what was envisioned within the City's General Plan and GGRP. As result, implementation of the amended Precise Plan would exceed the emissions projections and associated carbon-efficiency target identified in the GGRP. This exceedance would represent a conflict with the assumptions in the GGRP and would be considered a significant impact.

Impact GHG-3: New development will be required to implement TDM measures and other emissions-reduction features in the GGRP. The additional new residential could increase the percentage of vehicle trip internalization or increased walking or bicycling trips. However, total emissions in the North Bayshore area are projected to increase beyond those previously assumed in the City's GGRP. Therefore, implementation of the Precise Plan would conflict with plans, policies, or regulations for reducing GHG emissions adopted by the City of Mountain View. **[Significant Impact]**

Mitigation Measures

The amended North Bayshore Precise Plan includes Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these measures, along with adopted State regulations, would not be sufficient to avoid conflicts with plans. The discussion following Impact GHG-1 outlines some measures that could be used to reduce this impact, but not to a less than significant level. **[Significant Unavoidable Impact]**

4.7.3 Consistency with Other Plans

California Transportation Plan 2040

The California Transportation Plan 2040 defines performance-based goals, policies, and strategies to achieve the state's collective vision for California's future statewide, integrated, multimodal transportation system. Transportation policies in the *North Bayshore Precise Plan* and the City's General Plan call for consideration of all modes of travel, the provision of complete streets to accommodate and encourage use of non-automobile transportation modes to reduce vehicle trip generation and VMT, and to actively coordinate with other agencies to ensure that regional GHG emission standards are met. The General Plan Mobility Element Goal MOB-9, and Policy MOB 9.1, and Actions MOB 9.1.1 and 9.1.2; as well as the amended Precise Plan transportation strategies within Chapters 6, 7, and 8, are in keeping with the goals and policies contained within the California Transportation Plan 2040.

4.7.4 Cumulative Impacts

Emissions of GHGs have a broader, global impact as they accumulate and move through the earth's atmosphere. Many of the major greenhouse gases can remain in the atmosphere for tens to hundreds of years after being released. They become globally mixed in the lower atmosphere, reflecting contributions from emissions sources worldwide. As the result of the extent of human sources of GHG worldwide, the stability of many of these compounds in the atmosphere, and the mixing that

occurs in the atmosphere (and oceans), the effects of GHG emissions on climate are considered global, cumulative impacts.

The analysis of greenhouse gas emissions and global climate change is cumulative by nature. As described above, implementation of the amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP that is necessary to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in Impact GHG-1 and Impact GHG-3. Additional strategies, policies and programs, as noted previously in this chapter, to supplement those currently identified, will ultimately be required to meet the 2030 reduction target in the City's GGRP.

Impact C-GHG-1: The amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in Impact GHG-1 and Impact GHG-3. **[Significant Cumulative Impact]**

Mitigation Measures

The North Bayshore Precise Plan provides Standards and Guidelines for development for an area that is a model of highly sustainable and innovative development within the City of Mountain View. Based upon the GHG analysis completed for the project, however, these measures, along with adopted State regulations, would not be sufficient to reduce greenhouse gas emissions to a less than significant level (refer also to Mitigation Measure GHG-1.1, above.) **[Significant Unavoidable Cumulative Impact]**

4.7.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
GHG-1: Under the 2030 full buildout under the amended North Bayshore Precise Plan, annual service population emissions of CO2e/yr/service population would exceed the City's established GGRP threshold of 4.5 MT of CO2e/year/service population, and would also exceed the mid-term 2030 target under SB 32.	Significant Impact	**MM GHG-1.1** and **MM GHG-1.2** would be included in the project, but would not fully reduce the impact.	Significant and Unavoidable
GHG-2: The project would not be substantially affected by the effects of global climate change.	Less than Significant	No mitigation required	Less than Significant
GHG-3: New development will be required to implement TDM measures and other emissions-reduction features in the GGRP. The additional new residential could increase the percentage of vehicle trip internalization or increased walking or bicycling trips. However, total emissions in the North Bayshore area are projected to increase beyond those previously assumed in the City's GGRP. Therefore, implementation of the Precise Plan would conflict with plans, policies, or regulations for reducing GHG emissions adopted by the City of Mountain View.	Significant Impact	No feasible mitigation measures available to fully reduce impact.	Significant and Unavoidable
C-GHG-1: The amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in the project impacts.	Significant Impact	No feasible mitigation measures available to fully reduce impact.	Significant and Unavoidable

4.8 HAZARDS AND HAZARDOUS MATERIALS

The discussion in this section is based in part on technical analysis completed by *Cornerstone Earth Group* in July 2015, September 2016, and February 2017. This information is attached as Appendix H to the Draft EIR.

4.8.1 Introduction and Regulatory Background

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds used in manufacturing. Determining if such substances are present on or near project sites is important because, by definition, exposure to hazardous materials above regulatory thresholds can result in adverse health effects on humans, as well as harm to plant and wildlife ecology.

Due to the fact that these substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs in place that are designed to minimize the chance for unintended releases and/or exposures to occur. Other programs set forth remediation requirements at sites where contamination has occurred.

Hazardous waste generators and hazardous materials users in the City are required to comply with regulations enforced by several federal, state, and county agencies. The regulations are designed to reduce the risk associated with the human exposure to hazardous materials and minimize adverse environmental effects. State and federal construction worker health and safety regulations require protective measures during construction activities where workers may be exposed to asbestos, lead, and/or other hazardous materials.

4.8.1.1 *Federal Laws and Regulations*

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for "cradle to grave" regulation of hazardous wastes.

Other federal laws include:

- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

4.8.1.2 *California Laws and Regulations*

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other

California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning. In California, the EPA has granted most enforcement authority of federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). Under the authority of Cal/EPA, the Department of Toxic Substances Control (DTSC) or the San Francisco Bay Regional Water Quality Control Board (RWQCB) is responsible for overseeing the remediation of contaminated sites in the San Francisco Bay area.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction. The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, protective clothing, and training requirements to prevent exposure to hazardous materials. DOSH also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement, which equal or exceed their federal counterparts.

4.8.1.3 *Local Regulations*

The routine management of hazardous materials in California is administered under the Unified Program. The Cal/EPA has granted responsibilities to the Santa Clara County Hazardous Materials Compliance Division (HMCD) for implementation and enforcement of hazardous material regulations under the Unified Program as a Certified Unified Program Agency (CUPA). Through a formal agreement with the HMCD, the Mountain View Fire Department (MVFD) implements hazardous materials programs for the City of Mountain View as a Participating Agency within the Unified Program. The Mountain View Fire Department coordinates with the HMCD to implement the Santa Clara County Hazardous Materials Management Plan and to ensure that commercial and residential activities involving classified hazardous substances are properly handled, contained, and disposed.

Under authority from the Regional Water Board, the Santa Clara County Department of Environmental Health implements the Local Oversight Program (LOP) to oversee the investigation and remediation of leaking underground fuel tanks in Santa Clara County.

Most of the hazardous materials programs in the North Bayshore Precise Plan area are administered and enforced under the Unified Program. The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following hazardous materials programs: 1) Hazardous Materials Business Plan (HMBP) Program, 2) California Accidental Release Prevention (CalARP) Program, 3) Underground Storage Tank (UST) Program, 4) Aboveground Storage Tank (AST) Program, 5) Hazardous Waste Generator Program, and 6) Hazardous Waste Tiered-Permitting Program. A summary of the hazardous materials programs in the North Bayshore Precise Plan area are provided below.

Hazardous Materials Business Plan Program

For the North Bayshore Precise Plan area, the MVFD requires any facility storing aggregate quantities of any hazardous materials equal to or greater than 10 gallons of liquids, 50 pounds of solids, or 200 cubic feet of gases to report their chemical inventories to the MVFD by preparing a

HMBP. An HMBP must include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP must also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

The HMBP informs the community on chemical use, storage, handling, and disposal practices. It is also intended to provide essential information to firefighters, health officials, planners, elected officials, workers, and their representatives so that they can plan for and respond to potential exposures to hazardous materials.

California Accidental Release Prevention Program (CalARP)

There are facilities within the North Bayshore area that handle more than the CalARP threshold quantity of regulated hazardous substances, such as federally listed extremely hazardous toxic and flammable substances and State listed acutely hazardous materials. Under the CalARP program, these facilities must prepare a risk management plan (RMP). An RMP must analyze the potential for an accidental release and provide measures that can be implemented to reduce this potential. Facilities that are required to prepare an RMP must obtain and keep current a CalARP Program Facility Permit from the HMCD. No extremely hazardous materials users are currently located in the North Bayshore area.

Underground Storage Tank Program

Due to fire hazards, flammable liquids, such as gasoline, have historically been stored in USTs, which, over time, may leak, resulting in potential risks for the general public and the environment. The UST Program implemented by the MVFD requires that USTs be installed, monitored, operated, and maintained in a manner that protects public health and the environment. Tanks must be constructed with primary and secondary levels of containment and be designed to protect public health and the environment for the lifetime of the installation. The USTs must be monitored for leaks and built such that a leak from the primary container into the secondary container will be detected. When a UST is proposed to be removed, a detailed permit application must be submitted to MVFD. The MVFD oversees UST removal activities to identify potential evidence of leakage. The Precise Plan area has a history of 22 leaking solvent and fuel USTs cases. Eighteen of these cases are closed with no further action necessary. Four cases are properties that are open and are currently undergoing remediation or monitoring.

Aboveground Storage Tank Program

The Precise Plan area must comply with the Aboveground Petroleum Storage Act (APSA) which requires facilities with aboveground storage tanks (ASTs) greater than or equal to 55 gallons of petroleum and having an aggregate aboveground storage capacity greater than or equal to 1,320 gallons to prepare and implement a Spill Prevention, Countermeasure, and Control (SPCC) plan. The SPCC plan would address prevention, preparation, and response measures to prevent oil discharges into navigable water and adjoining shorelines (i.e., San Francisco Bay). There are facilities in the Precise Plan area with aboveground storage tanks with an aggregate capacity of 10 gallons or more of petroleum, and therefore, these facilities are required to operate under a Hazardous Materials Permit and submit a tank facility statement annually to the MVFD. At least once every three years, HMCD would inspect storage tanks in the Precise Plan area with a storage

capacity of 10,000 gallons or more of petroleum to determine if the owner or operator is in compliance with the SPCC plan requirements of the APSA.

Hazardous Waste Generator Program

Generally, high intensity office/R&D and industrial developments within the North Bayshore Precise Plan area process hazardous materials (e.g., computer and electrical components, chemicals for laboratory testing and manufacturing) and what remains would be considered as hazardous waste. Facilities in the North Bayshore area that generate any quantity of hazardous waste are required to obtain and keep current a Hazardous Waste Generator Permit from the HCMD. Along with the Hazardous Waste Generator Permit, facilities that generate more than 100 kilograms of hazardous waste per month, or more than one kilogram of acutely hazardous waste, must be registered with U.S. EPA's RCRA program and are subject to extensive regulations regarding storage and disposal.

Hazardous Waste Tiered-Permitting Program

The Unified Program regulates a Tiered-Permitting Program for authorizing facilities that generate hazardous waste to treat eligible waste streams onsite. The tiers include the following permits: Permit by Rule (PBR), Conditionally Authorized (CA), and Conditionally Exempt (CE). PBR Tiered-Permitting facilities can treat any volume of hazardous waste, including hazardous wastes with more than one hazard. CA Tiered-Permitting facilities are only authorized to treat less than 5,000 gallons or 45,000 pounds per month of hazardous wastes with only one characteristic or hazard. CE Tiered-Permitting facilities are only authorized to treat less than 55 gallons per month of hazardous waste.

Tiered-Permitting facilities in the Precise Plan area must obtain and keep current a permit from the MVFD. All Tiered-Permitting facilities must characterize waste streams prior to treatment and PBR Tiered-Permitting facilities must prepare a waste analysis plan and are also required to submit annual notification to the MVFD, including an annual waste minimization certification.

4.8.1.4 *Regulatory Databases*

Federal, State, and local regulatory databases record the type of hazardous source, the status for cleanup, monitoring, and/or remediation, and the location of the source. The following databases document the hazardous materials sources in the North Bayshore Precise Plan area.

Table 4.8-1:
Hazardous Materials Databases

National Priority List (NPL)	Also known as Superfund, the NPL database identifies properties for priority cleanup under the Superfund program. The purpose of this database is to assist the U.S. EPA in prioritizing and determining sites that warrant further investigation through utilizing the Hazard Ranking System (HRS). The EPA requires that the criteria provided by the HRS be used to make a list of national priorities of the known releases or threatened releases of hazardous substances, pollutants, or contaminants in the United States. The City falls under the authority of the U.S. EPA Region 9.

Table 4.8-1: Hazardous Materials Databases	
Leaking Underground Storage Tank (LUST)	The Leaking Underground Storage Tank (LUST) database contains an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.
Aboveground Storage Tank (AST)	The database shows a listing of aboveground petroleum storage tank locations.
Spills, Leaks, Investigations and Cleanup (SLIC)	The Spills, Leaks, Investigations and Cleanup (SLIC) database contains a list of properties where the Regional Water Quality Control Board is overseeing site investigation and corrective action under the Site Cleanup Program (SCP).
Certified Unified Program Agency (CUPA) Listings	A listing of sites included in the County's Certified Unified Program Agency (CUPA) database. The unified hazardous materials and hazardous waste regulatory program consolidates associated administration, permits, inspections, and enforcement activities.
Envirostor	The Department of Toxic Substances Control's (DTSC's) Envirostor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites; State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.
Resource Conservation and Recovery Act Large Quantity Generators (RCRA-LQG)	This database includes selective information on facilities that generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over one kg of acutely hazardous waste per month.
Resource Conservation and Recovery Act Small Quantity Generators (RCRA-SQG)	This database includes selective information on facilities that generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.
Voluntary Cleanup Program (VCP)	A list of properties within the Voluntary Cleanup Program (VCP) where the project proponents have requested that DTSC oversee investigation and/or cleanup activities
DEED	A list of properties with recorded land use restrictions required by the DTSC Hazardous Waste Management Program (HWMP) as a result of the presence of hazardous substances that remain on property after the facility (or part of the facility) has been closed or cleaned up.
US INST CONTROL	A US EPA listing of properties with institutional controls in place to prevent exposure to contaminants remaining on the property.
US ENG CONTROLS	A US EPA listing of properties with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to eliminate pathways for regulated substances to enter environmental media or effect human health.
Historic UST Databases	The historic UST databases contain active and inactive USTs, but the databases are no longer updated or maintained. These databases include the Facility Inventory Database (FID) UST and the Statewide

Table 4.8-1: Hazardous Materials Databases	
	Environmental Evaluation and Planning System (SWEEPS) UST from the State Water Resource Control Board, a historical listing of UST sites (HIST UST) from the Hazardous Substance Storage Container Database, and the Recovered Government Archive (RGA) LUST.
Facility Inventory Database (FID)	The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board.
HIST UST	A historical listing of UST sites within the Hazardous Substance Storage Container Database.
Statewide Environmental Evaluation and Planning System (SWEEPS UST)	Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained.
Recovered Government Archive (RGA) Leaking Underground Storage Tank (RGA LUST)	The EDR Recovered Government Archive (RGA) Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists.

4.8.1.5 *General Plan Policies*

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocated necessary resources to support fulfillment of the City vision. Implementing actions are the specific to-do steps required to carry out the General Plan's broader goals and policies and are included in a companion Action Plan. The following General Plan Policies are applicable to the amended Precise Plan for hazards and hazardous materials impacts.

Public Safety	
GOAL PSA-3	**A community protected from fire, hazardous materials and environmental contamination.**
Policy PSA 3.2	Protection from hazardous materials. Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials through prevention and enforcement of fire and life safety codes.
Policy PSA 3.3	Development review. Carry out development review procedures that encourage effective identification and remediation of contamination and protection of public and environmental health and safety.
Policy PSA 3.4	Oversight agencies. Work with local, state and federal oversight agencies to encourage remediation of contamination and protection of public and environmental health and safety.

Infrastructure and Conservation	
GOAL INC-18	**Prevention and remediation of contamination in groundwater, surface water, soil and from soil vapor and vapor intrusion.**
Policy INC 18.1	Contamination prevention. Protect human and environmental health from environmental contamination.
Policy INC 18.2	Contamination clean-up. Cooperate with local, state and federal agencies that oversee environmental contamination and clean-up.
Land Use and Design	
GOAL LUD-3	**A diverse, balanced and flexible mix of land uses that supports a strong economy, complete neighborhoods, transit use and community health.**
Policy LUD 3.10	Zoning standards for sensitive uses. Allow sensitive uses such as child care in the North Bayshore and East Whisman Change Areas with measures to protect those uses from hazardous materials used by surrounding businesses.
GOAL LUD-2	**Effective coordination with regional agencies and other local governments on planning issues.**
Policy LUD 2.5	Moffett Federal Airfield. Encourage compatible land uses within the Airport Influence Area for Moffett Federal Airfield as part of Santa Clara County's Comprehensive Land Use Plan.
Mobility	
GOAL MOB-10	**The most effective use of the city's transportation networks and services.**
Policy MOB 10.1	Efficient automobile infrastructure. Strive to maximize the efficiency of existing automobile infrastructure and manage major streets to discourage cut-through traffic on neighborhood streets.
Policy MOB 10.2	Reducing travel demand. Promote effective Transportation Demand Management programs for existing and new development.
Policy MOB 10.4	Emergency response. Monitor emergency response times and review emergency response time standards.

4.8.2 Existing and Historic Site Conditions

The North Bayshore Precise Plan area is located north of US 101 and bordering the San Francisco Bay and Shoreline at Mountain View Regional Park. The area is characterized by large high-technology campuses with nearby open space resources. The project area currently consists of approximately 7.3 million square feet of office, light industrial, commercial, and scattered residential uses.

4.8.2.1 *Historic Site Conditions*

A review of aerial photographs from 1939 to 2012 showed the North Bayshore Precise Plan area changing from a primarily open space and agricultural community to an intensive office/R&D and industrial development, with nearby recreational and entertainment uses in Shoreline at Mountain View Regional Park (including the golf course and Shoreline Amphitheater).

By 1939, the Precise Plan area was developed with existing roadways and corridors including Shoreline Boulevard, Plymouth Street, Charleston Road, and Bayshore Highway. In the 1939 aerial, the current Permanente Creek Trail appears as a roadway. The area was agricultural near the roadways and open space near the Bay. In 1956, development expanded in the Precise Plan area, especially along Stevens Creek towards the Bay and south of Charleston Road. Large residential development expanded south and west of Bayshore Highway. By 1968, office/R&D and industrial development along the western boundary of the Precise Plan area and urban development was primarily south of Charleston Road. Also, Bayshore Highway became US 101, with multiple ramp interchanges in the project area. A 1991 aerial shows the Shoreline Amphitheatre and associated parking lots immediately north of the project area. From the early 1990's to the present, office/industrial has been the primary land use in the North Bayshore Precise Plan area.

From previous agricultural uses in the area, pesticides were likely applied during the course of normal farming operations. Subsequent to the agricultural use of the area, industrial and R&D uses would have had used and stored chemicals for manufacturing and research activities, and subsequently generated hazardous wastes from these processes.

4.8.2.2 *Sources of Contamination*

A regulatory database search for the 2014 North Bayshore Precise Plan EIR was completed to help identify and assess hazardous sources on-site and within one-mile of the Precise Plan area, as shown in Table 4.8-2. Figure 4.8-1 shows the known solvent and fuel leak cases in the area.

As shown in the table and Appendix H, the Precise Plan area contains 22 underground storage tanks with reported leakage on the LUST, 17 sites in the cleanup process for spills or leaks on the SLIC, and three contamination sites on the Envirostor database. While the plan area contains no active Superfund site, there are seven Superfund sites listed on the NPL databases within one mile, generally south of the Precise Plan area and south of US 101. No extremely hazardous materials users are currently located in the North Bayshore area.

Table 4.8-2: Summary of Selected Database Listings		
Database Name and Description[1]	**Within NBPP Site Listings**[2]	**Off-Site Within One Mile**[3]
National Priority List (NPL)	0	7
Leaking Underground Storage Tank (LUST)	29	66
Spills, Leaks, Investigations and Cleanup (SLIC)	17	38
Envirostor	3	26
Voluntary Cleanup Program (VCP)	0	3
Resource Conservation and Recovery Act Large Quantity Generators (RCRA-LQG)	9	8
Resource Conservation and Recovery Act Small Quantity Generators (RCRA-SQG)	41	45
Certified Unified Program Agency (CUPA) Listings	31	65
Leaking Underground Storage Tank (LUST)	3	1
Aboveground Storage Tank (AST)	5	3
DEED	1	7
US INST CONTROL	0	5
US ENG CONTROLS	0	7
Historic UST Databases		
FID UST	17	17
HIST UST	23	26
SWEEPS UST	18	16
RGA LUST	22	0

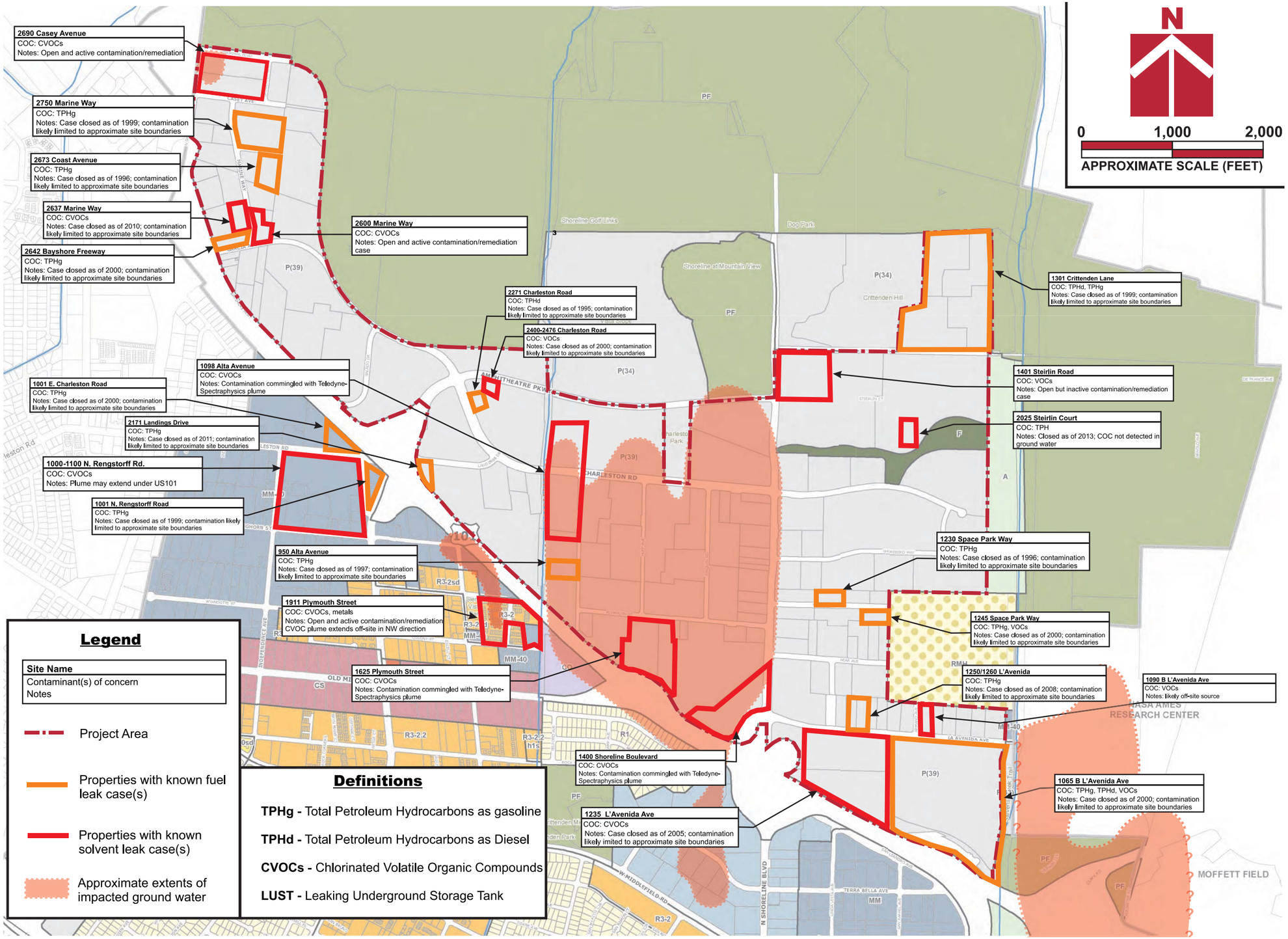
[1] Based on regulatory database search for the North Bayshore Precise Plan EIR (2014), prepared by Cornerstone Earth Group, April 7, 2014, and subsequent correspondence.
[2] Number of listings noted within the North Bayshore Precise Plan area.
[3] Number of listings noted outside the North Bayshore Precise Plan area within an approximate one-mile radius.

Asbestos-Containing Materials and Lead-Based Paint

The older buildings in the Precise Plan area, if constructed prior to 1978, may include asbestos-containing materials (ACMs) in building materials such as roofs, tiling, and insulation. Asbestos-containing materials are of concern because exposure to them has been linked to cancer.

Since demolition of buildings may occur as part of future development under the amended North Bayshore Precise Plan, asbestos-containing materials must be removed prior to demolition or other activities that may disturb these materials.

Lead was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. In 1972, the Consumer Products Safety Commission limited lead content in new paint to 0.5 percent, and to 0.06 percent in 1978. Similar to ACMs in buildings, lead may be present in older buildings within the North Bayshore area.



Source: Cornerstone Earth Group., 7/2015.

KNOWN SOLVENT AND FUEL LEAK CASES

FIGURE 4.8-1

Agricultural Pesticides

Pesticides containing metals such as arsenic, mercury, copper, and lead were utilized in agriculture prior to 1950. Then DDT (dichloro-diphenyl-trichloroethane) and chlordane pesticides were used from 1950 to the mid-1970's. In 1972, the EPA began regulating the manufacture, distribution, and import of pesticides under the updated Federal Insecticide, Fungicide, and Rodenticide Act. Pesticide regulations are enforced by the California Department of Pesticide Regulation (DPR) statewide, and the Santa Clara County Division of Agriculture in the City of Mountain View and the North Bayshore area.

The North Bayshore Precise Plan area was primarily agricultural from 1939 to the late 1950's, especially north of Plymouth Street. Soils in the Precise Plan area may contain residual pesticide contamination from previous agricultural activities.

4.8.2.3 *Airport Safety: Moffett Federal Airfield*

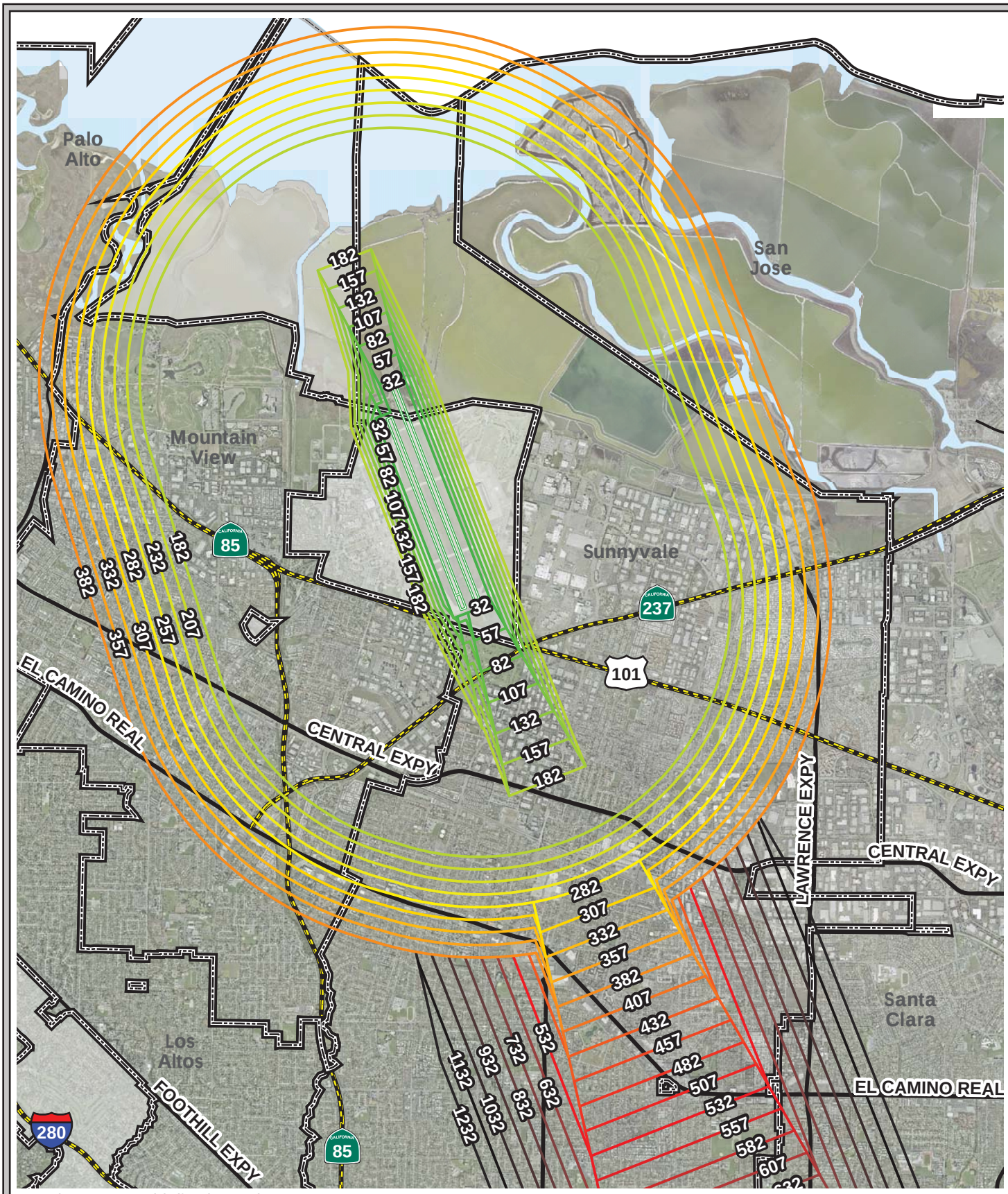
Moffett Federal Airfield is located between approximately 4,300 feet (from the eastern boundary) and 6,000 feet (from the western boundary) east of the North Bayshore area as measured from the airfield's westernmost runway.

Federal Aviation Administration

Due to the site's proximity to the airfield and its location in relationship to the flight paths, construction in the North Bayshore Precise Plan area may be subject to review by the both the Federal Aviation Administration (FAA) and NASA/Ames, the owner/operator of Moffett Federal Airfield. The criteria for this review are defined under Part 77 of Federal Aviation Regulations. The purpose of the review would be to determine whether the project would constitute a hazard to aviation, a finding which could be made if, for example, the heights of the proposed buildings exceed established criteria.

Any construction equipment or new structures that exceed the height restrictions of FAR Part 77 could affect navigable airspace associated with the airport. Compliance with FAA notification requirements (including preparation of an aeronautical study by FAA, specified in FAR Part 77, for new development or redevelopment that exceed the height limits) would minimize the potential for development to create a significant hazard to navigable airspace. The FAR Part 77 surfaces are shown on Figure 4.8-2. Most of the North Bayshore Precise Plan area is within the allowed 182 foot elevation contour area (a measured from mean sea level).

Some areas closest to Highway 101 have existing grade elevations plus or minus 30 feet above mean sea level, that when combined with new maximum Precise Plan building heights may potentially exceed the FAR Part 77 surface regulations. The Santa Clara County Airport Land Use Commission (ALUC) discussed in the next section, will review and comment on the Precise Plan's compliance with these FAA regulations as contained in the Moffett Field Comprehensive Land Use Plan.



MOFFETT FEDERAL AIRFIELD, FAA PART 77 SURFACES FIGURE 4.8-2

Santa Clara County Airport Land Use Commission (ALUC)

The planning area for Moffett Federal Airfield is described in the *Moffett Federal Airfield Comprehensive Land Use Plan (CLUP)* prepared by the Santa Clara County Airport Land Use Commission (ALUC) and adopted in November 2012.[83] The western border of the airport's influence area coincides approximately with Permanente Creek in the central part of the North Bayshore area. This area is within the Airport Influence Area (AIA) for Moffett Federal Airfield, east of the site (Figure 4.8-3). Figure 4.8-4 shows the Safety Zones from the Moffett Federal Airfield CLUP.

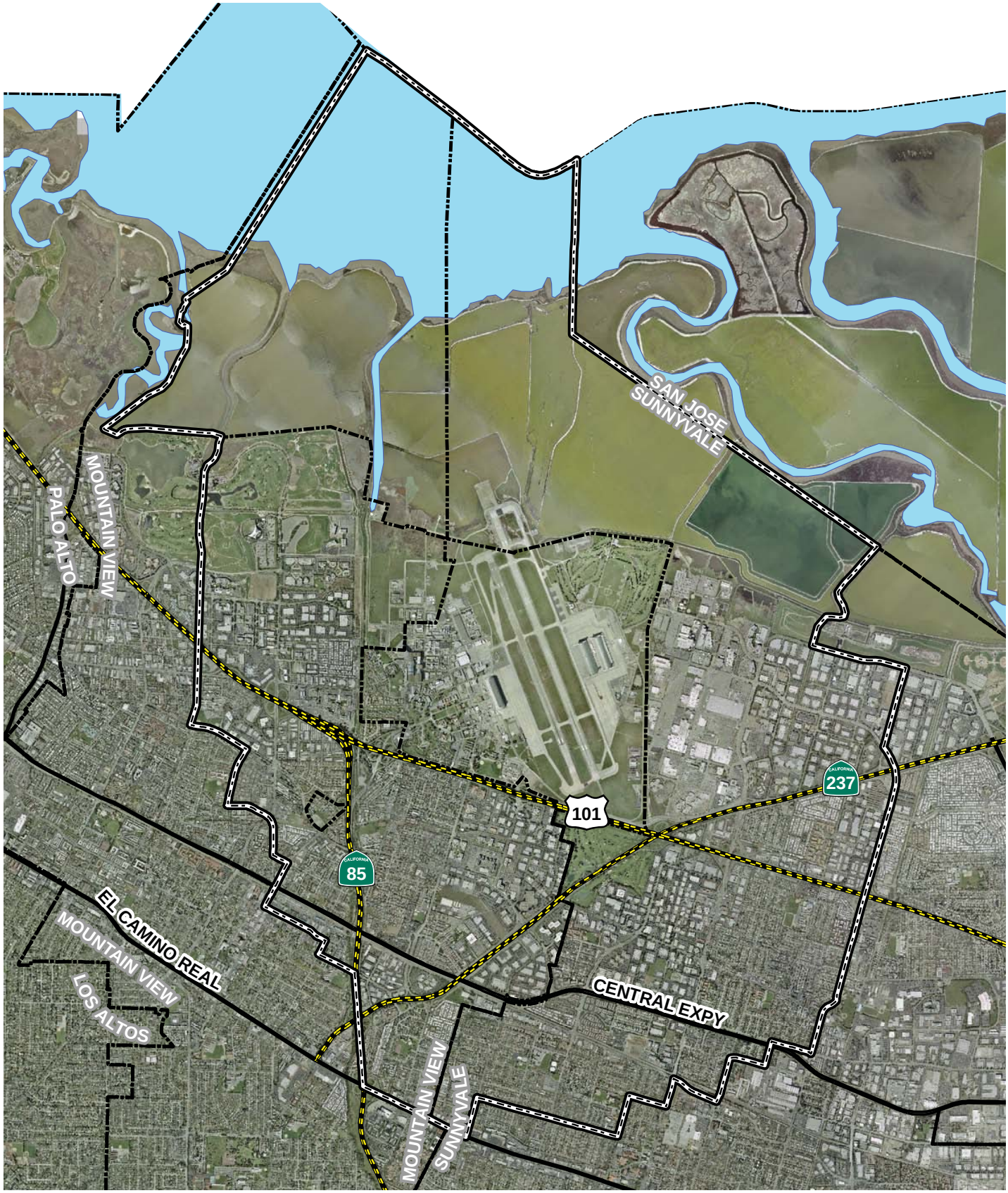
Development within the North Bayshore Precise Plan and the Moffett Federal Airfield planning area will be subject to review by the ALUC for consistencies with the policies of the CLUP. For example, new developments may increase building heights in the proposed plan area and exceed thresholds in the CLUP, and therefore, may require design modifications or an avigation easement for compliance with the CLUP.

Any construction equipment or new structures that exceed the height restrictions of Moffett Federal Airfield's adopted Comprehensive Land Use Plan (CLUP), could affect navigable airspace associated with the airport. The CLUP requires ongoing review of land uses within the AIA to ensure that land use changes are compatible with ALUC policies and plans.

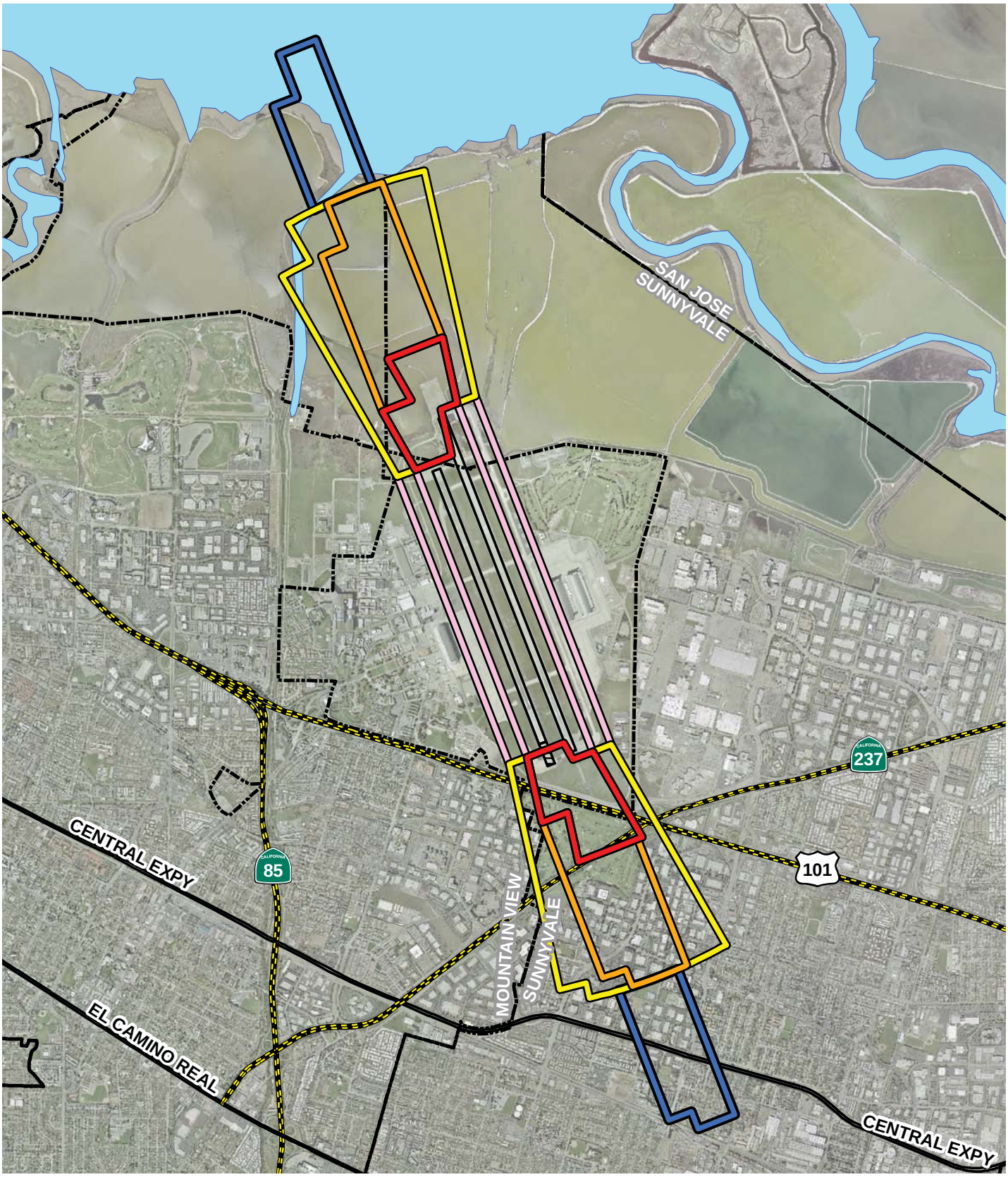
The City of Mountain View will work closely with ALUC staff to establish and carry out review coordination with the ALUC. Mountain View 2030 General Plan Policy LUD 2.5 also encourages compatible land uses within the AIA for Moffett Federal Airfield as part of Santa Clara County's Comprehensive Land Use Plan.

The following compatibility policies from the CLUP are used for determining consistency during the ALUC review:

[83] Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan.* November 2, 2012.



MOFFETT FEDERAL AIRFIELD, AIRPORT INFLUENCE AREA FIGURE 4.8-3



MOFFETT FEDERAL AIRFIELD, SAFETY ZONES FIGURE 4.8-4

General Compatibility

- G-1. In the case of conflicting policies, the most restrictive policy shall be applied.
- G-2. If a project falls into an area within two or more Airport Influence Areas (AIA), the most restrictive conditions from each separate airport shall apply to the project.
- G-3. The Airport is exempt from the policies of this CLUP for the development of projects on airport property.
- G-4. Local jurisdictions should encourage the conversion of land uses that are currently incompatible with this CLUP to uses that are compatible, where feasible.
- G-5. Where legally allowed, dedication of an avigation easement to the County of Santa Clara shall be required to be offered as a condition of approval on all projects located within an Airport Influence Area, other than reconstruction projects as defined in paragraph 4.3.7 of the CLUP.
- G-6. Any proposed uses that may cause a hazard to aircraft in flight are not permitted within the AIA. Such uses include electrical interference, high intensity lighting, attraction of birds (certain agricultural uses, sanitary landfills), and activities that may produce smoke, dust, or glare.

Noise Compatibility

- N-1. The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.
- N-2. In addition to the other policies herein, the Noise Compatibility Guidelines presented in Table 4-1 of the CLUP shall be used to determine if a specific land use is consistent with this CLUP.
- N-3. Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on Figure 5 of the CLUP.
- N-4. No residential or transient lodging construction shall be permitted within the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound levels will be less than 45 dB CNEL and there are no outdoor patios or outdoor activity areas associated with the residential portion of a mixed use residential project of a multi-unit residential project. (Sound wall noise mitigation measures are not effective in reducing noise generated by aircraft flying overhead.)
- N-5. All property owners within the 65 dB CNEL contour boundary who rent or lease their property for residential use shall include in their rental/lease agreement with the tenant, a statement advising that they (the tenants) are living within a high noise area and the exterior noise level is predicted to be greater than 65 dB CNEL in a manner that is consistent with current state law including AB2776 (2002).
- N-6. Residential construction will not be permitted in the area between the 60 dB CNEL contour boundary and the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound level will be no greater than 45 dB CNEL.
- N-7. Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 4-1 of the CLUP presents acceptable noise levels for other land uses in the vicinity of the Airport.
- N-8. Single-event noise levels (SENL) from single aircraft overflights are to be considered when evaluating the compatibility of highly noise-sensitive land uses such as schools, libraries, outdoor theaters, and mobile homes. Single-event noise levels are especially

important in the areas regularly overflown by aircraft, but which may not produce significant CNEL contours.

Height Compatibility

- H-1. Any structure or object that penetrates the Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace, (FAR Part 77) surfaces, as presented in Table 3-3 and illustrated on Figure 6 of the CLUP will be considered an incompatible land use.
- H-2. Any project that may exceed a FAR Part 77 surface must notify the Federal Aviation Administration (FAA) as required by FAR Part 77, Subpart B on FAA Form 7460-1, Notice of Proposed Construction or Alteration. (Notification to the FAA under FAR Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the FARs).

Tall Structure Compatibility

- T-1. The applicant for any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall submit to the FAA a completed copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration. A copy of the submitted form shall be submitted to the Santa Clara County ALUC as well as a copy of the FAA's response to this form.

- T-2. Any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall comply with FAR 77.13(a)(1) and shall be determined inconsistent if deemed to be a hazard by the FAA or if the ALUC determines that the project has any impact on normal aircraft operations or would increase the risk to aircraft operations.

Safety Compatibility

- S-1. These policies and the Safety Zone Compatibility Policies presented in Table 4-2 shall be used to determine if a specific land use is consistent with the CLUP. Safety impacts shall be evaluated according to the Airport Safety Zones presented on Figure 7.
- S-2. Schools, hospitals, nursing homes, and other uses in which the majority of occupants are children, elderly, and/or disabled shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), and Outer Safety Zones (OSZs) presented in Table 3-2. These uses should also be discouraged in the Traffic Pattern Zones (TPZs).
- S-3. Amphitheaters, sports stadiums and other very high concentrations of people shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), Outer Safety Zones (OSZs) and Traffic Pattern Zones (TPZs) presented in Figure 7.
- S-4. Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone. Above ground storage of fuel or other hazardous materials shall be prohibited in the Inner Safety Zone and Turning Safety Zone. Beyond these zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.
- S-5. In addition to the requirements of Table 4-2, open space requirements, for sites which

can accommodate an open space component, shall be established at the general plan level for each safety zone where feasible as determined by the local jurisdiction, as individual parcels may be too small to accommodate the minimum-size open space requirement. To qualify as open space, an area must be free of buildings, and have minimum dimensions of at least 75 feet wide by 300 feet ling along the normal direction of flight. The clustering of development and provision of contiguous landscaping and parking areas will be encouraged to increase the size of open space areas.

- S-6. The principal means of reducing risks to people on the ground is to restrict land uses so as to limit the number of people who might gather in areas most susceptible to aircraft accidents. A method for determining the concentration of people for various land uses is presented in Section 5.0, Implementation.
- S-7. The following uses shall be prohibited in all Airport Safety Zones:

  – Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.
  – Any use that would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.
  – Any use which would generate smoke or water vapor, or which would attract large concentrations of birds, or which may otherwise negatively affect safe air navigation within the area.
  – Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation, communication or navigation equipment.

- S-8. Buildings that would interfere with an aircraft gliding to an emergency landing in a safety zone open area are not permitted.
- S-9. In unique cases an exception can be granted, at the discretion of the ALUC, on the basis of mitigation measures proposed by the applicant which would result in the final project improving the overall safety in the safety zones in comparison to the situation existing prior to the project. An example of such a possible mitigation is the removal of existing incompatible structures in exchange for constructing less incompatible structures. The following conditions must be met for this variance to be granted:

  – There must be a clear, demonstrable net improvement in safety.
  – The mitigation must provide a permanent improvement in safety. For instance, in the example above, the removed structures could not be replaced by other structures at a later date.

<u>Overflight</u>

- O-1. All new projects within the AIA that are subject to discretionary review and approval shall be required to dedicate an avigation easement to the County of Santa Clara. The avigation easement shall be similar to that shown as Exhibit 1 in Appendix A of the CLUP.

Reconstruction

- R-1. Reconstruction projects that are not subject to a previous avigation easement shall not be required to provide an avigation easement as a condition for approval.
- R-2. Residential reconstruction projects must include noise insulation to assure interior noise levels of less than 45 dB CNEL.
- R-3. An application for reconstruction increasing the structure's internal square footage, footprint square footage, height, and/or intensity of use may be approved if the local agency determines that such increase will have no adverse impact beyond that which existed with the original structure. However, a project approved under this policy shall require the property owner to offer and the local agency shall accept an avigation easement to the County of Santa Clara, similar to Exhibit 1 in the Appendix of the CLUP.

Infill

- I-1. Infill projects must comply with paragraph 4.3.5 and Table 4-2 of this CLUP with the exception of the land use density requirements.
- I-2. Infill projects may be approved if all of the following conditions are met:

  - The total contiguous undeveloped land area at this location is less than 0.25 acres in size. Note that this means the total contiguous undeveloped land area, not just the land area being proposed for development. Lots larger than 0.25 acres shall not be considered for infill.
  - The site is already surrounded on three sides and a street, or two sides and two streets, by the same land use as that being proposed.
  - The ALUC determines that the project will create no adverse safety impacts beyond those that already exist due to the existing incompatible land uses.
  - The property owner shall offer and the local agency shall accept an avigation easement to the County of Santa Clara, similar to Exhibit 1 in the Appendix of the CLUP.

Other Airports

The site is not within the airport land use plan area of the Palo Alto Airport, which is approximately 9,480 feet (from the western boundary) northwest of the North Bayshore area.[84]

4.8.2.4 *Other Hazards: Emergency Response Plans*

In the North Bayshore Precise Plan area, as well as in the rest of the City, the Mountain View Fire Department (MVFD) Office of Emergency Services (OES) is responsible for responding to disasters or other large-scale emergencies. The OES Emergency Plan includes emergency response protocols and procedures for the entire City. In the North Bayshore Precise Plan area, the commuter train (VTA Light Rail and Caltrain), US 101, and State Route 85 could be used as evacuation routes.

[84] Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan Santa Clara County – Palo Alto Airport.* November 19, 2008.

4.8.2.5 *Other Hazards: Wildland Fire Hazards*

The California Department of Forestry and Fire Protection (CalFire) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones represent the risks associated with wildland fires. State law only requires identification of Very High Fire Hazard Severity Zones in local responsibility areas. Wildland-Urban Interface Areas designated by local agencies are also classified as Fire Hazard Severity Zones. No Fire Hazard Severity Zones for State responsibility areas or Very High Fire Hazard Severity Zones for local responsibility areas have been identified within or adjacent to the North Bayshore Precise Plan area.

New buildings and development projects are required to comply with the 2013 California Building Standard Codes as of January 2014, which include the California Building Code (CBC) and the California Fire Code (CFC) and/or any other ordinances adopted by the City of Mountain View such as approved building materials and construction methods to prevent and protect against wildfire hazards.[85] The MVFD is responsible for enforcing these provisions.

4.8.3 Hazards and Hazardous Materials Impacts

4.8.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a hazards and hazardous materials impact is considered significant if the project would:

- Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

[85] California Building Standards Commission. *2016 California Building Code.* January 1, 2017. Available at: http://www.bsc.ca.gov/codes.aspx. Accessed January 17, 2017.

4.8.3.2 *Impacts from the Use, Storage, and Delivery of Hazardous Materials*

As described above, existing industrial and R&D uses in the Precise Plan area involve the use, handling, and storage of hazardous materials and generation of hazardous waste. Fuels, paints, flammable liquids, cleaning solutions, and other potentially hazardous materials would continue to be delivered to and stored on-site and used as part of ongoing operations. Fertilizers, pesticides, and herbicides used for landscaping in the future will also be used and stored on-site.

The MVFD regulates the storage of hazardous materials in the City. Even if a hazardous material is accidentally released, it does not necessarily have the potential for causing off-site consequences. Many such substances are only kept in small quantities that make an accidental release unlikely to result in a substantial concentration that would release very far from the source.

New development or redevelopment in the Precise Plan could involve the routine use and storage of hazardous materials that could pose a significant threat to human health or the environment if not properly managed or accidently released. The storage, use, handling, generation, transport, and disposal of hazardous materials during site construction and operation activities are addressed by federal, state, and local laws, regulations, and programs, including RCRA, TSCA, DOT regulations in 49 CFR, and hazardous materials regulations in CCR Title 26 on the federal and state levels. On the local level, the Santa Clara County HMCD and MVFD implement regulatory programs for sites that routinely manage hazardous materials to ensure the safe storage, management, and disposal of hazardous materials in accordance with the Unified Program and local ordinances.

The MVFD also enforces storage, handling, and dispensing requirements for hazardous materials and other regulated materials according to the City of Mountain View Hazardous Materials Permit Code Ordinance and Toxic Gases Ordinance. The MVFD requires any facility storing aggregate quantities of any hazardous materials equal to or greater than 10 gallons of liquids, 50 pounds of solids, or 200 cubic feet of gases to report their chemical inventories to the MVFD by preparing a Hazardous Materials Business Plan (HMBP). An HMBP must include measures for safe storage, transportation, use, and handling of hazardous materials. The HMBP must be approved by MVFD and include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

The City of Mountain View has adopted the following hazardous materials policies and action items as part of the 2030 City of Mountain View General Plan to reduce potential impacts associated with the use, storage, and transport of these materials:

> POLICY PSA 3.2: Protection from hazardous materials. Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials through enforcement of fire and life safety codes and prevention.
>
> POLICY PSA 3.3: Development review. Implement development review procedures that encourage effective identification and remediation of contamination and protection of public and environmental health and safety.

Future development and redevelopment projects in the Precise Plan area could result in the use, handling, and storage of hazardous materials and generation of hazardous waste. Future projects will be evaluated on a project-by-project bases consistent with Policy PSA 3.3.

Extremely Hazardous Materials: As described above, no extremely hazardous materials users are currently located in the North Bayshore area. *Chapter 3: Land Use and Design* of the North Bayshore Precise Plan defines the land use standards and guidelines for new uses. Since residential uses would be allowed in the North Bayshore area, the following land use standard from Section 3.3.2 of the Precise Plan would apply to new development in all Character Areas:

North Bayshore Precise Plan Standard

4. **Prohibited uses.** Extremely hazardous material users as defined in the City Code are prohibited, except for exempt permitted materials.

The nearest school to the Precise Plan area is Crittenden Middle School located at 1701 Rock Street, approximately 0.2 miles south of the Precise Plan area. Projects that comply with air quality conditions of approval during construction (refer to *Section 4.2, Air Quality*) would not have a significant hazardous emissions impact on schools in or near the Precise Plan area.

Projects that comply with federal, state, local requirements, and the City of Mountain View 2030 General Plan policies and actions, and the standard and measures listed above, will reduce the potential for hazardous materials impacts to existing and future residents, schools, and businesses in and near the Precise Plan area.

Impact HAZ-1: Future development and redevelopment projects in the Precise Plan area could result in the use, handling, and storage of hazardous materials and generation of hazardous waste. Future projects will be evaluated on a project-by-project bases consistent with Policy PSA 3.2 and PSA 3.3 and associated actions. Projects that comply with federal, state, local requirements, and the City of Mountain View 2030 General Plan policies and actions, and the standard and measures listed above, will reduce the potential for hazardous materials impacts to existing and future residents, schools, and businesses in and near the Precise Plan area. **[Less Than Significant Impact]**

4.8.3.3 *Childcare and Educational Facilities*

No public schools are currently located in the North Bayshore Precise Plan area. The amended Precise Plan zoning standards would allow child-care facilities, specialized education and training schools, and studios for dance, art, music, etc., in the plan area with approval of a provisional use permit. It is not currently known whether future development will include child-care facilities or where exactly they may be proposed. The applications for these uses would be reviewed on a project-by-project basis, to identify the suitability of the use and any potential impacts from hazardous materials in the area. Public schools are subject to state siting criteria to ensure that they are not located on a hazardous materials site.

For these reasons, implementation of the Precise Plan would not result in impacts to existing or proposed schools, and would not construct a school on a property that is subject to hazards from hazardous materials contamination, emissions, or accidental release.

Impact HAZ-2: The amended Precise Plan zoning standards would allow child-care facilities, specialized education and training schools, and studios for dance, art, music, etc., in the plan area with approval of a provisional use permit. It is not currently known whether future development will include child-care facilities or where exactly they may be proposed. Applications for child-care facilities, and specialized education and training schools would be reviewed on a project-by-project basis, to determine the suitability of the use and to identify any potential impacts from hazardous materials in the area. For this reason, implementation of the Precise Plan would not result in impacts to existing or proposed schools. **[Less Than Significant Impact]**

4.8.3.4 *Existing Hazardous Materials Contamination*

As described above, several sites in the plan area are listed on hazardous materials lists compiled pursuant to Government Code Section 65962.5. As described above in the *Existing Setting* section, soils and groundwater throughout the project area have been contaminated in the past with solvents/volatiles organic compounds (VOCs), petroleum hydrocarbons, pesticides, metals, and other materials related to the industrial and agricultural activities on-site. Areas of the plan area are also currently undergoing groundwater monitoring and remediation from contamination caused by past industrial activities. The amended North Bayshore Precise Plan allows residential uses in locations that have been historically industrial and R&D based, which may result in land use compatibility issues with existing hazardous materials contamination.

Future development activities in the North Bayshore area could encounter contaminated soils during excavation and grading; subsurface utility installation, maintenance, or repair; landscaping, and building foundation construction. These activities could result in health risks to construction workers, future residents or employees, and/or the general public.

Groundwater level varies due to seasonal fluctuations, soil conditions, and other factors, and therefore, could be encountered during site development activities. If groundwater is encountered during site redevelopment activities contact with existing contamination could result in health risks to construction workers, future residents, and/or the general public.

Existing buildings and structures in the Precise Plan that may be removed for redevelopment could contain hazardous materials. Direct contact, inhalation, or ingestion of hazardous materials could potentially cause adverse health effects to construction workers and future site users.

Impact HAZ-3: Contaminated soils and groundwater in the plan area could pose a risk to construction workers, future residents and employees, and/or the general public. **[Potentially Significant Impact]**

The City of Mountain View has adopted the following policies and action items regarding hazardous materials as part of the 2030 City of Mountain View General Plan to reduce potential impacts from existing contaminated sites and structures:

> POLICY INC 18.1: Contamination prevention. Protect human and environmental health from environmental contamination.
>
> POLICY INC 18.2: Contamination clean-up. Cooperate with local, state, and federal agencies that oversee environmental contamination and clean-up activities.
>
> POLICY PSA 3.4: Oversight agencies. Work with local, state and federal oversight agencies to encourage remediation of contamination and protection of public and environmental health and safety.

General Plan Policy INC 18.1 encourages the prevention of contamination by working with agencies and managing the closure of abandoned water wells, locating monitoring wells, remediating abandoned contamination sites, and monitoring shallow groundwater. Policy INC 18.2 encourages the cooperation with local oversight agencies in the cleanup of contaminated sites.

In addition, future development projects would be subject to the standard Mountain View conditions of approval, which include:

Standard Conditions of Approval:

> DISCOVERY OF CONTAMINATED SOILS: If contaminated soils are discovered, the applicant will ensure the contractor employs engineering controls and Best Management Practices (BMPs) to minimize human exposure to potential contaminants. Engineering controls and construction BMPs will include, but not be limited to, the following: (a) contractor employees working on-site will be certified in OSHA's 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training; (b) contractor will stockpile soil during redevelopment activities to allow for proper characterization and evaluation of disposal options; (c) contractor will monitor area around construction site for fugitive vapor emissions with appropriate field screening instrumentation; (d) contractor will water/mist soil as it is being excavated and loaded onto transportation trucks; (e) contractor will place any stockpiled soil in areas shielded from prevailing winds; and (f) contractor will cover the bottom of excavated areas with sheeting when work is not being performed.
>
> TOXIC ASSESSMENT: A toxic assessment report shall be prepared and submitted as part of the building permit application. The applicant must demonstrate that hazardous materials do not exist on the site, or that construction activities and the proposed use of this site are approved by: the City of Mountain View Hazardous Materials Division of the Fire Department; the State Department of Health Services; the Regional Water Quality Control Board; and any Federal agency with jurisdiction. No building permits will be issued until each agency and/or department with jurisdiction has released the site as clean or an approved site toxics mitigation plan has been approved.

SOIL MANAGEMENT PLAN: Prepare a soil and groundwater management plan for review and approval by the Santa Clara County Department of Environmental Health (SCCDEH). Proof of approval or actions for site work required by the SCCDEH must be provided to the Building Inspection Division prior to the issuance of any demolition or building permits.

Program-level Mitigation Measures: To reduce impacts from hazardous materials contamination, the following mitigation measures will be required of all future development under the Precise Plan.

MM HAZ-4.1: If a future project is located in an area for which an overseeing regulatory agency (e.g., US EPA, California Department of Toxic Substances Control [DTSC]), San Francisco Bay Regional Water Quality Control Board (Water Board) or Santa Clara County Department of Environmental Health (DEH) has determined that mitigation or other site management measures are required prior to future development, the project applicant shall coordinate development activities with the overseeing regulatory agency and adhere to the project-specific development requirements.

MM HAZ-4.2: If a future project is not located in such areas as described in MM HAZ-4.1 and as part of the building permit application process, project applicants shall prepare the following reports:

- **Phase I Environmental Site Assessment (ESA)** - The purpose of the Phase I ESA shall be to identify Recognized Environmental Conditions (RECs), Controlled RECs or Historical RECs at the property (if any of these conditions exist). The scope of work shall be prepared in general accordance with ASTM E 1527-13 (or latest edition) titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule).

- **Phase II Investigation** - If warranted by the findings of the Phase I ESA, a Phase II investigation shall be completed. The primary objective of this investigation shall be to evaluate the RECs identified in the Phase I ESA for the purpose of providing information regarding the nature and extent of possible contamination. The scope of work shall include soil, ground water and/or soil vapor sampling in areas of potential concern to evaluate if mitigation measures are needed to protect the health and safety of property occupants.

- **Remedial Action Plan** – If contaminants of concern (COC) are detected above the lower of the then-current DTSC, Water Board or US EPA residential screening levels,[86] the project applicant shall then prepare a

[86] Note that naturally occurring background concentrations of some metals may exceed their respective screening levels. Regulatory agencies generally do not require cleanup of contaminants in soil to below background levels.

Remedial Action Plan (RAP) that reflects the results of the above investigations and implement the RAP, including long-term operation and maintenance. Site cleanup levels presented in the RAP shall be based on a target cancer risk (TR) of 10^{-6} or, for non-carcinogens, a target hazard quotient (THQ) of 1.0. The lower of the then-current DTSC, Water Board or US EPA residential screening levels shall be used to interpret the TR and THQ levels or, alternatively, a site-specific human health risk assessment shall be prepared and approved by the overseeing regulatory agency. Higher cleanup goals may be acceptable to the City if approved in writing by the oversight agency. The project applicant shall provide an oversight agency's written approval of the RAP to the City.

MM HAZ-4.3: Prior to the start of any construction activity on properties with known COC exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels1, the project applicant shall submit the following plans and controls to a regulatory agency for review and approval:

- **Air Monitoring Plan**, which would assess the exposure of future on-site construction workers and neighboring occupants adjoining the site to COCs; this plan shall specify measures to be implemented if COC concentrations exceed threshold values.

- **Vapor Intrusion Mitigation Plan**, which would describe the measures to be implemented to help prevent exposure of future project occupants to VOCs in indoor air as a result of vapor intrusion. If vapor intrusion of VOCs is identified as a REC, the Vapor Intrusion Mitigation Plan shall require the project applicant to design the proposed occupied spaces with appropriate structural and engineering features to reduce risk of vapor intrusion into buildings. At a minimum, this design shall include: 1) passive sub-slab ventilation with a vapor barrier[87] and with the ability to convert the system from passive to active ventilation; 2) monitoring to ensure the long- term effectiveness of the remedy; and 3) the implementation of institutional controls. Other designs would be acceptable if approved in writing by the overseeing regulatory agency. The project applicant shall be required to submit the vapor intrusion remedial design and remedial action documents to an oversight agency for review and approval.

  Upon installation, the project applicant shall provide a Vapor Intrusion Response Action Completion Report to the oversight agency for review and approval. The report shall document installation of the vapor control measures identified in the Vapor Intrusion Mitigation Plan, including

Site specific background levels may be substituted for the published screening levels if approved by the overseeing regulatory agency.

[87] The vapor barrier shall be required for new construction; it may not be feasible to install the barrier under existing buildings planned for improvements.

plans and specifications, and shall include a long-term operation, maintenance and monitoring plan.

- **Long-Term Operations, Maintenance, and Monitoring Plan**, which shall describe actions to be taken following construction to maintain and monitor selected remedial measures as well as a contingency plan should a remedial measure fail.

- **Institutional Controls Implementation Plan**, which shall identify non-engineered instruments of control, such as administrative and legal controls that help to minimize the potential for human exposure to contamination and/or protect the integrity of the response action. Institutional Controls shall be implemented through the City's planning and permitting procedures which will ensure that the appropriate remedy is applied to particular building construction.

- **Financial Assurance**, which is proof that adequate funds are available for long-term maintenance and monitoring of the selected remedial measure.

- The project applicant shall provide the oversight agency's written approval of the above plans to the City.

MM HAZ-4.4: Prior to the start of any construction activity on properties with known COC exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels, the project applicant shall coordinate work activities with the oversight agency and Responsible Parties (as designated by the oversight agency), including identifying conditions that could affect the implementation and monitoring of the approved remedy.

MM HAZ-4.5: At future project sites identified as being impacted or potentially impacted during the property-specific Phase I ESA or subsequent studies, a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, or other materials during construction. The SMP shall be prepared by an Environmental Professional and be submitted to the overseeing regulatory agency for review and approval prior to construction. The project applicant shall provide the oversight agency's written approval of the SMP to the City. The SMP for the property shall include the following activities:

- Property control procedures to control the flow of personnel, vehicles and materials in and out of the property.

- Monitoring of vapors (if VOCs are determined to be a COC) during the removal of the underground utilities as well as any other underground features. An Environmental Professional shall be present to observe soil conditions, monitor vapors with a hand held meter and low level VOC

detector, as appropriate, and determine if additional soil, soil gas, and air sampling should be performed. Protocols and procedures shall be presented for determining when soil sampling and analytical testing will be performed. If additional sampling is performed, a report documenting sampling activities (with site plans and analytical data) shall be provided to the oversight agency.

- Minimization of dust generation, storm water runoff and off-property tracking of soil.

- Minimization of airborne dust during demolition activities.

- Management of property risks during earthwork activities in areas where impacted soil, soil vapor and/or ground water are present or suspected. Worker training requirements, health and safety measures and soil handling procedures shall be described.

- Decontamination to be implemented by the Contractor to reduce the potential for construction equipment and vehicles to release contaminated soil onto public roadways or other off-property transfer.

- Perimeter air monitoring at the property during any activity that substantially disturbs the property soil (e.g., mass grading, foundation construction, excavation or utility trenching). This monitoring shall be used to document the effectiveness of required dust and vapor control measures.

- Contingency measures for previously unidentified buried structures, wells, debris, or areas of impacted soil that could be encountered during property development activities.

- Characterization and profiling of soil suspected of being contaminated so that appropriate disposal or reuse alternatives can be implemented. All soil excavated and transported from the property shall be appropriated disposed at a permitted facility.

- Segregation of “clean” and “impacted” soil stockpiles.

- Evaluation and documentation of the quality of soil imported to the property.

- Soil containing chemicals exceeding the lower of the then-current DTSC, Water Board or US EPA residential screening levels or typical background concentrations of metals shall not be accepted.

- Monitoring of excavations and trenches for the potential presence of VOC vapors (if a COC).

- Evaluation of the on-property soil conditions to determine if they will adversely affect the integrity of below ground utility lines and/or structures (e.g., the potential for corrosion).

- Measures to reduce potential soil vapor and ground water migration through trench backfill and utility conduits (if soil and/or ground water are contaminated). Such measures shall include placement of low-permeability backfill "plugs" at specified intervals on-property and at all locations where utility trenches extend off-property. In addition, utility conduits that are placed below ground water shall be installed with water-tight fittings to reduce the potential for ground water to migrate into conduits.

- If the property is known to have COCs with the potential for mobilization, a Civil Engineer shall design the bottom and sides of vegetated swales and water retention ponds to be lined with a minimum 30 mil heavy duty plastic to help prevent infiltration.

- If deep foundation systems are proposed, the foundations shall incorporate measures to help reduce the potential for the downward migration of contaminated ground water (if present).

- Methods to mitigate the potential for vapor intrusion of VOC vapors (if present) into the planned structures.

- For construction activity that involves below ground work (e.g., mass grading, foundation construction, excavating or utility trenching), information regarding property risk management procedures (e.g., a copy of the SMP) shall be provided to the contractors for their review, and each contractor should provide such information to its subcontractors.

- If excavation dewatering is required, protocols shall be prepared to evaluate water quality and discharge/disposal alternatives; the pumped water shall not be used for on-property dust control or any other on-property use if contaminated. If long-term dewatering is required, the means and methods to extract, treat and dispose ground water also shall be presented and shall include treating/discharging ground water to the sanitary sewer under a Publicly Owned Treatment Works (POTW) permit or treating /discharging ground water to the storm drain system pursuant to a California Regional Water Quality Control Board - San Francisco Bay Region (Water Board) NPDES permit. If dewatering activities may impact known ground water contaminant plumes in the vicinity of the

property, the oversight agency responsible for the remediation of these contaminant releases shall be notified of planned activities.

- The project applicant's Environmental Professional shall assist in the implementation of the SMP for the property and shall, at a minimum, perform part-time observation services during demolition, excavation, grading and trenching activities. Upon completion of construction activities that significantly disturb the soil, the Environmental Professional shall prepare a report documenting compliance with the SMP; this report shall be submitted to the City and to the oversight agency (if the property is under regulatory oversight - which would require the Project Applicant to provide the oversight agency's written approval of the SMP Completion Report to the City).

MM HAZ-4.6: Leaving contaminated soil with COC above residential screening levels in-place or re- using it on future project sites shall require an oversight agency's written approval; the written approval shall be provided to the City. At a minimum, if contaminated soil is left in-place, a deed restriction or land use covenant shall detail the location of these soils. This document shall include a surveyed map of these impacted soils; shall restrict future excavation in these areas; and shall require future excavation be conducted in these areas only upon written approval by an oversight agency.

MM HAZ-4.7: Any soil, soil vapor and/or ground water remediation of a future project site during development activities shall require written approval by an oversight agency and shall meet all applicable federal, state and local laws, regulations and requirements.

MM HAZ-4.8: Due to the North Bayshore Precise Plan area's proximity to US 101, soil sampling and analytical testing on a future site adjacent to US 101 for lead shall be performed (due to historical leaded gasoline use). If lead is detected above the lower of the then-current DTSC, Water Board or US EPA residential screening levels, it should appropriately mitigated under regulatory agency oversight.

MM HAZ-4.9: Unless the Phase I ESA documents that a specific project site was historically not used for agricultural purposes, soil sampling and laboratory analyses shall be performed to evaluate the residual pesticide concentrations, if any, and potential health risks to future occupants and construction workers.

MM HAZ-4.10: Soil exported from future project sites within the Precise Plan area shall be analyzed for COCs amongst other chemicals as required by the receiving facility.

MM HAZ-4.11: The project applicant shall require the construction General Contractor to prepare a Health and Safety Plan (HSP) establishing appropriate protocols for working at the property. Workers conducting property earthwork activities in

contaminated areas shall complete 40-hour HAZWOPER training course (29 CFR 1910.120). The General Contractor shall be responsible for the health and safety of their employees as wells as for compliance with all applicable federal, state, and local laws and guidelines.

MM HAZ-4.12: Groundwater monitoring wells and remediation system components located on future project sites within the Precise Plan area shall be protected during construction. Upon written approval from the overseeing regulatory agency, the wells could be destroyed under permit from the Santa Clara Water District prior to mass grading activities. Relocation of the wells may be required. The locations of future ground water monitoring wells and other remediation infrastructure, if any, shall be incorporated into the development plans.

MM HAZ-4.13: If future project sites are under active regulatory agency oversight, the project applicant and subsequent owners and occupants shall provide access to the sites, including ongoing access to monitoring wells for monitoring and sampling purposes, and cooperate with the oversight agency and Responsible Parties during implementation of any subsequent investigation or remediation, if required. In addition, if vapor intrusion poses a human health risk, the project applicant and subsequent property owners and occupants shall provide access for future indoor air vapor monitoring activities and shall not interfere with the implementation of remedies required by the oversight agency.

MM HAZ-4.14: For future sites that are subject to activity and use limitations (AULs), such as institutional (legal or regulatory restrictions on a property's use such as deed restrictions) and engineering (physical mechanisms that restrict property access or use) controls, compliance will be maintained.

MM HAZ-4.15: At future sites where hazardous materials are used or stored, a permit may be required for facility closure (i.e., demolition, removal, or abandonment) of any facility or portion of a facility. The project applicant shall contact the Mountain View Fire Department and County Department of Environmental Health to determine facility closure requirements prior to building demolition or change in property use.

Future development allowed by the North Bayshore Precise Plan will be evaluated on a project-by-project basis during the discretionary review process. All future projects will be required to comply with federal, state, local requirements, City of Mountain View 2030 General Plan policies, and the program mitigation measures and standard conditions of approval listed above. Future projects that demonstrate consistency with these regulations, policies, and measures would reduce potential impacts associated with contaminated soil, groundwater, and hazardous building materials, to a less than significant level.

With the implementation of program mitigation measures and standard conditions of approval listed in this section, the project would not create a significant hazard to the public or the environment as a result of the routine transport, use or disposal of hazardous materials; or through reasonably

foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **[Less Than Significant Impact with Mitigation Measures Incorporated in the Project]**

4.8.3.5 *Airport Safety*

Any construction equipment or new structures that exceed the height restrictions of FAR Part 77 or land use policies from Moffett Federal Airfield's adopted Comprehensive Land Use Plan (CLUP), could affect navigable airspace associated with the airport. Compliance with FAA notification requirements (including preparation of an aeronautical study by FAA, specified in FAR Part 77, for new development or redevelopment that exceed the height limits) would minimize the potential for development to create a significant hazard to navigable airspace.

The CLUP requires ongoing review of land uses within the AIA to ensure that land use changes are compatible with ALUC policies and plans. The City of Mountain View shall work closely with ALUC staff to establish and carry out review coordination with the ALUC.

Future development under the Precise Plan would be required to comply with existing FAA and the Moffett Federal Airfield CLUP, as well as applicable policies and actions from the 2030 General Plan. Compliance with these regulations and policies would ensure that potential impacts on airport safety operations for Moffett Federal Airfield are less than significant.

Impact HAZ-4: Future development under the amended Precise Plan would be required to comply with existing FAA regulations and the Moffett Federal Airfield CLUP, as well as General Plan Policy LUD 2.5, which would ensure that potential impacts on airport safety operations for Moffett Federal Airfield are less than significant. **[Less Than Significant Impact]**

4.8.3.6 *Emergency Response and Evacuation Plans*

The 2030 General Plan contains a number of policies and actions requiring maintenance of existing emergency response plans, development of a new emergency response plan for damaged utilities, development of a Local Hazard Mitigation Plan, emergency response training, and collaboration with local communities, large employers, and Moffett Federal Airfield to coordinate emergency response and preparedness. Increased traffic as a result of new development in the City of Mountain View could impair emergency response and evacuation procedures. However, the following General Plan policies require the maintenance of efficient automobile infrastructure and effective Transportation Demand Management (TDM) programs for existing and new developments.

> POLICY MOB 10.1: Efficient automobile infrastructure. Strive to maximize the efficiency of existing automobile infrastructure and manage major streets to discourage cut-through traffic on neighborhood streets.
>
> POLICY MOB 10.2: Reducing travel demand. Promote effective Transportation Demand Management programs for existing and new development.

POLICY MOB 10.4: Emergency response. Monitor emergency response times and where necessary consider appropriate measures to maintain emergency response time standards. Measures to ensure provision of adequate response times may include the expanded use of emergency vehicle signal preemption, evacuation route modifications, or the construction of new facilities (e.g., fire stations).

Consistent with the General Plan, the amended Precise Plan contains an extensive TDM program, as described in *Section 4.14, Traffic and Transportation*, which would be required of all new development. In addition, the Precise Plan would not conflict with Policy MOB 10.4, which directs the City to monitor and maintain emergency response times as necessary.

Impact HAZ-5: Future development under the Precise Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **[Less Than Significant Impact]**

4.8.3.7 *Wildland Fire Hazards*

According to CalFire, there are no Fire Hazard Severity Zones for State responsibility areas or Very High Fire Hazard Severity Zones for local responsibility areas within or adjacent to the City of Mountain View. Based on this mapping, impacts related to wildland fire hazards on new development or redevelopment in the City of Mountain View would be less than significant and no mitigation is required.

Impact HAZ-6: Future development under the Precise Plan would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. **[Less Than Significant Impact]**

4.8.3.8 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval and program-level mitigation measures. The proposed amendments to the General Plan would not result in additional hazardous materials impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.8.3.9 *Cumulative Impacts*

Some of the projects that would be built out under the 2030 General Plan are proposed on properties that were previously developed with industrial or commercial uses. It is likely that hazardous

materials may have been stored and used on, and/or transported to and from some of these properties as part of activities on the sites. These hazardous materials (such as gasoline, oil, propane, and various chemicals used in R&D and manufacturing) may have been stored on these sites in aboveground or underground tanks. Storage tanks can leak, often resulting in soil and/or groundwater contamination. If groundwater is affected, it can impact properties downgradient of the spill.

In addition, as many of the properties in Mountain View and surrounding cities were used for agricultural purposes prior to their development for industrial and residential uses, agricultural chemicals such as pesticides and fertilizers may have been used on site in the past. The use of these chemicals on agricultural properties can result in widespread residual soil contamination, sometimes in concentrations that exceed regulatory thresholds. In addition, development and redevelopment of some of the sites would require demolition of existing buildings that may contain asbestos-containing materials (ACMs) and/or lead paint. Demolition of these structures could expose construction workers or other persons in the vicinity to harmful levels of asbestos or lead.

Based on the above-described conditions, which are present on most project sites to varying degrees, potentially significant environmental impacts could occur under the cumulative development scenario since such conditions can lead to the exposure of residents and/or workers to substances that have been shown to adversely affect health. For each of the projects that are under consideration, various mitigation measures will be implemented as a condition of development approval for the risks associated with exposure to hazardous materials. Measures would include incorporating the requirements of applicable existing local, state, and federal laws, regulations, and agencies such as the State Department of Toxic Substances (DTSC) and the California Occupational Safety and Health Administration (Cal/OSHA), during all phases of project development.

If chemical releases have occurred on these sites, and depending upon the extent of the release, contaminated soils could be excavated and transported to appropriate landfills, or treated on-site. If groundwater is affected, remediation and ongoing groundwater sampling both on the site and on surrounding downgradient properties could be warranted. Finally, determining the extent of asbestos and lead paint contamination would also be required prior to building demolition and site grading and, if present, such substances would be handled and disposed of in a manner that minimizes human exposure. Therefore the cumulative projects, including the proposed project, would not result in significant cumulative hazardous materials impacts.

Hazardous materials and other public health and safety issues are generally site-specific and would not contribute to impacts associated with other contaminated sites in Santa Clara County. For example, investigation and possible subsequent remediation of a development or redevelopment site in the City of Mountain View would not affect other investigation and remediation sites within Santa Clara County (or even other sites in the City of Mountain View). Therefore, the City's contribution to county-wide impacts related to hazards and hazardous materials with implementation of the North Bayshore Precise Plan, together with the 2030 General Plan.

Impact C-HAZ-1: Implementation of the amended Precise Plan, in addition to the buildout of the General Plan, would not result in significant cumulative hazardous materials impacts. **[Less Than Significant Cumulative Hazardous Materials Impact]**

4.8.4 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
HAZ-1: Future development and redevelopment projects in the Precise Plan area could result in the use, handling, and storage of hazardous materials and generation of hazardous waste. Future projects will be evaluated on a project-by-project bases consistent with Policy PSA 3.2 and PSA 3.3 and associated actions. Projects that comply with federal, state, local requirements, and the City of Mountain View 2030 General Plan policies and actions, and standard conditions of approval, will reduce the potential for impacts to existing residents and businesses in and adjacent to the Precise Plan area.	Less Than Significant	No mitigation required	Less Than Significant
HAZ-2: Applications for child-care facilities, and specialized education and training schools would be reviewed on a project-by-project basis, to determine the suitability of the use and to identify any potential impacts from hazardous materials in the area. For this reason, implementation of the Precise Plan would not result in impacts to existing or proposed schools.	Less Than Significant	No mitigation required	Less Than Significant
HAZ-3: Contaminated soils and groundwater in the plan area could pose a risk to construction workers, future occupants, and/or the general public. Future development allowed under the North Bayshore Precise Plan will be evaluated on a project-by-project basis during the discretionary review process. All future projects will be required to comply with federal, state, local requirements, City of Mountain View 2030 General Plan policies and actions, and standard conditions of approval related to hazardous materials and	Less Than Significant	**MM HAZ 4.1-4.15**	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
hazardous waste. Future projects that demonstrate consistency with these regulations, policies, and conditions of approval would reduce potential impacts associated with contaminated soil, groundwater, and hazardous building materials, to a less than significant level.			
HAZ-4: Future development under the Precise Plan would be required to comply with existing FAA regulations and the Moffett Federal Airfield CLUP, as well as General Plan Policy LUD 2.5, which would ensure that potential impacts on airport safety operations for Moffett Federal Airfield are less than significant.	Less Than Significant	No mitigation required	Less Than Significant
HAZ-5: Future development under the Precise Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant	No mitigation required	Less Than Significant
C-HAZ-1: Future development under the Precise Plan would not expose people or structures to a significant risk of loss, injury or death involving wildland fires.	Less Than Significant	No mitigation required	Less Than Significant

4.9 HYDROLOGY AND WATER QUALITY

This section provides a discussion of the existing water resources and hydrology conditions in the North Bayshore Precise Plan area, including the extent and quality of surface water and groundwater, runoff and drainage patterns, and flood conditions. Discussions and analysis regarding infrastructure issues associated with the provision of stormwater facilities are also addressed in *Section 4.15, Utilities and Service Systems*.

4.9.1 Regulatory Background

4.9.1.1 *Federal Clean Water Act of 1972*

The federal Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands, and is administered by the US Environmental Protection Agency (EPA). It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. The sections of the CWA include:

- Section 303 – Water Quality Standards and Implementation Plans
- Section 401 – Dredge/Fill and Wetlands Certification Program
- Section 402 – National Pollutant Discharge Elimination System
- Section 404 – US Army Corps of Engineers fill or dredge discharge Permits

With the exception of the 404 permits, the EPA has delegated its authority to implement and enforce the provisions of these sections to the individual states. In California, the provisions are enforced by nine Regional Water Quality Control Boards under the auspices of the State Water Board.

4.9.1.2 *Federal Emergency Management Agency*

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally-backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

The Federal Emergency Management Agency (FEMA) manages the NFIP and creates Flood Insurance Rate Maps (FIRMs) that designate 100-year floodplain zones and delineate other flood hazard areas. A 100-year floodplain zone is the area that has a one in one hundred (one percent) chance of being flooded in any one year based on historical data. Portions of the City are identified as special flood hazard areas (primarily from creeks), with a one percent annual chance and a 0.2 percent annual chance of flooding (also known as the 100-year and 500-year flood zones) as determined by the FEMA NFIP.

4.9.1.3 *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Water Quality), promulgated in 1969, implements the federal CWA. It established the State Water Board and divided the State into nine hydrologic regions, each overseen by a Regional Water Quality Control Board. The State Water Board is the primary state agency responsible for protecting the quality of the

State's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine Regional Water Quality Control Boards. The Porter-Cologne Act also provides for the development and tri-annual review of Water Quality Control Plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters.

The San Francisco Bay RWQCB regulates water quality in the Bay Area in accordance with the Water Quality Control Plan or "Basin Plan." The Basin Plan is a master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulations in the San Francisco Bay region. The Regional Board first adopted a water quality control plan in 1974 and the last major revision was adopted in 1995. The Basin Plan lists the beneficial uses which the RWQCB has identified for local aquifers, streams, marshes, rivers, and the 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 "non-point 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. Mountain View lies within the jurisdiction of the San Francisco Bay Water Board which enforces compliance with water quality objectives for beneficial uses of surface waters.

4.9.1.4 *National Pollutant Discharge Elimination System*

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 U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board have been developed to fulfill the requirements of this legislation. EPA's regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the 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, which for the Mountain View area is the San Francisco Regional Water Quality Control Board (RWQCB).

Statewide Construction General Permit

The State Water Resources Control Board has implemented a NPDES Construction General Permit (CGP) for the State of California. The CGP, which became effective July 1, 2010, includes requirements for training, inspections, record keeping, reporting, and for projects of certain risk levels, monitoring. Projects disturbing one acre or more of land must obtain permit coverage under the CGP by filing a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) with the State Water Resources Control Board prior to commencement of construction, and implementing the SWPPP through the completion of construction. Individual projects implemented under the North Bayshore Precise Plan (NBPP) that disturb one acre or more of land would be required to comply with the CGP.

Municipal Regional Stormwater NPDES Permit (MRP)/C.3 Requirement

In an effort to standardize stormwater management requirements throughout the region, the San Francisco Bay RWQCB issued a Municipal Regional Stormwater NPDES Permit (MRP) to 76 jurisdictions including the City of Mountain View, that own, operate or maintain storm drain collection and conveyance facilities that drain to San Francisco Bay. Provision C.3 of the MRP

establishes requirements for reducing pollutants in stormwater runoff by requiring new development to capture and treat runoff. Other provisions of the MRP address construction site stormwater pollution prevention requirements, trash pollution reduction and prevention, municipal operations, illicit discharge prohibitions and public education and outreach requirements.

Under MRP Provision C.3, development projects that create or replace 10,000 square feet or more of impervious surfaces are required to design and construct stormwater treatment controls to treat post-construction stormwater runoff. The MRP requires post-construction runoff to be managed with Low Impact Development (LID) methods, such as on-site harvest and use of runoff, infiltration and/or bioretention. Projects that are located in watersheds sensitive to hydromodification impacts (e.g., create or replace one acre or more of impervious surfaces and result in a net increase of impervious surfaces are subject to hydromodification management (HM) requirements. Hydromodification Management Plans (HMPs) are developed in order to prevent increased erosion, siltation, or other adverse impacts to local waterways.

Impaired Water Bodies (Section 303(d))

Pursuant to the Clean Water Act Section 303(d), the State of California assesses the water quality of the state's waterways to determine if they contain pollutants in concentrations that exceed federal standards. Total Maximum Daily Load (TMDL) programs are established by the State and Regional Water Quality Control Boards (RWQCB) for waterways that exceed these limits. A TMDL is a calculation of the maximum amount of a pollutant that a body of water can receive and still meet water quality standards. A body of water is deemed 'impaired' if, despite the use of pollution control technologies, pollutant concentrations exceed the standards.

4.9.1.5 *San Francisco Bay Conservation and Development Commission*

State legislation, the McAteer-Petris Act, was passed in 1965 to establish and govern the San Francisco Bay Conservation and Development Commission (BCDC). The BCDC is dedicated to the protection and enhancement of San Francisco Bay. The San Francisco Bay Plan (Bay Plan), completed by the BCDC in 1969, regulates development in and around the Bay, and includes a range of policies on public access, water quality, fill, and project design. The *Bay Plan* also designates shoreline areas that should be reserved for water-related purposes like ports, industry, public recreation, airports, and wildlife refuges.

BCDC regulatory jurisdiction consists of 1) San Francisco Bay and 2) a 100-foot wide band adjacent to the shoreline of San Francisco Bay. These areas are defined in the McAteer-Petris Act (PRC Section 66610), as follows:

- San Francisco Bay, being all areas that are subject to tidal action from the south end of the Bay to the Golden Gate (Point Bonita-Point Lobos) and to the Sacramento River line (a line between Stake Point and Simmons Point, extended northeasterly to the mouth of Marshall Cut), including all sloughs, and specifically, the marshlands lying between mean high tide and five feet above mean sea level; tidelands (land lying between mean high tide and mean low tide); and submerged lands (land lying below mean low tide).

- A shoreline band consisting of all territory located between the shoreline of San Francisco Bay as defined above and a line 100 feet landward of and parallel with that line, but excluding any portions of such territory which are included in other areas of BCDC jurisdiction; provided that the Commission may, by resolution, exclude from its area of jurisdiction any area within the shoreline band that it finds and declares is of no regional importance to the Bay.

BCDC's jurisdiction borders the North Bayshore Precise Plan project area boundary, and includes jurisdiction over Permanente Creek up to the Amphitheatre Parkway crossing, and the extent of tidal influence up Stevens Creek. Mountain View Shoreline Park is a designated Waterfront Park Priority Use Area on BCDC's Bay Plan Map. BCDC's jurisdiction includes the North Bayshore Precise Plan area boundary where the Mountain View Shoreline Park borders the northern edge of the Google Complex parking lot and along Garcia Avenue. Projects within BCDC's jurisdiction may require permits issued by BCDC. The projects requiring a BCDC permit must comply with the requirements of the McAteer-Petris Act and the Bay Plan.

4.9.1.6 *Mountain View Flood Hazard Ordinance*

The City of Mountain View Flood Hazard Ordinance requires the lowest floor in new non-residential construction to be elevated to the base flood elevation, be flood-proofed by making walls below the base flood level watertight, and have structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. The applicable requirements of the Municipal Code for construction in a flood zone will be required of projects built under the Precise Plan as conditions of project approval.

4.9.1.7 *City of Mountain View 2030 General Plan*

The policies and actions of the Mountain View 2030 General Plan are intended to avoid or mitigate potential environmental impacts resulting from planned development occurring under the Plan. Policies and actions adopted to protect water quality and avoid flooding and inundation impacts are included in the Land Use and Design, Infrastructure and Conservation, and Parks, Open Space and Community Facilities elements of the plan.

The following goals, policies and actions are intended to protect water quality, avoid flooding and inundation hazards and sustainably manage stormwater.

Hydrology and Water Quality

GOAL LUD-8	**A network of pedestrian-oriented, sustainable and public spaces.**
Policy LUD 8.7	Sustainable streets. Encourage sustainable streets that include drought- tolerant landscaping, natural stormwater treatment areas and other sustainable features.
GOAL INC-2	**Infrastructure systems planned and designed to function during interruptions, emergencies or disasters.**
Policy INC 2.4	Emergency preparedness and critical infrastructure. Ensure emergency preparedness for all critical infrastructure including potable water, wastewater, stormwater, recycled water, telecommunications, energy and streets.

Policy INC 3.3	Street design for stormwater. Encourage street designs that reduce storm- water flows and accomplish other City stormwater goals.
GOAL INC-8	**An effective and innovative stormwater drainage system that protects properties from flooding and minimizes adverse environmental impacts from stormwater runoff.**
Policy INC 8.1	Citywide stormwater system. Maintain the stormwater system in good condition.
Policy INC 8.2	National Pollutant Discharge Elimination System Permit. Comply with requirements in the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP).
Policy INC 8.3	Cost-effective strategies. Encourage stormwater strategies that minimize additional City administrative and maintenance costs.
Policy INC 8.4	Runoff pollution prevention. Reduce the amount of stormwater runoff and stormwater pollution entering creeks, water channels and the San Francisco Bay through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program.
Policy INC 8.5	Site-specific stormwater treatment. Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.
Policy INC 8.6	Green streets. Seek opportunities to develop green streets and sustainable streetscapes that minimize stormwater runoff, using techniques such as on-street bio-swales, bio-retention, permeable pavement or other innovative approaches.
Policy INC 8.7	Stormwater quality. Improve the water quality of stormwater and reduce flow quantities.
Policy INC 8.8	Stormwater infrastructure funding. Develop permanent and ad hoc sources of funding to implement stormwater best practices in the city.
GOAL INC-17	**A healthy and well-managed watershed that contributes to improved water quality and natural resource protection.**
Policy INC 17.1	Flood prevention. Provide and maintain City infrastructure to reduce localized flooding and protect community health and safety.
Policy INC 17.2	Natural hydrology in watersheds. Promote an ecologically sensitive approach to flood protection, encouraging natural hydrology and preserving habitat and ecology within watercourses.
Policy INC 17.3	Floodway preservation. Preserve floodways as a natural flood control mechanism.
Policy INC 17.4	National Flood Insurance Program. Participate in the National Flood Insurance Program administered by the Federal Emergency Management Administration.
GOAL POS-9	**High-quality, accessible, flexible, well-maintained and environmentally sustainable public facilities.**
Policy POS 9.1	Sustainable design. Promote sustainable building materials, energy- efficient and water-efficient designs, permeable paving and other low-impact features in new public buildings.

4.9.2 Existing Setting

4.9.2.1 *Stormwater Drainage*

The North Bayshore Precise Plan area drains to Stevens Creek, Permanente Creek, the Palo Alto Flood Basin and San Francisco Bay Estuary. Permanente Creek flows south to north through the approximate center of the Precise Plan area. Stevens Creek is located immediately to the east of the Precise Plan area, and the Palo Alto Flood Basin and Coast Casey Forebay immediately to the north of the plan area's northwestern corner and Palo Alto Flood Basin to the west of this corner.

Runoff from impervious surfaces in developed portions of the North Bayshore area, including the Precise Plan area, are collected by a municipal storm drain system consisting of storm drain inlets, conveyance pipes, culverts, channels and retention basins operated by the City of Mountain View Public Works Department. Stormwater runoff from the Precise Plan area is conveyed by the storm drain system to Permanente Creek, Stevens Creek or the Palo Alto Flood Basin by gravity flow or by pumping. There are five stormwater pump stations in the North Bayshore area: Amphitheatre, Charleston, Coast Casey, Crittenden, and High Level Ditch (refer to Figure 4.9-1 for the location of pump stations, retention basins and creeks in the North Bayshore area). The Coast Casey pump station receives a large portion of its flow from areas outside the North Bayshore area. A portion of the North Bayshore Area drains into the Palo Alto storm drain network.

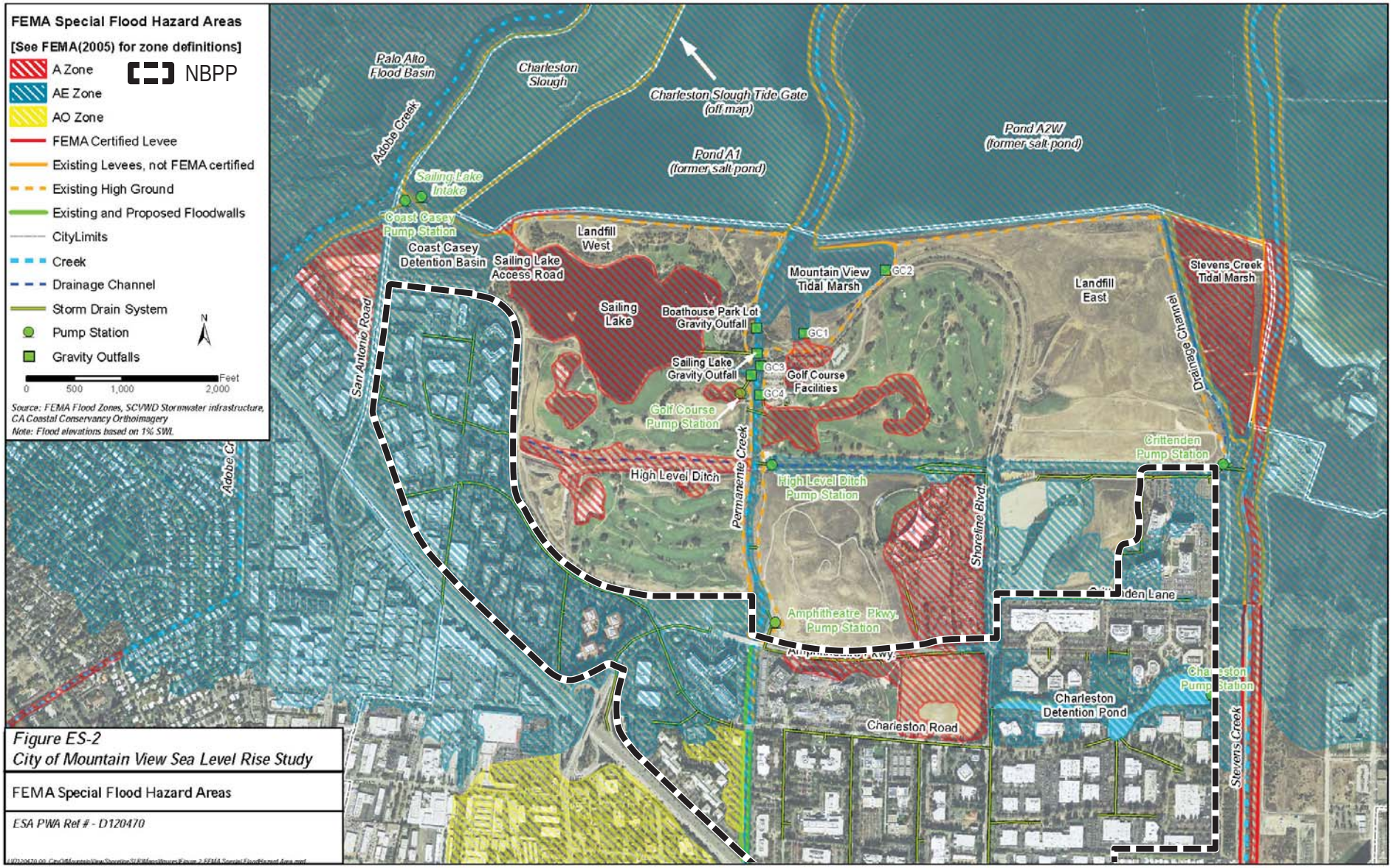
Developed portions of the Precise Plan area contain large amounts of impervious surfaces including buildings, parking lot, streets and other hardscape areas that contribute runoff to the storm drain system. Impervious surface area was calculated for existing land uses based on analysis of aerial photography. Developed areas contain an average of 85 percent impervious surfaces and undeveloped areas (e.g., open space and vacant properties) contain approximately five percent impervious surfaces.[88]

Pervious surfaces that generate no runoff or negligible amounts of runoff include open space (such as Charleston Park) landscaped portions of developed areas, and vacant unpaved parcels.

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as non-point source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Urban stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

[88] Schaaf & Wheeler. *North Bayshore Storm Drain Master Plan.* April 2014. Table 1.



FEMA SPECIAL FLOOD HAZARD ZONES FIGURE 4.9-1

4.9.2.2 *Groundwater*

Groundwater resources for the North Bayshore Precise Plan Area are located within the Santa Clara subbasin, which extends from the northern border of Santa Clara County to the groundwater divide near Morgan Hill. The Santa Clara groundwater basin provides municipal, domestic, industrial, and agricultural water supply to the area. The Santa Clara Valley Water District (SCVWD) conducts an artificial groundwater recharge program that entails releasing locally conserved or imported water to in-stream and off-stream infiltration facilities.

Depth to groundwater will vary throughout the Precise Plan Area depending on site specific conditions. Monitoring wells or exploratory borings drilled for previous projects located within the North Bayshore Precise Plan area have encountered groundwater at approximately six to 12 feet below ground surface.[89] Typical groundwater levels in the Precise Plan area range from five to 15 feet below ground surface.[90] Groundwater in the Precise Plan Area flows generally northeast to southeast towards the nearby marshlands adjoining San Francisco Bay. Groundwater flow direction may deviate from the regional trend due to zones of higher or lower permeability and groundwater pumping or recharge.

4.9.2.3 *Flooding*

The North Bayshore Precise Plan Area is subject to coastal flooding from San Francisco Bay, overflow from the Palo Alto Flood Basin, and flooding from Permanente and Stevens Creeks during a 100-year flood event. As shown in Figure 4.9-1, the majority of the Precise Plan area west of Permanente Creek is located in Flood Zone AE, with a smaller portion located in Zone AO. East of Permanente Creek, small portions of the Precise Plan area north of Charleston Road are located in Flood Zone A and Zone AE.

The probability of flooding within each of the flood zones is defined by the Federal Emergency Management Agency (FEMA) as follows:

- Zone A – Areas with a one percent annual chance of flooding and 26 percent chance of flooding over the life of a 30-year mortgage.
- Zone AE – Area subject to inundation by the one percent annual chance flood (100-year flood), also known as the base flood.
- Zone AO – River or stream flood hazard areas, and areas with a one percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from one to three feet.

4.9.2.4 *Other Inundation Hazards*

Dam Failure

The Association of Bay Area Governments (ABAG) compiles the dam failure inundation hazard maps submitted to the State Office of Emergency Services by dam owners throughout the Bay Area.

[89] City of Mountain View. *2600 Marine Way Office Project Draft Environmental Impact Report*. February 2014.
[90] City of Mountain View. *Final Draft Shoreline Landfill Master Plan*. January 2013.

The Mountain View dam hazard map shows that the project site is not located within a dam failure inundation hazard zone.[91]

Sea Level Rise

The City of Mountain View completed the *Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program* in December 2012. The study provides an overview of the vulnerability of the Shoreline area (including the Precise Plan area) to sea level rise, proposed projects to provide long-term flood protection, and estimates of future funding needed to implement these projects. Because of the uncertainty in sea level rise projections, the study adopts two sea level rise scenarios to bracket the low and high ends of a representative uncertain range of higher sea level elevations. The two sea level rise scenarios studied were:

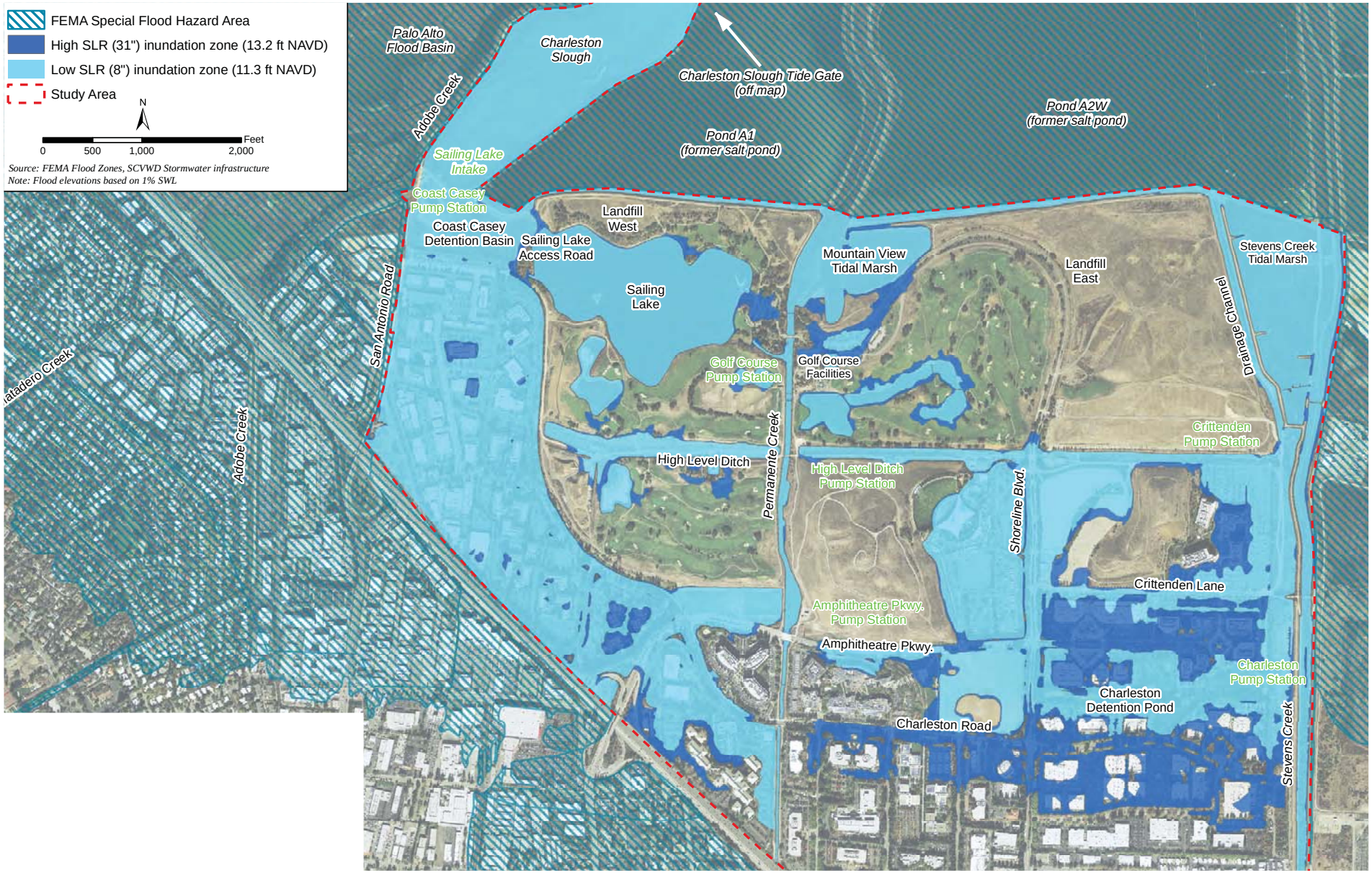
- Eight (8) inches of sea level rise between 2000 and 2067, and
- 31 inches of sea level rise between 2000 and 2067.

Using these two scenarios, the North Bayshore Precise Plan area would be affected by sea level rise under both the eight-inch sea level rise scenario and the 31-inch scenario described above, if none of the improvements described in the study are implemented (refer to Figure 4.9-2). The study identified eleven capital improvement projects needed to address sea level rise vulnerabilities in the Shoreline area, including improved levees and flood walls, stormwater pump station modifications, erosion protection, and upgrades to storm drain outfalls. With implementation of all of the capital improvements identified in the plan,[92] the Shoreline area would be protected against the worst-case 31-inch sea rise scenario.

Based on the direction from the City Council, the City is currently planning for the "Low Plus" sea level rise scenario, focusing capital improvement project (CIP) efforts on improving flood protection infrastructure for the eight-inch sea level rise. These improvements will also include provisions (such as more substantial levee foundation) such that improvements can be built-up to withstand a potential 31-inch future sea level rise, should it occur. These improvements are shown in Figure 4.9-3, Capital Improvement Program for Sea Level Rise Projects. Figure 4.9-4 shows the potential inundation of the area following the full implementation of the CIP program.

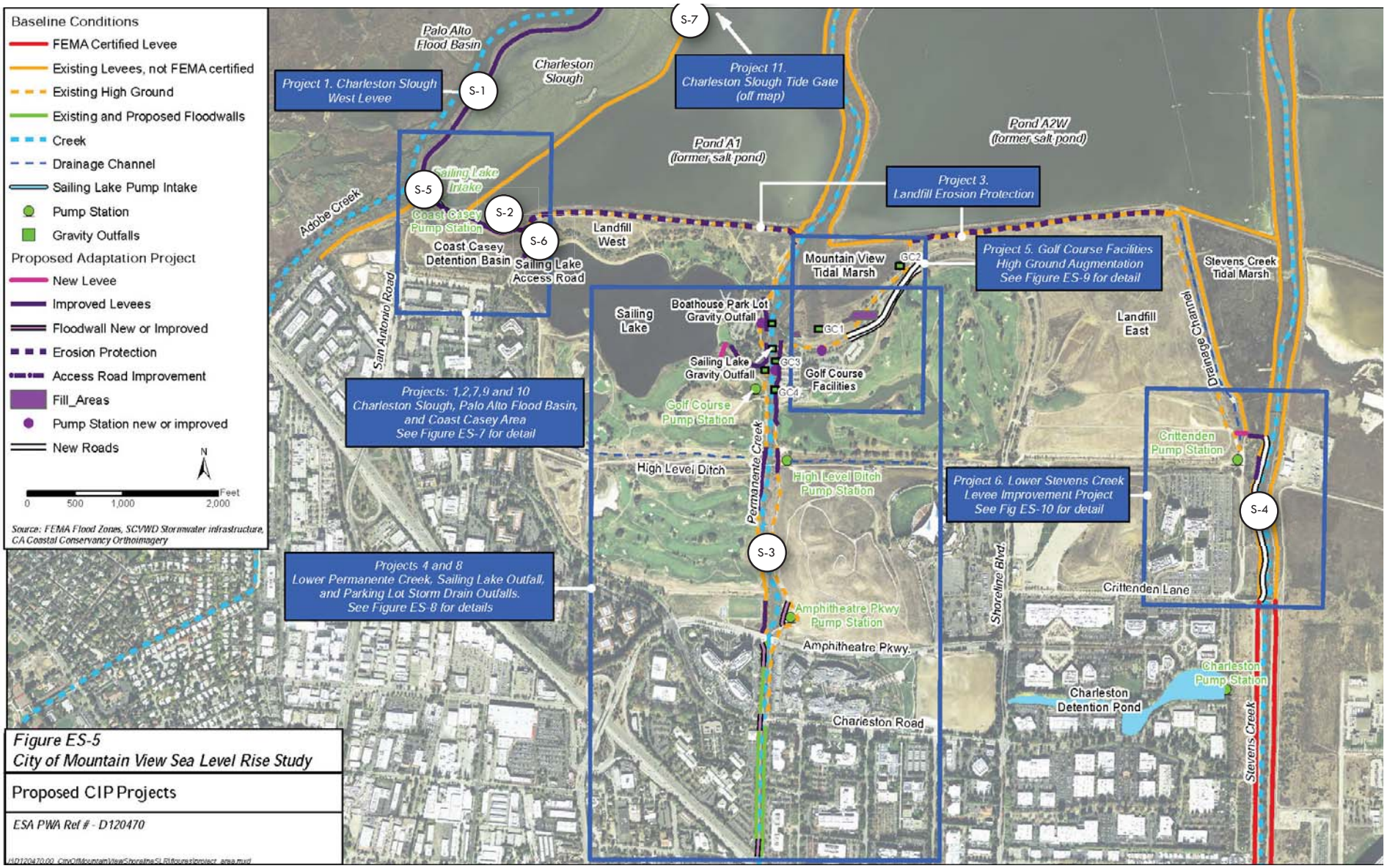
[91] City of Mountain View. *Draft General Plan and Greenhouse Gas Reduction Program, Draft EIR*. November 2011. Figure IV. H-3.

[92] Mapping of Shoreline area inundation with the capital improvement program completed assumes additional capital projects completion of flood control projects within the City of Palo Alto.

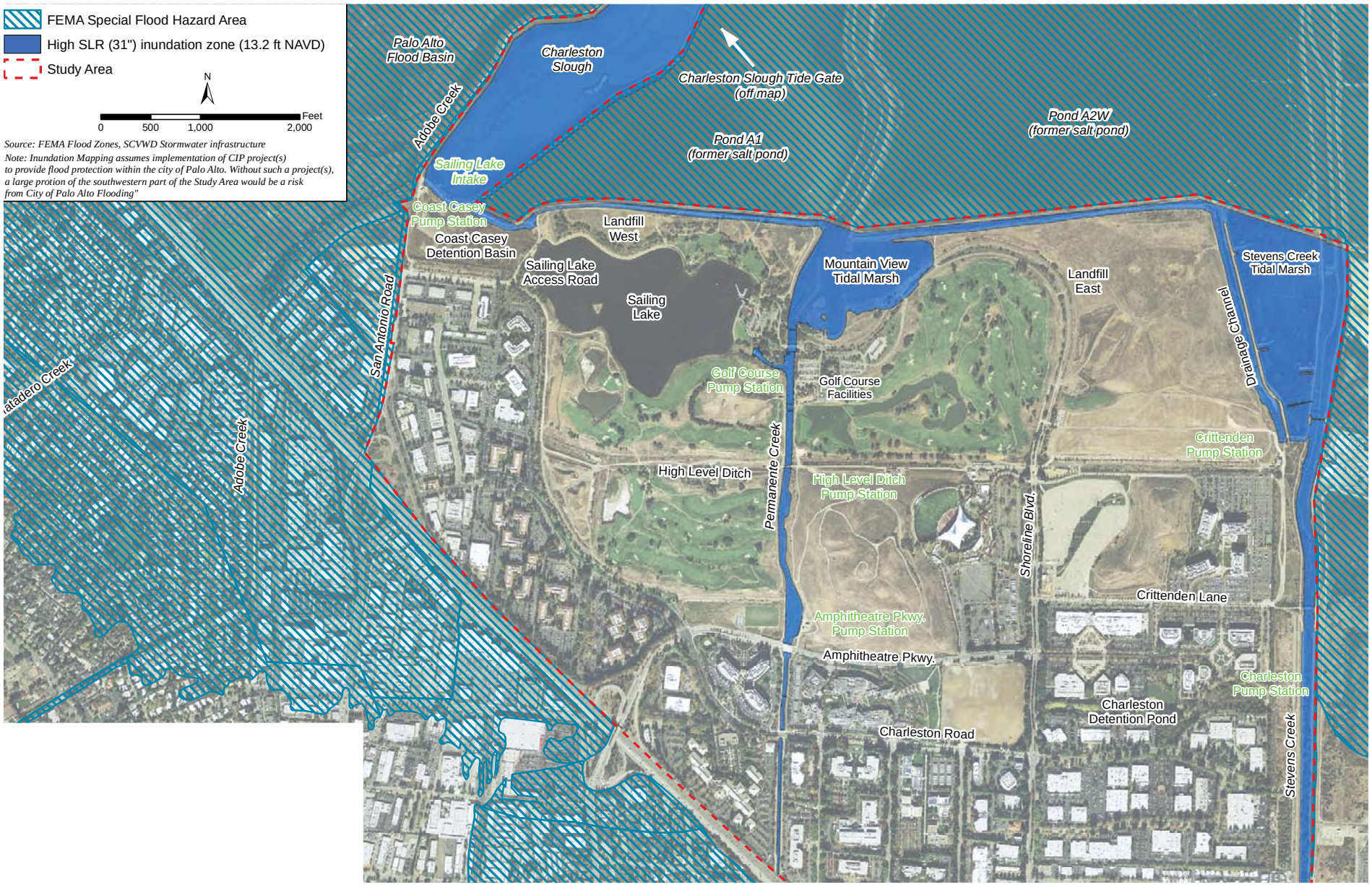


SEA-LEVEL RISE INUNDATION WITHOUT PROJECT

FIGURE 4.9-2



CAPITAL IMPROVEMENT PROGRAM FOR SEA LEVEL RISE PROJECTS FIGURE 4.9-3



SEA-LEVEL RISE INUNDATION WITH PROJECT

FIGURE 4.9-4

Earthquake-Induced Waves and Mudflow Hazards

The Precise Plan area is not located near the ocean, or in a landslide hazard zone, or other areas typically associated with tsunami or mudslide hazards. According to maps developed for emergency planning purposes, the plan area is not in a tsunami hazardous zone, and is not subject to inundation by seiche, tsunami, or mudflow.[93]

4.9.3 Hydrology and Water Quality Impacts

4.9.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a hydrology and water quality impact is considered significant if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- 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;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impeded or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

4.9.3.2 *Water Quality Impacts*

The project could result in a significant impact if future development violates any water quality standards or waste discharge requirements; or otherwise substantially degrades water quality.

[93] California Department of Conservation and the County of Santa Clara. *Tsunami Inundation Map for Emergency Planning, Mountain View Quadrangle*. July 2009. Available at: http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/SantaClara/Documents/Tsunami_Inundation_MountainView_Quad_SantaClara.pdf. Accessed October 5, 2016.

Development of sites within the approximately 650-acre North Bayshore Precise Plan area would occur on a project-by-project basis over time. As noted in *Section 3.3, Project Description,* the Mountain View 2030 General Plan calls for the North Bayshore area to demonstrate highly sustainable and innovative development that protects the area's unique natural and biological resources. Specifically, the General Plan calls for sustainable planning, building, and design, and encourages new development to achieve increasingly higher levels of environmental performance as the Precise Plan area is redeveloped.

The North Bayshore Precise Plan outlines specific standards and guidelines for sustainable development, including green building and sustainable site design practices to reduce the volume and peak flows of stormwater entering the stormwater system, and reducing the amount of potable water used for non-potable sources. For example, the guidelines encourage new construction to collect and use rainwater for non-potable uses.

Construction Period Water Quality Impacts

Development occurring under the amended Precise Plan would require excavation and grading of project sites, which could result in sediment and other pollutants being transported from active construction sites to nearby creeks, marshes and San Francisco Bay through soil erosion, stormwater runoff or wind-blown dust. Individual projects that would disturb one acre or more of soil would be subject to the requirements of the statewide Construction General Permit.

Projects disturbing less than one acre of soil would be subject to Municipal Regional Stormwater Permit Provision C.6, which requires that construction sites employ effective Best Management Practices to control erosion, prevent sediment transport and maintain good site management to prevent stormwater pollution.

The City requires standard conditions of approval, based on RWQCB requirements, to reduce runoff and pollution in runoff from construction activities. These conditions would be required of all projects, and may include:

Standard Conditions of Approval

- STATE OF CALIFORNIA CONSTRUCTION GENERAL STORMWATER PERMIT: A "Notice of Intent" (NOI) and "Stormwater Pollution Prevention Plan" (SWPPP) shall be prepared for construction projects disturbing one (1) acre or more of land. Proof of coverage under the State General Construction Activity Stormwater Permit shall be attached to the building plans.

- CONSTRUCTION BEST MANAGEMENT PRACTICES: All construction projects shall be conducted in a manner which prevents the release of hazardous materials, hazardous waste, polluted water, and sediments to the storm drain system. Refer to the City of Mountain View document, "It's In the Contract But Not In the Bay," for the specific construction practices required at the job site.

- CONSTRUCTION SEDIMENT AND EROSION CONTROL PLAN: The applicant shall submit a written plan acceptable to the City which shows controls that will be used at the site

to minimize sediment runoff and erosion during storm events. The plan should include installation of the following items where appropriate: (a) silt fences around the site perimeter; (b) gravel bags surrounding catch basins; (c) filter fabric over catch basins; (d) covering of exposed stockpiles; (e) concrete washout areas; (f) stabilized rock/gravel driveways at points of egress from the site; and (g) vegetation, hydroseeding, or other soil stabilization methods for high-erosion areas. The plan should also include routine street sweeping and storm drain catch basin cleaning.

Impact HYDRO-1: With compliance with City and RWQCB requirements, temporary water quality impacts from soil erosion, sedimentation and other pollutants in stormwater runoff from construction sites would not result in significant impacts. **[Less Than Significant Impact]**

Post-Construction Water Quality Impacts

The North Bayshore Precise Plan area is currently developed with low-rise industrial and office development, with ornamental landscaping, parking lots, and driveways. Redevelopment of most properties within the area would increase the amount of pervious surfaces through compliance with the Precise Plan guidelines, state, and local regulations.

As noted in the Precise Plan, projects implemented under the plan are required to meet the requirements of the Municipal Regional Stormwater Permit (MRP). Provision C.3 of the MRP currently requires post-construction stormwater controls on all development and redevelopment projects involving the creation or replacement of 10,000 square feet of impervious surface (5,000 square feet for certain vehicle-related land uses). The stormwater treatment requirements for both new and existing streets are described in MRP provisions C.3.b.(ii)(4) and C.3.j. (i) through (ii). Typical "green street" design provides stormwater treatment of runoff in biotreatment areas contained in curb extensions (bulb-outs), but other treatment designs, such as tree trenches, may be considered.

The Precise Plan builds upon the C.3 provisions for the installation of stormwater treatment controls, adding requirements for higher treatment levels for stormwater and accelerating reductions in trash loads, which are included in Provision C.10 of the MRP.

Section 4.4 of the Precise Plan includes the following standards for stormwater management:

North Bayshore Precise Plan Standards

1. **Post-construction stormwater controls**. Regulated new construction and redevelopment construction projects, residential and non-residential, shall meet or exceed the stormwater requirements contained under Provision C.3 of the Bay Area MRP.

2. **Retrofitting existing street to green streets**. Any new development or redevelopment project shall retrofit existing streets with stormwater treatment in accordance with the MRP and the City's Green Infrastructure Plan.

3. **Trash capture.** As determined by the City, all new construction shall include installation of partial and/or full trash capture systems within a portion of the storm drain system.

4. **Vehicle washing.** For businesses that conduct vehicle washing services, including fleet bus washing, wash water shall be collected and shall not be allowed to enter the storm drain system.

5. **Source controls.** All new construction projects and some renovation projects may be required to install pollutant source controls, such as covered trash enclosures, and grease controls for food service facilities.

Future developments with greater than 10,000 square feet of impervious surfaces would implement the following standard conditions of approval, based on RWQCB requirements, to reduce impacts to water quality to a less than significant level.

Standard Conditions of Approval

- STORMWATER TREATMENT (C.3): This project will create or replace more than ten thousand (10,000) square feet of impervious surface; therefore, stormwater runoff shall be directed to approved permanent treatment controls as described in the City's guidance document entitled, "Stormwater Quality Guidelines for Development Projects." The City's guidelines also describe the requirement to select Low- Impact Development (LID) types of stormwater treatment controls; the types of projects that are exempt from this requirement; and the Infeasibility and Special Projects exemptions from the LID requirement.

  The "Stormwater Quality Guidelines for Development Projects" document requires applicants to submit a Stormwater Management Plan, including information such as the type, location, and sizing calculations of the treatment controls that will be installed. Include three stamped and signed copies of the Final Stormwater Management Plan with the building plan submittal. The Stormwater Management Plan must include a stamped and signed certification by a qualified Engineer, stating that the Stormwater Management Plan complies with the City's guidelines and the State NPDES Permit. Stormwater treatment controls required under this condition may be required to enter into a formal recorded Maintenance Agreement with the City.

- HYDROMODIFICATION MANAGEMENT: Post-construction stormwater runoff shall drain to approved permanent Hydromodification Management (HM) controls to mitigate increases in peak runoff flow and increased runoff volume. Projects that will decrease impervious surface area in comparison to the pre-project condition are not subject to the HM requirement. Information related to this requirement, including the exemption criteria, is included in the City's document entitled, "Hydromodification Management Plan Guidelines for Development Projects," and the Santa Clara Valley Urban Runoff Pollution Prevention Program's manual entitled, "C.3 Stormwater Handbook: Guidance for Implementing Stormwater Requirements for New and Redevelopment Projects."

  The City's "Hydromodification Management Plan Guidelines for Development Projects" manual requires applicants to submit a Stormwater Management Plan, including information

such as the type, location, and sizing requirements of the controls that will be installed. Include the Stormwater Management Plan with the building plan submittal. Property owners of projects that include stormwater controls constructed in accordance with this condition are required to enter into a formal recorded self-inspection and maintenance agreement with the City.

- STORMWATER MANAGEMENT PLAN – THIRD-PARTY ENGINEER'S CERTIFICATION: The Final Stormwater Management Plan must be certified by a qualified third-party engineer that the proposed stormwater treatment controls comply with the City's Guidelines and Provision C.3 of the Municipal Regional Stormwater NPDES Permit (MRP).

- LANDSCAPE DESIGN: For residential and non-residential buildings, landscape design shall minimize runoff and promote surface filtration. Examples include:

  – No steep slopes exceeding 10 percent;
  – Using mulches in planter areas without ground cover to avoid sedimentation runoff;
  – Installing plants with low water requirements; and
  – Installing appropriate plants for the location in accordance with appropriate climate zones.

- EFFICIENT IRRIGATION: For residential and nonresidential buildings: common areas shall employ efficient irrigation to avoid excess irrigation runoff. Examples include:

  – Setting irrigation timers to avoid runoff by splitting irrigations into several short cycles;
  – Employing multi-programmable irrigation controllers;
  – Employing rain shutoff devices to prevent irrigation after significant precipitation;
  – Use of drip irrigations for all planter areas which have a shrub density that will cause excessive spray interference of an overhead system; and
  – Use of flow reducers to mitigate broken heads next to sidewalks, streets and driveways.

- OUTDOOR STORAGE AREAS (INCLUDING GARBAGE ENCLOSURES): Outdoor storage areas (for storage of equipment or materials which could decompose, disintegrate, leak or otherwise contaminate stormwater runoff), including garbage enclosures, shall be designed to prevent the run-on of stormwater and runoff of spills by all of the following:

  – Paving the area with concrete or other nonpermeable surface;
  – Covering the area; and
  – Sloping the area inward (negative slope) or installing a berm or curb around its perimeter. There shall be no storm drains in the outdoor storage area.

- MULTI-FAMILY DWELLING COMPLEX CAR WASH: For multi-family dwelling complexes (25 or more units), a dedicated car wash area shall be installed. The car wash area shall be designed to prevent the run-on of stormwater and runoff of spills by all of the following: (a) paving the area with concrete or other nonpermeable surface; (b) sloping the area inward (negative slope) or installing a berm or curb around its perimeter; and

(c) discharging the wash water to an approved wastewater treatment system connected to the sanitary sewer.

- PARKING GARAGES: For multiple-level parking garages, interior levels shall be connected to an approved wastewater treatment system discharging to the sanitary sewer. Treatment systems require engineered drawings. All treatment systems connected to the sanitary sewer require a wastewater discharge permit.

- PRIVATE STORM DRAIN INLET STENCILING: For residential subdivisions with private streets, storm drain inlets shall be labeled in accordance with the City's storm drain inlet label program ("No Dumping, Flows to Bay").

Implementation of the North Bayshore Precise Plan stormwater management Standards and Guidelines and City standard conditions of approval on a project-by-project basis, in combination with project conformance with Municipal Regional Stormwater Permit requirements, would ensure that post-construction stormwater runoff would not result in result in substantial additional sources of polluted runoff.

Impact HYDRO-2: New development under the amended North Bayshore Precise Plan would produce stormwater runoff which could provide substantial additional sources of polluted runoff. Compliance with Municipal Regional Stormwater Permit Provision C.3 requirements and the North Bayshore Precise Plan Stormwater Management Standards and Guidelines would ensure that development under the Plan would not result in substantial sources of polluted runoff. **[Less Than Significant Impact]**

4.9.3.3 *Storm Drain Capacity Impacts*

The project could result in a significant impact if future development will substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on-or off-site; or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on-or off-site; or creates or contributes runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. As described previously, the North Bayshore Precise Plan area would redevelop over time, and impervious surfaces and stormwater facilities would be improved on a project-by-project basis.

The *North Bayshore Storm Drain Master Plan* was prepared in 2014 to evaluate the capacity of the storm drain system serving the entire North Bayshore area, which also includes the Precise Plan area, and to identify a prioritized plan of capital improvements to reduce the risk of flood, improve system reliability, and reduce operations costs. The Storm Drain Master Plan identifies limited areas within North Bayshore that experience minor flooding. No severe flooding has occurred in the larger North Bayshore area during the past 30 years. Within the Precise Plan area, storm drain capacity modeling indicated that under existing conditions some nodes (e.g. storm drain inlets and laterals) along Plymouth Street would flood during the ten year storm event. Prioritized improvements identified by the study that would eliminate all flooding include the installation of a flap gate at the Plymouth

Street outfall to Permanente Creek, the connection of drainage ditches to an existing retention basin and other drainage ditch improvements.

Table 4.9-1 shows the Capital Improvement Projects (CIPs) that were recommended for implementation in the North Bayshore area as part of the plan. The locations of these improvements are shown in Figure 4.9-5.

Table 4.9-1:
North Bayshore Storm Drain Master Plan Recommended CIPs

Project	Pipe Length (feet)	Connections	Flap Gates
Alternative 1	3,838	14	0
Plymouth	-	-	1
High Level Ditch Abandonment	900	4	0
Crittenden	364	1	0
Shorebird	601	2	0

The *North Bayshore Storm Drain Master Plan* concluded that the existing North Bayshore storm drain system provides adequate conveyance of the ten year storm event, and that development proposed for the North Bayshore area will not significantly impact the drainage system or require additional capital improvements beyond those identified in the study. Even if these improvements are not implemented, impacts to the storm drain system from implementation of the North Bayshore Precise Plan would be less than significant.

A comparison of the proposed land use for the North Bayshore Precise Plan area and the City's existing land use show little potential increase in impervious surfaces in the area. The Precise Plan requires a 25 percent minimum open areas or landscaping for new residential development, which is likely a greater amount of pervious surface than is currently in the area. Therefore, there would not be any significant impact on the drainage system through implementation of the Precise Plan. The sustainable and low-impact nature of the proposed plan and future development would further reduce the impacts on the region's drainage systems.

Each of these measures reduces runoff and widespread implementation of such practices throughout the plan area would reduce the overall volume of runoff conveyed by the storm drain system when compared to conventional development.

The City has a Storm Drain Construction Fund that collects revenues derived from off-site drainage fees authorized by Mountain View Code Section 28.51. These revenues are used to pay for improvements and repairs to the City's storm drainage system, including scheduled replacement of existing systems.

Project	Priority
Alternative 1	High
Plymouth	High
High Level Ditch Abandonment	Moderate
Crittenden	Low
Shorebird	Low

PROPOSED STORM-WATER CAPITAL IMPROVEMENT PROJECTS FIGURE 4.9-5

Changes to the on-site drainage systems on large parcels could alter the drainage patterns within the North Bayshore Precise Plan area. The City will review each development project application and will compare drainage characteristics and patterns to those assumed in the North Bayshore Storm Drain Master Plan to determine consistency.

Impact HYDRO-3: New development under the amended North Bayshore Precise Plan would continue to contribute runoff to the storm drain system serving the North Bayshore area, and the capacity of the North Bayshore drainage system is currently adequate to accommodate runoff from new development planned for the area. The stormwater management standards and guidelines identified in the North Bayshore Precise Plan would minimize runoff from new development projects, and each new development application would be reviewed for consistency with the Precise Plan. Therefore, development under the amended Precise Plan would not exceed the capacity of the storm drainage system, alter existing drainage patterns or degrade water quality from excess flows. **[Less Than Significant Impact]**

4.9.3.4 *Flooding and Inundation Impacts*

Implementation of the amended Precise Plan would result in a significant impact if the project would place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map; or if it would place structures within a 100-year flood hazard area, such that flood flows would be impeded or redirected, or expose people or structures to a significant risk of loss, injury, or death involving flooding.

The majority of the Precise Plan area west of Permanente Creek is located in Flood Zone AE, the 100 year flood zone (Figure 4.9-1). Smaller portions of the Precise Plan area are located in Flood Zone A and AO. The amended Precise Plan does not propose new residential uses within the Flood Zone AE or other areas impacted by 100-year flood hazards. It is not anticipated that development of the North Bayshore Precise Plan area would result in an increase in flooding elsewhere in the City.

To reduce the potential impacts from the 100-year flood to new development, the project is required to implement flood-proofing measured as required by the City's Flood Hazard Ordinance and FEMA. With the implementation of the following measures, which are required by the City as conditions of approval, the impacts of flooding and inundation would be less than significant.

Standard Conditions of Approval

- AE FLOOD ZONE**:** The site is located within Special Flood Hazard Zone AE 1, and the building and site designs must comply with the drainage and flood control requirements of the City Code. Applicant shall obtain a Flood Development Permit from the Public Works Department for each building prior to any permit issued by the Building Division or Public Works Department for that building. It is recommended that this permit be obtained before the design of the building plans in order to avoid potential redesign of the building.

- AO FLOOD ZONE: The site is located within Special Flood Hazard Zone AO, depth 1 and must comply with the drainage and flood control requirements of the City Code. The

elevation of the lowest floor of the building must be at least one foot above the highest adjacent grade and must be above elevation 12.75 (NAVD 88) or dry floodproofed. The highest adjacent grade is defined as the highest natural elevation of the ground surface prior to construction next to the proposed walls of the structure. Applicant shall obtain a Flood Development Permit from the Public Works Department for each building prior to any permit issued by the Building Inspection Division or Public Works Department for that building.

- GRADING REQUIREMENTS: For sites located within a special flood hazard zone, the grading or site plan must show the elevation of the finished pad, lowest floor, highest adjacent grade for Flood Zone AO, and base flood elevation for Flood Zone AE. All elevations must be referenced to a City elevation benchmark. The benchmark number, description, elevation, and datum year shall be noted on the grading plan.

- SUBSTANTIAL IMPROVEMENT: If the existing building is located within Special Flood Hazard Zone, prior to submitting plans to the Building Inspection Division to improve the existing building, the applicant shall submit a completed substantial improvement worksheet to the Public Works Department for review and approval. The substantial improvement worksheet is used to determine whether or not the value of the new improvements exceed 50 percent of the value of the existing structure, where the value of the existing structure must be depreciated for the age of the structure. If the applicant's building improvements exceed 50 percent of the value of the existing building, the applicant must elevate the existing and new building improvements above the base flood elevation and above the City minimum elevation requirements in accordance with the City's drainage and flood control requirements in the City Code and with requirements of FEMA. The applicant must obtain a Flood Development Permit before submitting any construction plans to the Community Development Department.

Implementation of the Precise Plan would place structures within a 100-year flood hazard area, but conformance with the City's standard conditions of approval would ensure that these flooding impacts would be less than significant.

Other Inundation Hazards

The North Bayshore Precise Plan would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam; nor would the area be subject to inundation by seiche, tsunami, or mudflow, and therefore, they are not discussed further.

Impact HYDRO-4: Some new commercial and office development under the amended North Bayshore Precise Plan could be located in a special hazard flood zone (an area subject to the 100-year flood). Individual projects built under the North Bayshore Precise Plan would be required to comply with the City of Mountain View Flood Hazard Ordinance for non-residential construction proposed within a special hazard flood zone. Compliance with the Flood Hazard Ordinance would avoid significant flood impacts. **[Less Than Significant Impact]**

Sea Level Rise

Flood risks from sea level rise and coastal storms are two critical threats to Mountain View. With climate change, these risks are expected to increase, requiring additional adaptive actions to prevent damage to North Bayshore businesses and infrastructure. New development under the amended North Bayshore Precise Plan would occur in areas affected by projected sea level rise, under both an eight-inch sea level rise scenario and a 31-inch sea level rise scenario, based on sea level rise projections included in the *Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program (SLR CIP)*. The SLR CIP addressed long-term flood protection from sea level rise for the City's Shoreline Community, including North Bayshore. With implementation of the capital improvement projects identified in the plan, the Precise Plan area (and the greater Shoreline area) would be protected from the "worst case" 31-inch sea level rise scenario.

Based on City Council direction, the City is currently planning flood protection infrastructure for the eight-inch scenario, but the improvements will also include provisions to address the 31-inch scenario in the future. The amended North Bayshore Precise Plan integrates SLR CIP projects directly in the Precise Plan to provide long-term flood protection, as described in Chapter 7: Infrastructure of the Precise Plan (Appendix C).

While all of the projects in the SLR CIP are important for the Shoreline Community area, only eight of the eleven projects will benefit the North Bayshore Precise Plan area or are located entirely within North Bayshore. These projects are therefore included within the Precise Plan implementation strategy. In addition, some of the improvements needed to implement the Precise Plan will also benefit the region and the City. The eight projects benefitting the Precise Plan area are as follows:

- Charleston Slough and Palo Alto Flood Basin Levee Improvement
- Charleston Slough Tide Gates Improvement
- Coast Casey North Levee Improvement
- Coast Casey Pump Station Improvement
- Lower Permanente Creek Levee and Floodwall Improvements
- Lower Permanente Creek Storm Drain Improvements
- Lower Stevens Creek Levee Improvements
- Sailing Lake Access Road Improvement

Chapter 8, Implementation of the Precise Plan contains the complete list of CIPs for North Bayshore. Individual development projects under the Precise Plan would contribute fair-share contributions to this capital improvement program to fund the construction of the sea level rise protection measures. Although several of these projects would be located within the Precise Plan area, and would be funded in part by fees provided by development of the North Bayshore Precise Plan, this EIR does not provide environmental review for these projects. Since these projects may involve impacts or work in areas of sensitive habitat, require permits or approval by other agencies, and/or are not yet designed; the SLR CIP projects will undergo specific CEQA and/or NEPA review at the time of implementation.

In addition, the properties that are within the "Low Sea Level Rise inundation zone" envelope (Figure 4.9-2, above), where the envelope is shown to include any part of the property (as identified in the SLR CIP), shall be required to construct building finish floor elevations to account for sea

level rise. New buildings, or additions to buildings, shall be constructed to meet the minimum finish floor elevation to be at or above the low sea level rise elevation of 11.3 feet above mean sea level.

Impact HYDRO-5: The North Bayshore Precise Plan area could be affected by future sea level rise. Individual development projects implemented under the Precise Plan would contribute funding to construct sea level rise protection measures as described in the *Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program (SLR CIP),* and shall be required to construct building finish floor elevations at 11.3 feet above mean sea level to account for an eight-inch sea level rise scenario. **[Less Than Significant Impact]**

4.9.3.5 *Groundwater Impacts*

Shallow groundwater exists throughout the Precise Plan area and the greater North Bayshore area due to its low elevation and proximity to San Francisco Bay. Shallow groundwater in the North Bayshore area is not used for drinking water. The North Bayshore Precise Plan would not introduce new land uses that extract groundwater for irrigation or other purposes. Shallow groundwater would likely be encountered during construction of projects under the North Bayshore Precise Plan, and require temporary dewatering, however temporary dewatering during construction would not extract quantities that would deplete groundwater aquifers.

Impact HYDRO-6: Development under the North Bayshore Precise Plan would not introduce land uses that would adversely affect groundwater or deplete groundwater aquifers. **[Less Than Significant Impact]**

4.9.4 Consistency with Plans

4.9.4.1 *Mountain View 2030 General Plan*

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval and consistency with existing laws and regulations. The proposed amendments to the General Plan would not result in additional hydrology and water quality impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.9.5 Cumulative Hydrology and Water Quality Impacts

4.9.5.1 *Cumulative Stormwater Impacts*

Buildout of the General Plan would involve redevelopment of existing developed sites that contain substantial impervious surfaces, and these projects would be required to conform to applicable General Plan goals, policies, and action statements regarding stormwater runoff, infrastructure and flooding. In addition, future projects proposed in the 2030 General Plan timeframe would be required to comply with applicable requirements in the City of Mountain View Municipal Zoning Code, and the City's stormwater management guidelines, and National Pollutant Discharge Elimination System (NPDES) permits standards to avoid hydrology and water quality impacts or reduce them to a less than significant level.

Additionally, future projects would be required to implement construction-period stormwater pollution practices, and post-construction Low Impact Development measures to comply with the NPDES Municipal Regional Permit to reduce water quality impacts. For these reasons, the proposed project and other projects that would be constructed during the 2030 General Plan horizon, would not result in significant cumulative impacts to hydrology and water quality.

Impact C-HYDRO-1: The proposed project, together with projects built during the 2030 General Plan horizon would not result in significant cumulative hydrology impacts. **[Less Than Significant Cumulative Hydrology and Water Quality Impact]**

4.9.5.2 *Cumulative Flooding Impacts*

Portions of the North Bayshore Precise Plan area are located in a special hazard flood zone, subject to 100-year flood events. Other projects built in the City during the 2030 General Plan buildout process may also be located in flood zones, but all of these projects would be subject to FEMA regulations and the Mountain View Flood Ordinance. Therefore, cumulative flooding impacts would be less than significant.

Impacts to the project site from a potential sea-level rise of eight inches are described in *Section 4.9.2.4, Other Inundation Hazards.* The amended Precise Plan would not contribute to a significant cumulative impact from sea-level rise.

Impact C-HYDRO-2: The cumulative projects, including the proposed project, would not result in significant cumulative hydrology impacts. **[Less Than Significant Cumulative Hydrology and Water Quality Impact]**

4.9.6 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
HYDRO-1: With compliance with City and RWQCB requirements, temporary water quality impacts from soil erosion, sedimentation and other pollutants in stormwater runoff from construction sites would not result in significant impacts.	Less Than Significant	No mitigation required	Less Than Significant
HYDRO-2: New development under the amended North Bayshore Precise Plan would produce stormwater runoff which could provide substantial additional sources of polluted runoff. Compliance with Municipal Regional Stormwater Permit Provision C.3 requirements and the North Bayshore Precise Plan Stormwater Management Standards and Guidelines would ensure that development under the Plan would not result in substantial sources of polluted runoff.	Less Than Significant	No mitigation required	Less Than Significant
HYDRO-3: New development under the amended North Bayshore Precise Plan would continue to contribute runoff to the storm drain system serving the North Bayshore area, however, the capacity of the North Bayshore drainage system is currently adequate to accommodate runoff from new development planned for the area. The stormwater management standards and guidelines identified in the amended North Bayshore Precise Plan would minimize runoff from new development projects, and each new development application would be reviewed at for consistency with the Precise Plan. Therefore, development under the Precise Plan would not exceed the capacity of the storm drainage system, alter existing drainage patterns or degrade water quality from excess flows.	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
HYDRO-4: Some new development under the amended North Bayshore Precise Plan could be located in a special hazard flood zone (an area subject to the 100-year flood). Compliance with the Flood Hazard Ordinance and standard conditions of approval would avoid significant flood impacts.	Less Than Significant	No mitigation required	Less Than Significant
HYDRO-5: The North Bayshore Precise Plan area could be affected by future sea level rise. Individual development projects implemented under the Precise Plan would contribute funding to construct sea level rise protection measures as described in the *Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program (SLR CIP)*, and shall be required to construct building finish floor elevations at 11.3 feet above mean sea level to account for an eight-inch sea level rise scenario.	Less Than Significant	No mitigation required	Less Than Significant
HYDRO-6: Development under the amended North Bayshore Precise Plan would not introduce land uses that would adversely affect groundwater or deplete groundwater aquifers.	Less Than Significant	No mitigation required	Less Than Significant
C-HYDRO-1: The proposed project, together with the cumulative projects, would not result in significant cumulative hydrology and water quality impacts.	Less Than Significant	No mitigation required	Less Than Significant
C-HYDRO-2: The cumulative projects, including the proposed project, would not result in significant cumulative hydrology and water quality impacts.	Less Than Significant	No mitigation required	Less Than Significant

4.10 LAND USE AND PLANNING

The following discussion is based upon the following land use documents:

- City of Mountain View 2030 General Plan
- City of Mountain View Greenhouse Gas Reduction Program
- City of Mountain View Municipal Code
- County of Santa Clara, Comprehensive Land Use Plan, Moffett Federal Airfield
- County of Santa Clara, Comprehensive Land Use Plan, Palo Alto Airport

"Land use" is a term that describes different activities that occur in a particular area. For example, different areas in Mountain View contain homes, retail stores, industry, parks, open spaces, and public facilities, such as schools. Mountain View includes a mixed-use Downtown core, distinct residential neighborhoods and commercial corridors, and industrial areas, each embodying a character that makes the City unique.

Local land use is governed by the City's General Plan, which in turn provides the basis for the City's Zoning Ordinance, precise plans, and design guidelines. The current Mountain View 2030 General Plan and City's Zoning Ordinance are described below.

4.10.1 Regulatory Setting

4.10.1.1 *Mountain View 2030 General Plan*

The Mountain View 2030 General Plan was adopted in July 2012, and provides the City with goals and policies that reflect shared community values, potential change areas, and compliance with state law and local ordinances. The General Plan provides a guide for future land use decisions in the city.

North Bayshore Change Area

The North Bayshore Precise Plan area consists of the North Bayshore Change Area of the 2030 General Plan in its entirety. The 2030 General Plan identifies new land uses and intensities for change areas, primarily in commercial and industrial zoned areas along corridors and in commercial locations. Change areas are intended to reinforce General Plan policies, guide zoning ordinance and Precise Plan updates, and capital improvement projects in order to meet the form, character, and vision of the General Plan.

General Plan Land Use Designations

Following adoption of the 2030 General Plan in July 2012, much of the North Bayshore Precise Plan area received the General Plan land use designation of *High Intensity Office.* Areas surrounding the Shoreline Boulevard corridor are designated *North Bayshore Mixed-Use,* existing commercial properties west of Shoreline Boulevard and north of US 101 are designated *Mixed-Use Center,* and Charleston Park is designated *Parks, Schools, and City Facilities.* The acreage contained in each General Plan land use area is shown below in Table 4.10-1, and are shown on Figure 3.2-1.

Table 4.10-1: Areas in Mountain View 2030 General Plan Current Land Use Designations	
General Plan Land Use Designation	**Acreage**
High-Intensity Office	464.9
North Bayshore Mixed-Use (Residential)	105.1
North Bayshore Mixed-Use (Non-Residential)	37.7
Mixed-Use Center	28.7
Total Acreage	**636.4**

These General Plan land use designations are described further below.

High-Intensity Office

The *High-Intensity Office* land use designation accommodates major corporations, financial and administrative offices, high-technology industries, and other scientific facilities, as well as supporting retail and service uses. High-intensity office areas support technological advancement and research and development. The *High-Intensity Office* designation is further defined as follows:

- Allowed Land Uses: Office and ancillary commercial; light industrial, light manufacturing, startups and other commercial and industrial uses as appropriate.
- Density and Intensity: 0.35 FAR; intensities above 0.35 FAR and up to 1.0 FAR may be permitted with measures for highly sustainable development specified within zoning ordinance or precise plan standards.
- Height Guideline: up to eight (8) stories.

North Bayshore Mixed-Use

The *North Bayshore Mixed-Use* land use designation was amended in June 2015 to allow residential uses. The *North Bayshore Mixed-Use* land use designation promotes a vibrant mix of retail, including restaurants and services, along with residential, offices, lodging, entertainment and small businesses along the North Shoreline Boulevard corridor. Pedestrian and bike paths connect this area to surrounding office campuses and other areas.

- Allowed Land Uses: Office, commercial, lodging, entertainment; residential allowed north of Pear Avenue, east of Joaquin Road and south of Charleston Road, as shown on the General Plan map.
- Intensity: 0.35 FAR; office intensities above 0.35 FAR and up to 1.0 FAR may be permitted with measures for highly sustainable development specified within zoning ordinance or precise plan standards; residential and lodging intensities up to 1.85 FAR may be permitted, inclusive of other uses in mixed-use projects (approximately 70 dwelling units per acre or 60 – 150 residents per acre);
- Height Guideline: Up to eight (8) stories.

Mixed-Use Center

The *Mixed-Use Center* land use designation promotes pedestrian-oriented mixed-use centers with integrated, complementary uses such as entertainment, restaurants, department stores and other retail, office, hotels, convention/assembly and/or civic uses and public spaces that draw visitors from surrounding neighbor-hoods and the region. The *Mixed-Use Center* designation is further defined as follows:

- Allowed Land Uses: Office, retail, and personal services, lodging, entertainment, parks and plazas; multi-family residential is allowed in the San Antonio Change Area.
- Intensity: 2.35 FAR, of which up to 0.75 FAR can be office or commercial. Lodging is an allowed land use within this designation.
- Height Guideline: up to eight (8) stories.

Parks, Schools and City Facilities

Charleston Park, a City owned park, is the only parcel in the North Bayshore Precise Plan area that has a *Parks, Schools and City Facilities* land use designation. The *Parks, Schools and City Facility* designation includes smaller City-owned parks and gardens, public schools, facilities owned and operated by the City of Mountain View, and other public open space or educational uses compatible with surrounding neighborhoods. The *Parks, Schools and City Facilities* designation is further defined as follows:

- Allowed Land Uses: City facilities, schools and school facilities, parks and open spaces.
- Intensity: 0.10 FAR for parks; 1.0 FAR for schools and city facilities.

General Plan Goals and Policies – North Bayshore Change Area

The North Bayshore Precise Plan is within the North Bayshore Change Area of the 2030 General Plan. The vision of the North Bayshore Change Area is to continue as a major technology employment center and a model of highly sustainable and innovative development that protects and stewards the natural open space and biological assets of the area. North Bayshore Change Area policies encourage new development to incorporate highly sustainable design features and materials while creating an efficient multi-modal transportation system that connects to downtown. The goals and policies of the North Bayshore Change Area that apply to the amended Precise Plan are as follows:

Innovation and Sustainability	
Goal LUD-15	**An area that is a model of highly sustainable and innovative development, protective of the natural and biological assets of the area.**
Policy LUD 15.1	***A leader in sustainable planning***. Create and promote the North Bayshore area as a leader in innovative and sustainable planning and growth.
Policy LUD 15.2	***Sustainable development focus***. Require sustainable site planning, building and design strategies.

Policy LUD 15.3	***Highly sustainable development***. Encourage new or significantly rehabilitated development to include innovative measures for highly sustainable development.
Policy LUD-15.4	***Wildlife friendly development***. Implement wildlife friendly site planning, building and design strategies.

Land Use and Design

Goal LUD-16	**A diverse area of complementary land uses and open space resources.**
Policy LUD 16.1	***Protected open space***. Protect and enhance open space and habitat in the North Bayshore area.
Policy LUD 16.2	***Mix of uses***. Create and promote the North Shoreline Boulevard corridor as a vibrant mix of residential, commercial, service and entertainment uses.
Policy LUD 16.3	***Business-class hotel***. Encourage the development of a business-class hotel and conference center.
Policy LUD 16.4	***Innovative corporate campuses***. Encourage innovative corporate campus designs.
Policy LUD 16.5	***Protect views***. Protect views by including open areas between tall buildings.
Policy LUD 16.6	***Open space amenities***. Encourage development to include open space amenities, plazas and parks that are accessible to the surrounding transit, bicycle and pedestrian network.
Policy LUD 16.7	***Gateway development***. Support the creation of a gateway development with a diverse mix of uses near US 101 and North Shoreline Boulevard.

Mobility

Goal LUD-17	**A sustainable and efficient multi-modal transportation system.**
Policy LUD 17.1	***Connectivity***. Improve connectivity and integrate transportation services between North Bayshore, Downtown, NASA Ames and other parts of the city.
Policy LUD 17.2	***Transportation Demand Management strategies***. Require development to include and implement Transportation Demand Management strategies.
Policy LUD 17.3	***Bicycle and pedestrian focus***. Support bicycle and pedestrian improvements and connections to and throughout the North Bayshore Area.
Policy LUD 17.4	***North Shoreline Boulevard and Rengstorff Avenue enhancements***. Encourage the enhancement of North Shoreline Boulevard, Rengstorff Avenue and other key streets in North Bayshore through new development and street design standards.

Sea-Level Rise

Goal LU-18	**A comprehensive strategy for reducing the effects of future sea-level rise.**
Policy LUD 18.1	***Collaboration on sea-level rise impacts***. Collaborate with regional, state and federal agencies to address the effects of potential rises in sea levels through assessing vulnerabilities and creating adaptation strategies.
Policy LUD 18.2	***Flood retention areas***. Plan for the development of flood retention areas to address effects from sea-level rise.

4.10.1.2 *Mountain View Zoning Ordinance*

As a long-range planning document, the General Plan outlines long-term visions, policies, and actions designed to shape future development within Mountain View. The Zoning Ordinance serves as an implementing tool for the General Plan by establishing detailed, parcel-specific development regulations and standards in each area of the City. Although the two are distinct documents, the Mountain View General Plan and Zoning Ordinance are closely related,

Precise Plans

Precise Plans are a tool for coordinating future public and private improvements on specific properties where special conditions of size, shape, land ownership or existing or desired development require particular attention. Precise Plans are defined in Section 36.70 of the Mountain View Municipal Code. The City has 32 active Precise Plans. Adopted in late 2014, the San Antonio, El Camino, and North Bayshore Precise Plans were developed to provide zoning and design standards for three large Change Areas identified in the 2030 General Plan. The East Whisman Precise Plan, currently in preparation, will provide zoning standards and guidelines for the East Whisman Change Area.

The existing zoning districts for the Precise Plan area are shown on Figure 3.2-2, and the acreage for these districts is summarized in Table 4.10-3.

Table 4.10-2:
Existing North Bayshore Zoning Districts

Zoning Districts	Acreage
North Bayshore Precise Plan (P39)	577
Floodplain (F)	9.9
Public Right-of-Ways (approximate)	63
Total Acreage:	**649.9**

Apart from the *(P39) North Bayshore Precise Plan* zoning, the North Bayshore area also includes the *Floodplain* zoning district, as described below.

Floodplain (F)

The Charleston Retention Basin is zoned *Floodplain (F).* The *Floodplain (F)* zoning district is designed to protect persons and property from hazards of development in areas subject to tidal or floodwater inundation, and to protect the community from the costs which may be incurred when unsuitable development occurs in such areas, and to allow uses which may be appropriately located in a flood plain. The principal uses allowed in the *F* zoning district include public parks and recreation areas, extraction of chemicals from sea water by natural evaporation or distillation, and certain agricultural uses.

4.10.1.3 *Agriculture*

Farmland Mapping and Monitoring Program

The California Resources Agency's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called *Prime Farmland*.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act (commonly referred to as the Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space use. In return, landowners receive lower property tax assessments.

4.10.2 Existing Setting

4.10.2.1 *Existing Land Uses in the Precise Plan Area*

The North Bayshore Precise Plan area is located at the City's northern boundary, between US 101 and San Francisco Bay, and is characterized by high-technology office campuses and suburban-style office parks, and open spaces. The North Bayshore area is an important employment center for the City and the region, with moderate-intensity, suburban-type office parks, and is geographically distinctive due to its clear separation from the rest of the City by US 101.

The area also includes commercial uses, including cafes, restaurants, movie theaters, and cultural destinations such as the Computer History Museum, and these uses provide services to nearby workers. The North Bayshore Precise Plan area contains limited single-family residential uses, although a large mobile home park (Santiago Villa) is adjacent to the plan area to the east. The existing land uses in the project area by acreage are shown in Table 4.10-3.

Table 4.10-3:
Existing Land Uses (2016)

North Bayshore Precise Plan Area*	Approximate Acreage
Office / R&D / Light Industrial	442.6
Heavy Commercial / Light Industrial	23.7
Retail / Entertainment	35
Institutional	31.3
Residential	2.1
Vacant	30.3
Rights of Way (including creeks)	71.4
Total:	**636.40**

Source: City of Mountain View GIS, 2016.

Approximately three percent of the North Bayshore Precise Plan area is comprised of commercial land uses, primarily associated with the movie theater commercial property at the northwest quadrant of Shoreline Boulevard and US 101, and the Computer History Museum located on the east side of North Shoreline Boulevard. The Shoreline Amphitheater, a regional entertainment and concert venue, is located directly north of the North Bayshore Precise Plan project area.

Approximately five percent of the North Bayshore Precise Plan project area is currently used for parks and open-space, including Charleston Park and Garfield Park. Charleston Park is a passive neighborhood park on Charleston Road south of Amphitheatre Parkway, and contains meandering walking paths and restrooms. Garfield Park is an active park located north of Amphitheater Parkway and includes soccer fields, tennis courts, and hardscape recreational space. The Shoreline Athletic Fields were recently opened on Garcia Avenue, and serve as a new public sports facility for the area. Permanente Creek and trail runs north through the North Bayshore area to the San Francisco Bay.

Mountain View Fire Department Fire Station Number Five is located at the northeast corner of North Shoreline Boulevard and Crittenden Lane, directly adjacent to the North Bayshore Precise Plan project area.

Residential land uses currently comprise a miniscule proportion of the total land in the North Bayshore Precise Plan project area. Four single-family parcels scattered within the North Bayshore area represent one percent of the land use in the project area. There is currently no mixed-use development in the project area, although the current General Plan land use map does allow 1,100 dwelling units in the area around Shoreline Boulevard. A large mobile home park (Santiago Villa) is located east of the Precise Plan area, between the Precise Plan area and Stevens Creek.

Approximately eight percent of the North Bayshore Precise Plan project area is considered vacant, however, most of the parcels have pending or entitled projects. These projects include an approved office development at 1625 Plymouth Street.

4.10.2.2 *Surrounding Land Uses*

The project site is bordered by Shoreline at Mountain View Regional Park and the San Francisco Bay to the north, US 101 to the south, the City of Palo Alto to the west, and Moffett Federal Airfield/NASA Ames Research Center to the east. The Stevens Creek trail corridor and the Santiago Villa mobile home park are also located to the east of the project site.

The former Shoreline Landfill underlies most of the land north of and adjacent to the Precise Plan area, including the current locations of Shoreline at Mountain View Regional Park and Shoreline Amphitheatre. The landfill is classified as a closed Class III solid waste landfill consisting of three distinct and separate sites: a 544-acre main site, containing approximately 350 acres of waste; the 84-acre Vista site, containing approximately 65 acres of waste; and the 27-acre Crittenden site, containing approximately 24 acres of waste. Federal, state and local regulations require post closure operation and maintenance during the minimum thirty year post-closure period. A landfill gas supply pipeline connects to adjacent business within the Amphitheatre Parkway, Charleston Road and Alta Avenue area. The landfill and pipeline supplies landfill gas for power generation that is maintained and operated by Google, Inc.

Parks and open spaces adjacent to the North Bayshore Precise Plan project area include Shoreline at Mountain View Regional Park, Shoreline Amphitheater, the Stevens Creek trail corridor, and Shoreline Golf Links. Shoreline at Mountain View Regional Park and the surrounding Baylands are known to contain sensitive habitat and wildlife species.

The NASA Ames Research Center and Moffett Federal Airfield are located directly east of the North Bayshore Precise Plan area on federal land.

4.10.2.3 *Agriculture*

The North Bayshore Precise Plan area is not currently used for agricultural purposes, and is located within an existing developed, urban area of Mountain View. According to the *Santa Clara County Important Farmlands 2014 Map,* the Precise Plan area is designated as "Urban and Built-up Land," which is defined as residential land with a density of at least six units per 10-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures.[94]

The project site is not designated by the California Resources Agency as farmland of any type and is not subject to a Williamson Act contract. No land adjacent to the project site is designated or used as farmland or timberland.

4.10.3 Land Use and Planning Impacts

4.10.3.1 *Thresholds of Significance*

Land Use and Planning

For the purposes of this SEIR, a **land use and planning** impact is considered significant if the project would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Agriculture and Forestry

For the purposes of this SEIR, an **agricultural and forestry** resource impact is considered significant if the project would:

- 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;

[94] California Department of Conservation. October 2016.

- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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));
- Result in a loss of forest land or conversion of forest land to non-forest use; or
- 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.

4.10.3.2 *2030 General Plan Amendment*

The project proposes to amend the Mountain View 2030 General Plan to allow an increase in residential uses in the North Bayshore Precise Plan area. The proposed residential uses would be located in the central portion of the Precise Plan area, and would have a 2030 General Plan land use designation of either *North Bayshore Mixed-Use* or *Mixed-Use Center* (refer to Figure 3.3-1: Proposed General Plan Land Use Designations). The existing North Bayshore Residential Uses Boundary overlay would be removed from the General Plan land use map, as the above-noted land use definitions in North Bayshore would be revised to allow residential uses.

The proposed General Plan amendment would allow development of up to 9,850 multi-family residential units within the North Bayshore Precise Plan area. This amount of potential development reflects an increase of 8,750 more residential units than allowed in the existing Mountain View 2030 General Plan for the North Bayshore Change Area and City-wide. This would be in addition to the existing 362 residential units in the Santiago Villa Mobile Home Park, which is adjacent to, but not within, the North Bayshore Precise Plan study area. The addition of 9,850 housing units would bring the total number of housing units in the North Bayshore area (North Bayshore Precise Plan area and the Santiago Villa Mobile Home Park), to approximately 10,210 at full buildout.

The 2030 General Plan's *North Bayshore Mixed-Use* land use designation would also be amended with adoption of the proposed General Plan amendment. The allowed land uses, floor area ratios, densities, and building heights within this designation would be amended as follows:

The 2030 General Plan's *North Bayshore Mixed-Use* land use designation would be amended with adoption of the proposed General Plan amendment. The allowed land uses, floor area ratios, densities, and building heights within this designation would be amended to be consistent with the proposed revisions to the North Bayshore Precise Plan. The proposed amendments to the *North Bayshore Mixed-Use* designation are as follows:

> North Bayshore Mixed-Use promotes a vibrant mix of retail, including restaurants and services, along with residential, offices, lodging, entertainment and small businesses along the North Shoreline Boulevard corridor. Pedestrian and bike paths connect this area to surrounding office campuses and other areas.
>
> - *Allowed Land Uses:* Office, commercial, lodging, entertainment~~;~~ and residential ~~allowed east of North Shoreline Boulevard between La Avenida and the flood retention basin, between~~

~~North Shoreline Boulevard and Joaquin Road, and south of Plymouth Street, as shown on the General Plan Land Use Map~~

- *Intensity (office):* 0.35 FAR; ~~office~~ intensities ~~above~~ between 0.35 FAR and up to 1.5-FAR may be permitted with measures for highly sustainable development and public benefits specified within zoning ordinance or precise plan standards~~; residential and lodging intensities up to 1.85 FAR permitted, inclusive of other uses in mixed-use projects (approximately 70 DU/ac or 60 – 150 residents per acre)~~

- *Intensity (residential):* 1.0 FAR (approximately 40 DU/ac or 40 – 80 residents per acre)

- *Intensity (lodging):* 1.85 FAR

- *Intensity (mixed-use)*: Mixed use intensities are defined within Precise Plan or zoning ordinance standards

- *Height Guideline:* Up to 8 stories for office and lodging; up to 15 stories for residential

The 2030 General Plan's *Mixed-Use Center* land use designation would also be amended with adoption of the proposed General Plan amendment. The allowed land uses, floor area ratios, densities, and building heights within this designation would be amended to be consistent with the proposed revisions to the North Bayshore Precise Plan. The proposed amendments to the *Mixed-Use Center* designation are as follows:

Mixed-Use Center promotes pedestrian-oriented mixed-use centers with integrated, complementary uses such as entertainment, restaurants, residential, department stores and other retail, office, hotels, convention/assembly and/or civic uses and public spaces that draw visitors from surrounding neighborhoods and the region.

San Antonio

- *Allowed Land Uses:* Office, retail and personal services, multi-family residential, lodging, entertainment, parks and plazas

- *Intensity:* 2.35 FAR (approximately 70 DU/acre or 60 - 150 residents/acre), of which up to 0.75 FAR can be office or commercial

- *Height Guideline:* Up to 8 stories

North Bayshore

- *Allowed Land Uses:* Office, retail and personal services, multi-family residential, lodging, entertainment, parks and plazas

- *Intensity (office):* 1.0 FAR; intensities between 1.0 FAR and up to 2.35 FAR may be permitted with measures for highly sustainable development and public benefits specified

defined within zoning ordinance or precise plan standards

- *Intensity (residential):* 1.0 FAR (approximately 40 DU/ac or 40 – 80 residents per acre)
- *Intensity (lodging):* 1.85 FAR
- *Intensity (mixed-use)*: Mixed use intensities are defined within Precise Plan or zoning ordinance standards
- *Height Guideline:* Up to 8 stories for office and lodging; up to 15 stories for residential

The proposed changes to the General Plan map will change the distribution of acreage within the land use designations, as shown in Table 4.10-4:

Table 4.10-4:
Areas in Mountain View 2030 General Plan
Proposed Land Use Designations

General Plan Land Use Designation	Acreage
High-Intensity Office	450.3
North Bayshore Mixed-Use (Residential)	157.4
Mixed-Use Center	28.7
Total Acreage	**636.4**

Additional text changes to the 2030 General Plan are included as Appendix D, and the proposed General Plan Land Use Designations are shown on Figure 3.3-1.

4.10.3.3 *Amended North Bayshore Precise Plan*

The amended North Bayshore Precise Plan would represent a rezoning of the North Bayshore area to allow an increased density of residential uses. The Precise Plan represents the implementation of the General Plan's goals and policies for the North Bayshore Change Area. The Precise Plan would be amended to allow up to 9,850 multi-family dwelling units in North Bayshore, in the *North Bayshore Mixed-Use* and *Mixed-Use Center* land use designations. The proposed amended North Bayshore Precise Plan would revise the 2014 North Bayshore Precise Plan that codifies the area's land use and development regulations.

The proposed amended North Bayshore Precise Plan guides all land use and development decision-making processes for the area. The Precise Plan does not replace or augment building safety codes or other non-planning related codes. All applications for new construction, substantial modifications to existing buildings, and changes in land use will be reviewed for conformance with the proposed amended Precise Plan. The Precise Plan would be adopted under the authority of the City's Zoning Ordinance, which establishes Precise Plans as a tool to regulate land use and development.

4.10.3.4 *Land Use Compatibility Impacts from the Proposed Project*

Land use conflicts can arise from two basic causes: 1) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere; or 2) conditions on or near the project site may have impacts on the persons or development introduced onto the site by the new project. Both of these circumstances are aspects of land use compatibility. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritation and annoyance to potentially significant effects on human health and safety.

The project site is identified as the North Bayshore Change Area in the Mountain View 2030 General Plan. The North Bayshore Change Area consists of primarily office and light industrial uses totaling approximately 7.3 million square feet of development, as previously described. The currently-adopted Precise Plan allows approximately 3.4 million square feet of net new development, consistent with the development analyzed in the 2030 General Plan for the area. The amended Precise Plan would include up to 9,850 multi-family dwelling units in addition to the commercial and light industrial uses.

The Precise Plan is organized into four different areas, each with distinct building forms and character: the Gateway, Core, General, and Edge (refer to Figure 3.3-2). Each character area supports a range of employment activities, residential uses and the principal components of the Environmental Sustainability Framework. The character areas differ in their physical character, interfaces with habitat and open space, and building intensity and scale. The Edge Character Area provides a transition between the more intensive development in the Core and General Character Areas and nearby sensitive areas by allowing lower development intensities than the rest of North Bayshore (refer also to *Section 4.3, Biological Resources* of this Draft SEIR).

The amended Precise Plan includes new Complete Neighborhood areas in the central part of North Bayshore (Figures 3.3-2 and 3.3-3). These neighborhoods are overlaid on the Plan's four existing Character Areas, and would include a mix of land uses and amenities. The Complete Neighborhood areas are planned around walkable access to transit, open space, and services. The Precise Plan's amended standards and guidelines for uses in these areas will help existing uses transition to complete, pedestrian-oriented neighborhoods over time.

The amended Precise Plan has been designed to provide an integrated mix of residential and commercial uses, and would provide housing for workers in the North Bayshore area, reducing vehicle miles traveled and traffic congestion. During development of these uses, demolition and construction activities near existing residences or offices could create traffic, noise, and other disturbances. These impacts during construction activities, however, would be temporary and of limited time, and would not result in a significant impact to nearby sensitive uses with the implementation of the North Bayshore Precise Plan standards and guidelines, mitigation measures, and conditions of approval described elsewhere in this Draft SEIR.

For these reasons, the project would not physically divide an existing community, place incompatible land uses adjacent to existing uses, or allow the adjacent development of new incompatible uses, and therefore this impact is less than significant.

Impact LU-1: The proposed project would not physically divide an existing community, place incompatible land uses adjacent to existing uses, or allow the adjacent development of new incompatible uses. **[Less Than Significant Impact]**

4.10.3.5 *Conflicts with Applicable Plans, Policies, and Regulations*

Following adoption of the 2030 General Plan in July 2012, much of the North Bayshore Precise Plan area received the General Plan land use designation of *High Intensity Office.* Areas surrounding the Shoreline Boulevard corridor are designated *North Bayshore Mixed-Use,* existing commercial properties west of Shoreline Boulevard and north of US 101 are designated *Mixed-Use Center,* and Charleston Park is designated *Parks, Schools, and City Facilities.* The North Bayshore Precise Plan is designed to implement the goals and policies of the Mountain View 2030 General Plan by providing development guidelines and policies for the entire area.

The amended North Bayshore Precise Plan includes transportation demand management (TDM) measures as described in *Section 4.14, Transportation and Traffic.* Since the Precise Plan includes TDM measures and other sustainability and green building features, the amended Precise Plan would be consistent with similar requirements in areas in North Bayshore with the land use designation of *High-Intensity Office*.

The *North Bayshore Mixed-Use* and *Mixed-Use Center* land use designations would be amended to allow an increased amount of residential uses, as described above. The 2030 General Plan *North Bayshore Mixed-Use* designation was previously amended in June 2015 to allow up to 1,100 dwelling units near Shoreline Boulevard.

The project proposes a General Plan amendment and rezoning, and so by definition, would not be consistent with the General Plan and Zoning Ordinance. The amended North Bayshore Precise Plan includes standards and guidelines to minimize environmental impacts, including transportation, biological resources, and aesthetics, and would be consistent with General Plan polices adopted to mitigate environmental effects.

Impact LU-2: The amended North Bayshore Precise Plan includes standards and guidelines to minimize environmental impacts, and would be consistent with General Plan polices adopted to mitigate environmental effects. **[Less Than Significant Impact]**

4.10.3.6 *Transfer of Development Rights*

The Precise Plan allows transfer of development rights (TDR) from Edge Character Area parcels to Core Character Area parcels. The purpose of TDR is to minimize the amount of development near sensitive habitat and residential areas and to focus more intensive development near transit and commercial services on or near Shoreline Boulevard in the Core Character Area. TDR is voluntary and the TDR program requirements are described in detail in *Chapter 3: Land Use and Design* of the draft Precise Plan (Appendix C).

Impact LU-3: The amended North Bayshore Precise Plan would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction

over the project adopted for the purpose of avoiding or mitigating an environmental effect. The proposed development standards in the new *North Bayshore Precise Plan* zoning district would not conflict with the City's Zoning Ordinance and would not result in significant land use impacts. **[Less Than Significant Impact]**

4.10.3.7 *Habitat Conservation Plans*

As described in *Section 4.3, Biological Resources*, the Precise Plan area is not within an adopted habitat conservation plan or natural community conservation plan.

Impact LU-4: The amended Precise Plan would not conflict with an adopted habitat conservation plan or natural community conservation plan. **[No Impact]**

4.10.3.8 *Agricultural and Forest Resources Impacts*

The project site is located within an existing developed area, and has not been used for agricultural purposes since approximately the 1960's. The Precise Plan area is not used or zoned for agricultural purposes. The site is not designated by the Department of Conservation as farmland of any type, and is not the subject of a Williamson Act contract. None of the properties adjacent to the project site are used for agriculture, nor is it designated as forest land. For these reasons, the project would have no impact on agricultural or forest resources.

Impact AG-1: The proposed project would not have an impact on agricultural land, agricultural activities, or forest resources. **[No Impact]**

4.10.3.9 *Cumulative Land Use Impacts*

Construction of projects under the 2030 General Plan and the Precise Plan would be within the boundaries of the City of Mountain View, and since little open land is available in the City, generally would consist of redevelopment of previously developed sites. Development on a number of these sites would result in a change of uses and/or an intensification of development.

The compatibility of new development with adjacent land uses, and the general character of surrounding areas are considered as a part of the City of Mountain View's architectural and environmental review processes for its projects. Through appropriate site design and review of these projects, land use compatibility impacts such as visual intrusion and noise would be avoided.

All development projects in the City would be subject to 2030 General Plan goals, policies, and action statements that require appropriate buffers, edges, and transition areas between dissimilar land uses. In addition, the setback, design, and operational requirements of the Mountain View City Code should minimize land use compatibility issues.

Because the North Bayshore Precise Plan, like the 2030 General Plan, would allow an increased density within Mountain View, but would require TDM measures and transit-oriented development, it would result in a less than significant contribution to significant cumulative land use impacts including land use compatibility. The project, in conformance with the applicable 2030 General Plan goals, policies, and action items and with the implementation of mitigation measures, would not

result in significant land use compatibility impacts or conflict with a policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact. The project, therefore, in combination with the 2030 General Plan development, would not result in significant land use impacts.

Since little open land is available in the City of Mountain View, including in the area of the project site, projects constructed under the cumulative conditions scenario generally would consist of redevelopment of previously developed sites. Development on a number of these sites could result in a change of uses and/or an intensification of development.

The compatibility of new development with adjacent land uses, and the general character of surrounding areas are considered as a part of the City of Mountain View's architectural and environmental review processes for its projects. The adjacent Cities of Palo Alto and Sunnyvale have similar review processes. Through appropriate site design and review of these projects, land use compatibility impacts such as visual intrusion and noise would be minimized.

The project, in conformance with the applicable 2030 General Plan goals, policies, and action statements and with the implementation of mitigation measures, would not result in significant land use compatibility impacts or conflict with a policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Additionally, new development would have been reviewed under the appropriate design and environmental review process. The project, therefore, in combination with other development in the area, would not result in significant land use impacts.

Impact C-LU-1: The cumulative projects, including the proposed project, would not result in significant cumulative land use impacts. **[Less Than Significant Cumulative Land Use Impact]**

4.10.4 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
LU-1: The proposed project would not physically divide an existing community, place incompatible land uses adjacent to existing uses, or allow the adjacent development of new incompatible uses. s	Less Than Significant	No mitigation required	Less Than Significant
LU-2: The amended North Bayshore Precise Plan includes standards and guidelines to minimize environmental impacts, and would be consistent with General Plan polices adopted to mitigate environmental effects.	Less Than Significant	No mitigation required	Less Than Significant
LU-3: The amended North Bayshore Precise Plan would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. The proposed development standards in the new North Bayshore Precise Plan zoning district would not conflict with the City's Zoning Ordinance and would not result in significant land use impacts.	Less Than Significant	No mitigation required	Less Than Significant
LU-5: The amended Precise Plan would not conflict with an adopted habitat conservation plan or natural community conservation plan.	No Impact	No mitigation required	No Impact
AG-1: The proposed project would not have an impact on agricultural land, agricultural activities, or forest resources.	No Impact	No mitigation required	No Impact
C-LU-1: The cumulative projects, including the proposed project, would not result in significant cumulative land use impacts.	Less Than Significant	No mitigation required	Less Than Significant

4.11 NOISE AND VIBRATION

The following discussion is based in part upon a noise and vibration assessment completed for the North Bayshore Precise Plan area by *Illingworth & Rodkin* in January 2017. This report is attached to this SEIR as Appendix I.

4.11.1 Background

Noise may be defined as unwanted sound. Acceptable levels of noise vary from land use to land use. In any one location, the noise level will vary over time, from the lowest background, or ambient noise level, to temporary increases caused by traffic or other sources. State and federal standards have been established as guidelines for determining the compatibility of a particular use with its noise environment.

There are several methods of characterizing sound. The most common in California is the A-weighted sound level or dBA.[95] This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, different types of noise descriptors are used to account for this variability. Typical noise descriptors include maximum noise level (L_{max}), the energy-equivalent noise level (L_{eq}), and the day-night average noise level (L_{dn}). The L_{dn} noise descriptor is commonly used in establishing noise exposure guidelines for specific land uses. For the energy-equivalent sound/noise descriptor called L_{eq} the most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable.

Since the sensitivity to noise increases during the evening hours, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The Day/Night Average Sound Level (L_{dn}) is the average A-weighted noise level during a 24-hour day, obtained after the addition of 10 dB to noise levels measured in the nighttime between 10:00 p.m. and 7:00 a.m. The Community Noise Equivalent Level (CNEL) is a 24-hour A-weighted noise level from midnight to midnight after the addition of five dBA to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dBA to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.

[95] The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. All sound levels in this discussion are A-weighted, unless otherwise stated.

Table 4.11-1
Land Use Compatibility Standards

Land Use Category	Community Noise Exposure in Decibels (CNEL) Day/Night Average Noise Level in Decibels (Ldn)						
	55	60	65	70	75	80	85
Residential-Single-Family, Duplex, Mobile Homes							
Residential-Multi-Family, Transient Lodging-Motels, Hotels							
Schools. Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters, Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

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
New construction or development should be under-taken only after a detailed analysis of the noise\ reduction requirements is made and needed noise insulation features included in the design.

NORMALLY UNACCEPTABLE
New construction or development should be discouraged. If new construction or development does proceed, detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development clearly should not be undertaken

Source: State of California General Plan Guidelines, 2003.

4.11.2 Regulatory Setting

4.11.2.1 *City of Mountain View 2030 General Plan*

General Plan Noise Element

The purpose of the City of Mountain View 2030 General Plan Noise Element is to guide policies for addressing exposure to current and projected noise sources in Mountain View. The Element covers State Government Code requirements and the State Office of Noise Control Guidelines. The Noise Element includes a land use compatibility section which outlines acceptable outdoor noise environment standards for different land uses categories (refer to Table 4.11-1 below, which is Table 7.1 from the General Plan Noise Element).

The following Noise Element goals, policies, and actions are intended to reduce conflicts between noise and land use and to lessen noise sources that reduce the quality of life in the City:

Noise	
Goal NOI-1	**Noise levels that support a high quality of life in Mountain View.**
Policy NOI 1.1	Land Use Compatibility. Use the Outdoor Noise Acceptability Guidelines as a guide for planning and development decisions.
Policy NOI 1.2	Noise-sensitive land uses. Require new development of noise-sensitive land uses to incorporate measures into the project design to reduce interior and exterior noise levels to the following acceptable levels: • New single-family developments shall maintain a standard of 65 dBA L_{dn} for exterior noise in private outdoor active use areas. • New multi-family residential developments shall maintain a standard of 65 dBA L_{dn} for private and community outdoor recreation use areas. Noise standards do not apply to private decks and balconies in multi-family residential developments. • Interior noise levels shall not exceed 45 dBA L_{dn} in all new single-family and multi-family residential units. • Where new single-family and multi-family residential units would be exposed to intermittent noise from major transportation sources such as train or airport operations, new construction shall achieve an interior noise level of 65 dBA through measures such as site design or special construction materials. This standard shall apply to areas exposed to four or more major transportation noise events such as passing trains or aircraft flyovers per day.
Policy NOI 1.3	Exceeding acceptable noise thresholds. If noise levels in the area of a proposed project would exceed normally acceptable thresholds, the City shall require a detailed analysis of proposed noise reduction measures to determine whether the proposed use is compatible. As needed, noise insulation features shall be included in the design of such projects to reduce exterior noise levels to meet acceptable thresholds, or for uses with no active outdoor use areas, to ensure acceptable interior noise levels.
Policy NOI 1.4	Site planning. Use site planning and project design strategies to achieve the noise level standards in NOI 1.1 (Land Use Compatibility) and in NOI 1.2 (Noise

	Sensitive Land Uses). The use of noise barriers shall be considered after all practical design-related noise measures have been integrated into the project design.
Policy NOI 1.5	Major roadways. Reduce the noise impacts from major arterials and freeways.
Policy NOI 1.6	Sensitive uses. Minimize noise impacts on noise-sensitive land uses, such as residential uses, schools, hospitals and child-care facilities
Policy NOI 1.7	Stationary sources. Restrict noise levels from stationary sources through enforcement of the Noise Ordinance.
Policy NOI 1.8	Moffett Federal Airfield. Support efforts to minimize noise impacts from Moffett Federal Airfield in coordination with Santa Clara County's Comprehensive Land Use Plan.

4.11.2.2 *Santa Clara County Airport Land Use Commission Comprehensive Land Use Plan*

The Santa Clara County Airport Land Use Commission prepares Comprehensive Airport Land Use Plans (CLUPs) for public airports in Santa Clara County (e.g., Moffett Federal Airfield, San Jose Mineta International Airport, Palo Alto Airport, Reid-Hillview Airport, and South County Airport). The CLUPs are intended to provide guidelines that minimize the public's exposure to excessive noise and safety hazards. The ALUC has established provisions for regulating land use, building height, safety and noise insulation within the vicinity of Santa Clara County airports ("referral boundaries"). The ALUC also reviews the General and Specific plans prepared by local agencies (including Mountain View) for consistency with the ALUC plan.

The Santa Clara County ALUC has jurisdiction over new land uses in the vicinity of airports, and establishes 65 dBA CNEL as the maximum allowable noise level considered compatible with residential uses. Recommendations made by the ALUC are advisory in nature to the local jurisdictions, not mandatory.

4.11.2.3 *City of Mountain View Municipal Code*

The City of Mountain View addresses noise regulations and goals in the zoning chapter of the City Municipal Code. The City's codes help protect the community from exposure to excessive noise and also specify how noise is measured and regulated. Noise is also regulated through project conditions of approval, and the Mountain View Police Department and the City Attorney's office enforce noise violations.

Section 8.70.1 of the City's Municipal Code restricts the hours of construction activity to 7:00 a.m. to 6:00 p.m., Monday through Friday. No construction activity is permitted on Saturday, Sunday, or holidays without written approval from the City. Authorized land uses and construction activity established through the discretionary land use permit process may be subject to specific noise conditions of approval that may be more restrictive. Construction activities are defined to include any physical activity on the construction site or in the project's staging area, including the delivery of materials.

The City of Mountain View also identifies limits on noise from stationary equipment (such as heating, ventilation, and air conditioning mechanical systems, delivery truck idling,

loading/unloading activities, recreation activities, and parking lot operations) in Section 21.26 of the Municipal Code. The maximum allowable noise level is 55 dBA during the day and 50 dBA at night (10:00 p.m. to 7:00 a.m.), unless it has been demonstrated that such operation will not be detrimental to the health, safety, peace, morals, comfort or general welfare of residents subjected to such noise, and the use has been granted a permit by the Zoning Administrator.

4.11.3 Existing Noise Conditions

4.11.3.1 *North Bayshore Precise Plan Area Noise Monitoring*

A noise monitoring survey was performed by *Illingworth & Rodkin* in June 2015 to quantify existing ambient noise levels for the Precise Plan. The survey consisted of four long-term noise measurements (LT-1 through LT-4) and eight short-term (10-minute) noise measurements. Noise measurement locations are shown on Figure 4.11-1.

Based on the results of the ambient noise measurements, it was determined that transportation-related noise sources are the primary contributor to the noise environment in the Precise Plan area. Major transportation corridors that traverse the Precise Plan area include US 101; arterial roadways, such as Shoreline Boulevard and Amphitheatre Parkway; and collector roadways, such as Charleston Road.

Noise measurement LT-1 was located in Charleston Park, approximately 450 feet north of Charleston Road centerline. This section of the Precise Plan area served as a reference location for noise levels attributable to concerts/festivals at Shoreline Amphitheatre. Two concerts were measured during the noise monitoring survey. The first concert (Lady Antebellum, Hunter Hayes, and Sam Hunt) occurred on Friday, June 26, 2015 between 7:00 p.m. and 11:00 p.m. Hourly average noise levels at LT-1 typically ranged from 60 to 63 dBA L_{eq} during the concert. The second concert (the Rockstar Energy Mayhem Festival) measured during the noise survey occurred on Sunday, June 28, 2015 between 1:00 p.m. and 11:00 p.m. During the second concert, hourly average noise levels were typically 58 to 62 dBA $_{Leq}$. The day-night average noise level at LT-1 was 54 dBA L_{dn} on days when concerts/festivals did not occur and 61 to 62 dBA L_{dn} when concerts/festivals occurred.

Long-term noise measurement LT-2 was also located in Charleston Park, positioned in a tree approximately 85 feet from the centerline of Charleston Road. Existing ambient noise levels due to Charleston Road traffic were approximately 59 to 60 dBA Ldn. With the addition of concert/festival-related noise, overall L_{dn} noise levels on Friday and Sunday ranged from 62 to 64 dBA L_{dn}.

Long-term measurement location LT-3 was approximately 115 feet east of North Shoreline Boulevard at Shorebird Way. This location was selected to quantify noise levels due to traffic along North Shoreline Boulevard. Daytime hourly average noise levels at LT-3 typically ranged from 62 to 68 dBA L_{eq} during weekdays. On the weekend, traffic noise levels during the daytime period ranged from approximately 55 to 62 dBA L_{eq}. Daily-average noise levels at this location ranged from 63 to 68 dBA L_{dn}.

Long-term noise measurement LT-4 accounted for existing ambient noise levels at the east end of Pear Avenue near Santiago Villa. The calculated day-night average noise level at this location varied from 54 to 55 dBA L_{dn} during the weekend, to 60 dBA L_{dn} during weekdays.

NOISE MEASUREMENT LOCATIONS

FIGURE 4.11-1

Eight short-term noise measurements were made to complete the noise monitoring survey. The short-term noise measurements were collected in the afternoon and late evening of Sunday, June 28, 2015 during the Rockstar Energy Mayhem Festival and the morning of Monday, June 29, 2015. Table 4.11-2 summarizes the results of the short-term measurements.

Table 4.11-2:
Summary of Short-Term Noise Measurements (dBA)

Noise Measurement Location	Noise Source	L_{eq}	L_{max}	L_{dn}
ST-1: 75 feet from the center of Amphitheatre Parkway (June 29, 2015, 10:40 - 10:50 a.m.)	Local Traffic	65	77	66
ST-2: 140 feet from the center of US Highway 101 at the corner of Alta Avenue (June 29, 2015, 10:10 - 10:20 a.m.)	US 101 Traffic	74	74	71
ST-3A: Huff Avenue south of Charleston Road (June 28, 2015, 2:30 - 2:50 p.m.)	Local Traffic/ Music	59	74	60
ST-3B: Huff Avenue north of Plymouth Street (June 28, 2015, 3:00 - 3:30 p.m.)	Local Traffic/ Music	56	66	60
ST-4: Corner of Inigo Way/La Avenida Avenue (June 29, 2015, 8:40 - 9:00 a.m.)	Local Traffic	63	74	64
ST-5: South end of Macon Avenue (June 29, 2015, 9:30 - 9:40 a.m.)	US 101 Traffic	60	72	62
ST-6: La Avenida Trailhead at east end of Precise Plan area (June 29, 2015, 9:10 - 9:20 a.m.)	Distant Traffic	48	56	55
ST-7: Space Park Way (June 28, 2015, 8:10 - 8:20 p.m.)	Local Traffic/ Music	57	70	60
LT-2: Charleston Road (June 28, 2015, 7:30 - 7:50 p.m.)	Music	58	64	62

4.11.3.2 *Future Noise Environment*

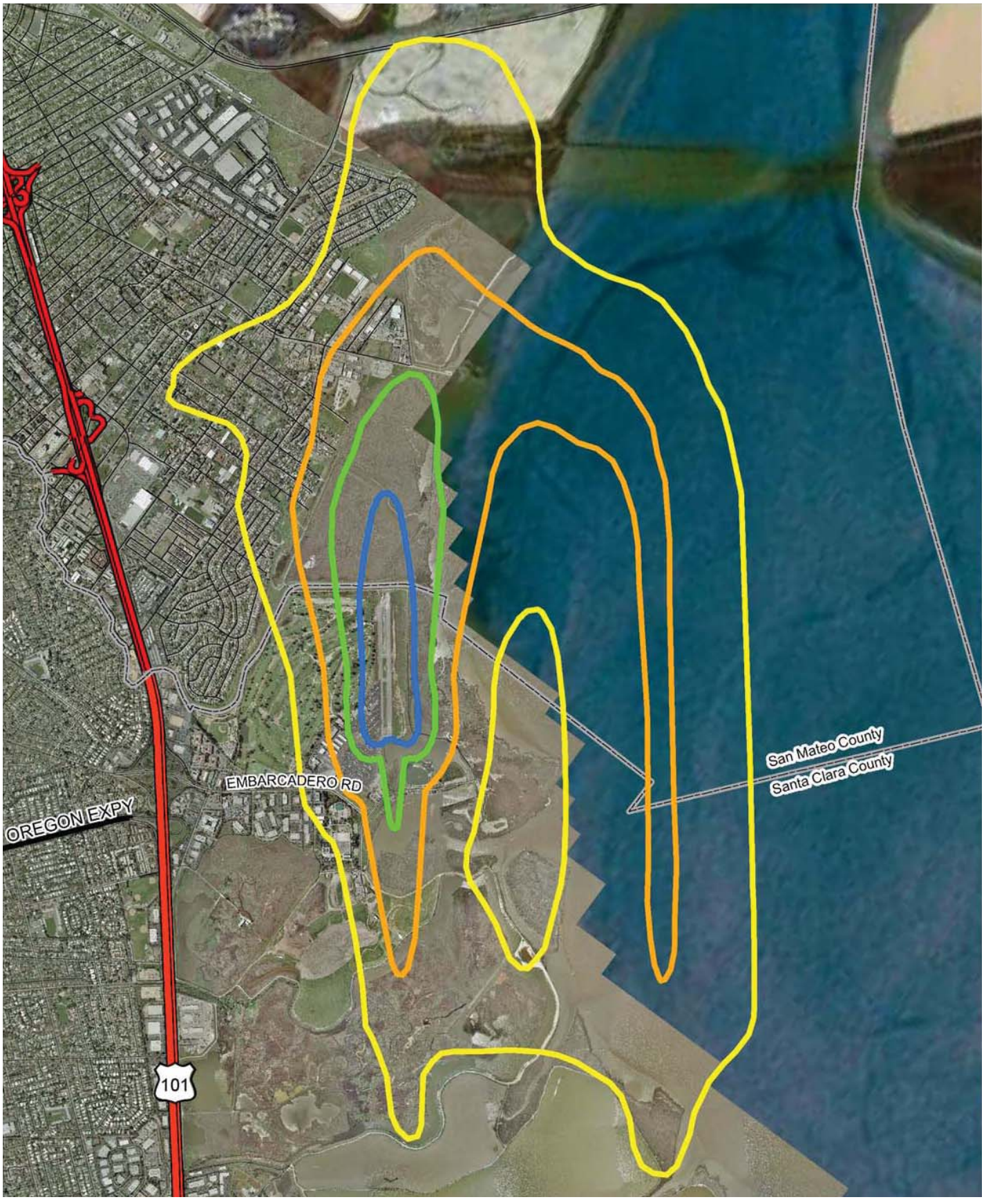
Roadway Noise

Future exterior noise levels in the Precise Plan area were assessed for the year 2030. Future exterior noise levels at a distance of 75 feet from the centerline of the primary roadways traversing the Precise Plan area would typically range from 65 to 75 dBA L_{dn}. Future exterior noise levels within 75 feet of US 101 would be approximately 85 dBA L_{dn}.

Airports

Aircraft activities related to operations at Moffett Federal Airfield, approximately one mile west of the Precise Plan area, would also contribute to ambient noise levels within the Precise Plan area. The Precise Plan area is located outside the 65 dBA CNEL contour line for aircraft activities at Moffett Federal Airfield (refer to Figure 4.11-2). The Precise Plan area is located approximately 1.6 miles southeast of the Palo Alto Airport and well outside the airport's 65 dBA CNEL noise contour (refer to Figure 4.11-3).

MOFFETT FEDERAL AIRFIELD, AIRPORT NOISE CONTOURS FIGURE 4.11-2



PALO ALTOP AIRPORT NOISE CONTOURS FIGURE 4.11-3

Wind tunnels located at the adjacent NASA Ames Research Center and Moffett Federal Airfield are additional sources of noise that may affect noise-sensitive land uses proposed within North Bayshore. These wind tunnels can produce noise levels ranging from about 50 dBA to 60 dBA at the easternmost portions of the Precise Plan area.

Shoreline Amphitheatre

Concerts and festivals occurring at Shoreline Amphitheatre generate noise levels are audible throughout the Precise Plan area, with the exception of those areas immediately adjacent to US 101. Concert noise levels are highest at the northernmost portions of the Precise Plan area, ranging from 55 to 62 dBA.

Operational Noise Sources

Commercial and industrial operations are the primary stationary noise sources that make a significant local contribution to community noise levels within the Precise Plan area. These uses can generate noise due to the regular operation of equipment, including fans, blowers, chillers, compressors, boilers, pumps, and air conditioning systems that may run continuously. Other intermittent sources of noise include emergency generators, horns, buzzers, and loading activities.

4.11.3.3 *Sensitive Receptors*

The North Bayshore Precise Plan area includes existing uses that are sensitive to excess noise, including a four scattered single family residences. Sensitive noise receptors adjacent to the Precise Plan area include the Santiago Villa residential mobile home park, directly east of the Precise Plan area (refer to Figure 3.1-3).

Charleston Park, Garfield Park, Shoreline Athletic Fields, and the Permanente Creek and Stevens Creek trails are also near or within the project area.

4.11.4 Noise and Vibration Impacts

4.11.4.1 *Thresholds of Significance*

For the purposes of this SEIR, a noise and vibration impact is considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

The following criteria were used to evaluate environmental noise in accordance with the thresholds listed above:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code.

- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Ground-borne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to normal buildings.

- A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is five (5) dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is three (3) dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

- A significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA $L_{eq,}$ and the ambient by at least five (5) dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses.

As previously discussed in Section 4.0, on December 17, 2015, the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project unless the project could exacerbate the existing environmental hazards or risks. Nevertheless, the City has policies and regulations that address existing conditions affecting a proposed project. The City has, therefore, included information regarding the project's exposure to ambient noise levels as a General Plan consistency analysis and planning considerations relating to these policies and regulations.

4.11.4.2 *Noise Impacts from Project*

Permanent Noise Level Increase (Project Traffic Noise)

Increases in traffic noise gradually degrade the environment in areas sensitive to noise as development occurs and the population increases. Proposed roadway modifications could also increase or decrease traffic noise levels depending on the circumstances of each individual project. A significant impact would result if traffic generated by development under the Precise Plan would substantially increase noise levels at sensitive receivers within the Precise Plan area or in the vicinity.

A substantial increase would occur if: a) the noise level increase is five dBA L_{dn} or greater, with a future noise level of less than 60 dBA Ldn, or b) the noise level increase is three dBA L_{dn} or greater, with a future noise level of 60 dBA Ldn or greater.

Traffic noise levels were projected for future conditions including Precise Plan development as well as other background development (outside of the Precise Plan area) for the year 2030. Traffic noise increases above existing levels would be zero to one dBA L_{dn} or less at noise-sensitive receptors within and outside the Precise Plan area. Since the increase in traffic noise as a result of the Precise Plan buildout would be less than three dBA, future traffic noise from the Precise Plan buildout would have a less than significant impact on noise sensitive receptors in the area.

Impact NOISE-1: Buildout of the proposed amended Precise Plan would not result in a substantial permanent noise level increase from increased traffic noise. **[Less Than Significant Impact]**

Project Operation and Mechanical Equipment

The proposed amended Precise Plan would facilitate development of land uses that would have the potential to generate noise levels in excess of allowable noise limits. General Plan Policy NOI 1.7 restricts noise levels from stationary sources through enforcement of the Noise Ordinance. The City Code states that stationary equipment noise from any property must be maintained at or below 55 dBA L_{eq} during daytime hours (i.e., between 7:00 a.m. and 10:00 p.m.) and at or below 50 dBA L_{eq} during nighttime hours (i.e., between 10:00 p.m. and 7:00 a.m.) as measured at residential land uses.

Various mechanical equipment for heating, ventilation, and cooling purposes, exhaust fans, emergency generators, and other similar equipment could produce noise levels exceeding the daytime and nighttime noise limits when located near existing or proposed residential land uses. Due to the number of variables inherent in the mechanical equipment needs of an individual project (number and types of units, locations, size, housing, specifications, etc.), the impacts of mechanical equipment noise on nearby noise-sensitive uses cannot be assessed currently and should be assessed during the final design stage of individual projects. As required by the City Code and the City of Mountain View's standard conditions of approval, design planning would take into account the noise criteria associated with such equipment, and utilize site planning to locate equipment in less noise-sensitive areas. Other controls could include, but shall not be limited to, fan silencers, enclosures, and screen walls.

Future development and redevelopment under the amended North Bayshore Precise Plan would comply with the City Code requirements for stationary equipment. Replacement of existing equipment and operation of new mechanical equipment would be evaluated on a project-by-project basis, particularly for projects near existing residential or other noise-sensitive uses. Development and redevelopment during the implementation of the amended North Bayshore Precise Plan would be subject to City standard conditions of approval in place at the time of the application, which could include:

Standard Condition of Approval

- MECHANICAL EQUIPMENT: The noise emitted by any mechanical equipment shall not exceed a level of 55 dBA during the day or 50 dBA during the night, 10:00 p.m. to 7:00 a.m., when measured at any location on the adjoining residentially used property.

With the implementation the City's General Plan Policy NOI-1.7, standard condition of approval and City Code, the project's mechanical noise impacts upon existing receptors within the vicinity of the Precise Plan area would be less than significant.

Impact NOISE-2: Through compliance with the City Code and standard conditions of approval, future development proposals under the proposed amended North Bayshore Precise Plan would not result in significant noise impacts from operations and mechanical equipment. **[Less Than Significant Impact]**

Short-Term Construction Noise Impacts

No specific site development or construction is proposed as part of the amended North Bayshore Precise Plan; however, future development and redevelopment projects falling within North Bayshore would generate construction-related noise. This analysis assumes that construction activities facilitated by the Precise Plan would adhere to the allowable hours of construction as specified in the City Code (7:00 a.m. and 6:00 p.m. Monday through Friday). Construction activities would not occur on weekends or holidays, as specified in the Municipal Code, unless prior written approval is granted by the building official.

Construction activities would occur intermittently at different sites within the Precise Plan area until full buildout. Although the related noise impacts at any one location would be temporary, construction of individual projects could cause adverse localized effects on the ambient noise environment.

Noise impacts resulting from construction depend on the noise 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 areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction lasts over extended periods of time.

Major noise-generating construction activities associated with new projects would typically include removal of existing pavement and structures, site grading and excavation, installation of utilities, the construction of building foundations, cores, and shells, paving, and landscaping. The highest noise levels would be generated during the demolition of existing structures when impact tools are used (e.g., jackhammers, hoe rams) and during the construction of building foundations if impact pile driving is required. Site grading and excavation activities would also generate high noise levels as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders.

Typical hourly average construction generated noise levels are about 81 dBA to 88 dBA measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average noise levels generated by the construction of residential units would range from about 65 dBA to 88 dBA measured at a distance of 50 feet depending on the amount of activity at the site. Construction generated noise levels drop off at a rate of about six dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors. Lower noise levels result from building construction activities when these activities move indoors and less heavy equipment is required to complete the tasks.

Temporary construction noises are disturbances that are necessary for the construction or repair of buildings and structures in urban areas. Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction materials, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. Limiting the hours when construction can occur to daytime hours is often a simple method to reduce the potential for noise impacts. In areas immediately adjacent to construction, controls such as constructing temporary noise barriers and utilizing "quiet" construction equipment can also reduce the potential for noise impacts.

Noise generated by construction activities would temporarily elevate noise levels at adjacent noise sensitive receptors, but this would be considered a less than significant impact assuming that construction activities are conducted in accordance with the provisions of the City of Mountain View City Code and with the implementation of construction best management practices. A Construction Noise Logistics Plan shall be developed and specify the hours of construction, noise and vibration minimization measures, posting or notification of the method of construction and schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints. The Construction Noise Logistics Plan shall include measures 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.

Future development and redevelopment (including demolition of existing buildings) during the implementation of the amended North Bayshore Precise Plan and related short-term noise impacts would be evaluated on a project-by-project basis and will be required to comply with applicable provisions of Chapter 8 of the City Code. These measures include:

- No construction activity shall commence prior to 7:00 a.m., nor continue later than 6:00 p.m., Monday through Friday, nor shall any work be permitted on Saturday or Sunday or holidays unless prior written approval is granted by the building official. The term "construction activity" shall include any physical activity on the construction site or in the staging area, including the delivery of materials. In approving modified hours, the building official may specifically designate and/or limit the activities permitted during the modified hours.

- At any time before commencement of or during construction activity, the building official may modify the permitted hours of construction upon twenty-four (24) hours written notice to the contractor, applicant, developer or owner. The building official can reduce the hours of construction activity below the 7:00 a.m. to 6:00 p.m. time frame or increase the allowable hours.

- If the hours of construction activity are modified, then the general contractor, applicant, developer or owner shall erect a sign at a prominent location on the construction site to advise subcontractors and material suppliers of the working hours. The contractor, owner or applicant shall immediately produce upon request any written order or permit from the building official pursuant to this section upon the request of any member of the public, the police or city staff.

Projects that occur under the amended North Bayshore Precise Plan will also be required to follow General Plan policies NOI 1.1, NOI 1.2, NOI 1.3, and NOI 1.4, which would also minimize potential noise impacts from construction activity by requiring the City to take steps to reduce the exposure of noise sensitive land uses to construction related noise through the development review process. The project would also comply with Policy NOI 1.7, which specifically requires enforcement of the permitted hours for construction activities, reducing the exposure of sensitive receptors to significant noise impacts.

In addition, development and redevelopment during the implementation of the amended North Bayshore Precise Plan would be subject to City standard conditions of approval in place at the time of the application, which could include:

Standard Conditions of Approval

- CONSTRUCTION NOISE REDUCTION: The following noise reduction measures shall be incorporated into construction plans and contractor specifications to reduce the impact of temporary construction-related noise on nearby properties: (a) comply with manufacturer's muffler requirements on all construction equipment engines and ensure exhaust mufflers are in good condition; (b) turn off construction equipment when not in use, where applicable; (c) locate stationary equipment, such as air compressors or portable power generators, construction staging areas, and construction material areas, as far as practical from sensitive receptors; (d) use temporary sound barriers or sound curtains around loud stationary equipment if the other noise reduction methods are not effective or possible and when located near adjoining sensitive land uses; (e) shroud or shield impact tools and use electric-powered rather than diesel-powered construction equipment; and (f) route all construction traffic via designated truck routes where possible and prohibit construction related heavy truck traffic in residential areas where feasible.

- PILE DRIVING NOISE REDUCTION: The following measures shall be incorporated into construction plans and contractor specifications if impact pile driving is proposed: (a) multiple-pile drivers shall be considered to expedite construction. Although noise levels generated by multiple pile drivers would be higher than the noise generated by a single pile driver, the total duration of pile driving activities would be reduced; (b) temporary noise control blanket barriers shall shroud pile drivers or be erected in a manner to shield the adjacent land uses. Such noise control blanket barriers can be rented and quickly erected; (c) foundation pile holes shall be pre-drilled to minimize the number of impacts required to seat the pile. Pre-drilling foundation pile holes is a standard construction noise control technique. Pre-drilling reduces the number of blows required to seat the pile.

- CONSTRUCTION PRACTICES AND NOTICING - DISTURBANCE COORDINATOR: The project applicant shall designate a "disturbance coordinator" who will be responsible for responding to any local complaints regarding construction noise. The coordinator (who may be an employee of the general contractor) will determine the cause of the complaint and will require that reasonable measures warranted to correct the problem be implemented. The contractor shall notify all adjacent uses of the construction schedule in writing. A telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.

Implementation of the City of Mountain View's limits on allowable construction hours and City of Mountain View's standard conditions of approval would reduce construction noise levels from future project sites by five to 10 dBA to minimize disruption and annoyance. With the implementation of these controls, the amended North Bayshore Precise Plan would result in a less than significant construction noise impact.

Impact NOISE-3: Through compliance with General Plan noise policies, Mountain View City Code, and standard conditions of approval, future development under the proposed amended North Bayshore Precise Plan would not result in significant construction noise impacts. **[Less Than Significant Impact]**

Ground-borne Vibration due to Project Construction

Construction of projects within the Precise Plan area may, in some cases, be located directly adjacent to or near existing structures. Construction activities may include demolition of existing structures, site preparation work, excavation of below-grade levels, foundation work, pile driving, and new building erection. Demolition for an individual site may last several weeks and at times may produce substantial vibration. Excavation for underground levels would also occur on some project sites and vibratory pile driving could be used to stabilize the walls of the excavated area. Piles or drilled caissons may also be used to support building foundations.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened.

Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV, and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

Pile driving has the potential of generating the highest ground vibration levels and is of primary concern to architectural damage, particularly when it occurs within 100 to 200 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions such as soil conditions, construction methods, and equipment used but could exceed the recommended

PPV thresholds to avoid architectural damage. Other project construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may also potentially generate substantial vibration in the immediate vicinity.

As with any type of construction, vibration levels may at times be perceptible. Construction phases that have the highest potential of producing vibration (pile driving and use of jackhammers and other high power tools) would be intermittent and would only occur for short periods of time for any individual project site. By use of administrative controls such as notifying neighbors of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with least potential to affect nearby businesses, perceptible vibration can be kept to a minimum and as such would not result in a significant impact with respect to perception.

Depending on the proximity of existing structures to each construction site, the structural soundness of the existing buildings, and the methods of construction used, vibration levels may be high enough to damage existing structures. Given the proximity of many existing structures to the Precise Plan area, ground-borne vibration impacts would be potentially significant.

Impact NOISE-4: Construction activities during implementation of the amended North Bayshore Precise Plan could result in significant ground-borne vibration impacts to existing structures. **[Significant Impact]**

Mitigation Measures: The following mitigation measures would reduce ground-borne vibration impacts from future construction on nearby residences or businesses to a less than significant level.

MM NOI-4.1: Avoid impact pile driving where possible. Drilled piles cause lower vibration levels where geological conditions permit their use.

MM NOI-4.2: Avoid using vibratory rollers and tampers near sensitive areas.

MM NOI-4.3: In areas where project construction is anticipated to include vibration-generating activities, such as pile driving, in close proximity to existing structures, site-specific vibration studies should be conducted to determine the area of impact and to present appropriate mitigation measures that may include the following:

- Identification of sites that would include vibration compaction activities such as pile driving and have the potential to generate ground-borne vibration, and the sensitivity of nearby structures to ground-borne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 200 feet of the project. A qualified structural engineer should conduct this task.

- Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits,

and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions.

- Construction contingencies would be identified for when vibration levels approached the limits.

- At a minimum, vibration monitoring should be conducted during initial demolition activities and during pile driving activities. Monitoring results may indicate the need for more or less intensive measurements.
- When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.

- Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

[Less Than Significant Impact with Mitigation Measures Incorporated in the Project]

4.11.4.3 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore Precise Plan area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Noise and Land Use Compatibility

Future Exterior Noise Environment

As established by Policy NOI 1.2 in the City's General Plan, exterior noise environments at private and community outdoor recreation use areas should be maintained at or below 65 dBA L_{dn} to be considered acceptable by the City of Mountain View. The noise standards do not apply to private decks and balconies in multi-family residential developments.

Future exterior noise levels in the Precise Plan area, with the project, were assessed for the year 2030. Existing and future noise levels at distances of 75 feet from the centerline of the primary roadways within the Precise Plan area are summarized in Table 4.11-3. Based on the modeling predictions, noise produced by vehicular traffic along North Bayshore area roadways could expose residential land uses to levels above the City's 65 dBA L_{dn} exterior compatibility threshold. Future exterior noise levels at a distance of 75 feet from the centerline of the primary roadways traversing the Precise Plan area would typically range from 65 to 75 dBA L_{dn}. Future exterior noise levels within 75 feet of US 101 would be approximately 85 dBA L_{dn}.

Table 4.11-3: Modeled Noise Levels for Existing and 2030 Plus Project Conditions			
Location	**Existing (dBA, L_{dn})**	**2030 Plus Project (dBA, L_{dn})**	**Noise Level Increase (dBA, L_{dn})**
Amphitheatre Parkway - east of Garcia Avenue	69	70	1
Garcia Avenue - east of Bayshore Parkway	72	73	1
Garcia Avenue - west of Salado Drive	70	71	1
Garcia Avenue - west of Amphitheatre Parkway	70	71	1
Charleston Road - east of N. Rengstorff Avenue	71	72	1
Charleston Road - west of Alta Avenue	70	71	1
Charleston Road - east of Alta Avenue	68	69	1
Charleston Road - west N. Shoreline Boulevard	67	67	0
Charleston Road - east of N. Shoreline Boulevard	65	65	0
US 101	85	85	0
North Rengstorff Avenue- south of Charleston Road	75	75	0
North Shoreline Boulevard - north of Stierlin Court	65	65	0
North Shoreline Boulevard - south of Stierlin Court	67	67	0
North Shoreline Boulevard - north of Plymouth Street	69	69	0
North Shoreline Boulevard - south of Plymouth Street	72	73	1
Source: Illingworth & Rodkin, Inc., January 2017.			

With the implementation of the amended Precise Plan, there may be noise and land use conflicts between the proposed residential uses and significant sources of noise within the Precise Plan area, including Shoreline Amphitheatre, as well as existing commercial and industrial land uses and their associated traffic. Noise produced by existing or proposed noise-generating land uses may be audible and disruptive to future residences within the Precise Plan area, and could have the potential to violate the Section 21.26 of the City Code if the noises generated by such uses are not regulated or adequately mitigated.

As described previously, Moffett Federal Airfield borders the Precise Plan area to the east and Palo Alto Airport is located approximately 1.8 miles northwest of the Precise Plan area. The Santa Clara County ALUC has jurisdiction over new land uses in the vicinity of airports, and establishes 65 dBA CNEL as the maximum allowable noise level considered compatible with residential uses. The Precise Plan area is located just beyond the 65 dBA CNEL contour for aircraft activities associated with Moffett Federal Airfield, and well outside of the 65 dBA CNEL noise contour for aircraft activities associated with Palo Alto Airport. Noise from aircraft operations would be considered by Santa Clara County ALUC to be compatible with the land uses of the proposed amended North Bayshore Precise Plan.

Future Interior Noise Environment

Policy NOI 1.2 of the City's General Plan requires that interior noise levels within residences be maintained at or below 45 dBA L_{dn}. Standard residential construction with the windows partially open for ventilation provides approximately 15 dBA of exterior to interior noise reduction. Standard

residential construction assuming the incorporation of a forced-air mechanical ventilation unit (allowing the occupant to control noise by maintaining the windows shut) provides 20 to 25 dBA of noise reduction in interior spaces. Where noise levels exceed 60 dBA L_{dn}, forced-air mechanical ventilation systems are normally required. Where exterior noise levels exceed 70 dBA L_{dn}, special sound rated construction systems are normally required. The exact specifications of window and wall systems cannot be accurately predicted at this time, but once building elevations and floor plans are developed, the specifications can be made. To control interior maximum noise levels to minimize the potential for activity interference and sleep disturbance, noise insulation features such as stucco-sided walls and sound-rated windows and doors may be used. The noise control treatments should be designed to reduce interior noise levels to 45 dBA L_{dn} or less.

Future Residential Exterior and Interior Noise Levels

As mandated by General Plan Policy NOI 1.3, an acoustical study shall be conducted when an application is received for a residential development. The study shall identify the existing noise sources affecting the parcel, the site's noise exposure, and site specific measures to reduce exterior and interior noise levels.

The following City of Mountain View Standard Conditions of Approval would be incorporated into the project to reduce future exterior and interior noise levels to meet the requirements of General Plan Policy NOI 1.2:

Standard Conditions of Approval

Future residential and commercial uses developed under the Specific Plan could be exposed to interior noise levels that would exceed 45 dBA L_{dn} without the incorporation of noise insulation features into the project's design. The following conditions of approval shall be implemented to reduce interior noise levels to 45 dBA Ldn or less to meet the requirements of General Plan Policy NOI 1.2:

- SITE-SPECIFIC BUILDING ACOUSTICAL ANALYSIS: Project-specific acoustical analyses are mandated by the State where noise levels exceed 60 dBA L_{dn}. A qualified acoustical consultant will review final site plans, building elevations, and floor plans prior to construction to calculate expected interior noise levels as required by state noise regulations. The analyses shall meet the following noise reduction requirements. Interior average noise levels shall be reduced to 45 dBA L_{dn} or lower to meet State and local standards. New construction shall also achieve an interior noise level of 65 dBA (L_{max}) through measures such as site design or special construction materials. The analysis should also consider measures to further reduce noise to minimize activity interference and sleep disturbance. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation for all new units exposed to exterior noise levels greater than 60 dBA L_{dn}, so that windows could be kept closed at the occupant's discretion to control noise.

  Special building construction techniques would be required for new residential uses adjacent to US 101, arterial roadways, the Shoreline Amphitheatre, and noise-producing commercial and industrial land uses. These treatments include, but are not limited to, sound-rated windows and doors, sound rated wall constructions, acoustical caulking, etc. The specific

determination of what treatments are necessary will be conducted on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce interior noise levels to 45 dBA L_{dn} or lower.

- INTERIOR NOISE LEVELS (COMMERCIAL): Construction drawings must confirm that measures have been taken to achieve a maximum interior noise level of 45 dBA L_{dn} for all commercial tenant space.

The following additional conditions shall be implemented to reduce exterior noise levels in private and community outdoor recreation use areas to 65 dBA L_{dn} or less to meet the requirements of General Plan Policy NOI 1.2:

- NOISE BARRIERS: When developing a parcel's site plan, locate noise-sensitive outdoor use areas away from major roadways and significant office or commercial noise sources. Shield noise-sensitive spaces with buildings or noise barriers to reduce exterior noise levels. The final detailed design of the heights and limits of proposed noise barriers shall be completed at the time that the final site and grading plans are submitted.

The City will consider additional measures to address potential noise conflicts between noise-sensitive and noise-producing land uses. Measures may include notifying neighbors of potential noise disturbance or temporary exceptions for existing noise-producing land uses to meet the thresholds, and approval of residential site designs to be acoustically compatible with noise-producing land uses.

Consistency: The proposed project would not result in significant noise impacts with the implementation of mitigation measures and standard City of Mountain View conditions of approval. The proposed amendments to the General Plan would not result in additional noise impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. Through compliance with General Plan Policies NOI 1.2 and NOI 1.3, along with implementation of standard conditions of approval, future development projects in the North Bayshore Precise Plan area would be compatible with the City's noise policies and regulations.

The proposed project would allow and regulate the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

Santa Clara County Airport Land Use Commission Airport Land Use Plan

The Precise Plan area is located just beyond the 65 dBA CNEL contour for aircraft activities associated with Moffett Federal Airfield, and well outside of the 65 dBA CNEL noise contour for aircraft activities associated with Palo Alto Airport. Noise from aircraft operations would be considered by Santa Clara County ALUC to be compatible with the land uses proposed as part of the North Bayshore Precise Plan.

Consistency: The project is consistent with the ALUC Airport Land Use Plan.

4.11.4.4 *Cumulative Impacts*

The project would result in a significant cumulative traffic noise impact if noise levels at existing sensitive receivers would be substantially increased (e.g., three dBA L_{dn} above existing traffic noise levels where noise levels would exceed 60 dBA L_{dn}) under cumulative conditions, and if the project would make a "cumulatively considerable" contribution to the overall traffic noise level increase. A "cumulatively considerable" contribution would be defined as an increase of one dBA L_{dn} or more attributable solely to the proposed project.

The 2030 General Plan EIR identified a cumulatively considerable contribution of the General Plan buildout on regional noise conditions, resulting from increases in traffic noise levels along certain roadway segments within the City, including all segments of US 101 adjacent to the project site. As described in the noise assessment completed by *Illingworth & Rodkin* in January 2017, future (2030) exterior noise levels at land uses within 75 feet of US 101 would be approximately 85 dBA L_{dn}.

While traffic noise increases from the General Plan buildout were considered cumulatively significant, mitigation measures, such as sound walls along US 101, were not considered feasible due to the fact that the City cannot require and ensure that sound walls are incorporated onto these facilities. Therefore, the increase in traffic noise along the identified roadway segments (including along US 101) was considered a significant, unavoidable impact under cumulative conditions in the 2030 General Plan Draft EIR. The 2030 General Plan included buildout of the previously adopted Precise Plan. As described in Section 4.11.4.2, traffic noise increases above existing levels from the amended Precise Plan buildout, in addition to other future development, would be zero to one dBA L_{dn} or less. Buildout of the amended North Bayshore Precise Plan, therefore, would not result in a cumulatively considerable contribution to the significant unavoidable impact identified in the 2030 General Plan EIR.

The 2030 General Plan EIR concluded that construction impacts of General Plan buildout would be reduced to a less than significant level through compliance with General Plan policies and applicable City codes and Standard Conditions of Approval. Development of the proposed amended Precise Plan would also result in less than significant construction noise impact through conformance with the same Policies, Codes, and Conditions of Approval. Given the separation of the North Bayshore Precise Plan area from the rest of Mountain View by US 101, a 12-lane major freeway, construction on either side of US 101 would not result in a perceptible noise increase on the other side of US 101 and, therefore, would not result in a cumulative construction noise impact.

Impact C-NOISE-1: Through compliance with all applicable General Plan policies, Mountain View City Code, and Conditions of Approval, described above in Section 4.11, the proposed amended Precise Plan will minimize noise impacts. The proposed amended Precise Plan would not result in any new or greater impacts than were previously identified in the 2030 General Plan EIR (or subsequent General Plan EIRs). **[Less Than Significant Cumulative Impact]**

4.11.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
NOISE-1: Buildout of the proposed amended Precise Plan would not result in a substantial permanent noise level increase	Less Than Significant	No mitigation required	Less Than Significant
NOISE-2: Through compliance with the City Code and standard conditions of approval, future development proposals under the proposed amended Precise Plan would not result in significant noise impacts from operations and mechanical equipment.	Less Than Significant	No mitigation required	Less Than Significant
NOISE-3: Through compliance with General Plan noise policies, Mountain View City Code, and standard conditions of approval, future development proposals under the proposed amended North Bayshore Precise Plan would not result in significant construction noise impacts.	Less Than Significant	No mitigation required	Less Than Significant
NOISE-4: Construction activities during implementation of the amended North Bayshore Precise Plan could result in significant ground-borne vibration impacts to existing structures.	Significant	**MM NOI-4.1** to **MM NOI-4.3**	Less Than Significant
C-NOISE-1: Through compliance with applicable General Plan policies, Mountain View City Code, and standard conditions of approval, the proposed amended Precise Plan will minimize noise impacts. The proposed amended Precise Plan would not result in any new or greater impacts than were previously identified in the 2030 General Plan EIR (or subsequent General Plan EIRs)	Less Than Significant	No mitigation required	Less Than Significant

4.12 POPULATION AND HOUSING

Changes in population, housing, and employment in and of themselves are generally characterized as social and economic effects, not physical effects on the environment. CEQA provides that economic or social effects are not considered significant effects on the environment, unless the social and/or economic effects are connected to physical environmental effects.

While increased population and changes to demographics resulting from new development do not necessarily cause direct adverse physical environmental effects, indirect physical environmental effects such as increased vehicle trips and associated increases in air pollutant emissions could occur. Physical environmental effects associated with the increase in population and employment are discussed in other impact sections of this SEIR.

4.12.1 Regulatory Framework

4.12.1.1 *Housing*

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. ABAG's forecast has become a part of Plan Bay Area, a joint effort led by ABAG and the Metropolitan Transportation Commission (MTC) in partnership with the Bay Area's other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC). The most recent projections series, Projections 2013, distributes activity in conformance with expected development patterns described in Plan Bay Area to the year 2040.

Plan Bay Area 2040 is the strategic update to Plan Bay Area 2013. In July 2013, the Plan 2013 was jointly approved by ABAG Executive Board and by MTC. Plan Bay Area 2013 includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use and housing plan that will support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the Bay Area.

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 regional housing need; 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 that is to be updated on a regular recurring basis.

The City of Mountain View's Housing Element was last updated in 2014.

4.12.2 Existing Setting

4.12.2.1 *City of Mountain View*

Population and Housing

Table 4.12-1, below, summarizes the existing and projected population data in 2030 for Mountain View. Estimates are included from the 2030 General Plan EIR (2012) and ABAG's *Plan Bay Area*

Projections 2013, the Plan Bay Area 2040 Draft Preferred Land Use Scenario with a 2016 estimate from the California Department of Finance.

Table 4.12-1:
Population and Housing in Mountain View

	2010 Estimates			2030 Projections		2040 Projections
	General Plan 2010[1]	Plan Bay Area 2010[2]	California Depart-ment of Finance[1]	2030 General Plan, 2030 Estimate[1]	Plan Bay Area, 2030 Estimate[2]	Draft Plan Bay Area 2040, 2040 Estimate[4]
Population	74,066[1]	74,066[2]	77,925[3]	88,570[1]	90,500[2]	N/A
Households/ Dwelling Units	31,957[1]	31,957[2]	35,239[3]	42,240[1]	38,510[2]	58,500

[1] Based on 2030 General Plan Draft EIR. September 2012.
[2] Association of Bay Area Governments. *Plan Bay Area Projections 2013*. December 2013.
[3] California Department of Finance, Table 2: E-5 City/County Population and Housing Estimates, for January 1, 2016. May 2016
[4] Plan Bay Area 2040. "Re: Plan Bay Area 2040 Draft Preferred Land Use Scenario." September 2, 2016.

The California Department of Finance identifies the City of Mountain View's population (within the City limits) at 77,925, with an estimated 35,239 housing units (as of January 1, 2016).[96]

The Mountain View 2030 General Plan assumed the proposed land use designations in the Plan would allow development of 21,760 new jobs and 8,970 new housing units, for a total of 82,230 jobs and 42,240 housing units in the City by 2030, with a projected population in the City of 88,570 residents. This estimate is roughly consistent with the residential projections of *Plan Bay Area 2013*, jointly approved by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC).

Employment

Plan Bay Area (2013) estimated that the City of Mountain View contained approximately 47,950 jobs in 2010. The General Plan EIR estimated that the number of jobs in the City would increase to 82,230 in 2030, although *Plan Bay Area* estimated that jobs in Mountain View would rise to 59,390 in 2030 (a substantially lower estimate).

[96] California Department of Finance. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2016 with 2010 Census Benchmark*. May 2016. Available at: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/

Table 4.12-2: Jobs and Employment in Mountain View					
	General Plan 2010[1]	**Plan Bay Area 2010**[2]	**2030 General Plan 2030 Estimate**[1]	**Plan Bay Area 2030 Estimate**[2]	**Draft Plan Bay Area 2040, 2040 Estimate**[3]
Employed Residents	38,260	38,650	48,580	49,330	N/A
Jobs	60,460	47,950	82,230	59,390	69,600

[1] Based on 2030 General Plan Draft EIR.
[2] Association of Bay Area Governments. *Plan Bay Area Projections 2013*. December 2013.
[3] Plan Bay Area 2040. "Re: Plan Bay Area 2040 Draft Preferred Land Use Scenario." September 2, 2016.

4.12.2.2 *North Bayshore Area*

Population and Housing

The North Bayshore Precise Plan area currently contains approximately six dwelling units (two single-family and four multi-family). The Santiago Villa Mobile Home Park, which is in the general North Bayshore area (north of US 101) but outside of the Precise Plan zoning district, contains approximately 362 dwelling units.

In 2015 the Mountain View 2030 General Plan was amended to allow up to 1,100 dwelling units in the North Bayshore Precise Plan area. Based on this amendment, the projected 2030 population in North Bayshore was revised in the General Plan to an estimated 2,960 persons (including the population of Santiago Villa).[97]

Table 4.12-3 shows the breakdown of population and jobs by Planning Areas in Mountain View, as described in the 2030 General Plan (as amended) in 2015.

[97] While the General Plan was amended at that time, the underlying North Bayshore Precise Plan zoning was not amended at that time to allow more residential uses.

Table 4.12-3: Population and Jobs in Mountain View by 2030 General Plan Planning Area				
2030 General Plan Planning Area	**Population**		**Jobs**	
	2009	**2030**	**2009**	**2030**
San Antonio	12,320	16,130	2,680	3,780
Moffett/Whisman	13,740	16,560	13,860	19,190
Central Neighborhoods/Downtown	11,400	12,440	6,510	7,400
Monta Loma/Farley/Rock	13,790	15,060	6,920	7,670
Miramonte/Springer	9,540	10,250	4,830	4,900
Grant/Sylvan Park	10,610	10,820	2,470	3,250
North Bayshore[1]	**760**	**2,960**	**17,480**	**28,080**
El Camino Real	1,700	4,350	5,710	6,550
Total	**73,860**	**88,570**	**60,460**	**80,820**

Source: City of Mountain View. *Mountain View 2030 General Plan*. Table 3.1. 2012.
[1] City of Mountain View. *General Plan Map and Text Amendment*. June 2015.
Estimates for North Bayshore in the General Plan include the Santiago Villa Mobile Home Park, outside of the North Bayshore Precise Plan area.

Employment

Based on estimates contained in the Mountain View travel model, an estimated 24,840 jobs (employees) are currently located in the North Bayshore area.[98]

4.12.3 Population and Housing Impacts

4.12.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a population and housing impact is considered significant if the project would:

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

4.12.3.2 *Population and Housing Growth Assumptions*

2030 General Plan Amendment

The proposed General Plan amendment would allow the development of up to 9,850 multi-family residential units within the Precise Plan area. This amount of potential development reflects an

[98] Fehr & Peers. Memorandum. "North Bayshore Precise Plan with Residential – Vehicle Miles Traveled Estimates." December 15, 2016.

increase of 8,750 more residential units than allowed in the existing Mountain View 2030 General Plan for the North Bayshore Change Area (1,100 dwelling units). This would be in addition to the existing 362 residential units in the Santiago Villa Mobile Home Park, which is adjacent to, but not within, the North Bayshore Precise Plan study area.

The addition of 9,850 housing units would bring the total number of housing units in the North Bayshore area (i.e., North Bayshore Precise Plan area and the Santiago Villa Mobile Home Park), to approximately 10,210 at full buildout. Citywide, new dwelling units allowed under the amended General Plan would increase from 8,970 to 17,820.

Population in Mountain View would increase as new housing is built and occupied. Table 4.12-4 shows the projected change in population in Mountain View per planning area under the under the proposed General Plan amendment.

Table 4.12-4:
Population: 2030 General Plan Estimates

Planning Area	Population		
	2009	2030 Current General Plan	2030 Proposed Amendment
San Antonio	12,320	16,130	16,130
Moffett/Whisman	13,740	16,560	16,560
Central Neighborhoods/Downtown	11,400	12,440	12,440
Monta Loma/Farley/Rock	13,790	15,060	15,060
Miramonte/Springer	9,540	10,250	10,250
Grant/Sylvan Park	10,610	10,820	10,820
North Bayshore[1]	**760**	**2,960**	**18,000**
El Camino Real	1,700	4,350	4,350
Total	**75,869**	**88,570**	**103,610**

Source: City of Mountain View. *Mountain View 2030 General Plan*. Table 3.1. 2012.
[1] City of Mountain View. *General Plan Map and Text Amendment*. June 2015.

The existing density for multi-family land uses in North Bayshore is estimated to be 2.10 persons per household. For the North Bayshore Precise Plan area under project conditions in 2030, the estimated density for new multi-family land uses is based on 1.75 persons per household. Based on this, the proposed General Plan amendment would allow 15,040 additional new residents to the City, for a total projected City population in 2030 of 103,610.

North Bayshore Precise Plan Zoning

The current North Bayshore Precise Plan zoning does not allow residential uses. Together with the 2030 General Plan amendment described previously, the proposed amended North Bayshore Precise Plan zoning district would allow up to 9,850 new multi-family dwelling units.

4.12.3.3 *Employment Growth*

2030 General Plan Amendment

Currently, the City of Mountain View has a "surplus" of jobs compared to the number of housing units located within the City, as described in the General Plan Draft EIR. As described above, the current number of employed persons in the North Bayshore area is estimated at 24,840. Under the proposed project, an estimated 38,910 employees could be located in the North Bayshore area at General Plan buildout in 2030, an increase of 14,070 jobs over existing conditions.[99] This increase can be attributed in part to the greater density of employees in office buildings than in the past.[100] While employee densities are increasing in the region for many types of companies, these densities can fluctuate over time, based on the specific uses. Table 4.12-5 shows the change in employment assumptions per Mountain View planning area under the proposed project.

Table 4.12-5:
Employment: 2030 General Plan Estimates

Planning Area	Jobs		
	2009	**2030 Current General Plan & Precise Plan Assumptions**	**2030 Proposed Project**
San Antonio	2,680	3,780	3,780
Moffett/Whisman	13,860	19,190	19,190
Central Neighborhoods/Downtown	6,510	7,400	7,400
Monta Loma/Farley/Rock	6,920	7,670	7,670
Miramonte/Springer	4,830	4,900	4,900
Grant/Sylvan Park	2,470	3,250	3,250
North Bayshore[1]	**17,480**	**28,080**	**38,910**
El Camino Real	5,710	6,550	6,550
Total	**62,469**	**80,820**	**91,650**

Source: City of Mountain View. *Mountain View 2030 General Plan*. Table 3.1. 2012.
[1] City of Mountain View. *General Plan Map and Text Amendment*. June 2015.

Impacts associated with adding employment and population to the area include traffic and circulation impacts, increased energy usage, increases in air quality and greenhouse gas emissions impacts, and utility impacts, which are discussed in their relevant sections of this SEIR.

[99] For the existing, and the proposed 2030 amended North Bayshore Precise Plan, the densities for office and R&D land uses are 4.00 and 3.5 employees per 1,000 square feet, respectively.
[100] This increase in employment density is an estimate, as businesses are not required to report the number of employees on site.

4.12.3.4 *Growth Inducement and Jobs/Housing Ratio*

Approval of the amended North Bayshore Precise Plan would result in an increase in both jobs and dwelling units allowed in the City. Based on the 2030 General Plan, the jobs to housing unit ratio was 1.74 in 2010. The jobs to housing units ratio was projected to decrease to 1.61 in 2030, then increase to a rate of 1.87 in 2035.

As mentioned above, employee density data has been updated and refined, based on the latest information available, and this density will fluctuate over time depending on the needs of individual companies. Under the proposed project, there would be approximately 38,910 jobs in North Bayshore in 2030. Buildout of the amended North Bayshore Precise Plan would allow the development of up to 9,850 residential units, which is 8,750 dwelling units over the 1,100 dwelling units currently allowed under the 2030 General Plan. Citywide, the projected jobs/housing ratio with the proposed project would be about 1.57 in 2030, which is similar to that previously projected in the 2030 General Plan.

The project would almost double new dwelling units allowed under the Mountain View General Plan. Some new residents may live and work in the North Bayshore area, a Priority Development Area (PDA), and others may commute out of the City. The addition of housing in the North Bayshore area would help provide housing for workers in Mountain View and regionally. Growth would occur within a developed area of Mountain View and the proposed project is consistent with the General Plan goals for focused and sustainable growth, because it supports the intensification of development in an urbanized area that is currently served by existing roads, transit, utilities, and public services. For these reasons, the project would not contribute to substantial growth inducement in Mountain View or in the region.

Impact POP-1: The proposed project would provide housing near an employment center and would not induce population growth by extending or expanding infrastructure beyond areas planned for development. **[Less Than Significant Impact]**

4.12.3.5 *Displacement of Housing and People*

The current North Bayshore Precise Plan area contains minimal housing stock, and fewer than ten residents (apart from the adjacent Santiago Villa mobile home park that is outside the North Bayshore Precise Plan limits.) The amended North Bayshore Precise Plan project could result in the removal of these housing units and their residents, during redevelopment of the area. The project would, however, not directly impact or result in changes to the Santa Villa mobile home park. Since the number of residents that may be displaced during implementation of the Precise Plan buildout is relatively low, however, these changes would not result in a substantial displacement of housing or people.

Impact POP-2: The amended North Bayshore Precise Plan would not result in a substantial displacement of housing or people. **[Less than Significant Impact]**

4.12.3.6 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the 2030 General Plan.

Consistency: The proposed project would allow construction of residential and employment uses in an identified Change Area of the City, and would be generally consistent with General Plan goals and policies related to providing housing near employment centers. The proposed amendments to the General Plan could result in additional environmental impacts, however, when compared to the implementation of the adopted North Bayshore Precise Plan, including significant and unavoidable traffic and greenhouse gas emissions impacts. These impacts are described in the specific subject areas of this SEIR.

4.12.3.7 *Cumulative Impacts*

The proposed increase in the intensity of office development and the increase in dwelling units in the North Bayshore Precise Plan area would add jobs and dwelling units in the City. While the increase in jobs may be more than previously envisioned, the amount of office and R&D development in the North Bayshore area would generally be cons**is**tent with the intent, policies, and assumptions from the 2030 General Plan. The increase in dwelling units, well above the projections of the 2030 General Plan, would provide additional housing necessary for existing and projected employment in Mountain View and the region.

Impact C-POP-1: Future development under the proposed project would not induce substantial population growth in Mountain View and the Bay Area. It would not displace substantial amounts of existing housing or people. **[Less Than Significant Cumulative Impact]**

4.12.4 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
POP-1: The proposed project would provide for housing near an employment center and would not induce population growth by extending or expanding infrastructure beyond areas planned for development.	Less Than Significant	No mitigation required	Less Than Significant
POP-2: The amended North Bayshore Precise Plan would not result in a substantial displacement of housing or people.	Less Than Significant	No mitigation required	Less Than Significant
C-POP-1: Future development under the proposed project would not induce substantial population growth in Mountain View and the Bay Area. It would not displace substantial amounts of existing housing or people.	Less Than Significant	No mitigation required	Less Than Significant

4.13 PUBLIC SERVICES AND RECREATION

4.13.1 Background and Regulatory Setting

Public facility services are provided to the community as a whole, usually from a central location or several locations. The resources base for delivery of the services, including the physical service delivery mechanisms, is financed on a community-wide basis, usually from a unified or integrated financial system. The service delivery agency can be a city, county, service or other special district. Usually, new development will create an incremental increase in the demand for these services; the amount of the demand will vary widely, depending on both the nature of the development (residential vs. industrial, for instance) and the type of services, as well as the specific characteristics of the development (such as senior housing vs. family housing).

The impact of a particular project on public facilities services is generally a fiscal impact. By increasing the demand for a type of service, a project could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.) That is a fiscal impact, however, not an environmental one.

CEQA does not require an analysis of fiscal impacts unless the increased demand triggers the need for a new facility (such as a new school or fire station), since the new facility may have a physical impact on the environment.

4.13.1.1 *California Government Code*

School Impact Fees, California Government Code Section 65995-65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Sections 65995-65998 sets forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property" (Section 65996[a]). The legislation goes on to say that payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

In accordance with California Government Code Section 65996, developers pay a school impact fee to the school district to offset the increased demands on school facilities caused by their proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Quimby Act, California Government Code Sections 66475-66478

The Quimby Act (California Government Code Sections 66475-66478) was approved by the California legislature to preserve open space and parkland in the state. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate parks, pay an in-lieu fee, or perform a combination of the two.

4.13.1.2 *Santa Clara County*

The County of Santa Clara Parks and Recreation Department in responsible for the general oversight and protection of the County trail system and is responsible for implementing the Santa Clara County Countywide Trails Master Plan Update (Countywide Trails Plan). The Countywide Trails Plan is an element of the Parks and Recreation Section of the County of Santa Clara General Plan that was adopted on November 14, 1995. The Countywide Trails Plan identifies existing and proposed trial routes, identifies policies and guidelines for trail placement, construction, and provides general oversight and protection of the trail system.

4.13.1.3 *City of Mountain View 2030 General Plan*

The goals and policies of the City of Mountain View 2030 General Plan provide key direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocate necessary resources to support fulfillment of the City's vision. Implementing actions are the specific to-do steps required to carry out the General Plan's broader goals and policies and are included in a companion General Plan Action Plan.

Particular General Plan policies related to public services include the following:

Public Safety	
Goal PSA-1	**A high level of community safety with police, fire and emergency response services that meet or exceed industry-accepted service standards.**
Policy PSA 1.1	***Adequate staffing.*** Maintain adequate police and fire staffing, performance levels and facilities to serve the needs of the community.
Policy PSA 1.2	***Design for safety.*** Support and promote crime prevention and fire safety strategies in the design of new developments.
Goal PSA-2	**A total commitment to reducing criminal activity and instilling a feeling of safety and security in the community.**
Policy PSA 2.1	***Community policing.*** Provide superior community-oriented police services.
Policy PSA 2.2	***Sense of safety.*** Ensure a sense of safety throughout the community.
Policy PSA 2.3	***Service and effectiveness.*** Explore ways to improve service delivery and police effectiveness.
Policy PSA 2.4	***Youth interaction.*** Expand opportunities for positive police and youth interaction.
Policy PSA 2.5	***Regional partnerships.*** Participate in regional partnerships to reduce crime and respond to emergencies.
Policy PSA 2.6	***Victims and special needs.*** Provide support to crime victims and people with special needs.
Policy PSA 2.7	***Police service levels and facilities.*** Ensure Mountain View Police Department service levels and facilities from new growth and development.
Goal PSA-3	**A community protected from fire, hazardous materials and environmental contamination.**

Public Safety	
Policy PSA 3.1	***Minimized losses.*** Minimize property damage, injuries and loss of life from fire.
Policy PSA 3.2	***Protection from hazardous materials.*** Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials through prevention and enforcement of fire and life safety codes.
Policy PSA 3.4	***Oversight agencies.*** Work with local, state and federal oversight agencies to encourage remediation of contamination and protection of public and environmental health and safety.
Goal PSA-4	**A well-prepared community that has developed plans to minimize risks from environmental and human-induced disasters.**
Policy PSA 4.1	***Emergency response plan.*** Maintain and update the City's emergency response plans.
Policy PSA 4.2	***Natural disasters.*** Minimize impacts of natural disasters.
Policy PSA 5.3	***Technology.*** Use effective technologies to inform the community about potential hazards and emergency response.

4.13.2 Existing Setting

4.13.2.1 *Fire Services*

Fire protection to the Precise Plan area is provided by the MVFD, which serves a resident population of approximately 75,275 and an area of 12 square miles. The MVFD provides fire suppression and rescue response, hazard prevention and education, and disaster preparedness.

The MVFD operates out of five stations with five engine companies, one rescue unit, one ladder truck and one Hazmat unit; with 86 full-time personnel, including Suppression and Emergency Medication Service Division (EMS), Fire and Environmental Protection Division, and Administrative Division employees. The Suppression and Emergency Medical Service (EMS) Division operates a response force of 21 Firefighters-EMS providers 100 percent of the time out of five (5) fire stations. As adopted by City Council, the EMS Division is required for the first engine to arrive 100 percent of the time to the scene of a structure fire within six minutes of dispatch and the second engine within eight minutes 100 percent of the time. For all EMS responses the response time goal is to arrive within six minutes of dispatch.

In Fiscal Year 2014/2015, out of approximately 5,830 emergency calls made to the MVFD, 3,900 of the calls (67 percent) were for medical aid (rescue and EMS incident).[101]

The North Bayshore Precise Plan area is most closely served by MVFD Station Five, located at 2195 North Shoreline Boulevard, at the northeast corner of North Shoreline Boulevard and Crittenden Lane intersection, directly adjacent to the north side of the Precise Plan. Station Five houses a fire suppression engine, a paramedic, and a hazardous materials van.

[101] Mountain View Fire Department. *Annual Report - Fiscal Year 2014-2015*. 2015.

The City's Multi-Family Housing Inspection and Fire Prevention Program is managed by the Mountain View Fire Department (MVFD). The multi-family housing inspection program ensures proper maintenance of multi-family housing (three or more dwelling units in a building), including hotels and motels. This program was established to implement the housing goals of the city, to preserve and protect the city's existing stock of multi-family housing, to protect and promote the health, safety and welfare of the residents of multi-family housing, and to avoid conditions of deterioration and blight which could adversely affect economic conditions and the quality of life throughout the city. Currently, there are approximately 680 properties in the program totaling 15,850 dwelling units, which is managed by one full-time employee.

4.13.2.2 *Police Services*

Police protection services are provided to the Precise Plan area by the Mountain View Police Department (MVPD). The MVPD consists of authorized staff of 90 sworn and 45 non-sworn personnel. The MVPD conducts an active (non-officer) volunteer program, which consists of approximately 30 non-sworn volunteers. Officers patrolling the area are dispatched from police headquarters, located at 1000 Villa Street, approximately 1.25 miles driving distance south of the North Bayshore area.

The most frequent crimes in the City of Mountain View are larceny, burglary, and assault. The MVPD has a goal to respond to Priority E and Priority 1 calls in less than four minutes at least 55 percent of the time. Priority E and Priority 1 calls are considered the highest priority calls and signal emergency dispatch from the MVPD. Priority E calls are of higher importance, because they are often associated with violent crime incidents.

To ensure that their standards are always met, MVPD has a mutual aid agreement with the surrounding jurisdictions, under which the other agencies would assist the MVPD in responding to calls, when needed.

4.13.2.3 *Schools*

Mountain View Whisman School District

The project area is located within the Mountain View Whisman School District, which includes seven elementary schools (Grades K-5) and two middle schools (Grades 6-8). Students residing within the North Bayshore Precise Plan area would likely attend Monta Loma Elementary School (located at 460 Thompson Avenue, approximately one mile south of the North Bayshore area) and Crittenden Middle School (located at 1701 Rock Street, approximately one-half mile south of the North Bayshore area).

During the 2015-2016 school year, Monta Loma Elementary School had an enrollment of 466 students, and a maximum enrollment capacity of 625 (25 students per classroom with 25 rooms). Crittenden Middle School had a 2015-2016 school year enrollment of 666 students, and a maximum enrollment capacity of 800 (25 students per classroom with 32 rooms).

Mountain View Los Altos High School District

The Precise Plan area is within the boundaries of the Mountain View Los Altos High School District. Students from the portion of the Precise Plan west of Shoreline Boulevard are within the attendance boundaries of the Los Altos High School, located at 201 Almond Avenue in Los Altos, approximately 2.3 miles southwest of the Precise Plan area. Students from the portion of the plan area east of Shoreline Boulevard are within the attendance boundaries of Mountain View High School, located at 3535 Truman Avenue, approximately 3.5 miles south of the Precise Plan area.

For the 2016-2017 school year, Los Altos High School has an enrollment of 2,091 students, and an optimum capacity of 1,873 students. Mountain View High School has an enrollment of 1,912 students, and an optimum capacity of 1,784 students. With 82 students at Alta Vista High, and nine students in other programs, the total district enrollment is 4,102.

A summary of the enrollment and capacity of schools assigned to the North Bayshore Precise Plan area by Mountain View Whisman School District and Mountain View Los Altos High School District is shown below in Table 4.13-1.

Table 4.13-1:
Enrollment and Capacity of Schools Serving the Precise Plan Area

School District / School	Current Enrollment (2015-2016)	Enrollment Capacity
Mountain View Whisman School District		
Monta Loma Elementary School	466	625[1]
Crittenden Middle School	666	800[2]
School District / School	**Current Enrollment (2016-2017)**	**Enrollment Capacity**
Mountain View Los Altos High School District		
Mountain View High School	1,912	1,784
Los Altos High School	2,091	1,873

[1] Based on 25 students per classroom and 25 classrooms. Mountain View Whisman School District, November 2016.
[2] Based on 25 students per classroom, and 32 classrooms. Mountain View Whisman School District, November 2016.

4.13.2.4 *Parks and Open Space*

The City of Mountain View currently owns 973 acres of parks and open space facilities, including 22 urban parks and the Stevens Creek Trail. The urban parks are divided among mini-parks, neighborhood parks, district parks, a community garden, and a regional park (Shoreline at Mountain View). The City also maintains 10 parks under joint-use agreements with local school districts. City

of Mountain View neighborhood parks typically include playgrounds, picnic area, and recreational courts (tennis or basketball).

The North Bayshore Precise Plan area is located within the North Bayshore Planning Area of the City of Mountain View 2014 *Parks and Open Space Plan*. With the presence of Shoreline at Mountain View Regional Park, the 1,889-acre North Bayshore Planning Area contains 1,063 acres per 1,000 residents and far exceeds the City standard of providing 3.0 acres per 1,000 residents.[102] The acreage of North Bayshore Planning Area in the *Parks and Open Space Plan* is almost equally divided between high-technology industrial and open space uses. Thus parkland in the area serves not only the few residents (mostly in Santiago Villa Mobile Home Park, east of the Precise Plan area), but also a wide regional population.

The Permanente Creek Trail is located within the Precise Plan area, and the Stevens Creek Trail is located directly adjacent to the eastern boundary of the Precise Plan area. In recent years, Mountain View has made significant progress in extending several trails across the City. Most of the Stevens Creek Trail, from Shoreline at Mountain View Regional Park to south of El Camino Real, is complete. Parts of the Permanente Creek Trail, the Light Rail Trail and the Hetch Hetchy Trail are also complete or are in advanced planning stages.

The City's park requirements are based on a standard of 3.0 acres per 1,000 residents. The service areas for different park types are as follows:

Table 4.13-2:
Park Service Area and Size

Park Type	Service Area	Desirable Size
Mini-Park	1 mile	Up to 1 acre
Neighborhood Park	1 mile	1 to 5 acres
Community Park and/or Recreational Facility	Entire City	>5 acres
Stevens Creek Trail	Entire City	N/A

The Mountain View City Council recently the City's first *Pedestrian Master Plan (PMP)* in January 2014, which contains policies and guidelines aimed at improving the pedestrian environment in Mountain View. The PMP is used as an implementing tool and expands upon the City's 2030 General Plan mobility goals by addressing pedestrian-related needs of the community, including the North Bayshore area.

[102] In 2006, the population in the North Bayshore area was estimated to be 738 (including Santiago Villa Mobile Home Park).

Park Facilities in the North Bayshore Area

Approximately five percent of the North Bayshore Precise Plan project area (32 acres) is currently used for parks and open space, including Charleston Park, Shoreline Athletic Fields and Garfield Park.

Charleston Park is a 6.5-acre park located on Charleston Road near the headquarters of Google, Inc. Charleston Park contains meandering walking paths and park amenities, including grass fields and sitting areas.

Garfield Park is an active park located north of Amphitheater Parkway that includes soccer fields, tennis courts, and hardscape recreational space. Garfield Park is owned by Google, Inc., but has an agreement with the City for public use of the park during evenings and weekends.

The Shoreline Athletic Fields are located at 2450 Garcia Avenue. The athletic fields are multi-purpose, synthetic turf fields which accommodate baseball, softball, and soccer. The facility includes a concession, restroom and storage building, lighting for night games, a play area, batting cages and parking. A portion of the facility is designated for wildlife habitat.

Nearby park facilities include Shoreline at Mountain View Regional Park, a 750-acre wildlife and recreation area with multiple land uses, including a 50-acre small boat sailing lake, an 18-hole golf course, clubhouse, amphitheater, banquet facilities, the historic Rengstorff House, a self-guided interpretive sign system, extensive wetlands, open space, and wildlife habitat including lands currently managed for burrowing owls. Recreational opportunities within the park include jogging, walking, bird watching, kite flying and sailing. The park also provides opportunities to directly connect to other park facilities, including the Stevens Creek Trail and the San Francisco Bay Trail.

4.13.2.5 *Libraries*

There are no public libraries in the North Bayshore Precise Plan area. The Mountain View Public Library, located at 585 Franklin Street in Downtown, is the City's only library (approximately two miles south of the North Bayshore Precise Plan area).

4.13.3 Public Services Impacts

4.13.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a public services impact is considered significant if the impacts are associated with:

- The provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

  - Fire protection
  - Police protection
  - Schools

- Parks
- Other public facilities.

For the purposes of this SEIR, a recreation impact is considered significant if the project would:

- Result in an 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; or
- Include recreational facilities or require the construction of expansion of recreational facilities which might have an adverse physical effect on the environment.

4.13.3.2 *Fire Protection Impacts*

The amended North Bayshore Precise Plan could include up to 9,850 new multi-family housing units which, under the current code, require fire prevention inspections. The MVFD reviews applications for new projects to ensure that they comply with the City's current codes and standards. The MVFD does not anticipate the need to construct a new fire station to accommodate buildout of the amended North Bayshore Precise Plan, including increasing the residential growth projected in the 2030 General Plan by 8,750 additional units. The increase in housing units, however, may require additional fire equipment and personnel to meet the City Council's adopted response times.

If the amended North Bayshore Precise Plan is approved, the Mountain View Fire Department will complete a study within five years to fully determine the fire and emergency response needs in North Bayshore. This study would utilize a nationally recognized standard such as "Standards of Cover" for measuring fire and emergency service needs. Additionally, with the potential for traffic congestion in the area, the City of Mountain View will consider the modernization of traffic signals, using technologies such as the pre-empt from the emitter/receiver model to a modern fire apparatus GPS system that changes the traffic signals based on fire apparatus route.[103]

The Precise Plan would allow for future development and redevelopment and, therefore, may incrementally increase the needs for fire suppression and rescue response services. Future projects following the Precise Plan would be constructed to current Fire Code standards, and would not increase the urban area already served by the Mountain View Fire Department.

For the reasons described above, the amended North Bayshore Precise Plan's incremental increase in demand for fire protection services would not result in the need to expand or construct new fire facilities. Future projects following the North Bayshore Precise Plan would be required to comply with General Plan Policies PSA 1.1 and PSA 3.1, which are intended to reduce impacts to emergency response times. In addition, the City would consider the need for additional fire equipment and personnel resources as the buildout of the North Bayshore Precise Plan is implemented.

Impact PS-1: The amended North Bayshore Precise Plan would not substantially affect the provision of fire protection and rescue response, or result in the need for new or physically altered facilities in order to maintain acceptable service ratios,

[103] Diaz, Juan F. Fire Chief, Mountain View Fire Department. Memorandum: "North Bayshore Precise Plan Housing Threshold Analysis." October 19, 2016.

response times, or other performance objectives. **[Less Than Significant Impact]**

4.13.3.3 *Police Services Impacts*

The amended North Bayshore Precise Plan could include up to 9,850 new multi-family housing units, which would require police services.

The amended North Bayshore Precise Plan, with the addition of up to 9,850 multi-family housing units, and existing and planned commercial development in the area would likely result in the City designating the plan area as its own patrol beat. Staffing this beat would require eight to 10 new officers. This estimate is based on staffing one beat for four shifts seven days a week, plus a shift relief factor to backfill for planned and unplanned time off. With adding an additional beat, the Police Department does not anticipate the need for additional supervisory or management staff.

Since there are no specific staffing service ratio goals or development-related triggers, the Police Department would look at other factors, including traffic patterns, and how they would affect response times. If it is determined that traffic would impact access into North Bayshore, the Police Department would assess calls for service and service demand in the plan area, and they could consider having a police beat that was solely located north of US 101. In lieu of a fully-staffed substation, the Police Department may evaluate a "point of operation" location for officers. This building would include a break room, area for officers to park cars/motorcycles, and access to the city network so officers could station themselves in the area and respond to calls for service.[104]

In January 2014, the Mountain View City Council approved plans for refurbishments to the Police/Fire Administration Building to meet accessibility requirements and improve services. In May 2016, the City approved the construction contract for this facility. Improvements to the administration building will improve public services to the City of Mountain View, including the Precise Plan area.

The amended North Bayshore Precise Plan would increase the intensity of development within the Precise Plan area and, therefore, may incrementally increase the demand for police services in the project area. Future development projects that occur under the Precise Plan project would be designed and constructed in conformance with current codes and reviewed by the City of Mountain View to ensure appropriate safety features that minimize criminal activity are incorporated into the project design on a project-by-project basis.

Future projects following the Precise Plan are required to comply with General Plan Policies PSA 1.1, PSA 2.1, PSA 2.2, and PSA 2.3, which are intended to reduce impacts to emergency response times.

Impact PS-2: The amended North Bayshore Precise Plan would not substantially affect the provision of police protection, or result in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives. **[Less Than Significant Impact]**

[104] Bosel, Max. Police Chief, Mountain View Police Department. Personal Communication to DJP&A. October 4, 2016.

4.13.3.4 *Schools Impacts*

Mountain View Whisman School District

The proposed amendments to the North Bayshore Precise Plan could add 9,850 multi-family residential dwelling units to the North Bayshore area, including residential uses that would generate demand for school facilities.

Based on the student generation rates provided by the Mountain View Whisman School District, the project would generate approximately 985 new elementary and 394 new middle school students through the buildout of the plan, as shown in Table 4.13-3.

Table 4.13-3:
Student Generation Rates

Type of School	Student Generation Rates (Multi-Family)	Estimated Number of Students from Project[1]	
Elementary School Students	0.1	985	
Middle School Students	0.04	394	
High School Students[2] Standard Units (80%/100%)	0.046	363	453
High School Students[2] Affordable Units (20%/0%)	0.378	745	0

[1]Based on 9,850 multi-family units.
[2]Range of potential affordable units, from 0% up to 20% of 9,850 units.

The Mountain View Whisman School District provides multi-family student generation rates but does not have specific student generation rates for studio and micro-units. Therefore, the student generation rates described above may be conservative in their project of student demand.

The Mountain View Whisman School District does not currently have sufficient existing capacity to meet the demand in the designated elementary and middle schools, which is estimated to be 985 elementary school students and 394 middle school students. The North Bayshore area currently lacks an elementary or middle school to accommodate the new students, and the Mountain View Whisman School District does have a funding source or property on which to build a school.

The exact method in which the school district would accommodate the project-generated students in the near term is unknown at this time, however, it is anticipated that they would need to add portable classrooms/buildings, adjust district boundary lines, and/or provide additional bus transportation services. The Mountain View Whisman School District Board will consider new boundaries related to the neighborhood school concept during the 2017-2018 school year, which may affect the schools that North Bayshore students could attend.

It is assumed that the addition of portable classrooms/buildings would occur on existing school sites and that environmental impacts associated with the construction, while requiring separate environmental review, could be mitigated to a less than significant level.

Mountain View Los Altos High School District

Based on the student generation rates provided by Mountain View Los Altos High School District, the project could generate up to approximately 1,108 new high school students through buildout of the plan (depending on the percentage of affordable units). The Mountain View Los Altos High School District provides multi-family student generation rates for standard and affordable units but does not have specific student generation rates for studio and micro-units. For these reasons, the student generation rates described above may be conservative in their project of student demand.

The District will add three portable classrooms at Los Altos High School in the 2017/2018 school year to accommodate projected enrollment growth. The District is in the midst of a facility master plan process which will identify new facilities needed. There is not currently sufficient capacity at either Mountain View or Los Altos High School to accommodate the increased demand from the buildout of the Precise Plan.

Conclusion: Schools Impacts

Future residential development projects in the North Bayshore Precise Plan area would be required to pay school impact fees to offset impacts to local schools. Through payment of school impact fees, consistent with state statutes, the amended North Bayshore Precise Plan would result in a less than significant impact to schools.

Conditions of Approval: As required by state law (Government Code Section 65996), future development projects under the North Bayshore Precise Plan, the project shall implement the following standard measure to offset its impact to local schools:

- In accordance with California Government Code Section 65996, future project applicants shall pay the appropriate school impact fees to the Mountain View Whisman School District and Mountain View Los Alto High School District to offset the increased demands on school facilities caused by the project.

Impact PS-3: Future residential development projects in the North Bayshore Precise Plan area would be required to pay school impact fees to offset impacts to local schools. Through conformance with state law, the amended North Bayshore Precise Plan would result in a less than significant impact to schools. **[Less Than Significant Impact]**

4.13.3.5 *Parks Impacts*

North Bayshore Precise Plan

Future development in the North Bayshore Precise Plan area would be provided in the form of smaller blocks and buildings served by high-quality, walkable, and sustainable public spaces. Areas

at the edges of North Bayshore, near sensitive habitat and open space, are intended to be lower in intensity and more bucolic in nature.

Vision for Open Space

The character of North Bayshore would be defined primarily by the quality of its open space network. A comfortable, accessible, human-scale network of public open spaces would be woven throughout North Bayshore's mixed-use employment districts and Complete Neighborhoods. *Chapter 3: Land Use and Design* of the Precise Plan, provides development standards and guidelines for meeting the land use objectives and character vision of the North Bayshore area. This chapter also proposes a vision for the parks and open space network of the Precise Plan.

The proposed open space network includes and integrates the existing streets, future Green Streets and campus open space networks, parks and plazas, natural open spaces and habitat in to a single interwoven pattern, focused on accommodation of pedestrians and bicyclists and on protecting and preserving natural resources. These proposed green spaces and parks are shown on Figure 3.3-6: Proposed Public Open Space Plan.

The North Bayshore Precise Plan's open space strategy includes central public open spaces, neighborhood parks, open space and habitat areas, and green ways. The North Bayshore Precise Plan includes the following guidelines:

North Bayshore Precise Plan Guidelines

1. Open space development. The Plan's new open spaces should be coordinated with private development projects and planned infrastructure improvements.

2. Connected open spaces. New public open spaces should be accessible from and located within a comfortable walking and biking distance of residents and workers. Open spaces should be located along bikeways or greenways.

3. Sustainability. New public open spaces should be designed to incorporate best practices in sustainability, including water use and conservation, stormwater management, landscaping, and planting.

While the North Bayshore area has the largest area of parks and open space in the City, new parks and recreational facilities with appropriate amenities may be needed in North Bayshore, which will be determined as the area is built-out and new development is proposed. In order to understand how much park acreage would be needed, the following table illustrates the required parkland using a standard of 3.0 acres per thousand residents, a sliding scale of housing unit quantities, and assumptions about the number of people per occupied housing unit.

Table 4.13-4: Required Park Area by Number of Units and People per Unit			
Service Ratio (parks per 1,000 residents)	3	3	3
Assumptions: Persons per Unit	1.75	2	2.36*
Number of Units	**Acres**		
9,000	47	54	64
10,000	53	60	71
* The City's current population per occupied housing units is 2.36.			

Chapter 3: Land Use and Design of the Precise Plan includes a vision and development standards for the future parks and open space network in the North Bayshore area. These guidelines are intended to improve social interaction, physical activity, and the existing parks and open space network. Future development projects within the Precise Plan would be required to comply with these guidelines.

To meet Mountain View's demand for parks and open space, the City uses the Quimby Act (California Government Code, Section 66477), which allows cities to require builders of residential developments to dedicate land for parks and recreational areas, or pay an open space fee to the City. Mountain View requires developers to dedicate at least three acres of park land for each 1,000 persons who will live in a new housing project (owned or rented) or pay an in-lieu fee that would be used to offset the increased demands on park facilities (Chapter 41.3 of the Mountain View Municipal Code).

The number of residents generated by a proposed project is calculated using the density formula table in the "Park Land Dedication or Fees In Lieu Thereof" Ordinance (Chapter 41.6 of the Mountain View Municipal Code). Future development of up to 9,850 residential units under the amended North Bayshore Precise Plan would be required to pay park land fees; therefore, the project would have a less than significant impact on parks and recreation resources.

Impact PS-4: The Precise Plan would not substantially affect the provision of parks and open space, or result in the need for new or physically altered facilities in order to maintain acceptable performance objectives. **[Less Than Significant Impact]**

4.13.3.6 *Library Impacts*

The growth projected in the North Bayshore Precise Plan, including approximately 9,850 residential housing units and non-residential square footage, would not trigger the City to build or operate a new library in North Bayshore.

Impact PS-5: The amended North Bayshore Precise Plan would not substantially affect the provision of library services, or result in the need for new or physically altered facilities in order to maintain acceptable service ratios or other performance objectives. **[Less Than Significant Impact]**

4.13.3.7 *Consistency with Plans*

Mountain View 2030 General Plan

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

The Mountain View 2030 General Plan EIR identified significant impacts to police services and public school facilities from implementation of the General Plan buildout. New General Plan policies and actions were included in the General Plan to reduce these impacts to public services, including periodically reviewing service levels and facilities so that demands from new growth and development are met.

Consistency: The proposed project would not result in significant impacts with the implementation of 2030 General Plan policies and standard City of Mountain View conditions of approval, and consistency with adopted plans and policies. Although the number of residential units would increase over General Plan projections with the approval of the amended North Bayshore Precise Plan, policies and actions included in the General Plan would be available to maintain services levels and facilities.

For these reasons, the proposed amendments to the General Plan would not result in additional public services impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.13.4 Cumulative Public Services Impacts

The cumulative projects in Mountain View and neighboring cities analyzed in this Draft EIR may require provision of public services, including, like the project site, increased fire and police services and schools. All of cumulative projects occurring within Mountain View or neighboring cities, would implement conditions of approval or mitigation measures that would reduce impacts to public services. These projects would also be subject to state, county, and City codes regulating public services.

Development under the proposed project and cumulative projects could result in the need for new schools. Future residential development projects in the North Bayshore Precise Plan area and elsewhere in Mountain View and nearby areas would be required to pay school impact fees to offset impacts to local schools. The cumulative projects, including the proposed project, would not result in significant cumulative impacts to public services.

Impact C-PS-1: The project would not contribute to a cumulatively considerable contribution to a significant public services impact. **[Less Than Significant Impact]**

4.13.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
PS-1: The amended North Bayshore Precise Plan would not substantially affect the provision of fire protection and rescue response, or result in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives.	Less Than Significant	No mitigation required	Less Than Significant
PS-2: The amended North Bayshore Precise Plan would not substantially affect the provision of police protection, or result in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives.	Less Than Significant	No mitigation required	Less Than Significant
PS-3: Future residential development projects in the North Bayshore Precise Plan area would be required to pay school impact fees to offset impacts to local schools. Through conformance with state law, the amended North Bayshore Precise Plan would result in a less than significant impact to schools.	Less Than Significant	No mitigation required	Less Than Significant
PS-4: The amended North Bayshore Precise Plan would not substantially affect the provision of parks and open space, or result in the need for new or physically altered facilities in order to maintain acceptable performance objectives.	Less Than Significant	No mitigation required	Less Than Significant
PS-5: The amended North Bayshore Precise Plan would not substantially affect the provision of library services, or result in the need for new or physically altered facilities in order to maintain acceptable performance objectives.	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
C-PS-1: The amended North Bayshore Precise Plan would not result in a cumulatively considerable contribution to a significant school impact.	Less Than Significant	No mitigation required	Less Than Significant

4.14 TRANSPORTATION/TRAFFIC

The discussion in this section is based on the "Draft Transportation Impact Analysis, North Bayshore Precise Plan," prepared by *Fehr & Peers* in February 2017. This report is included in this Draft EIR as Appendix J. *Chapter 6: Mobility* of the draft Precise Plan (Appendix C) was also referenced.

4.14.1 Regulatory Setting

4.14.1.1 *Regional Plans and Agencies*

Santa Clara County Valley Transportation Authority (VTA)

The proposed Precise Plan is located within the City of Mountain View, in Santa Clara County. The Santa Clara County Valley Transportation Authority (VTA) is the Congestion Management Agency (CMA) for the County and has policies and regulations that are relevant to the project. The VTA is responsible for ensuring local government conformance with the Congestion Management Program (CMP), a program aimed at reducing regional traffic congestion. The CMP requires that each jurisdiction identify existing and future transportation facilities that will operate at an acceptable service level and provide mitigation where future growth degrades that service level. The VTA has review responsibility for proposed development projects that are expected to generate 100 or more peak-hour trips.

Santa Clara Countywide Bicycle Plan

The Santa Clara Countywide Bicycle Plan synthesizes other local and County plans into a comprehensive 20-year cross-county bicycle corridor network and expenditure plan (May 2008). The long-range countywide transportation plan and the means by which projects compete for funding and prioritization are documented in the Valley Transportation Plan (VTP) 2035 (adopted in January 2009). VTA has adopted the Santa Clara Countywide Bicycle Plan (June 2008), which is a planned bicycle network of 24 routes of countywide or intercity significance. One of these proposed facilities, Route #5 Shoreline-Miramonte/El Monte Corridor, travels near the North Bayshore Precise Plan area. This plan is currently under update by the VTA, with an anticipated completion date of summer 2017.

4.14.1.2 *City of Mountain View*

Mountain View 2030 General Plan

The Mountain View 2030 General Plan was adopted in July 2012, and provides the City with goals and policies that reflect shared community values, potential change areas, and compliance with state law and local ordinances. The General Plan provides a guide for future land use decisions in the city.

Particular General Plan policies related to traffic and transportation include the following:

Land Use and Design	
Goal LUD-2	**Effective coordination with regional agencies and other local governments on planning issues.**
Policy LUD 2.1	Regional land use decisions. Influence regional decisions on land use, transportation, economic development, sustainability and other topics to improve the quality of life for the Mountain View community.
Goal LUD-3	**A diverse, balanced and flexible mix of land uses that supports a strong economy, complete neighborhoods, transit use and community health.**
Policy LUD 3.1	Land use and transportation. Focus higher land use intensities and densities within ½ mile of public transit service and along major commute corridors.
Policy LUD 3.2	Mix of land uses. Encourage a mix of land uses, housing types, retail and public amenities, and public neighborhood open spaces accessible to the community.
Goal LUD-6	**Distinctive neighborhoods that preserve and enhance the quality of life for residents.**
Policy LUD 6.3	Street presence. Encourage building facades and frontages that create a presence at the street and along interior pedestrian paseos or pathways.
Policy LUD 6.5	Pedestrian and bicycling improvements. Support pedestrian and bicycling improvements and connections between neighborhoods.
Goal LUD-8	**High-quality, sustainable and healthful building design and development.**
Policy LUD 8.2	Streets friendly to bicyclists and pedestrians. Encourage a network of streets friendly to bicyclists and pedestrians that create a safe and comfortable environment and include convenient amenities and features.
Policy LUD 8.3	Enhanced publicly-accessible bicycle and pedestrian connections. Encourage new and existing developments to enhance publicly-accessible bicycle, pedestrian and transit connections.
Policy LUD 8.4	Pedestrian-oriented civic and public spaces. Create and encourage new pedestrian-oriented civic and public spaces throughout the city.
Policy LUD 8.5	Pedestrian and bicycle amenities. Encourage attractive pedestrian and bicycle amenities in new and existing developments, and ensure that roadway improvements address the needs of pedestrians and bicyclists.
Policy LUD 8.6	Traffic-calming measures. Carry out traffic-calming measures through the City's Neighborhood Traffic Management Program.
Goal LUD-9	**Buildings that enhance the public realm and integrate with the surrounding neighborhood.**
Policy LUD 9.4	Enhanced pedestrian activity. Ensure commercial development enhances pedestrian activity through these strategies: • Encourage the first level of the building to occupy a majority of the lot's frontage, with exceptions for vehicle and pedestrian access. • Allow for the development of plazas and dining areas. • Encourage the majority of a building's ground floor frontage to provide visibility into the building by incorporating windows and doors. • Require that ground floor uses be primarily pedestrian-oriented. • Ensure pedestrian safety and access when designing parking areas and drive-through operations. • Minimize driveways.

Goal LUD-17	**A sustainable and efficient multi-modal transportation system.**
Policy LUD 17.1	Connectivity. Improve connectivity and integrate transportation services between North Bayshore, Downtown, NASA Ames and other parts of the city.
Policy LUD 17.2	Transportation Demand Management strategies. Require development to include and implement Transportation Demand Management strategies.
Policy LUD 17.3	Bicycle and pedestrian focus. Support bicycle and pedestrian improvements and connections to and throughout North Bayshore.
Policy LUD 17.4	North Shoreline Boulevard and Rengstorff Avenue enhancements. Encourage the enhancement of North Shoreline Boulevard, Rengstorff Avenue and other key streets in North Bayshore through new development and street design standards.

Mobility

Goal MOB-1	**Streets that safely accommodate all transportation modes and persons of all abilities.**
Policy MOB 1.1	Multi-modal planning. Adopt and maintain master plans and street design standards to optimize mobility for all transportation modes.
Policy MOB 1.2	Accommodating all modes. Plan, design and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.
Policy MOB 1.3	Pedestrian and bicycle place making. Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for placemaking, and foster a greater sense of community.
Policy MOB 1.4	Street design. Ensure street design standards allow a variety of public and private roadway widths.
Policy MOB-1.5	Public accessibility. Ensure all new streets are publicly accessible.
Policy MOB 1.6	Traffic calming. Provide traffic calming, especially in neighborhoods and around schools, parks and gathering places.
Goal MOB-2	**Transportation networks, facilities and services accessible to all people.**
Policy MOB 2.1	Broad accessibility. Improve universal access within private developments and public and transit facilities, programs and services.
Goal MOB-3	**A safe and comfortable pedestrian network for people of all ages and abilities at all times.**
Policy MOB 3.1	Pedestrian network. Provide a safe and comfortable pedestrian network.
Policy MOB 3.2	Pedestrian connections. Increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, village centers, and other destinations throughout the City.
Policy MOB 3.3	Pedestrian and bicycle crossings. Enhance pedestrian and bicycle crossings at key locations across physical barriers.
Policy MOB 3.4	Avoiding street widening. Preserve and enhance citywide pedestrian connectivity by limiting street widening as a means of improving traffic.
Policy MOB 3.5	Walking and bicycling outreach. Actively engage the community in promoting walking and bicycling through education, encouragement, and outreach on improvement projects and programs.
Goal MOB-4	**A comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill levels.**

Policy MOB 4.1	Bicycle network. Improve facilities and eliminate gaps along the bicycle network to connect destinations across the City.
Policy MOB 4.2	Planning for bicycles. Use existing planning processes to identify or implement improved bicycle connections and bicycle parking facilities.
Policy MOB 4.3	Public bicycle parking. Increase the amount of well-maintained, publicly accessible bicycle parking and storage throughout the City.
Policy MOB 4.4	Bicycle parking standards. Maintain bicycle parking standards and guidelines for well-sited bicycle parking and storage in private development to enhance the bicycle network.
Policy MOB 4.5	Promoting safety. Educate bicyclists and motorists on bicycle safety.
Goal MOB-5	**Local and regional transit that is efficient, frequent, convenient and safe.**
Policy MOB 5.1	Transit agencies. Coordinate with local and regional transit agencies, including MTC, VTA, JPB (Caltrain), SamTrans, and the California High-Speed Rail Authority, to improve transportation service, infrastructure and access in the city.
Policy MOB 5.2	California High Speed Rail. Actively participate with the High Speed Rail Authority in planning any future high-speed rail service to address urban design, traffic, noise and compatibility issues.
Policy MOB 5.3	Local transportation services. Create or partner with transit providers, employers, educational institutions, and major commercial entities and event organizers to improve local transportation services.
Policy MOB 5.4	Connecting key areas. Identify and implement new or enhanced transit services to connect Downtown, El Camino Real, San Antonio, North Bay- shore, East Whisman and NASA Ames Research Center.
Policy MOB 5.5	Access to transit services. Support right-of-way design and amenities consistent with local transit goals to facilitate access to transit services and improve transit as a viable alternative to driving.
Policy MOB 5.6	Emerging technologies. Explore emerging transit technologies such as Personal Rapid Transit and their citywide applicability.
Goal MOB-7	**Innovative strategies to provide efficient and adequate vehicle parking.**
Policy MOB 7.1	Parking codes. Maintain efficient parking standards that consider reduced demand due to development conditions such as transit accessibility.
Policy MOB 7.2	Off-street parking. Ensure new off-street parking is properly designed and efficiently used.
Goal MOB-8	**Transportation performance measures that help implement larger City goals.**
Policy MOB 8.3	Multi-modal transportation monitoring. Monitor the effectiveness of policies to reduce vehicle miles traveled (VMT) per service population by establishing transportation mode share targets and periodically comparing travel survey data to established targets.
Goal MOB-9	**Achievement of state and regional air quality and greenhouse gas emission reduction targets.**
Policy MOB 9.1	Greenhouse gas emissions. Develop cost-effective strategies for reducing greenhouse gas emissions, in coordination with the Greenhouse Gas Reduction Program.

Policy MOB 9.2	Reduced vehicle miles traveled. Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita vehicle miles traveled.
Policy MOB 9.3	Low-emission vehicles. Promote use of fuel-efficient, alternative fuel and low-emissions vehicles.
Goal MOB-10	**The most effective use of the city's transportation networks and services.**
Policy MOB 10.1	Efficient automobile infrastructure. Strive to maximize the efficiency of existing automobile infrastructure and manage major streets to discourage cut-through traffic on neighborhood streets.
Policy MOB 10.2	Reducing travel demand. Promote effective Transportation Demand Management programs for existing and new development.
Policy MOB 10.3	Avoiding street widening. Limit widening of streets as a means of improving traffic, and focus instead on operational improvements to preserve community character.

Infrastructure and Conservation

Goal INC-3	**Functional, safe and well-maintained public rights-of-way that promote environmental sustainability.**
Policy INC 3.1	Citywide rights-of-way maintenance. Maintain City streets, sidewalks and other public rights-of-way in good condition, while promoting and adhering to environmental best practices.
Policy INC 3.2	Traffic signals. Maintain and operate the City's traffic signal system.
Policy INC 3.4	Right-of-way regulations. Ensure that right-of-way regulations comply with relevant street and highway codes while still prioritizing multi-modal transportation in all right-of-way design.
Goal INC-20	**Clean, breathable air and strongly controlled city sources of air pollution.**
Policy INC 20.1	Pollution prevention. Discourage mobile and stationary sources of air pollution.
Policy INC 20.3	Pollution-reduction technologies. Encourage the use of non-fossil fuels and other pollution-reduction technologies in transportation, machinery and industrial processes.
Policy INC 20.4	Freight routes. Identify and maintain primary freight routes that provide direct access to industrial and commercial areas.
Policy INC 20.5	Truck access. Plan industrial and commercial development to avoid truck access through residential areas, and minimize truck travel on streets designated primarily for residential access by the General Plan.

Parks and Open Space

Goal POS-2	**Parks and public facilities equitably distributed throughout the community and accessible to residents and employees.**
Policy POS 2.2	Connectivity and transit access. Improve connectivity and transit accessibility to parks.
Policy POS 2.3	Pedestrian and bicycle access. Improve pedestrian and bicycle access to parks, and create new connections to parks to minimize pedestrian and bicycle travel distances.
Policy POS 2.4	Access to Bay and natural areas. Promote safe access to San Francisco Bay, creeks, scenic features and other natural resources in the city and surrounding region.

Goal POS-6	**An integrated system of multi-use trails connecting to key local and regional destinations and amenities.**
Policy POS 6.1	Citywide network of pathways. Develop a citywide network of pedestrian and bicycle pathways to connect neighborhoods, employment centers, open space resources and major destinations within the city.
Policy POS 6.2	At-grade crossings. Minimize at-grade crossings of major roads when building new trails.
Goal POS-9	**High-quality, accessible, flexible, well-maintained and environmentally sustainable public facilities.**
Policy POS 9.4	Americans with Disability Act accessibility. Implement accessibility improvements at public facilities as required by the Americans with Disabilities Act and the Uniform Building Code.

City of Mountain View Bicycle Transportation Plan

The City of Mountain View Bicycle Transportation Plan Update (November 2015) summarizes goals for improving the bicycle network, existing and proposed facilities, and programs involving education, enforcement, and promotion. The Plan was developed in conformance with several other plans including the Mountain View 2030 General Plan (2012), the Santa Clara Valley Transportation Authority Countywide Bicycle Plan, the Metropolitan Transportation Commission Regional Bicycle Plan, the Santa Clara County Trails Master Plan, and the Caltrans Streets and Highways Code Section 891.2.

City of Mountain View Pedestrian Master Plan

The City of Mountain View Pedestrian Master Plan (January 2014) summarizes goals for the pedestrian network, existing and proposed facilities, and priority of pedestrian improvements. The Plan was developed in conformance with several other plans including the Mountain View 2030 General Plan (2012), the Santa Clara Valley Transportation Authority Countywide Bicycle Plan, the Metropolitan Transportation Commission Regional Bicycle Plan, the Santa Clara County Trails Master Plan, and the Caltrans Streets and Highways Code Section 891.2.

4.14.2 Existing Setting

The North Bayshore area is bounded by US 101 to the south, Stevens Creek to the east, San Francisco Bay and the Shoreline at Mountain View Regional Park to the north, and San Antonio Road to the west. (Please note: the North Bayshore geographic area includes the Santiago Villa Mobile Home Park, but the mobile home park is not part of the North Bayshore Precise Plan.)

4.14.2.1 *Project Study Intersections*

A total of 75 intersections were selected as study locations in consultation with City of Mountain View staff and based on VTA's *Transportation Impact Analysis Guidelines* (updated October 2014). Project impacts on the study area roadway facilities were determined by measuring the effect project traffic would have on intersection operations during the morning (7:00 to 10:00 a.m.) and evening (4:00 to 7:00 p.m.) peak periods.

Since the City of Mountain View travel demand model is the primary forecasting tool, a select zone analysis of the North Bayshore area traffic was performed to identify intersections and freeway segments where the project would contribute at least two percent of the total traffic (this is similar to the 10 trip per turn lane rule from the VTA TIA Guidelines). The analysis was done for both the Existing with Project Conditions and Year 2030 Cumulative with Project Conditions, and was used to confirm the selection of study intersections.

4.14.2.2 *Study Freeway Segments*

The study freeway segments were selected in consultation with the City of Mountain View and finalized based on VTA guidelines. The analysis evaluated the operations of the following freeway segments:

- State Route (SR) 85 between SR 87 and US 101 (18 segments)
- SR 237 between El Camino Real and Interstate 880 (12 segments)
- I-880 between 1st Street and Tennyson Road (18 segments)
- US 101 between Tully Road and Millbrae Avenue (37 segments)
- Interstate 280 between Bird Avenue and Alpine Road (13 segments)
- SR 17 between Lark Avenue and Camden Avenue (two segments)
- SR 87 between Skyport Drive and US 101 (four segments)

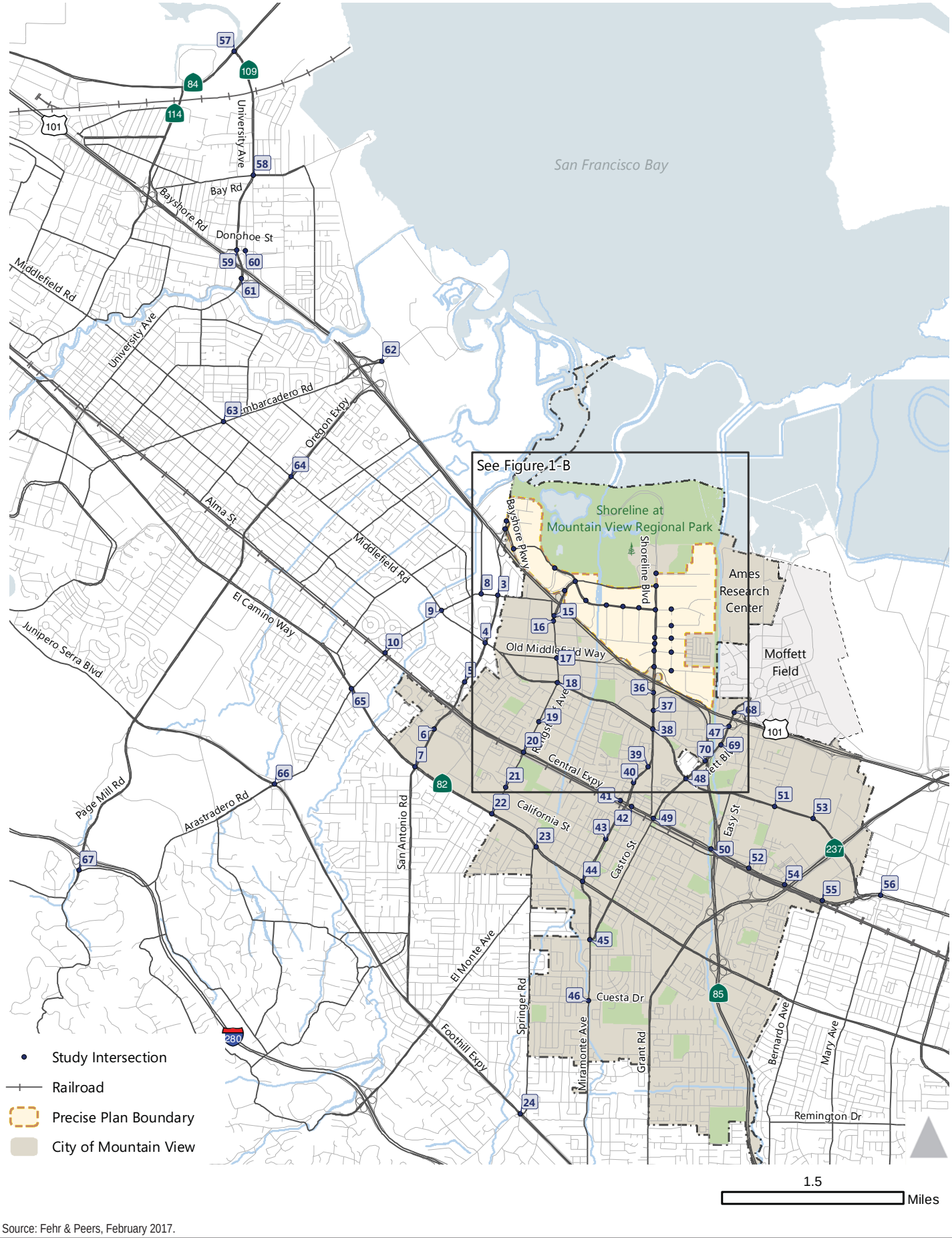
The project area, study intersections, gateways, and freeway segments are shown in Figures 4.14-1 through 4.14-4, and are described in the sections below.

4.14.2.3 *Existing Roadway Network*

US 101, SR 85, and SR 237 provide regional access to the study area. The following streets provide local access: Shoreline Boulevard, La Avenida Avenue, Rengstorff Avenue, San Antonio Road, and Bayshore Parkway. Each access facility is described below in more detail.

US 101 is a primarily north-south freeway with five travel lanes in each direction. Two travel lanes in each direction are designated as a high-occupancy vehicle (HOV) lane, beginning approximately one mile north (near Oregon Expressway) of the study area through the US 101/SR 85 interchange. One HOV lane and four travel lanes in each direction are present outside of this area in Santa Clara County between East Bayshore Road (in Redwood City) and Cochrane Road (in Morgan Hill). HOV lanes, also known as diamond or carpool lanes, are limited to use by vehicles occupied by two or more persons Monday through Friday between 5:00 and 9:00 a.m., and between 3:00 and 7:00 p.m. US 101 extends north through San Francisco and south through San Jose and Gilroy. The northbound direction is congested during the AM peak period and both northbound and southbound directions are congested during the PM peak period near the study area.

SR 237 is a primarily east-west freeway with two to three travel lanes in each direction. One travel lane in each direction is designated as a high-occupancy vehicle (HOV) lane between Fair Oaks Avenue and Zanker Road in San José, and as an express lane between Zanker Road and I-880. HOV lanes, also known as diamond or carpool lanes, are limited to use by vehicles occupied by two or more persons Monday through Friday between 5:00 and 9:00 a.m., and between 3:00 and 7:00 p.m.

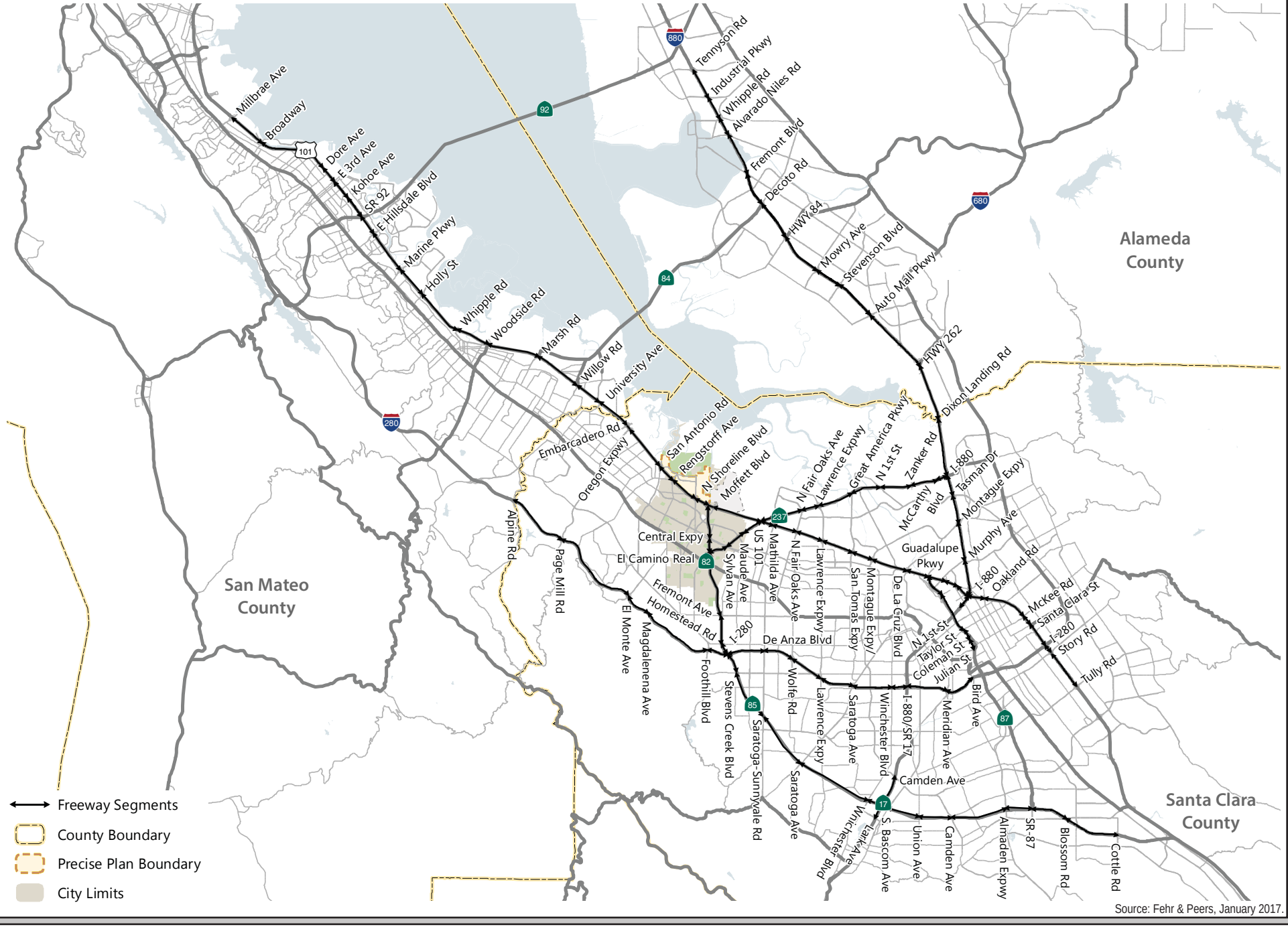


Source: Fehr & Peers, February 2017.

PROJECT LOCATION AND STUDY INTERSECTIONS FIGURE 4.14-1

Source: Fehr & Peers, February 2017.

PROJECT LOCATION AND STUDY INTERSECTIONS, NORTH BAYSHORE AREA FIGURE 4.14-2



Source: Fehr & Peers, January 2017.

PROJECT LOCATION AND STUDY FREEWAY SEGMENTS FIGURE 4.14-3

Source: Fehr & Peers, January 2017.

NORTH BAYSHORE GATEWAYS FIGURE 4.14-4

During the spring of 2012, the first phase of the SR 237 Express Lane Project opened to motor vehicles. This project converted the HOV lane connector ramps at the SR 237/I-880 interchange to express lanes. Carpool vehicles, motorcycles, and eligible hybrids can use this express lane without a charge, while single-occupant vehicles can use the express lane during commute hours by paying a toll. SR 237 merges into Grant Road in Mountain View and extends east to I-880 in Milpitas. The westbound direction is congested during the AM peak period and the eastbound direction is congested during the PM peak period. The study area is situated roughly four miles from the SR US 101/SR 237 interchange.

SR 85 is a north-south freeway extending from the US 101 interchange in the City of San José to the south and the US 101 interchange in Mountain View to the north. The freeway includes two mixed-flow lanes plus one HOV lane per direction. The peak commute directions on SR 85 near the project site are northbound during the morning and southbound during the evening. Access to the site from SR 85 is provided via its interchange with US 101.

Shoreline Boulevard is a four- to six-lane, north-south arterial road with a raised median that extends from El Camino Real in the south to the Shoreline at Mountain View Regional Park in the north. Shoreline Boulevard provides access to residential, commercial and office developments. In addition, the arterial provides access between the Mountain View Caltrain station and the study area. The posted speed limit on Shoreline Boulevard is 35 miles per hour.

La Avenida Avenue is a two-lane, east-west roadway that extends from Shoreline Boulevard in the west to the Stevens Creek Trail in the east. La Avenida Avenue is one-way westbound between Inigo Way and Shoreline Boulevard. This street provides local access to office, service, and industrial developments. The posted speed limit on La Avenida Avenue is 25 miles per hour.

Rengstorff Avenue is four-lane, north-south arterial road that extends from El Camino Real in the south to Garcia Avenue/Charleston Road within the Precise Plan area. Rengstorff Avenue provides access to residential, commercial and office developments. The posted speed limit on Rengstorff Avenue is 35 miles per hour.

San Antonio Road is a two- to four-lane, north-south arterial road that extends from Foothill Expressway in the south (within Los Altos) to Shoreline at Mountain View Regional Park. San Antonio Road provides access to residential, commercial and office developments. Near the project site, the posted speed limit is 35 miles per hour.

Bayshore Parkway is a two-lane street that parallels US 101 and extends from San Antonio Road to Salado Drive within the Precise Plan area. Bayshore Parkway provides access to office developments. The posted speed limit on Bayshore Parkway is 35 miles per hour.

Amphitheatre Parkway is a three- to five-lane east-west road that runs between the intersection of Rengstorff Avenue and Charleston Road to Shoreline Boulevard. Amphitheatre Parkway provides access to parks, undeveloped land, and office developments. The posted speed limit on Amphitheatre Parkway is 35 miles per hour.

Stierlin Court and Crittenden Lane are two-lane east-west divided streets running parallel to Charleston Road and take access from Shoreline Boulevard. They provide access to office

developments, and Crittenden Lane also provides access to Stevens Creek Trail. The posted speed limit on both roads is 25 miles per hour.

Garcia Avenue is a two- to four-lane roadway that runs from the intersection of Rengstorff Avenue and Charleston Road to Bayshore Parkway. Garcia Avenue provides access to parks and office developments. The posted speed limit on Garcia Avenue is 35 miles per hour.

Landings Drive is a two-lane street that loops around, taking access on either terminus from Charleston Road. Landings Drive provides access to office developments and surface parking lots. The posted speed limit on Landings Drive is 25 miles per hour.

Alta Avenue, Huff Avenue, Joaquin Road and Plymouth Street are two-lane streets that take access from Charleston Road and Shoreline Boulevard between the Permanente Creek Trail and US 101. They provide access to office developments. The posted speed limit on all four roads is 25 miles per hour.

Inigo Way is a two-lane north-south road that runs parallel to Shoreline Boulevard between Pear Avenue and La Avenida Avenue. Inigo Way provides access to the Computer History Museum and surface parking lots.

Macon Avenue is a two-lane north-south road that runs parallel to Shoreline Boulevard and is accessed off La Avenida Avenue. Macon Avenue provides access to office developments and surface parking lots.

4.14.2.4 *Existing Truck Routes*

The City of Mountain View Municipal Code section 19.60 designates truck routes within the city limits. Near the Precise Plan area, US 101, Charleston Road, and San Antonio Road are designated as truck routes.

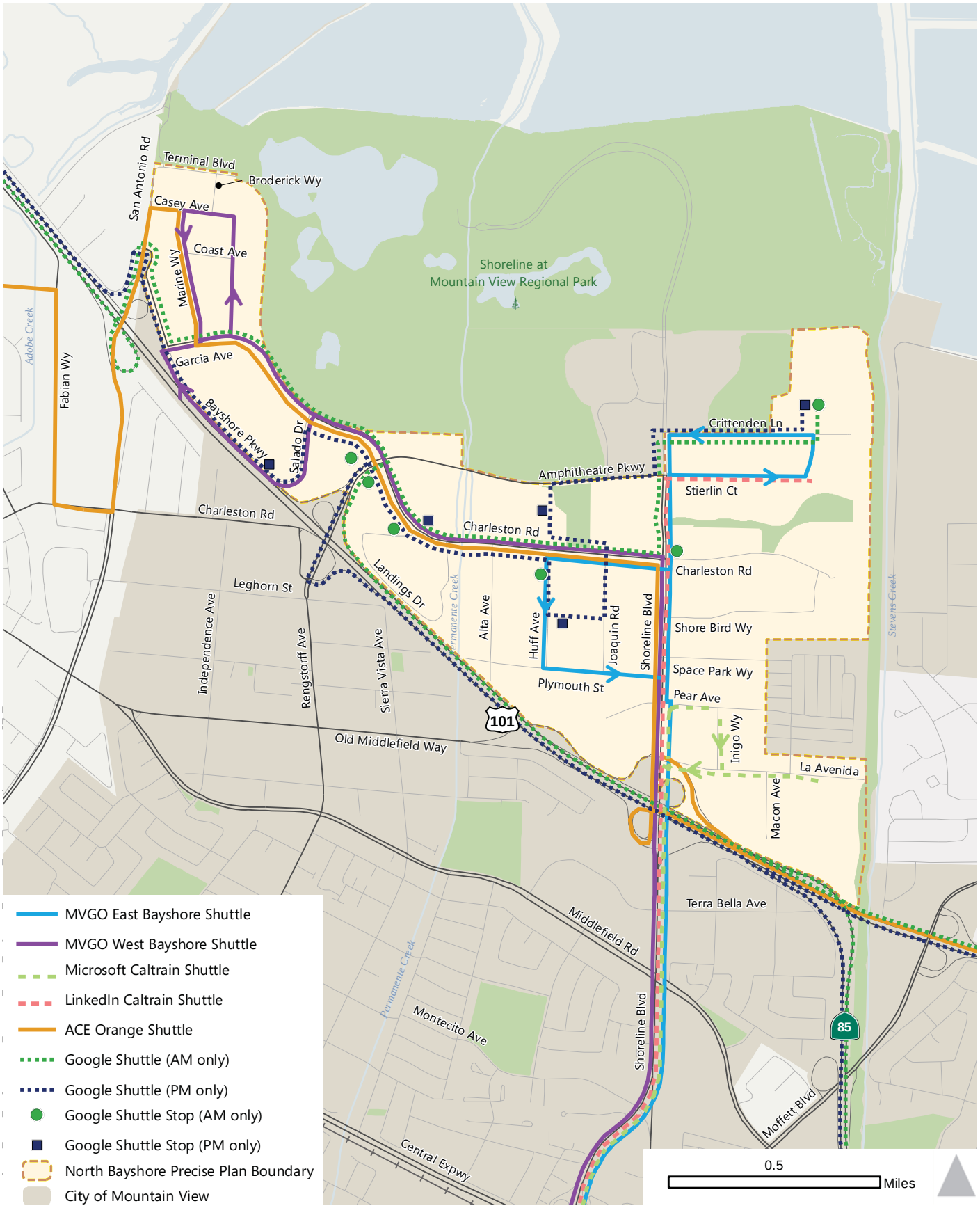
4.14.2.5 *Existing Transit Facilities*

Existing community, local, and express bus service and light rail service in Mountain View is provided by the Santa Clara Valley Transportation Authority (VTA), and commuter rail service is provided by Caltrain. Figures 4.14-5 and 4.14-6 show the existing transit and shuttle services near the project site, and Table 4.14-1 shows the frequency of bus and shuttle service.

Shuttle services are provided at a number of locations throughout the City of Mountain View. Shuttles serve passengers traveling to and from Downtown Mountain View, VTA light rail stations, Caltrain stations, Stanford University, the San Antonio Shopping Center, and employers in the North Bayshore and Whisman areas, as described below.

Source: Fehr & Peers, January 2017.

EXISTING TRANSIT SERVICE FIGURE 4.14-5



Source: Fehr & Peers, February 2017.

EXISTING SHUTTLE ROUTES FIGURE 4.14-6

Table 4.14-1:
Existing Transit Services

Route	From	To	Weekdays			Weekends		Peak Load Factor[2]
			Operating Hours	Headway (Minutes)[1]		Operating Hours	Headway[1] (minutes)	
				Peak	Mid day			
Community, Local, and Express Bus Routes								
40	La Avenida Avenue / Inigo Way	Foothill College	6:15 AM to 10:30 PM	30	30	7:50 AM to 6:50 PM	45 to 60	0.7[3]
120	Fremont BART	San Antonio Road / Casey Avenue	6:10 AM to 9:30 AM 5:00 PM to 6:00 PM	15 to 45	N/A	No Weekend Service		0.4[3]
Shuttles[4]								
ACE Orange	East Meadow Drive / Meadow Circle	Great America Station	6:15 AM to 9:45 AM 3:05 PM to 6:35 PM	60 to 75	N/A	No Weekend Service		0.3
West Bayshore MVgo	Downtown Mountain View Transit Center	Casey Avenue / Intuit Main Street	6:40 AM to 10:35 AM 3:00 PM to 8:35 PM	10 to 40	N/A	No Weekend Service		0.7
East Bayshore MVgo	Downtown Mountain View Transit Center	Huff Avenue / Plymouth Street	6:40 AM to 10:35 AM 3:05 PM to 8:35 PM	20 to 40	N/A	No Weekend Service		0.5

1. Headways are defined as the time between transit vehicles on the same route (e.g., time between two Route 32 buses stopping at San Antonio Transit Center).
2. Peak load factor for entire route. The peak load factor is the ratio of the average peak number of on-board passengers during the peak hour to supply of seats.
3. Data from 2016 provided by VTA.
4. Private company shuttle (Google, Microsoft, etc.) data unavailable.

Source: VTA March 2016; ACE and MVgo, September 2016.

ACE Shuttle Service: Altamont Commuter Express (ACE) is a passenger rail line that extends to San José with a stop at the Great America Station in Santa Clara. ACE and VTA sponsor free shuttles including the ACE Orange Shuttle that provides service from the Great America Station to eastern Palo Alto via Shoreline Boulevard, Charleston Boulevard, Garcia Avenue and Marine Way in Mountain View. The shuttle includes multiple stops in Mountain View's North Bayshore area. Headways are between approximately 60 and 75 minutes during commute periods on weekdays only.

MVgo: MVgo is a free shuttle service of the Mountain View Transportation Management Association (MVTMA) created to provide shuttle service for local businesses to and from the

Downtown Mountain View Transit Center. The shuttle service consists of two routes from the Downtown Mountain View Transit Center to the North Bayshore Gateway area and to businesses in the East Whisman area. MVgo is a free shuttle service providing a last-mile connection from Caltrain to employment centers in the Whisman and North Bayshore areas of Mountain View. MVgo shuttles are inter-campus shuttles and provide shuttle services to Google, Symantec, Samsung, LinkedIn and Intuit. Headways are between approximately 10 and 40 minutes during commute periods on weekdays only.

Employer-based Shuttles: There are a number of employer-based shuttle services located in Mountain View and adjacent cities. One example is the Google Commute Program, which provides free shuttle service for Google employees living in San Francisco and in certain areas of the East Bay and South Bay. Headways are approximately 15 minutes in peak commute hours. More recently, Intuit, LinkedIn, and Microsoft have provided inter-campus shuttles as well as longer-distance shuttle services to their employees.

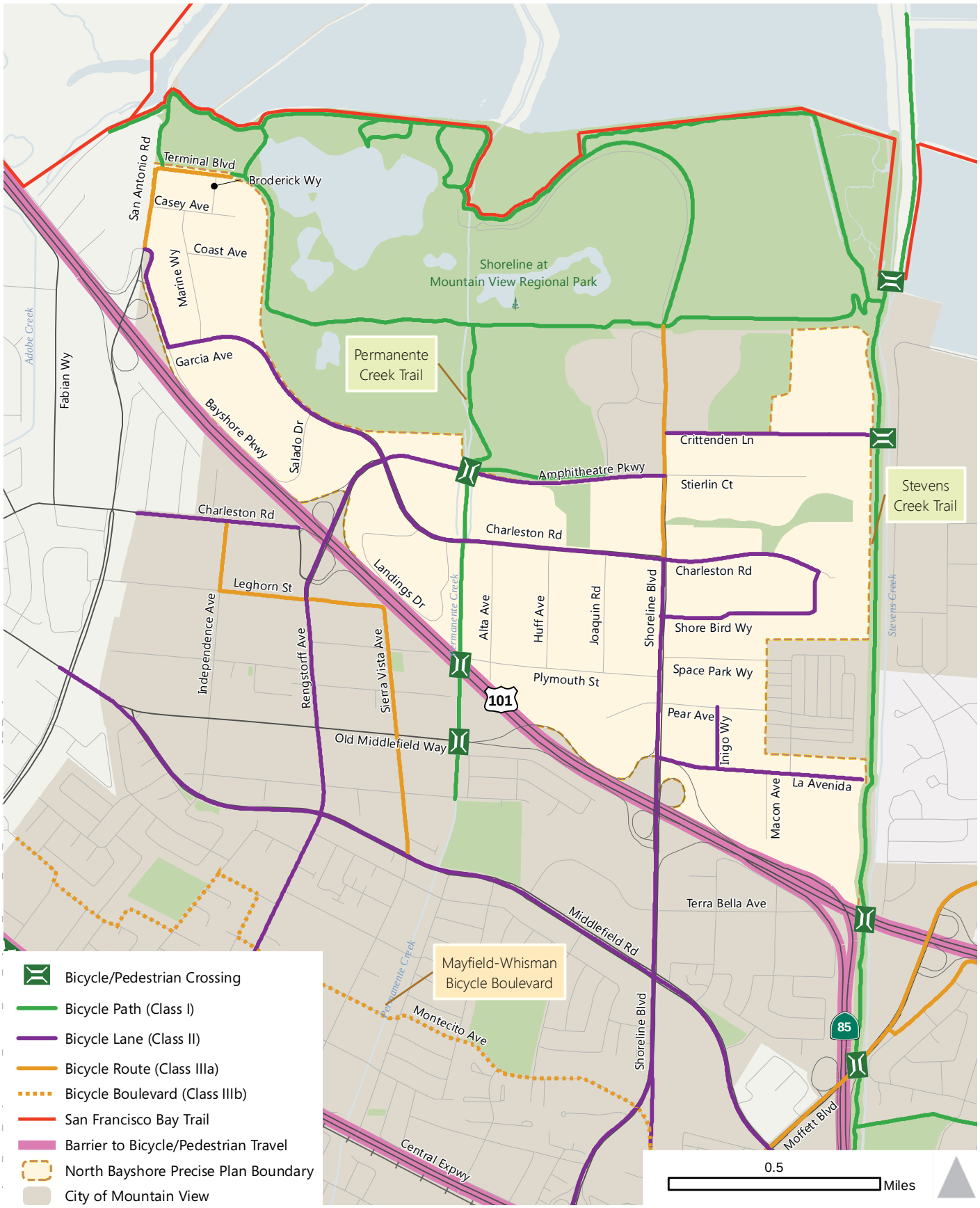
4.14.2.6 *Existing Bicycle Facilities*

The bicycle network promotes bicycling as an active mode of transportation for both commuting and recreation, with the specific goal of implementing the City's 2015 *Bicycle Transportation Plan*. The Planning Division implements the bike parking ordinance through review of development projects. Planning staff also work with developers to obtain right-of-way to develop bike paths. The City Public Works Department is responsible for overseeing the implementation and maintenance of a comprehensive bikeway system, as well as coordinating bike linkages to adjacent communities.

Figure 4.14-7 shows the location of existing bicycle facilities and the city's trail network, including pedestrian/bicycle crossings and barriers to pedestrian and bicycle travel. Recent additions to the bicycle system in the City of Mountain View include the completion of the Stevens Creek Trail over Moffett Boulevard, the extension of Stevens Creek Trail from El Camino Real to Heatherstone Way, and the Permanente Creek Trail extension from Charleston Road to Old Middlefield Way.

The City's 2015 *Bicycle Transportation Plan* describes the four bikeway classifications in the City, which all meet the design guidelines of the: (1) VTA *Bicycle Technical Guidelines* for bicycle facilities, and (2) the *Caltrans Highway Design Manual* (HDM), Chapter 1000: Bikeway Planning and Design for multi-use trails. These bicycle facility types are described below.

- Shared-Use Paths (Class I): These provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with minimal roadway crossings. Existing Class I facilities in Mountain View include the Stevens Creek Trail, Hetch Hetchy Trail, Permanente Creek Trail, existing light rail trails, and a portion of the Bay Trail through Shoreline at Mountain View Regional Park, all of which have asphalt or concrete surfaces.



Source: Fehr & Peers, February 2017.

EXISTING BICYCLE FACILITIES FIGURE 4.14-7

- Bike Lanes (Class II): These provide a striped lane and signage for one-way bike travel on a street or highway and are designed for the exclusive use of cyclists with certain exceptions. For instance, right-turning vehicles must merge into the lane before turning. Bike lanes in Mountain View meet VTA's *Bicycle Technical Guidelines*, which follows all applicable local, state and federal requirements. Examples of existing Class II facilities are the bike lanes on Middlefield Road, Evelyn Avenue, California Street, Shoreline Boulevard, and Grant Road. Bike lanes may be enhanced with painted buffers between vehicle lanes and/or parking, and green paint conflict zones (such as driveways or intersections).

- Bike Routes (Class IIIa): These may be identified on a local residential or collector street when the travel lane is wide enough and the traffic volume is low enough to allow both cyclists and motor vehicles to share a lane. Although some streets with high volumes of traffic have been designated as bike routes, most official bike routes in Mountain View are on low-volume streets. Examples of existing bike routes include Sierra Vista Street and Leghorn Street.

- Bike Boulevards (Class IIIb): These are modified bicycle routes providing a more convenient and efficient through route for cyclists of all skill levels than a typical bike route. A bike boulevard includes signage, pavement markings, and in some cases, physical traffic calming measures (e.g., midblock closures to vehicles) and/or striped bike lanes. The City of Mountain View has implemented the Mayfield-Whisman Bicycle Boulevard for cross-town (east-west) travel north of Central Expressway.

- Cycletracks (Class IV): These are also known as protected bike lanes and are paved bike paths that are physically separated from vehicle traffic by a vertical separation. Vertical separations include curbs, bollards or car parking. Cycletracks provide increased comfort for cyclists. There are no cycletracks in the City of Mountain View.

4.14.2.7 *Existing Pedestrian Facilities*

Pedestrian facilities include sidewalks, curb ramps, crosswalks, and off-street paths that are meant to provide safe and convenient routes for pedestrians to access destinations such as institutions, businesses, public transportation, and recreation facilities. The overall city-wide street network is essentially built out, and most streets include at least a four-foot wide sidewalk on one or both sides. Figure 4.14-8 shows the gaps in the existing sidewalk system within the Precise Plan area.

"Walkability" is defined as the ability to travel easily and safely between various origins and destinations without having to rely on automobiles or other motorized travel. The ideal "walkable" community includes wide sidewalks, a mix of land uses within relatively close proximity, a limited number of conflict points with vehicle traffic, and easy access to transit facilities and services. Walkability varies substantially within Mountain View. For example, Downtown Mountain View is the most walkable area of town, with a complete sidewalk network and relatively close proximity between residential areas, retail areas, and public transit services (bus lines, light rail, or Caltrain). In the North Bayshore area, most streets have sidewalks, but the land uses in the area are primarily employment-based, so the opportunities for residential and retail services within a reasonable walking distance (one-half to one mile) are limited.

Source: Fehr & Peers, January 2017.

SIDEWALK GAPS IN THE NORTH BAYSHORE PRECISE PLAN AREA FIGURE 4.14-8

Countdown pedestrian signal heads have been installed at all City, County, and Caltrans signals within the City. Per the City's ADA Transition Plan, the City continues installing and upgrading access ramps at intersections to meet the access demands of a diverse population and to enhance the overall pedestrian experience.

4.14.2.8 *Existing Vehicular Traffic Level of Service Methodology*

The operations of roadway facilities are typically described with the term level of service (LOS), a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents "at-capacity" operations. When traffic volumes exceed the intersection capacity, stop-and-go conditions result and a vehicle may wait through multiple signal cycles before passing through the intersection; these operations are designated as LOS F.

Signalized Intersections

The LOS method for signalized intersections approved by the City of Mountain View and the VTA analyzes intersection operations based on average control vehicular delay, as described in the 2000 Highway Capacity Manual (HCM) by the Transportation Research Board, with adjusted saturation flow rates to reflect conditions in Santa Clara County. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using TRAFFIX and Synchro analysis software, which was used for closely spaced and coordinated intersection operations along: 1) San Antonio Road between Bayshore Parkway and US 101 Northbound ramps, 2) Rengstorff Avenue between US 101 Southbound off-ramps and Leghorn Street, and 3) Shoreline Boulevard between Pear Avenue and Middlefield Road.

The City of Mountain View uses a LOS D standard for local streets, and a LOS E standard for streets within the Downtown and San Antonio Shopping Center areas and CMP facilities (e.g., Central Expressway, El Camino Real). Local streets in Palo Alto and Los Altos have a LOS D standard. Santa Clara County expressways and other CMP facilities have a LOS E standard. Table 4.14-2 shows the LOS descriptions and thresholds for signalized intersections.

Table 4.14-2: Signalized Intersection Level of Service Definitions		
Level of Service	**Description**	**Average Control Delay per Vehicle (seconds)**
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B+ B B-	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D 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 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0
Source: *Traffic Level of Service Analysis Guidelines*, VTA Congestion Management Program, June 2003; and *Highway Capacity Manual*, Transportation Research Board. 2000.		

Unsignalized Intersections

The operations of the unsignalized study intersections were evaluated using the method contained in 2000 HCM and calculated using TRAFFIX analysis software. LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At two-way or side-street-stop controlled intersections, control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, control delay is computed as the average of all movements in that lane. For all-way stop-controlled locations, a weighted average delay for the entire intersection is presented. The correlation between average delay and LOS for unsignalized intersections is shown in Table 4.14-3, below.

The City does not have an adopted LOS policy for unsignalized intersections; however, the City strives to maintain LOS D, which is a LOS standard that has been used in other traffic studies within the City. For two-way stop controlled intersections, the City determines the need for improvements based on turn movement operations (such as queues overflowing the storage capacity) as well as traffic signal warrant analyses.

Table 4.14-3: Unsignalized Intersection Level of Service Definitions		
LOS	**Description**	**Total Delay (seconds per vehicle)**
A	Little or no traffic delay.	10.0 or less
B	Short traffic delay.	10.1 to 15.0
C	Average traffic delay.	15.1 to 25.0
D	Long traffic delay.	25.1 to 35.0
E	Very long traffic delay.	35.1 to 50.0
F	Extreme traffic delay.	Greater than 50.0
Source: Transportation Research Board. *2000 Highway Capacity Manual.* 2000.		

Arterial Streets

Synchro software was used to evaluate the coordinated intersections on Shoreline Boulevard. Detailed signal timings were coded into the Synchro software and the level of service calculations were performed using the 2000 HCM method. The Synchro software program was also used to report average travel speeds for the Shoreline Boulevard corridor between signalized intersections. The arterial street level of service definitions are shown in Table 3 of Appendix J. An arterial segment is defined in the Highway Capacity Manual as the exit of an intersection to the exit of the next intersection; therefore the calculated LOS accounts not only for through movements, but also left and right turning movements into the study segment.

Freeway Segments

Freeway segments within Santa Clara County were evaluated using the VTA Guidelines analysis procedure, which is based on the density of the traffic flow using methods described in the *2000 HCM*. Density is expressed in passenger cars per mile per lane. The VTA Congestion Management Program ranges of densities for freeway segment levels of service are shown in Table 4.14-4. The VTA Guidelines standard for the freeway segments is LOS E. The LOS standard for the C/CAG freeway study segment on US 101 between Embarcadero Road and Whipple Road and between SR 92 and Peninsula Avenue is LOS F and LOS E between State Route 92 and Whipple Avenue, and between Peninsula Avenue and Millbrae Avenue.

Although the Alameda County Transportation Commission Congestion Management Program does not have a specified LOS threshold for land use development projects, consistent with other EIRs, the LOS E standard was used for CMP freeway segments in Alameda County.

Freeway mainline operations analysis evaluates the effects of the project on the freeway system. The level of operations of freeway mainline segments directly affect ramp operations and weaving patterns on the freeway system. Freeway mainline analysis was included in the TIA to evaluate the effects of the project on the freeway system.

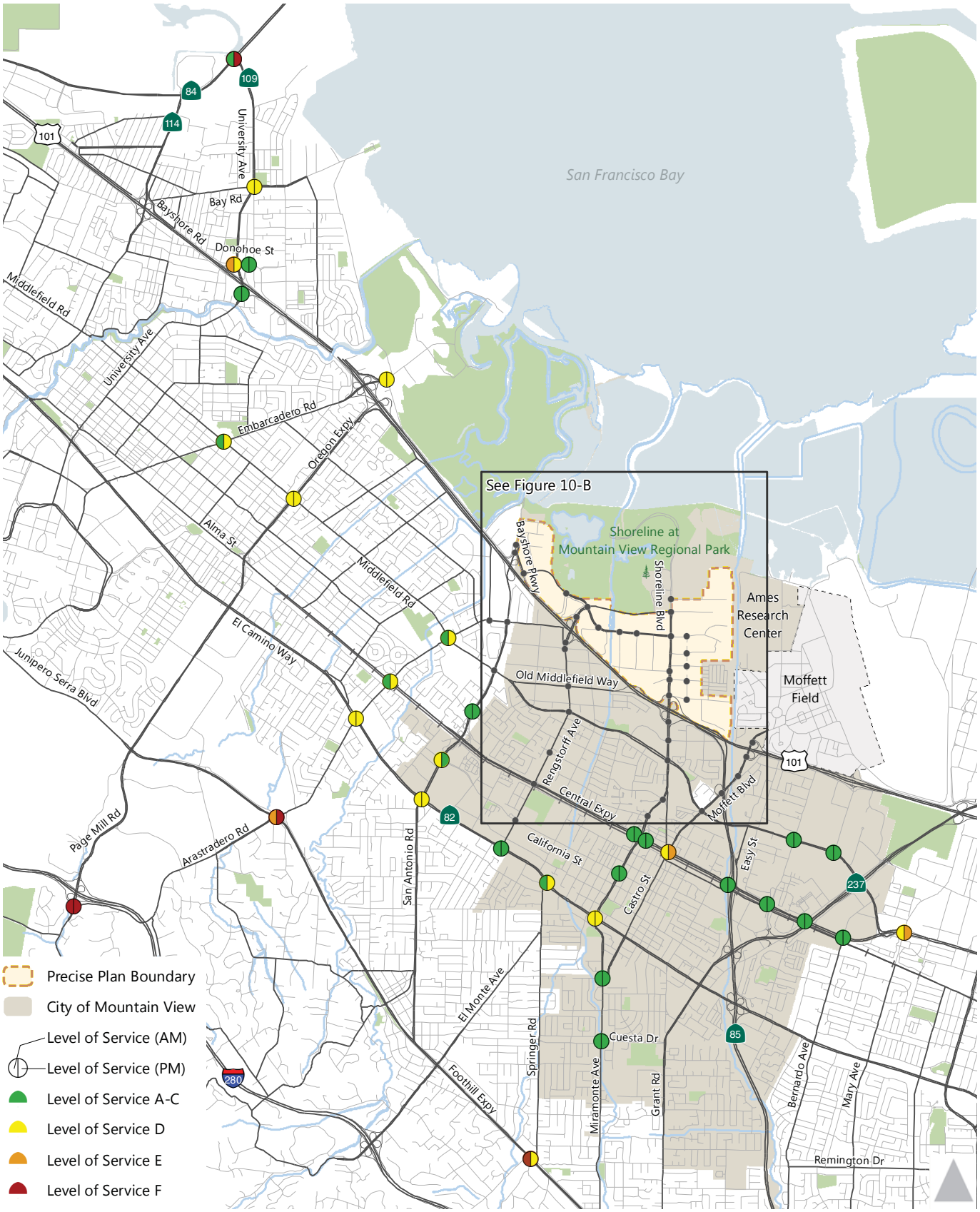
Table 4.14-4: Freeway Segment Level of Service Definitions	
LOS	**Density (Passenger cars per mile per lane)**
A	≤ 11
B	11.1
C	18.1
D	26.1
E	46.1
F	> 58.0
Source: Traffic Level of Service Analysis Guidelines, VTA Congestion Management Program, June 2003; Highway Capacity Manual, Transportation Research Board. 2000.	

4.14.2.9 *Existing Intersection Operations*

Roadway traffic operations were evaluated during a typical mid-week day at the intersection level during the morning (7:00 to 10:00 a.m.) and evening (4:00 to 7:00 p.m.) peak periods at 76 project study intersections. The morning peak hour was found to be 8:30 to 9:30 a.m. and the evening peak hour was found to be 5:00 to 6:00 p.m. In addition, counts of pedestrian and bicycle volumes were collected at each intersection. All counts were collected between June 2015 and October 2016 while local schools were in session; the data is shown in the TIA in Appendix J.

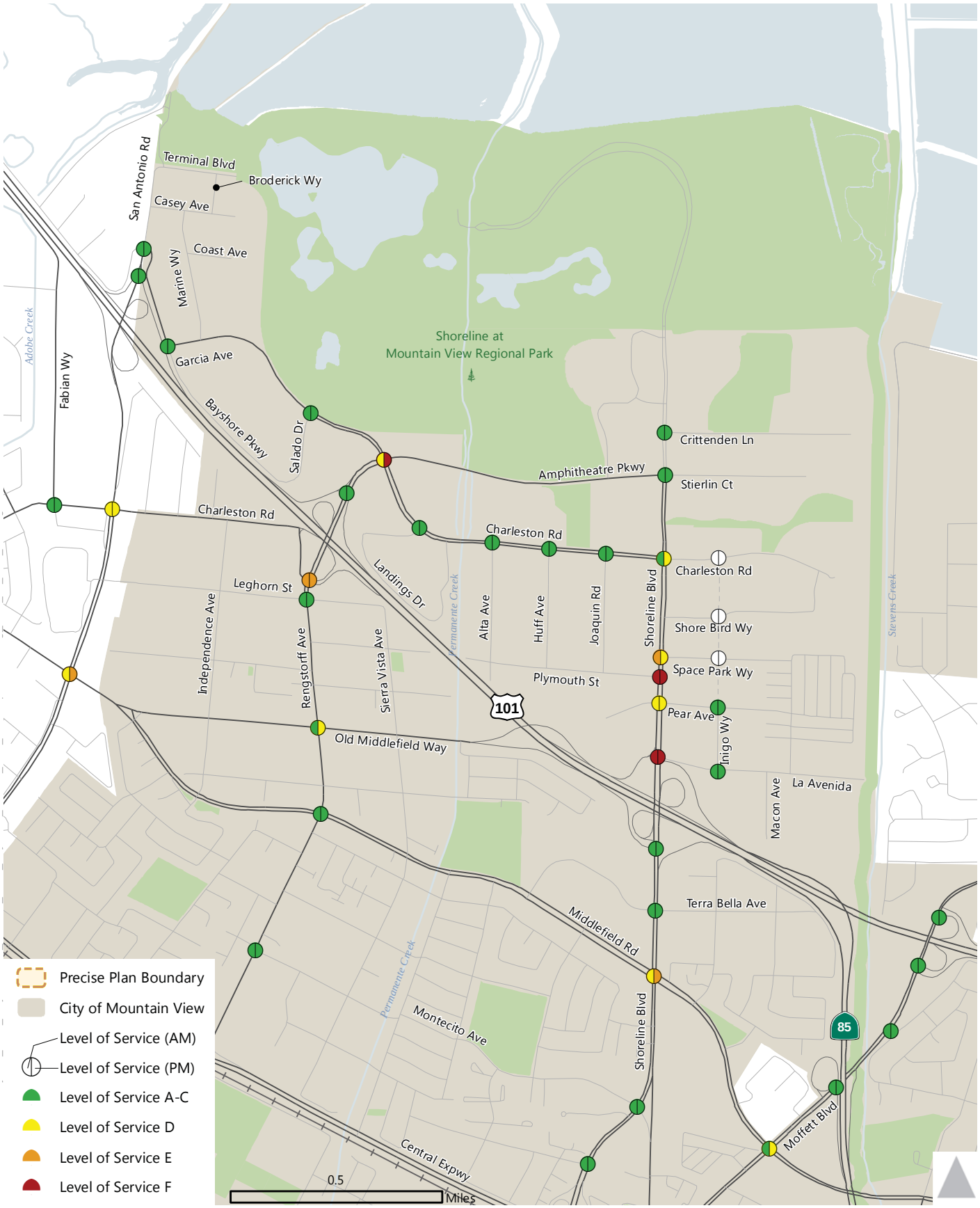
In February 2014, roadway vehicle classification counts were collected to quantify existing travel characteristics and quantify the number of vehicles crossing the North Bayshore Precise Plan gateways.

Table 4.14-5 shows the existing intersection level of service at each study location, and Figures 4.14-9 and 4.14-10 show the existing intersection level of service results.



Source: Fehr & Peers, February 2017.

EXISTING INTERSECTION LEVEL OF SERVICE RESULTS FIGURE 4.14-9



Source: Fehr & Peers, February 2017.

EXISTING INTERSECTION LEVEL OF SERVICE RESULTS, NORTH BAYSHORE AREA FIGURE 4.14-10

Table 4.14-5:
Existing Intersection Level of Service

Intersections	Jurisdiction (LOS Standard)	Peak Hour[1]	Delay[2] (sec)	LOS[3]
1. San Antonio Road/ Bayshore Parkway	Palo Alto (D)	AM PM	19.8 29.4	B C
2. San Antonio Road/ US 101 NB Ramps	Mountain View (D)	AM PM	15.1 8.9	B A
3. San Antonio Road/ Charleston Road*	Palo Alto (E)	AM PM	45.1 46.1	D D
4. San Antonio Road/ Middlefield Road*	Palo Alto (E)	AM PM	43.4 57.6	D E+
5. San Antonio Road/ Nita Avenue	Palo Alto (D)	AM PM	3.2 3.3	A A
6. San Antonio Road/ California Street	Mountain View (E)	AM PM	36.5 33.3	D+ C-
7. San Antonio Road/ El Camino Real*	Mountain View (E)	AM PM	43.7 47.7	D D
8. Charleston Road/ Fabian Way	Palo Alto (D)	AM PM	22.2 22.9	**C+** C+
9. Charleston Road/ Middlefield Road	Palo Alto (D)	AM PM	25.1 37.3	C D+
10. Charleston Road/ Alma Street	Palo Alto (D)	AM PM	33.3 41.4	C- D
11. Bayshore Parkway/ Garcia Avenue (Unsignalized)	Mountain View (D)	AM PM	11.0 11.5	B B
12. Salado Drive/ Garcia Avenue (Unsignalized)	Mountain View (D)	AM PM	12.2 11.7	B B
13. Amphitheatre Parkway/ Garcia Avenue-Charleston Road	Mountain View (D)	AM PM	36.2 **110.7**	D **F**
14. Rengstorff Avenue/ US 101 NB Ramps	Mountain View (D)	AM PM	2.5 5.8	A A
15. Rengstorff Avenue/ US 101 SB Ramps	Mountain View (D)	AM PM	**58.3** **72.2**	**E** **E**
16. Rengstorff Avenue/ Leghorn Street	Mountain View (D)	AM PM	18.1 24.7	B C
17. Rengstorff Avenue/ Old Middlefield Way	Mountain View (D)	AM PM	31.8 46.2	C D
18. Rengstorff Avenue/ Middlefield Road	Mountain View (D)	AM PM	30.3 34.5	C C-
19. Rengstorff Avenue/ Montecito Avenue-Jewell Place	Mountain View (D)	AM PM	8.2 6.4	A A
20. Rengstorff Avenue/ Central Expressway*	Santa Clara County (E)	AM PM	50.8 70.9	D E
21. Rengstorff Avenue/ California Street	Mountain View (D)	AM PM	28.2 34.5	C C-
22. Rengstorff Avenue/ El Camino Real*	Mountain View (E)	AM PM	25.3 25.5	C C

Table 4.14-5:
Existing Intersection Level of Service

Intersections	Jurisdiction (LOS Standard)	Peak Hour[1]	Delay[2] (sec)	LOS[3]
23. El Monte Avenue/ El Camino Real*	Mountain View (E)	AM PM	34.7 38.6	C- D+
24. Springer Road-Magdalena Avenue/ Foothill Expressway*	Santa Clara County (E)	AM PM	**117.0** 51.2	**F** D-
25. Landings Drive/ Charleston Road	Mountain View (D)	AM PM	9.6 13.9	A B
26. Alta Avenue/ Charleston Road	Mountain View (D)	AM PM	15.8 28.4	B C
27. Huff Avenue/ Charleston Road	Mountain View (D)	AM PM	17.6 22.1	B C+
28. Joaquin Road/ Charleston Road (Unsignalized)	Mountain View (D)	AM PM	11.8 17.7	B C
29. Shoreline Boulevard/ Crittenden Lane	Mountain View (D)	AM PM	6.1 8.5	A A
30. Shoreline Boulevard/ Stierlin Court	Mountain View (D)	AM PM	20.8 21.4	C+ C+
31. Shoreline Boulevard/ Charleston Boulevard	Mountain View (D)	AM PM	29.5 53.2	C D-
32. Shoreline Boulevard/ Space Park Way (Unsignalized)	Mountain View (D)	AM PM	44.3 27.2	**E** D
33. Shoreline Boulevard/ Plymouth Street (Unsignalized)	Mountain View (D)	AM PM	**>120** **>120**	**F** **F**
34. Shoreline Boulevard/ Pear Avenue*[4]	Mountain View (D)	AM PM	45.7 46.6	D D
35. Shoreline Boulevard/ La Avenida Avenue-US 101 NB Ramps	Mountain View (D)	AM PM	**88.3** **98.2**	**F** **F**
36. Shoreline Boulevard/ US 101 SB Ramps	Mountain View (D)	AM PM	14.3 12.8	B B
37. Shoreline Boulevard/ Terra Bella Avenue	Mountain View (D)	AM PM	19.9 22.6	B C
38. Shoreline Boulevard/ Middlefield Road	Mountain View (D)	AM PM	44.8 **65.8**	D **E**
39. Shoreline Boulevard/ Montecito Avenue-Stierlin Road	Mountain View (D)	AM PM	22.9 25.7	C+ C
40. Shoreline Boulevard/ Wright Avenue	Mountain View (D)	AM PM	11.5 13.8	B+ B
41. Shoreline Boulevard/ Central Expressway (West)*	Santa Clara County (E)	AM PM	6.5 5.5	A A
42. Shoreline Boulevard/ Central Expressway (East) *	Santa Clara County (E)	AM PM	13.1 7.5	B A
43. Shoreline Boulevard/ California Street	Mountain View (D)	AM PM	30.4 33.9	C C-
44. Shoreline Boulevard-Miramonte Avenue/El Camino Real*	Mountain View (E)	AM PM	38.5 38.3	D+ D+

Table 4.14-5:
Existing Intersection Level of Service

Intersections	Jurisdiction (LOS Standard)	Peak Hour[1]	Delay[2] (sec)	LOS[3]
45. Miramonte Avenue/ Castro Street-Marilyn Drive	Mountain View (D)	AM PM	15.0 12.1	B B
46. Miramonte Avenue/ Cuesta Drive	Mountain View (D)	AM PM	33.3 31.7	C- C
47. Moffett Boulevard/ US 101 SB Ramps	Mountain View (D)	AM PM	12.5 9.3	B A
48. Moffett Boulevard/ Middlefield Road	Mountain View (D)	AM PM	32.5 38.6	C- D+
49. Moffett Boulevard-Castro Street/ Central Expressway*	Santa Clara County (E)	AM PM	48.5 61.9	D E
50. State Route 85 Southbound Off-Ramps/ Central Expressway	Santa Clara County (E)	AM PM	7.4 15.0	A B
51. Whisman Road/ Middlefield Road	Mountain View (D)	AM PM	20.5 17.5	C+ B
52. Whisman Station Road/ Central Expressway*	Santa Clara County (E)	AM PM	13.4 15.6	B B
53. Ellis Street/ Middlefield Road	Mountain View (E)	AM PM	15.8 11.1	B B+
54. Ferguson Drive/ Central Expressway*	Santa Clara County (E)	AM PM	7.7 5.3	A A
55. Bernardo Avenue/ Central Expressway	Santa Clara County (E)	AM PM	10.6 11.3	B+ B+
56. Mary Avenue/ Central Expressway*[5]	Santa Clara County (E)	AM PM	52.0 67.2	D- E
57. Bayfront Expressway (State Route 84)/ University Avenue	Menlo Park (E)	AM PM	24.2 **82.7**	C **F**
58. Bay Road/ University Avenue	East Palo Alto (D)	AM PM	38.0 47.1	D+ D
59. Donohoe Street/ University Avenue	East Palo Alto (D)	AM PM	**66.0** 42.5	**E** D
60. Donohoe Street/ US 101 Northbound Off-Ramp	East Palo Alto (D)	AM PM	9.1 18.1	A B
61. US 101 Southbound Ramps/ University Avenue	East Palo Alto (D)	AM PM	28.3 25.0	C C
62. Embarcadero Road/ East Bayshore Road	Palo Alto (D)	AM PM	44.0 53.6	D D-
63. Embarcadero Road/ Middlefield Road	Palo Alto (D)	AM PM	33.2 36.6	C- D+
64. Oregon Expressway/ Middlefield Road*	Santa Clara County (E)	AM PM	46.7 47.3	D D
65. Arastradero Road/Charleston Road/ El Camino Real*	Palo Alto (D)	AM PM	43.0 46.3	D D
66. Arastradero Road/ Foothill Expressway*	Santa Clara County (E)	AM PM	59.7 **119.3**	E+ **F**

Table 4.14-5:
Existing Intersection Level of Service

Intersections	Jurisdiction (LOS Standard)	Peak Hour[1]	Delay[2] (sec)	LOS[3]
67. Page Mill Road/I-280 Southbound Off Ramp-Arastradero Road (Unsignalized)	Santa Clara County (E)	AM PM	**90.4** **73.3**	**F** **F**
68. Moffett Boulevard/ US 101 Northbound Ramps	Mountain View (D)	AM PM	15.2 23.5	B C
69. Moffett Boulevard/ Leong Drive	Mountain View (D)	AM PM	13.6 10.9	B B+
70. Moffett Boulevard/ State Route 85 Southbound Ramp	Mountain View (D)	AM PM	10.0 12.8	A B
71. New North-South Local Street/ Charleston Road	Mountain View (D)	Future Intersection		
72. New North-South Local Street/ Shorebird Way	Mountain View (D)	Future Intersection		
73. New North-South Local Street/ Space Park Way	Mountain View (D)	Future Intersection		
74. Inigo Way/ Pear Avenue (Unsignalized)	Mountain View (D)	AM PM	10.2 9.9	B A
75. Inigo Way/ La Avenida Avenue (Unsignalized)	Mountain View (D)	AM PM	10.8 13.4	B B

Notes:
1. AM = morning peak hour, PM = evening peak hour.
2. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections and all-way stops-controlled intersections. For Side-Street Stop-Controlled intersections total delay for the worst movement/approach is reported.
3. LOS = Level of Service. LOS calculations conducted using the TRAFFIX and Synchro analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual.*
4. Morning peak hour observations for Existing Conditions indicate worse level of service due to pedestrian crossings and side-street vehicle traffic. Observed level of service closer to LOS E/F threshold.
5. Evening peak hour observations indicate worse level of service due to Caltrain grade crossing backup at Mary Avenue and Evelyn Avenue. Observed level of service closer to LOS E/F threshold.

Bold text indicates intersection operations below the applicable level of service standard.
* Denotes Congestion Management Program (CMP) intersection.
Source: Fehr & Peers, February 2017.

Measured against the relevant standard of the local jurisdiction, the following intersections operate below the applicable level of service standard under existing conditions:

13. Amphitheatre Parkway / Garcia Avenue-Charleston Road (PM peak hour)
15. Rengstorff Avenue / US 101 Southbound Ramps (AM and PM peak hour)
24. Springer Road-Magdalena Avenue / Foothill Expressway (AM peak hour)
32. Shoreline Boulevard / Space Park Way (AM peak hour)
33. Shoreline Boulevard / Plymouth Avenue (AM and PM peak hour)
35. Shoreline Boulevard / La Avenida – US 101 Northbound Ramps (AM and PM peak hour)

38. Shoreline Boulevard / Middlefield Road (PM peak hour)
57. Bayfront Expressway (SR 84) / University Avenue (PM peak hour)
59. Donohoe Street / University Avenue (AM peak hour)
66. Arastradero Road / Foothill Expressway (PM peak hour)
67. Page Mill Road / I-280 Southbound Off Ramp-Arastradero Road (AM and PM peak hours)

4.14.2.10 *Existing Arterial Street Operations*

An arterial level of service analysis was performed for the Shoreline Boulevard corridor to evaluate operations while accounting for signal coordination, closely spaced intersections and congested conditions. The arterial level of service method can help determine how the operation of one intersection affects the adjacent intersections along the corridor.

Shoreline Boulevard is divided into four (4) segments with average speed calculated for each segment during the morning and evening peak hours. Measured against the local jurisdiction's level of service standard, the following roadway segments currently operate below the applicable standard:

- Northbound Direction
  - Shoreline Boulevard between US 101 southbound ramps and Pear Avenue (AM peak hour)

- Southbound Direction
  - Shoreline Boulevard between Pear Avenue and US 101 northbound ramps (AM and PM peak hours)
  - Shoreline Boulevard between US 101 southbound ramps and Terra Bella Avenue (AM peak hour)
  - Shoreline Boulevard between Terra Bella Avenue and Middlefield Road (AM and PM peak hours)

4.14.2.11 *Existing Freeway Segment Levels of Service*

The morning and evening peak hour freeway segment level of service calculations were evaluated following VTA guidelines to satisfy the Congestion Management Program analysis method. Segments in San Mateo County were evaluated against the *C/CAG Final San Mateo County Congestion Management Program* (November 2015).

Table 4.14-6 shows the existing freeway segment level of service for State Route 85, SR 237, Interstate 880, Interstate 280, US 101, SR 17, and SR 87. Measured against the VTA CMP level of service standard, the freeway segments operating below the level of service standard (they operate at LOS F) are shown in bold in the table.

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
State Route 85 - Northbound							
Cottle Road to	AM	2	1	**76**	52	**F**	E
Blossom Hill Road	PM	2	1	29	9	D	A
Blossom Hill Road to	AM	2	1	**93**	**70**	**F**	**F**
State Route 87	PM	2	1	31	10	D	A
State Route 87 to	AM	2	1	**111**	**106**	**F**	**F**
Almaden Expressway	PM	2	1	28	7	D	A
Almaden Expressway to	AM	2	1	**104**	**82**	**F**	**F**
Camden Avenue	PM	2	1	28	10	D	A
Camden Avenue to	AM	2	1	**92**	58	**F**	E
Union Avenue	PM	2	1	25	10	C	A
Union Avenue to	AM	2	1	**80**	**67**	**F**	**F**
South Bascom Avenue	PM	2	1	28	7	D	A
South Bascom Avenue to	AM	2	1	**96**	**111**	**F**	**F**
State Route 17	PM	2	1	20	11	C	A
State Route 17 to	AM	2	1	**82**	**96**	**F**	**F**
Winchester Boulevard	PM	2	1	14	10	B	A
Winchester Boulevard to	AM	2	1	**59**	49	**F**	E
Saratoga Avenue	PM	2	1	32	7	D	A
Saratoga Avenue to	AM	2	1	52	36	E	D
Saratoga-Sunnyvale Road	PM	2	1	21	8	C	A
Saratoga-Sunnyvale Road to	AM	2	1	**65**	**64**	**F**	**F**
Stevens Creek Boulevard	PM	2	1	22	9	C	A
Stevens Creek Boulevard to	AM	2	1	**124**	**108**	**F**	**F**
Interstate 280	PM	2	1	13	6	B	A
Interstate 280 to	AM	2	1	**148**	**118**	**F**	**F**
West Homestead Road	PM	2	1	23	7	C	A
West Homestead Road to	AM	2	1	**99**	**88**	**F**	**F**
West Fremont Avenue	PM	2	1	25	7	C	A
West Fremont Avenue to	AM	2	1	**69**	**61**	**F**	**F**
El Camino Real	PM	2	1	26	8	C	A
El Camino Real to	AM	2	1	42	36	D	D
State Route 237	PM	2	1	18	10	B	A
State Route 237 to	AM	2	1	30	28	D	D
Central Expressway	PM	2	1	18	9	B	A
Central Expressway to	AM	2	1	46	21	D	C
US 101	PM	2	1	17	7	B	A
State Route 85 - Southbound							
US 101 to	AM	2	1	21	3	C	A
Central Expressway	PM	2	1	**89**	27	**F**	D
Central Expressway to	AM	2	1	20	3	C	A
State Route 237	PM	2	1	**116**	56	**F**	E
State Route 237 to	AM	2	1	24	4	C	A
El Camino Real	PM	2	1	**86**	**69**	**F**	**F**

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
El Camino Real to	AM	2	1	30	10	D	A
West Fremont Avenue	PM	2	1	**69**	53	**F**	E
West Fremont Avenue to	AM	2	1	26	8	C	A
West Homestead Road	PM	2	1	53	34	E	D
West Homestead Road to	AM	2	1	12	9	B	A
Interstate 280	PM	2	1	23	24	C	C
Interstate 280 to	AM	2	1	21	5	C	A
Stevens Creek Boulevard	PM	2	1	**63**	**66**	**F**	**F**
Stevens Creek Boulevard to	AM	2	1	18	5	B	A
Saratoga-Sunnyvale Road	PM	2	1	**90**	47	**F**	E
Saratoga-Sunnyvale Road to	AM	2	1	21	8	C	A
Saratoga Avenue	PM	2	1	**62**	52	**F**	E
Saratoga Avenue to	AM	2	1	27	7	D	A
Winchester Boulevard	PM	2	1	53	35	E	D
Winchester Boulevard to	AM	2	1	19	7	C	A
State Route 17	PM	2	1	48	46	E	D
State Route 17 to	AM	2	1	16	11	B	A
South Bascom Avenue	PM	2	1	**72**	22	**F**	C
South Bascom Avenue to	AM	2	1	24	7	C	A
Union Avenue	PM	2	1	**82**	38	**F**	D
Union Avenue to	AM	2	1	20	8	C	A
Camden Avenue	PM	2	1	50	34	E	D
Camden Avenue to	AM	2	1	25	12	C	B
Almaden Expressway	PM	2	1	42	34	D	D
Almaden Expressway to	AM	2	1	23	7	C	A
State Route 87	PM	2	1	24	15	C	B
State Route 87 to	AM	2	1	24	6	C	A
Blossom Hill Road	PM	2	1	56	33	E	D
Blossom Hill Road to	AM	2	1	14	5	B	A
Cottle Road	PM	2	1	30	17	D	B
State Route 237 - Eastbound							
El Camino Real to	AM	2	N/A	50	N/A	E	N/A
State Route 85	PM	2		43		D	
State Route 85 to	AM	2	N/A	51	N/A	E	N/A
Central Expressway	PM	2		25		C	
Central Expressway to	AM	2	N/A	45	N/A	D	N/A
Maude Avenue	PM	2		23		C	
Maude Avenue to	AM	2	N/A	29	N/A	D	N/A
US 101	PM	2		38		D	
US 101 to	AM	2	N/A	38	N/A	D	N/A
Mathilda Avenue	PM	2		**96**		**F**	
Mathilda Avenue to	AM	2	1	43	15	D	B
North Fair Oaks Avenue	PM	2	1	**98**	28	**F**	D
North Fair Oaks Avenue to	AM	2	1	32	12	D	B
Lawrence Expressway	PM	2	1	**96**	33	**F**	D

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
Lawrence Expressway to	AM	2	1	35	16	D	B
Great America Parkway	PM	2	1	**100**	58	**F**	E
Great America Parkway to	AM	2	1	46	14	D	B
North First Street	PM	2	1	**88**	55	**F**	E
North First Street to	AM	2	1	46	19	D	C
Zanker Road	PM	2	1	**76**	54	**F**	E
Zanker Road to	AM	2	1	35	14	D	B
McCarthy Boulevard	PM	2	1	54	29	E	D
McCarthy Boulevard to	AM	2	1	19	11	C	A
Interstate 880	PM	2	1	**132**	31	**F**	D
Interstate 880 - Northbound							
1st Street to	AM	3	-	57	-	E	-
US 101	PM	3	-	43	-	D	-
US 101 to	AM	3	1	46	15	D	B
East Brokaw Road	PM	3	1	29	10	D	A
East Brokaw Road to Montague Expressway/San Tomas Expressway	AM	3	1	29	10	D	A
	PM	3	1	27	23	D	C
Montague Expressway/San Tomas	AM	3	1	23	17	C	B
Expressway to Great Mall Parkway	PM	3	1	34	23	D	C
Great Mall Parkway to	AM	3	1	22	20	C	C
State Route 237	PM	3	1	33	13	D	B
State Route 237 to	AM	3	1	20	9	C	A
Dixon Landing Road	PM	3	1	**82**	58	**F**	E
Dixon Landing Road to	AM	5	1	N/A	N/A	A	A
State Route 2625	PM	5	1			**F**	**F**
State Route 262 to	AM	3	1	N/A	N/A	A	A
Fremont Boulevard5	PM	3	1			E	E
Fremont Boulevard to	AM	3	1	N/A	N/A	A	A
Auto Mall Parkway5	PM	3	1			E	E
Auto Mall Parkway to	AM	3	1	N/A	N/A	A	A
Stevenson Boulevard5	PM	3	1			D	C
Stevenson Boulevard to	AM	3	1	N/A	N/A	A	A
Mowry Avenue5	PM	3	1			E	D
Mowry Avenue to	AM	3	1	N/A	N/A	A	A
Thornton Avenue5	PM	3	1			E	D
Thornton Avenue to	AM	3	1	N/A	N/A	A	A
Decoto Road5	PM	3	1			E	D
Fremont Boulevard to	AM	3	1	N/A	N/A	C	A
Decoto Road5	PM	3	1			**F**	E
Decoto Road to	AM	3	1	N/A	N/A	D	A
Alvarado Boulevard5	PM	3	1			E	E
Alvarado Boulevard to	AM	3	1	N/A	N/A	E	A
Alvarado-Niles Road5	PM	3	1			**F**	E

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
Alvarado-Niles Road to Whipple Road5	AM PM	4 4	1 1	N/A	N/A	E **F**	E B
Whipple Road to Industrial Parkway5	AM PM	4 4	1 1	N/A	N/A	E **F**	E B
Industrial Parkway to Tennyson Road5	AM PM	4 4	1 1	N/A	N/A	E **F**	E B
Interstate 880 – Southbound							
Tennyson Road to Industrial Parkway[5]	AM PM	4 4	1 1	N/A	N/A	**F** D	D B
Industrial Parkway to Whipple Road[5]	AM PM	4 4	1 1	N/A	N/A	**F** D	D B
Whipple Road to Alvarado-Niles Road[5]	AM PM	4 4	1 1	N/A	N/A	**F** D	D B
Alvarado-Niles Road to Alvarado Boulevard[5]	AM PM	3 3	1 1	N/A	N/A	**F** D	D B
Alvarado Boulevard to Decoto Road[5]	AM PM	3 3	1 1	N/A	N/A	**F** C	D A
Decoto Road to Thornton Avenue[5]	AM PM	3 3	1 1	N/A	N/A	**F** B	C A
Thornton Avenue to Mowry Avenue[5]	AM PM	3 3	1 1	N/A	N/A	**F** B	C A
Mowry Avenue to Stevenson Boulevard[5]	AM PM	3 3	1 1	N/A	N/A	**F** B	C A
Stevenson Boulevard to Auto Mall Parkway[5]	AM PM	3 3	1 1	N/A	N/A	E A	C A
Auto Mall Parkway to Fremont Boulevard[5]	AM PM	3 3	1 1	N/A	N/A	D A	B A
Fremont Boulevard to State Route 262[5]	AM PM	3 3	1 1	N/A	N/A	D A	B A
State Route 262 to Dixon Landing Road[5]	AM PM	4 4	1 1	N/A	N/A	C A	B A
Dixon Landing Road to State Route 237	AM PM	3 3	1 1	47 26	**60** 18	E C	**F** B
State Route 237 to Great Mall Parkway	AM PM	3 3	1 1	51 22	19 13	E C	C B
Great Mall Parkway to Montague Expressway/San Tomas Expressway	AM PM	3 3	1 1	43 29	17 21	D D	B C
Montague Expressway/San Tomas Expressway to East Brokaw Road	AM PM	3 3	1 1	19 **75**	11 42	C **F**	A D
East Brokaw Road to US 101	AM PM	3 3	1 1	**60** **78**	43 50	**F** **F**	D E
US 101 to 1st Street	AM PM	3 3	- -	**93** **101**	- -	**F** **F**	- -

Table 4.14-6: Existing Freeway Segment Level of Service							
Freeway Segment	**Peak Hour[1]**	**Lanes**		**Density[2]**		**Level of Service[3]**	
		Mixed Flow	**HOV**	**Mixed Flow**	**HOV**	**Mixed Flow**	**HOV**
State Route 237 – Westbound							
Interstate 880 to	AM	2	1	**132**	**68**	**F**	**F**
McCarthy Boulevard	PM	2	1	25	7	C	A
McCarthy Boulevard to	AM	2	1	**117**	52	**F**	E
Zanker Road	PM	2	1	**59**	7	**F**	A
Zanker Road to	AM	2	1	55	36	E	D
North First Street	PM	2	1	49	22	E	C
North First Street to	AM	2	1	48	32	E	D
Great America Parkway	PM	2	1	44	14	D	B
Great America Parkway to	AM	2	1	40	22	D	C
Lawrence Expressway	PM	2	1	32	16	D	B
Lawrence Expressway to	AM	2	1	51	34	E	D
North Fair Oaks Avenue	PM	2	1	30	19	D	C
North Fair Oaks Avenue to	AM	3	N/A	**56**	N/A	**E**	N/A
Mathilda Avenue	PM	3		**83**		**F**	
Mathilda Avenue to	AM	2	N/A	45	N/A	D	N/A
US 101	PM	2		33		D	
US 101 to	AM	2	N/A	31	N/A	D	N/A
Maude Avenue	PM	2		56		E	
Maude Avenue to	AM	2	N/A	30	N/A	D	N/A
Central Expressway	PM	2		**77**		**F**	
Central Expressway to	AM	2	N/A	28	N/A	D	N/A
State Route 85	PM	2		**76**		**F**	
State Route 85 to	AM	2	N/A	**84**	N/A	**F**	N/A
El Camino Real	PM	2		**97**		**F**	
US 101 – Northbound							
Tully Road to	AM	3	1	**72**	**95**	**F**	**F**
Story Road	PM	3	1	25	13	C	B
Story Road to	AM	3	1	**79**	**86**	**F**	**F**
Interstate 280	PM	3	1	15	5	B	A
Interstate 280 to	AM	3	1	**103**	**102**	**F**	**F**
Santa Clara Street	PM	3	1	23	10	C	A
Santa Clara Street to	AM	3	1	**112**	**92**	**F**	**F**
McKee Road	PM	3	1	20	15	C	B
McKee Road to	AM	3	1	**89**	**83**	**F**	**F**
Oakland Road	PM	3	1	24	11	C	A
Oakland Road to	AM	3	1	**96**	**75**	**F**	**F**
Interstate 880	PM	3	1	23	10	C	A
Interstate 880 to	AM	3	1	**100**	**84**	**F**	**F**
Old Bayshore Highway	PM	3	1	18	6	B	A
Old Bayshore Highway to	AM	3	1	**109**	**104**	**F**	**F**
North First Street	PM	3	1	20	8	C	A
North First Street to Guadalupe	AM	3	1	**85**	**84**	**F**	**F**
Parkway (State Route 87)	PM	3	1	17	9	B	A

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
Guadalupe Parkway (State Route 87) to De La Cruz Boulevard	AM	3	1	**107**	**100**	**F**	**F**
	PM	3	1	21	6	C	A
De La Cruz Boulevard to Montague Expressway/San Tomas Expressway	AM	3	1	**70**	53	**F**	E
	PM	3	1	31	14	D	B
Montague Expressway/San Tomas Expressway to Bowers Avenue/Great America Parkway	AM	3	1	**81**	51	**F**	E
	PM	3	1	38	26	D	C
Bowers Avenue/Great America Parkway to Lawrence Expressway	AM	3	1	**83**	**60**	**F**	**F**
	PM	3	1	45	18	D	B
Lawrence Expressway to North Fair Oaks Avenue	AM	3	1	**90**	55	**F**	E
	PM	3	1	30	16	D	B
North Fair Oaks Avenue to North Mathilda Avenue	AM	3	1	**59**	37	**F**	D
	PM	3	1	28	24	D	C
North Mathilda Avenue to State Route 237	AM	3	1	40	42	D	D
	PM	3	1	26	37	C	D
State Route 237 to Moffett Boulevard	AM	3	1	49	35	E	D
	PM	3	1	36	22	D	C
Moffett Boulevard to State Route 85	AM	3	1	**66**	33	**F**	D
	PM	3	1	52	16	E	B
State Route 85 to North Shoreline Boulevard	AM	4	1	**79**	34	**F**	D
	PM	4	1	47	15	E	B
North Shoreline Boulevard to Rengstorff Avenue	AM	3	1	**76**	25	**F**	C
	PM	3	1	**74**	13	**F**	B
Rengstorff Avenue to San Antonio Road	AM	3	1	42	20	D	C
	PM	3	1	**62**	11	**F**	A
San Antonio Road to Oregon Expressway	AM	3	1	42	29	D	D
	PM	3	1	**62**	22	**F**	C
Oregon Expressway to Embarcadero Road	AM	3	1	46	38	D	D
	PM	3	1	**62**	36	**F**	D
Embarcadero Road to University Avenue[4]	AM	3	1	N/A	N/A	**F**	**F**
	PM	3	1				
University Avenue to Willow Road[4]	AM	3	1	N/A	N/A	**F**	**F**
	PM	3	1				
Willow Road to Marsh Road[4]	AM	3	1	N/A	N/A	**F**	**F**
	PM	3	1				
Marsh Road to Woodside Road[4]	AM	3	1	N/A	N/A	**F**	**F**
	PM	3	1				
Woodside Road to Whipple Road[4]	AM	3	1	N/A	N/A	**F**	**F**
	PM	3	1				
Whipple Road to Holly Street[4]	AM	4	N/A	N/A	N/A	**F**	N/A
	PM	4					
Holly Street to Marine Parkway[4]	AM	4	N/A	N/A	N/A	**F**	N/A
	PM	4					
Marine Parkway to East Hillsdale Boulevard[4]	AM	4	N/A	N/A	N/A	**F**	N/A
	PM	4					

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
East Hillsdale Boulevard to State Route 92[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
State Route 92 to Kehoe Avenue[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Kehoe Avenue to East 3rd Avenue[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
3rd Avenue to Poplar Avenue	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Poplar Avenue to Broadway	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Broadway to Millbrae Avenue	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
US 101 – Southbound							
Millbrae Avenue to Broadway	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Broadway to Poplar Avenue	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Poplar Avenue to 3rd Avenue	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
East 3rd Avenue to State Route 92[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
State Route 92 to East Hillsdale Boulevard[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
State Route 92 to East Hillsdale Boulevard[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
East Hillsdale Boulevard to Marine Parkway[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Marine Parkway to Holly Street[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Holly Street to Whipple Road[4]	AM PM	4 4	N/A	N/A	N/A	**F**	N/A
Whipple Road to Woodside Road[4]	AM PM	3 3	1 1	N/A	N/A	**F**	**F**
Woodside Road to Marsh Road[4]	AM PM	3 3	1 1	N/A	N/A	**F**	**F**
Marsh Road to Willow Road[4]	AM PM	3 3	1 1	N/A	N/A	**F**	**F**
Willow Road to University Avenue[4]	AM PM	3 3	1 1	N/A	N/A	**F**	**F**
University Avenue to Embarcadero Road[4]	AM PM	3 3	1 1	N/A	N/A	**F**	**F**
Embarcadero Road to Oregon Expressway	AM PM	3 3	1 1	35 **104**	33 **83**	D **F**	D **F**
Oregon Expressway to San Antonio Road	AM PM	3 3	1 1	34 **89**	19 26	D **F**	C C

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
San Antonio Road to	AM	3	1	48	18	E	B
Rengstorff Avenue	PM	3	1	**85**	19	**F**	C
Rengstorff Avenue to	AM	3	1	40	21	D	C
North Shoreline Boulevard	PM	3	1	49	20	E	C
North Shoreline Boulevard to	AM	3	1	36	27	D	D
State Route 85	PM	3	1	47	32	E	D
State Route 85 to	AM	3	1	31	28	D	D
Moffett Boulevard	PM	3	1	**103**	35	**F**	D
Moffett Boulevard to	AM	3	1	33	22	D	C
State Route 237	PM	3	1	**70**	36	**F**	D
State Route 237 to	AM	3	1	23	22	C	C
North Mathilda Avenue	PM	3	1	31	31	D	D
North Mathilda Avenue to	AM	3	1	34	14	D	B
North Fair Oaks Avenue	PM	3	1	43	31	D	D
North Fair Oaks Avenue to	AM	3	1	38	16	D	B
Lawrence Expressway	PM	3	1	**71**	**75**	**F**	**F**
Lawrence Expressway to Bowers	AM	3	1	50	16	E	B
Avenue/Great America Parkway	PM	3	1	**97**	**93**	**F**	**F**
Bowers Avenue/Great America Parkway to Montague Expressway/San Tomas Expressway	AM	3	1	25	16	C	B
	PM	3	1	**99**	**91**	**F**	**F**
Montague Expressway/San Tomas Expressway to De La Cruz Boulevard	AM	3	1	27	14	D	B
	PM	3	1	**104**	**63**	**F**	**F**
De La Cruz Boulevard to Guadalupe Parkway (State Route 87)	AM	3	1	35	9	D	A
	PM	3	1	**87**	48	**F**	E
Guadalupe Parkway (State Route	AM	3	1	13	6	B	A
87) to North First Street	PM	3	1	**94**	**78**	**F**	**F**
North First Street to	AM	3	1	17	6	B	A
Old Bayshore Highway	PM	3	1	**147**	**91**	**F**	**F**
Old Bayshore Highway to	AM	3	1	12	8	B	A
Interstate 880	PM	3	1	**126**	**72**	**F**	**F**
Interstate 880 to	AM	3	1	16	5	B	A
Oakland Road	PM	3	1	**107**	**84**	**F**	**F**
Oakland Road to	AM	3	1	19	6	C	A
McKee Road	PM	3	1	53	33	E	D
McKee Road to	AM	3	1	14	12	B	B
Santa Clara Street	PM	3	1	35	20	D	C
Santa Clara Street to	AM	3	1	18	4	B	A
Interstate 280	PM	3	1	34	28	D	D
Interstate 280 to	AM	3	1	16	7	B	A
Story Road	PM	3	1	41	21	D	C
Story Road to	AM	3	1	20	7	C	A
Tully Road	PM	3	1	48	26	E	C

Table 4.14-6: Existing Freeway Segment Level of Service							
Freeway Segment	**Peak Hour[1]**	**Lanes**		**Density[2]**		**Level of Service[3]**	
		Mixed Flow	**HOV**	**Mixed Flow**	**HOV**	**Mixed Flow**	**HOV**
Tully Road to	AM	3	1	18	8	B	A
Capitol Expressway	PM	3	1	29	23	D	C
Interstate 280 - Northbound							
Bird Avenue to	AM	4	-	**89**	-	**F**	-
Meridian Avenue	PM	4	-	38	-	**D**	-
Meridian Avenue to	AM	3	1	**100**	70	**F**	**F**
Interstate 880	PM	3	1	21	19	**C**	C
Interstate 880 to	AM	3	1	**94**	63	**F**	**F**
Winchester Boulevard	PM	3	1	**70**	20	**F**	C
Winchester Boulevard to	AM	3	1	**78**	48	**F**	E
Saratoga Avenue	PM	3	1	53	16	E	B
Saratoga Avenue to	AM	3	1	**89**	**78**	**F**	**F**
Lawrence Expressway	PM	3	1	37	15	D	B
Lawrence Expressway to	AM	3	1	**81**	46	**F**	D
Wolfe Road	PM	3	1	23	10	C	A
Wolfe Road to	AM	3	1	**62**	57	**F**	E
North De Anza Boulevard	PM	3	1	25	7	C	A
North De Anza Boulevard to	AM	3	1	**73**	45	**F**	D
State Route 85	PM	3	1	23	7	C	A
State Route 85 to	AM	3	1	**70**	58	**F**	E
Foothill Expressway	PM	3	1	22	8	C	A
Foothill Expressway to	AM	3	1	37	53	D	E
Magdalena Avenue	PM	3	1	22	13	C	B
Magdalena Avenue to	AM	4	-	48	-	E	-
South El Monte Avenue	PM	4	-	25	-	C	-
South El Monte Avenue to	AM	4	-	32	-	D	-
Page Mill Road	PM	4	-	25	-	C	-
Page Mill Road to	AM	4	-	32	-	C	-
Alpine Road	PM	4	-	36	-	D	-
Interstate 280 - Southbound							
Page Mill Road to	AM	4	-	25	-	C	-
Alpine Avenue	PM	4	-	32	-	D	-
South El Monte Avenue to	AM	4	-	21	-	C	-
Page Mill Road	PM	4	-	**68**	-	**F**	-
Magdalena Avenue to	AM	4	-	20	-	C	-
South El Monte Avenue	PM	4	-	**81**	-	**F**	-
Foothill Expressway to	AM	3	1	23	12	C	B
Magdalena Avenue	PM	3	1	37	18	D	C
Foothill Expressway to	AM	3	1	33	14	D	B
State Route 85	PM	3	1	40	14	D	B
State Route 85 to	AM	3	1	24	9	C	A
North De Anza Boulevard	PM	3	1	**103**	19	**F**	E
North De Anza Boulevard to	AM	3	1	36	10	D	A
Wolfe Road	PM	3	1	**77**	30	**F**	E

Table 4.14-6:
Existing Freeway Segment Level of Service

Freeway Segment	Peak Hour[1]	Lanes		Density[2]		Level of Service[3]	
		Mixed Flow	HOV	Mixed Flow	HOV	Mixed Flow	HOV
Wolfe Road to	AM	3	1	35	16	D	B
Lawrence Expressway	PM	3	1	**85**	37	**F**	D
Lawrence Expressway to	AM	3	1	37	10	D	A
Saratoga Avenue	PM	3	1	74	29	F	D
Saratoga Avenue to	AM	3	1	32	10	D	B
Winchester Boulevard	PM	3	1	**90**	**21**	**F**	**F**
Winchester Boulevard to	AM	3	1	33	14	C	B
Interstate 880	PM	3	1	**90**	**21**	**F**	F
Interstate 880 to	AM	3	1	26	18	C	B
Meridian Avenue	PM	3	1	**90**	**30**	**F**	F
Meridian Avenue to	AM	4	-	36	-	D	-
Bird Avenue	PM	4	-	**81**	-	**F**	-
State Route 17 - Northbound							
Lark Avenue to	AM	2	N/A	46	N/A	D	N/A
State Route 85	PM	2		22		C	
State Route 85 to	AM	3	N/A	**74**	N/A	**F**	N/A
Camden Avenue	PM	3		19		C	
State Route 17 - Southbound							
Camden Avenue to	AM	3	N/A	24	N/A	C	N/A
State Route 85	PM	3		25		C	
State Route 85 to	AM	3	N/A	20	N/A	C	N/A
Lark Avenue	PM	3		28		D	
State Route 87 - Northbound							
Julian Street to	AM	2	1	**69**	32	**F**	D
Coleman Street	PM	2	1	22	6	**C**	A
Coleman Street to	AM	2	1	**142**	**51**	**F**	**F**
West Taylor Street	PM	2	1	22	7	C	A
West Taylor Street to	AM	2	1	**69**	32	**F**	D
Skyport Drive	PM	2	1	22	6	C	A
Skyport Drive to	AM	2	1	**142**	**51**	**F**	**F**
US 101	PM	2	1	22	7	C	A
State Route 87 – Southbound							
US 101 to	AM	2	1	26	6	C	A
Skyport Drive	PM	2	1	**109**	24	**F**	C
Skyport Drive to	AM	2	1	16	3	B	A
West Taylor Street	PM	2	1	**109**	24	**F**	C
West Taylor Street to	AM	2	1	18	9	B	B
Coleman Street	PM	2	1	**81**	31	**F**	A
Coleman Street to	AM	2	1	27	10	D	A
Julian Street	PM	2	1	**61**	44	F	D

Notes:
1. AM = morning peak hour, PM = evening peak hour.

Table 4.14-6: Existing Freeway Segment Level of Service							
Freeway Segment	**Peak Hour[1]**	**Lanes**		**Density[2]**		**Level of Service[3]**	
		Mixed Flow	**HOV**	**Mixed Flow**	**HOV**	**Mixed Flow**	**HOV**

2. Measured in passenger cars per mile per lane. Mixed = Mixed-Flow Lanes; HOV = High-Occupancy Vehicle Lane.
3. Level of service based on density.
4. These segments are in San Mateo County. The C/CAG Final San Mateo County Congestion Management Program – 2011 (November 2011), reports the worst roadway segment operation. This is LOS F between Whipple Avenue and the Santa Clara County line and LOS F between State Route 92 and Whipple Avenue (page 7-10). The LOS standards are LOS F and LOS E respectively. Mixed-flow and HOV lanes are reported together for CMP freeway segment monitoring for San Mateo County.
5. These segments are in Alameda County. The Congestion Management Program (October 2015), reports the worst roadway segment operation.

Bold text indicates below the applicable level of service standard (LOS F for CMP designated facilities).
Source: Monitoring & Conformance Report, VTA, 2012; Fehr & Peers, November 2016.

In San Mateo County, detailed freeway density information is not collected regularly for CMP analysis. Rather, floating car travel-time runs are collected every two years. The most recent CMP data shows that US 101 between Whipple Avenue and the Santa Clara County border (near Embarcadero Road) operates at a below-standard level of service during the morning and evening peak hours. These published observations apply to the US 101 freeway study segments between Marsh Road and Embarcadero Road within San Mateo County.

4.14.2.12 *Existing Travel Patterns at North Bayshore Gateways*

To establish the current travel characteristics of the North Bayshore area, transportation data was collected on February 4 to 6, 2014, February 12, 2014, September 22, 2015 and September 29, 2015. The existing usage observed and described here is similar to the patterns observed in previously recorded data. The sections below summarize the existing travel patterns for the North Bayshore area gateways, including the preferred access to North Bayshore, vehicle traffic patterns by time of day, and travel choice.

Existing Travel Patterns

Using available gateway counts, vehicle traffic patterns, mode share, and vehicle usage for the inbound morning peak period are shown below, establishing the current usage of the North Bayshore gateways as a whole.

Preferred Access to North Bayshore:

The physical capacity of the three main vehicle gateways to North Bayshore (San Antonio Road, Rengstorff Avenue, and Shoreline Boulevard) constrain the number of vehicles that can be served during the peak morning and evening peak periods. The multi-use paths at Permanente Creek and Stevens Creek serve bicyclists and pedestrians to/from North Bayshore. The data indicate that most vehicle drivers prefer to use Rengstorff Avenue or Shoreline Boulevard, with 80 percent of drive-alone (single occupant vehicles – SOV) or carpool (high occupant vehicles – HOV) vehicle access occurring on those two routes. Figure 4.14-4 shows the gateways.

Vehicle Traffic Patterns By Time of Day.

Based on the gateway counts, the primary directional flow of vehicle traffic is inbound to the North Bayshore area during the morning peak (7:00 to 10:00 a.m.) and outbound during the evening peak (4:00 to 7:00 p.m.). Inbound traffic peaks at 8:45 a.m., while outbound traffic peaks at 5:15 p.m. In the mid-day period, between 11:15 a.m. and 1:30 p.m., inbound and outbound traffic is relatively balanced, and the volume is slightly more than half (about 56 percent) of the volume that occurs during the AM or PM peaks.

Both San Antonio Road and Rengstorff Avenue exhibit a distinctly peaked pattern of AM inbound traffic; with Rengstorff Avenue serving substantially higher volumes than San Antonio Road. By contrast, Shoreline Boulevard is at capacity for multiple hours. In the evening, outbound traffic for all three gateways is spread somewhat more evenly across several hours than it is in the morning, when it is more concentrated in a shorter period of time.

In terms of the total daily vehicle traffic pattern, Shoreline Boulevard serves the highest traffic volumes through all hours of the day, followed by Rengstorff Avenue.

Travel Choice

To get to and from the North Bayshore area, people can choose to drive alone, carpool, take transit, bicycle, or walk. To encourage non-drive-alone choices, employers in North Bayshore have been using transportation demand management (TDM) programs that offer transit passes, employee shuttles, active transportation incentives, carpool/vanpooling incentives, and other methods.

Most vehicles (78 percent) entering the North Bayshore area during the morning peak period are drive-alone vehicles; these vehicles transport 55 percent of the people. An additional 14 percent of people arrive using carpools. Twenty-four (24) percent of morning commuters use public transit and shuttles, which make up two (2) percent of the total number of inbound vehicles. The remaining seven (7) percent of commuters use active modes – walk or bicycle.

By Gateway

Each gateway has a different mix of vehicles during the morning peak period. While Shoreline Boulevard serves more vehicles, Rengstorff Avenue serves the highest number of people during the morning peak period, because many more buses use Rengstorff than use Shoreline Boulevard.

The majority of commuters who drive-alone (single occupant vehicles – SOV) or carpool (high occupant vehicles – HOV) enter North Bayshore via the Shoreline Boulevard and Rengstorff Avenue gateways. Almost all transit riders enter North Bayshore on San Antonio Road or Rengstorff Avenue. The largest portion of active transportation users enter North Bayshore via the Stevens Creek trail.

4.14.2.13 *Field Observations*

Field observations were conducted in June 2015 and November 2016 to determine travel patterns, sources and locations of congestion, travel times along Shoreline Boulevard, and overall circulation of pedestrians and bicycles into, out of, and throughout the North Bayshore Precise Plan area.

Travel Patterns and Congestion

The vehicle count data and field observations indicate the primary directional flow of vehicle traffic is into the North Bayshore area during the morning peak hour and outbound during the evening peak hour. This directionality is very pronounced, because the majority of the land uses in the North Bayshore area are employment-based; as a result, the traffic patterns are dominated by commute trips entering the area in the morning and leaving the area in the evening. In general, the field observations confirmed the level of service calculations described previously.

During the morning peak hour, an extensive queue was observed on Shoreline Boulevard northbound between Pear Avenue and Middlefield Road. Because of the high northbound vehicle volume along Shoreline Boulevard, combined with a pedestrians and vehicles crossing Shoreline Boulevard at Pear Avenue, this intersection acts as a bottleneck that essentially meters traffic into the North Bayshore area. The queue formed on the northbound approach at Shoreline Boulevard/Pear Avenue spills back along Shoreline Boulevard to Middlefield Road, and also spills back nearly 2,000 feet along the northbound US 101/SR 85 off-ramp.

Morning peak hour queuing on Shoreline Boulevard also affects traffic operations at the intersection of Shoreline Boulevard and Middlefield Road. Vehicles in the northbound through and westbound right-turn lanes need multiple cycles to clear the intersection because of the upstream congestion. Thus, fewer vehicles are served under this operating condition. As a result, queues also formed intermittently on the northbound approach between Middlefield Road and Mountain Shadows Drive and on the westbound approach between Shoreline Boulevard and Linda Vista Avenue.

In the evening peak hour, the queue of southbound vehicles on Shoreline Boulevard extends from the US 101 Southbound ramps to Plymouth Street. This queuing is primarily due to a lane utilization imbalance caused by traffic heading toward US 101 northbound and the US 101 and State Route 85 southbound on-ramps.

The Rengstorff Avenue gateway is an alternative to the Shoreline Boulevard gateway, with less congestion and shorter queues than along Shoreline Boulevard. For those commuters traveling to or from the south; however, most prefer to use the Shoreline Boulevard gateway to minimize the time spent on the heavily congested freeway. The San Antonio Road gateway is more lightly used and does not experience high levels of congestion or queuing during either the morning or evening peak hours.

Localized congestion was observed on the expressways and arterials used for access to/from the freeway system, particularly at the points where there are crossings of substantial barriers such as the Caltrain railroad tracks or major roadways such as El Camino Real and Central Expressway.

Shoreline Boulevard Travel Times

To provide for further observation of the congested section of Shoreline Boulevard, travel time runs were conducted in October 2016 along Shoreline Boulevard from Montecito Avenue/Stierlin Road in the south to Charleston Road in the north. The speed limit in this corridor is 35 miles per hour in both directions.

The morning peak hour average speed on Shoreline Boulevard between Middlefield Road and Pear Avenue was 5.3 miles per hour northbound, and 21.5 miles per hour southbound. Although the southbound vehicle traffic is not congested, it is typically delayed at the Shoreline Boulevard and La Avenida/US 101 Northbound Ramps intersection, which slows travel speeds out of the North Bayshore Precise Plan area. During the evening peak hour, the average observed speed was 20.5 miles per hour northbound, and 11.9 miles per hour southbound.

Pedestrian and Bicycle Observations

Bicycle use is widespread throughout the Precise Plan area and along the roadways and shared-use paths leading into the area. The highest observed volume of bicyclists at an intersection was 123 bicyclists in a single peak hour at Amphitheatre Parkway/Garcia Avenue-Charleston Road. During the morning inbound peak hour direction, 139 bicyclists and pedestrians used the Shoreline Boulevard gateway, 47 bicyclists and pedestrians used the Rengstorff Avenue gateway, and 41 bicyclists and pedestrians used the Stevens Creek Trail and Permanente Creek Trail gateways. Google, Inc. operates a bike share program in the North Bayshore area which allows employees to bicycle between Google buildings within the Plan area.

4.14.2.14 *Gateway Capacity and Estimates*

The physical capacity of the three main gateways (San Antonio Road, Rengstorff Avenue, and Shoreline Boulevard) to the North Bayshore area constrain the number of vehicles that can be served during the peak morning and evening periods. Understanding these constraints is an important aspect of developing vehicle trip estimates, and was a key input to developing North Bayshore Precise Plan land use and transportation policies.

Historically, whenever new developments were proposed, the street system would often be expanded to accommodate the increase in vehicle traffic associated with the increased land use density and intensity resulting from the new development. In this case, however, the City Council policy direction has been that no substantial new transportation infrastructure should be constructed to increase the physical capacity for automobiles in and around the North Bayshore area. Instead, the amended North Bayshore Precise Plan continues the 2014 North Bayshore Precise Plan strategy and accommodates the growth by developing a land use and transportation policy framework to:

- More effectively use the existing physical capacity at the gateways;
- Achieve a targeted mode shift (i.e., a goal of no more than 45 percent single-occupancy vehicles for office development uses) through application of an extensive TDM Program; and,

- Manage the timing of arrivals and departures by imposing a cap on the number of trips that occur during the AM peak period.[105]

Gateway Capacity

The vehicle gateway capacity estimates[106] are based on existing street configurations and observed vehicle demand during the morning and evening peak hours. The peak period capacity estimates are then calculated based on the observed ratio between existing peak period and peak hour counts. These vehicle capacity estimates refine the planning level capacity estimates prepared during the City of Mountain View *Shoreline Transportation Study* (June 2013). The detailed analysis of existing travel characteristics and the adopted gateway capacity is included in the Appendices to the TIA (Appendix J). Also included in the TIA appendices is the mixed-use gateway capacity estimate described in the *North Bayshore Precise Plan with Residential EIR – Vehicle Gateway Capacity with Residential* technical memorandum.

Peak-Hour Two-Way Capacity Results Without Mixed-Use

Under Existing Conditions, Shoreline Boulevard is at capacity during the morning and evening peak hours, while Rengstorff Avenue and San Antonio Road have capacity available. Table 4.14-7 shows the calculated capacities for each gateway separately, and the peak hour vehicle capacities for all of the North Bayshore area gateways combined.

As described previously, the North Bayshore area traffic patterns are predominantly inbound in the morning and outbound in the evening. The vehicle capacity estimates account for the highly directional flow of traffic and maintain a similar ratio of peak direction to non-peak directional flow. The close spacing of the local streets (La Avenida Avenue, Bayshore Parkway, and Garcia Avenue-Charleston Road) to the US 101 interchange ramps limits the number of vehicles that can be stored without backing up into adjacent intersections and causing gridlock.

For the adopted 2014 North Bayshore Precise Plan, the combined total capacity of all the gateways was calculated as follows:

- Morning Peak Hour = 8,100 two-way vehicles
- Evening Peak Hour = 7,940 two-way vehicles

Two-way vehicle capacity is summarized in the TIA because it is the most direct way to describe vehicle gateway capacity, which is the maximum number of vehicles that can be served in a specified time period while maintaining reasonable freedom of vehicle movement through the gateways. In other words, the two-way capacity is constrained by the combination of inbound and outbound traffic.

[105] The morning peak period (7:00 to 10:00 AM) vehicle trip cap is 18,900 vehicles. The detailed analysis can be found in Appendices E and F of the TIA.

[106] For the purposes of this analysis, "vehicle gateway capacity" is defined as the maximum number of vehicles that can be served in a specified time period while maintaining reasonable freedom of vehicle movement through the gateways. Rather than apply a theoretical per-lane capacity assumption, the vehicle capacity for each gateway was calculated based on observed vehicle demand, queuing characteristics, and available vehicle storage that could be accommodated without blocking other movements and causing gridlock.

Table 4.14-7: Peak Hour Vehicle Capacity by Gateway: Adopted N.B. Precise Plan						
Gateway	**Morning Peak Hour**			**Evening Peak Hour**		
	Inbound	**Out-bound**	**Total**	**Inbound**	**Out-bound**	**Total**
1. San Antonio Road between Bayshore Parkway and Casey Avenue	460	70	530	150	480	630
2. Bayshore Parkway between San Antonio Road and Garcia Avenue	1,070	100	1,170	250	860	1,110
3. Rengstorff Avenue between US 101 Northbound Ramps and Garcia Avenue - Charleston Road	2,960	330	3,290	350	2,090	2,440
4. Shoreline Boulevard between US 101 Northbound Ramps – La Avenida Avenue and Pear Avenue	2,490	470	2,960	1,030	2,250	3,280
5. La Avenida Avenue between Shoreline Boulevard and Inigo Way	N/A	150	150	N/A	480	480
Total	**6,980**	**1,120**	**8,100**	**1,780**	**6,160**	**7,940**

1. Peak hour volumes rounded to nearest 10 vehicles.
Source: Appendix F of the TIA: "North Bayshore Precise Plan EIR – Establishing Vehicle Gateway Capacity and Sensitivity Tests on Accommodating New Growth." Fehr & Peers. July 2014.

4.14.3 Transportation/Traffic Impacts

4.14.3.1 *Thresholds of Significance*

City of Mountain View

Interim Level of Service Policy

The *City of Mountain View 2030 General Plan* (July 2012) includes policies to develop and adopt multimodal transportation performance measures for projects in the City of Mountain View.

> POLICY MOB 8.1: Multimodal performance measures. Develop performance measures and indicators for all modes of transportation, including performance targets that vary by street type and location.
>
> POLICY MOB 8.2: Level of service. Ensure performance measurement criteria optimize travel by each mode.

The City of Mountain View 2030 General Plan and Greenhouse Gas Reduction Program (GGRP) EIR established the following interim level of service policy standards:

> **Interim level of service (LOS) standards**: Until adoption of the mobility plans described in Action MOB 1.1.1 [and adoption of alternative impact thresholds in Action MOB 8.1.2], maintain the Citywide vehicle LOS standards from the 1992 General Plan, which include a target peak hour LOS policy of LOS D for all intersections and roadway segments, with the following exceptions in high-demand areas:

- Use LOS E for intersections and street segments within the Downtown Core and San Antonio areas where vitality, activity and multi-modal transportation use are primary goals; and
- Use LOS E for intersections and street segments on CMP designated roadways in Mountain View (e.g., El Camino Real, Central Expressway and San Antonio Road).

This transportation impact analysis will follow the interim LOS standards as written.

Significant impacts at signalized City of Mountain View intersections are said to occur when the addition of project traffic causes one of the following:[107]

- Intersection operations degrade from an acceptable level to an unacceptable level; or
- Exacerbate unacceptable operations by increasing the average critical delay by four seconds or more and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more; or
- An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable operations when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

Cities of Los Altos, Palo Alto, and East Palo Alto

Significant impacts at signalized intersections in Los Altos, Palo Alto, or East Palo Alto are said to occur when the addition of project traffic causes one of the following:

- Intersection operations degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F); or
- Exacerbate unacceptable operations (LOS E or F) by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more; or
- An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

Santa Clara County and Congestion Management Program

The LOS standard for Santa Clara County expressway and Congestion Management Program (CMP) intersections is LOS E. Traffic impacts at these intersections would occur when the addition of traffic associated with a project causes:

- Intersection operations to deteriorate from an acceptable level to an unacceptable level; or
- Exacerbate unacceptable operations by increasing the average critical delay by four seconds or more and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more; or
- An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable operations when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

City of Menlo Park

The LOS standard for Menlo Park intersections is LOS D. Traffic impacts at these intersections would occur when the following occurs:

- At arterial signalized intersections in Menlo Park, the addition of project traffic causes an intersection operating at LOS D or better to operate at LOS E or F; or an increase of 23 seconds or greater in average vehicle delay; or an increase of more than 0.8 seconds of delay to vehicles on the most critical movements of an arterial intersection operating at LOS E or F prior to the addition of project traffic.
- At local approaches to state controlled signalized intersections in Menlo Park, the addition of project traffic causes an intersection operating at LOS D or better to operate at LOS E or F; or an increase of 23 seconds or greater in average vehicle delay; or causes an increase of more than 0.8 seconds of delay to vehicles on local approaches to State controlled signalized intersections operating at LOS E or F prior to the addition of project traffic.

Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modifying the type of intersection control (i.e., installing an all-way stop or a traffic signal). Traffic volumes, delay, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

The City of Mountain View does not have officially adopted significance criteria for unsignalized intersections. Based on previous studies, significant impacts are said to occur when the addition of project traffic causes the average intersection delay for an all-way stop-controlled intersection, or the worst movement/approach for a side-street stop-controlled intersection, to degrade to LOS F and the intersection satisfies the peak hour traffic signal warrant from the California Manual of Uniform Traffic Control Devices (MUTCD) (2014).[108]

Freeway Significance Impact Criteria

Traffic impacts on CMP freeway segments in Santa Clara County are determined to occur when the addition of project traffic causes:

- Freeway segment operations to deteriorate from an acceptable level (LOS E or better) under the Existing Conditions to an unacceptable level (LOS F); or
- There is an increase in traffic of more than one percent of the capacity on a segment that operates at LOS F under Existing or Cumulative Conditions.

[108] The peak-hour signal warrant analysis should not serve as the only basis for deciding whether and when to install a traffic signal. To reach such a decision, the full set of warrants should be investigated based on a thorough study of traffic and roadway conditions by an experienced engineer, the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.

The City/County Association of Governments (C/CAG) of San Mateo County also uses a threshold of one percent increase in project traffic on a freeway segment to identify project impacts.[109] The LOS standard for the C/CAG freeway study segment on US 101 between Embarcadero Road and Whipple Road is LOS F and between State Route 92 and Whipple Avenue is LOS E.

Traffic impacts on CMP freeway segments in Santa Mateo County are determined to occur when:

- The addition of project traffic causes the freeway segment to operate at a level of service that violates the standard adopted in the current Congestion Management Program (CMP); or
- When the cumulative analysis indicates that the combination of the proposed project and future cumulative traffic demand will cause the freeway segment to operate at a level of service that violates the standard adopted in the current Congestion Management Program (CMP) and the proposed project increases traffic demand on that freeway segment by an amount equal to one percent or more of the segment capacity, or causes the freeway segment volume-to-capacity (v/c) ratio to increase by one percent.

Under Year 2030 Cumulative Conditions, traffic impacts on CMP freeway segments in Santa Clara and San Mateo County are determined to occur when the addition of traffic causes a freeway segment volume-to-capacity (V/C) ratio to exceed one (1.0) and the proposed project increases traffic demand on the freeway segment by an amount equal to one percent or more of the segment capacity.

Note Regarding SB 743: It should be noted that recent legislation in California, Senate Bill 743, will change some of the significance criteria used in CEQA analyses. Specifically, once the legislation is implemented, vehicle LOS will no longer be used as a determinant of significant environmental impacts, and an analysis of vehicle miles of travel (VMT) will be required. The timing of implementation is not known at this point; based on current information, implementation guidelines may be finalized sometime in 2017, and agencies will then have two years to comply.

In the interim, impact analysis will continue to use the criteria and standards adopted by each of the relevant agencies, as described above. The VMT associated with the proposed project is also being analyzed and presented for informational purposes in this report, although there are no significance criteria yet developed for that metric.

Pedestrian and Bicycle Impacts

The Mountain View 2030 General Plan describes related policies necessary to ensure pedestrian and bicycle facilities are safe and effective for City residents. Using the General Plan as a guide, significant impacts to these facilities would occur when a project or an element of the project:

- Creates a hazardous condition that does not currently exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or

[109] C/CAG of San Mateo County. *Policy on Traffic Impact Analysis (TIA) to Determine Traffic Impacts on the Congestion Management Program (CMP) Roadway Network Resulting from Roadway Changes, General Plan Updates, and Land Use Development Projects.* August 2006.

- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Mountain View, City of Los Altos, City of Palo Alto, City of Menlo Park, Santa Clara County, City of Menlo Park, VTA, or Caltrans for their respective facilities in the study area.

Transit Impacts

Significant impacts to transit service would occur if the project or any part of the project:

- Creates demand for public transit services above the capacity which is provided or planned; or
- Disrupts existing transit services or facilities;[110] or
- Conflicts with an existing or planned transit facility; or
- Conflicts with transit policies adopted by the City of Mountain View, City of Los Altos, City of Palo Alto, City of Sunnyvale, Santa Clara County, VTA, or California Department of Transportation (Caltrans) for their respective facilities in the study area.

4.14.3.2 *Proposed Precise Plan Project Assumptions*

The amended North Bayshore Precise Plan includes a combination of land use, transportation infrastructure, and transportation demand management program improvements. The North Bayshore Precise adopted in 2014 allows the following net changes in the land uses as compared to development on the ground in 2015.

- 4,443,850 square feet of additional office building space
- 400 additional hotel rooms
- 937,660 fewer square feet of research & development and industrial building space
- 64,240 square feet of additional restaurant and retail building space
- 48,250 fewer square feet of service commercial building space
- 98,000 square foot new athletic club
- 88,500 square foot new theater

The proposed amended North Bayshore Precise Plan would allow the following net changes in land uses, compared to development on the ground in 2015.

- 9,850 residential units
- 5,534,950 additional square feet of office building space
- 400 additional hotel rooms
- 1,964,860 fewer square feet of research & development and industrial building space
- 129,240 square feet of additional restaurant and retail building space
- 65,050 fewer square feet of service commercial building space
- 98,000 square foot new athletic club
- 88,500 square foot new theater

[110] This includes disruptions caused by proposed project driveways on transit streets and impacts to transit stops/shelters; or impacts to transit operations from traffic improvements proposed or resulting from a project.

It should be noted that both the adopted 2014 North Bayshore Precise Plan and the proposed amended Precise Plan envision redeveloping a significant amount of outdated and inefficient R&D building space and replacing it with modern office buildings with more amenities and higher employee populations -- in the case of the proposed amended Precise Plan, more than half of the existing R&D space would be redeveloped.

Table 4.14-8:
Land Use in the North Bayshore Area: Building Size

Land Use	Units	Existing (2015)	Future(2030)	Change
Adopted North Bayshore Precise Plan				
Residential Units	Dwelling Units	363	363	0
Total Employment Uses[1]	Square Feet	7,231,909	10,754,089	3,522,180
Hotel Uses	Rooms	0	400	400
Proposed North Bayshore Precise Plan with Residential				
Residential Units	Dwelling Units	363	10,213	9,850
Total Employment Uses[1]	Square Feet	7,231,909	10,866,189	3,634,280
Hotel Uses	Rooms	0	400	400

Note: Total employment uses includes office, research & development, industrial, retail, restaurant, and service commercial categories.
Source: City of Mountain View VISUM model. November 2016

Priority Transportation Infrastructure

To accommodate the potential land use growth, increase usage of transit and active modes of travel, and improve local vehicle circulation, priority infrastructure improvements have been included in the North Bayshore Precise Plan and assumed in the transportation analysis of the amended plan, as described below and shown in Figure 4.14-11.

- Charleston Road Transit Boulevard: Convert outside curb lanes of Charleston Road between Amphitheatre Parkway and Shoreline Boulevard to transit-only lanes (Precise Plan Improvement Project T-3).
- New north/south street east of Shoreline Boulevard: Construct a new north/south local two-lane street between La Avenida and Charleston Road (Precise Plan Improvement Project T-10).
- Amphitheatre Parkway is widened from a three-lane street (one eastbound lane and two westbound lanes) between Permanente Creek bridge and Shoreline Boulevard to a four lane street (two lanes in each direction) (Precise Plan Improvement Project T-14).
- Multi-use path over US 101 between Terra Bella Avenue and Plymouth Street (Precise Plan Improvement Project T-8).
- Frontage road along US 101 between Alta Avenue and the Shoreline Commons site (Precise Plan Improvement Project T-11).

Source: Fehr & Peers, February 2017.

INCLUDED PRIORITY TRANSPORTATION IMPROVEMENT PROJECTS FIGURE 4.14-11

These priority transportation improvements are important to support the local connected street system, and to provide facilities for increased transit service to serve the increased transit ridership. The amended North Bayshore Precise Plan includes further detail and prioritization of additional infrastructure improvements throughout the North Bayshore area, such as two-way cycle tracks along Shoreline Boulevard, Charleston Road, Garcia Avenue, and other local streets, additional local street connections, and an enhanced transit connection at or near the Shoreline Boulevard and US 101 interchange.

Chapter 8 of the Precise Plan includes a description of possible funding strategies such as impact fees, the Shoreline Community Fund, and other funding sources for capital improvements needed to accommodate the growth in project traffic (Appendix C).

Stevens Creek Bridge Crossings

The amended North Bayshore Precise Plan includes the potential construction of one or two bridge crossing(s) over Stevens Creek. No formal bridge project is currently proposed. A new bridge would serve transit vehicles, bicycles, and pedestrians only. One potential location could be at Charleston Road, and another additional or alternative location could be near La Avenida Avenue. A potential Charleston Road bridge would continue the roadway from the intersection of Charleston Road and Shorebird Way across Stevens Creek onto federal property on the NASA Ames campus. A potential bridge crossing at La Avenida Avenue would be of similar length as a Charleston Road bridge.

The Santa Clara Valley Transportation Authority (VTA) is currently studying transit connections through the area, including potential location of a new bridge in either the Charleston Avenue or La Avenida Avenue locations.

Peak Hour Two-Way Gateway Capacity With Mixed Use

The primary traffic-related effect of adding residential uses to the North Bayshore area will be to create a somewhat more balanced directional traffic flow, increasing the amount of outbound traffic in the morning and inbound traffic in the evening. While there is ample physical space on the major roads such as Shoreline Boulevard and Rengstorff Avenue to accommodate more morning outbound and evening inbound traffic, it is important to consider how that new traffic will interact with the large numbers of vehicles moving in the peak (opposite) direction.

For example, much of the planned residential development is designated to occur on either side of Shoreline Boulevard; this means that many of the vehicles leaving the residential neighborhoods in the morning will use one of the east-west streets and then turn, left or right, onto southbound Shoreline Boulevard. Signal timings along Shoreline Boulevard will need to be adjusted to accommodate the increased number of turning vehicles, and left-turning vehicles in particular will tend to interrupt the flow of northbound vehicles entering North Bayshore. Thus, the net effect of the additional residential traffic will result in a small increase in total gateway capacity.

With more balanced traffic pattern due to a mix of uses, the combined total capacity of all the gateways would slightly increase to:

- Morning Peak Hour = 8,290 peak hour vehicles
- Evening Peak Hour = 8,030 peak hour vehicles

Most of the increase in capacity occurs at the San Antonio and Bayshore Parkway gateways, because those facilities are not fully utilized today. The shifting of trips to other gateways is consistent with the City Council policy direction not to construct substantial new transportation infrastructure to increase the physical capacity for automobiles in and around the North Bayshore area. As congestion increases at the Shoreline Gateway, vehicles will shift to the Rengstorff and San Antonio gateways even if it is not the most attractive or direct route in or out of North Bayshore. Some physical changes to the street network like the extension of Joaquin Road between Charleston Road and Amphitheatre Parkway will add local circulation options that can make the Rengstorff and San Antonio gateways more attractive.

The City has also included congestion pricing, which would help re-distribute traffic to each gateway. Thus, to accommodate additional growth in North Bayshore, traffic would need to fill available capacity at the other locations. The capacities at the Rengstorff Avenue and the Shoreline Boulevard/La Avenida Avenue gateways would not change; these facilities are already heavily used, and they would be most affected by the additional turning traffic from the residential areas conflicting with the peak directional traffic. This is the maximum volume that results in levels of intersection delay and queue lengths that are similar to those that would occur from the already adopted North Bayshore Precise Plan.

Table 4.14-9 shows the calculated capacities for each gateway separately and the peak hour vehicle capacities for all of the North Bayshore area gateways combined. The addition of approximately 1,500 to 3,000 residential units could be accommodated within the calculated gateway capacity.

Table 4.14-9:
Peak Hour Vehicle Capacity by Gateway: NB Precise Plan With Mixed-Use

Gateway	Morning Peak Hour			Evening Peak Hour		
	Inbound	Out-bound	Total	Inbound	Out-bound	Total
1. San Antonio Road between Bayshore Parkway and Casey Avenue	510	190	700	150	550	700
2. Bayshore Parkway between San Antonio Road and Garcia Avenue	950	240	1,190	340	790	1,130
3. Rengstorff Avenue between US 101 Northbound Ramps and Garcia Avenue - Charleston Road	2,650	670	3,290	650	1,790	2,440
4. Shoreline Boulevard between US 101 Northbound Ramps – La Avenida Avenue and Pear Avenue	2,220	620	2,840	1,170	2,010	3,180
5. La Avenida Avenue between Shoreline Boulevard and Inigo Way	N/A	270	270	N/A	580	580
Total	**6,300**	**1,990**	**8,290**	**2,310**	**5,720**	**8,030**

1. Peak hour volumes rounded to nearest 10 vehicles.
Source: See Appendix F of this TIA: *North Bayshore Precise Plan EIR – Vehicle Gateway Capacity with Residential,* Fehr & Peers, December 2016.

4.14.3.3 *Existing with Project Conditions: Project Traffic Volumes*

The addition of residential uses into the North Bayshore Precise Plan area has the potential to change vehicle demand compared to the land uses envisioned in the adopted North Bayshore Precise Plan (2014). This trip generation analysis incorporates the relevant North Bayshore Precise Plan policies related to travel from the office uses (e.g., to achieve the targeted mode shift for the office uses through an extensive TDM program, and to manage arrivals and departures with a vehicle trip cap for development), and specific characteristics of the proposed residential development (e.g., 9,850 small residential dwelling units with an average of 1.75 persons per unit, and standard residential parking supply of 1.2 parking spaces per unit).

A more detailed description of the trip generation analysis and sensitivity tests can be found in the *North Bayshore Precise Plan with Residential – Project Trip Generation Estimates* memorandum in Appendix G of the TIA.

Based on the above-described assumptions, the proposed project would generate 10,540 AM peak-hour vehicle trips (7,230 inbound and 3,310 outbound) and 11,380 PM peak-hour vehicle trips (4,040 inbound and 7,340 outbound). These estimates are shown in Table 4.14-10, along with the adopted North Bayshore Precise Plan gateway capacity and the mixed-use gateway capacity, for comparison.

The amended North Bayshore Precise Plan total (inbound and outbound) peak hour trip generation is approximately 30 percent greater than the total morning peak hour gateway capacity, and approximately 40 percent greater than the evening peak hour gateway capacity.

Table 4.14-10:
Trip Generation Estimates: North Bayshore Precise Plan with Residential

North Bayshore Scenario	Morning Peak Hour Trips			Evening Peak Hour Trips		
	Inbound	Outbound	Total	Inbound	Outbound	Total
Adopted North Bayshore Precise Plan Gateway Capacity	6,980	1,120	8,100	1,780	6,160	7,940
Amended North Bayshore Precise Plan Gateway Capacity	6,300	1,990	8,290	2,310	5,720	8,030
North Bayshore Precise Plan Amended Trip Generation	7,230	3,310	10,540	4,040	7,340	11,380

Notes:
1. Adopted Gateway Capacity was established in the adopted 2014 North Bayshore Precise Plan.
2. Mixed-Use Gateway Capacity based on *North Bayshore Precise Plan with Residential EIR – Vehicle Gateway Capacity with Residential* technical memorandum (Appendix F of the TIA).
3. Amended North Bayshore Precise Plan trip generation based on smaller household size and standard parking supply rates.

Source: Fehr & Peers, February 2017.

Affiliation[111] and Mixed-Use Reduction

One of the primary effects of the addition of housing to the North Bayshore area is to reduce vehicle trips due to an increased proportion of internalized person trips, meaning that some people could accomplish many or all of their daily needs by traveling within North Bayshore using transit and/or active modes rather than crossing one of the external gateways.

Under the adopted 2014 North Bayshore Precise Plan, which contained a modest mixture of retail, entertainment, and office uses, a nine percent reduction (or about 1,680 trips) of the morning peak hour person trips generated within North Bayshore were estimated to remain internal to the site and shift to transit and active modes. Under the various scenarios investigated in the amended North Bayshore Precise Plan, the mixed-use reduction is estimated to increase substantially, both in raw numbers and in percentage, due to the addition of residential uses to a jobs-rich environment. In the amended North Bayshore Precise Plan scenario studied in this impact analysis, the mixed-use reduction percentage doubles to about 18 percent; more importantly, because the total number of person trips increases, the number of person trips reduced more than doubles, from 1,680 to 4,440. Note that the numbers presented above relate to the total trips generated in North Bayshore, from all land use types. If one were to focus solely on trips generated by residential uses, the mixed-use trip reduction would be 27 percent, which is similar to Mountain View's live-work percentage and on the higher end of similar communities and neighborhoods.

These results support the concept that providing housing near jobs increases the likelihood that trips can remain within a local area, thus shortening travel distances and increasing residents' ability to accomplish some travel needs by walking, cycling, or using short-distance transit. These estimates are based on multiple empirical data sources including local trip generation surveys in North Bayshore and at several residential developments in Silicon Valley, trip generation information from comparable mixed-use developments around the country, and the California Household Travel Survey.

While placing housing in close proximity to jobs clearly helps to reduce both the total amount of vehicular travel and the length of those trips, it would be unrealistic to expect that all travel generated by residents would remain internal to a particular site. One reason is that many households, particularly in high-cost locations such as Silicon Valley, have more than one worker, so while one of them may work in the North Bayshore area, it is likely that the other(s) may work elsewhere. Similarly, people travel for many purposes; commuting to and from work typically represents no more than about one-third of a household's total travel, with the rest being trips to schools, shopping, recreational activities, personal business appointments, and many other activities, only a few of which are likely to be available within North Bayshore. Nevertheless, the addition of housing to North Bayshore causes substantial increases in the number and proportion of trips that will remain within the area as described in Appendix G of the TIA.

4.14.3.4 *Existing with Project Conditions: Intersection Levels of Service*

Level of service calculations were conducted to evaluate intersection operations under Existing with Project Conditions. The intersection volumes are shown in Appendix D of the TIA and results of the LOS analysis are summarized in Table 4.14-11, below.

[111] 'Affiliation' in this context refers to persons living and working in the same place.

Table 4.14-11:
Existing With Project Intersection Level of Service

Intersection	Peak Hour[1]	Existing Conditions		Existing With Project Conditions			
		Delay[2] (sec)	LOS[3]	Delay[2](sec)	LOS[3]	Change in Critical V/C	Change in Critical Delay
1. San Antonio Road / Bayshore Parkway (Palo Alto)	AM PM	19.8 29.4	B C	24.5 **>120**	C **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
2. San Antonio Road / US 101 Northbound Ramps (Mountain View)	AM PM	15.1 8.9	B A	22.3 36.0	C D	N/A[4] N/A[4]	N/A[4] N/A[4]
3. San Antonio Road / Charleston Road* (Palo Alto)	AM PM	45.1 46.1	D D	46.9 49.7	D D	+ 0.073 + 0.139	+ 2.7 + 8.1
4. San Antonio Road / Middlefield Road* (Palo Alto)	AM PM	43.4 57.6	D E+	45.2 66.9	D E	+ 0.097 + 0.126	+ 0.9 + 15.1
5. San Antonio Road / Nita Avenue (Palo Alto)	AM PM	3.2 3.3	A A	4.6 4.6	A A	+ 0.070 + 0.090	+ 2.7 + 2.3
6. San Antonio Road / California Street (Mountain View)	AM PM	36.5 33.3	D+ C-	36.8 33.8	D+ C-	+ 0.014 + 0.078	+ 0.4 + 2.3
7. San Antonio Road / El Camino Real* (Mountain View)	AM PM	43.7 47.7	D D	44.4 48.7	D D	+ 0.024 + 0.020	+ 1.0 + 1.0
8. Charleston Road / Fabian Way (Palo Alto)	AM PM	22.2 22.9	C+ C+	28.3 23.5	C C	+ 0.029 + 0.022	+ 10.7 + 0.3
9. Charleston Road / Middlefield Road (Palo Alto)	AM PM	22.1 37.3	C D+	26.1 39.7	C D	+ 0.036 + 0.100	+ 1.6 + 4.3
10. Charleston Road / Alma Street (Palo Alto)	AM PM	33.3 41.4	C- D	37.9 44.6	D+ D	+ 0.056 + 0.043	+ 5.0 + 2.6
11. Bayshore Parkway / Garcia Avenue (Mountain View)	AM PM	11.0 11.5	B B	17.4 15.0	C B	N/A[4] N/A[4]	N/A[4] N/A[4]
12. Salado Drive / Garcia Avenue (Mountain View)	AM PM	12.2 11.7	B B	20.9 **72.7**	C **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
13. Amphitheatre Parkway/ Garcia Avenue-Charleston Road (Mountain View)	AM PM	36.2 **110.7**	D **F**	**>120** **>120**	**F** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
14. Rengstorff Avenue / US 101 Northbound Ramps (Mountain View)	AM PM	2.5 5.8	A A	2.5 11.1	A B	N/A[4] N/A[4]	N/A[4] N/A[4]
15. Rengstorff Avenue / US 101 Southbound Ramps (Mountain View)	AM PM	**58.3** **72.2**	**E** **E**	**81.9** **61.6**	**F** **E**	N/A[4] N/A[4]	N/A[4] N/A[4]
16. Rengstorff Avenue / Leghorn Street (Mountain View)	AM PM	18.1 24.7	B C	17.4 **106.1**	B **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
17. Rengstorff Avenue / Old Middlefield Way (Mountain View)	AM PM	31.8 46.2	C D	32.7 **84.8**	C- **F**	+ 0.006 **+ 0.494**	- 16.0 **+ 3.2**

Table 4.14-11:
Existing With Project Intersection Level of Service

Intersection	Peak Hour[1]	Existing Conditions		Existing With Project Conditions			
		Delay[2] (sec)	LOS[3]	Delay[2](sec)	LOS[3]	Change in Critical V/C	Change in Critical Delay
18. Rengstorff Avenue / Middlefield Road (Mountain View)	AM PM	30.3 34.5	C C-	34.9 34.5	C- C-	+ 0.156 + 0.156	+ 5.0 + 0.7
19. Rengstorff Avenue / Montecito Avenue-Jewell Place (Mountain View)	AM PM	8.2 6.4	A A	8.3 6.9	A A	+ 0.015 + 0.114	+ 0.3 + 0.5
20. Rengstorff Avenue / Central Expressway* (Santa Clara County)	AM PM	50.8 70.9	D E	71.5 **104.0**	E F	+ 0.068 **+ 0.162**	+ 9.0 **+ 59.8**
21. Rengstorff Avenue / California Street (Mountain View)	AM PM	28.2 34.5	C C-	33.3 37.5	C- D+	+ 0.273 + 0.149	+ 8.9 + 8.7
22. Rengstorff Avenue / El Camino Real* (Mountain View)	AM PM	25.3 25.3	C C	32.6 28.8	C- C	+ 0.168 + 0.046	+ 10.3 + 3.6
23. El Monte Avenue / El Camino Real* (Mountain View)	AM PM	34.7 38.6	C- D+	31.9 36.5	C D+	+ 0.042 + 0.019	+ 2.2 + 1.3
24. Springer Road-Magdalena Avenue / Foothill Expressway* (Santa Clara County)	AM PM	**117.0** 51.2	**F** D-	**>120** 53.3	**F** D-	**+ 0.013** + 0.043	**+ 10.8** + 2.5
25. Landings Drive / Charleston Road (Mountain View)	AM PM	9.6 13.9	A B	15.8 17.2	B B	+ 0.366 + 0.206	+ 9.8 + 3.7
26. Alta Avenue / Charleston Road (Mountain View)	AM PM	15.8 28.4	B C	21.6 28.9	C+ C	- 0.005 + 0.050	+ 7.5 - 0.4
27. Huff Avenue / Charleston Road (Mountain View)	AM PM	17.6 22.1	B C+	21.7 19.7	C+ B-	+ 0.050 + 0.003	+ 5.8 - 1.9
28. Joaquin Road / Charleston Road (Unsignalized) (Mountain View)	AM PM	11.8 17.7	B C	24.9 31.4	C C	N/A N/A	N/A N/A
29. Shoreline Boulevard / Crittenden Lane (Mountain View)	AM PM	6.1 8.5	A A	5.9 8.1	A A	+ 0.185 + 0.062	+ 2.2 - 1.1
30. Shoreline Boulevard / Stierlin Court (Mountain View)	AM PM	20.8 21.4	C+ C+	21.3 24.2	C+ C	+ 0.070 + 0.114	+ 0.6 + 4.7
31. Shoreline Boulevard / Charleston Boulevard (Mountain View)	AM PM	29.5 53.2	C D-	33.3 44.4	C D-	+ 0.113 + 0.186	+ 7.7 + 11.9

Table 4.14-11:
Existing With Project Intersection Level of Service

Intersection	Peak Hour[1]	Existing Conditions		Existing With Project Conditions			
		Delay[2] (sec)	LOS[3]	Delay[2](sec)	LOS[3]	Change in Critical V/C	Change in Critical Delay
32. Shoreline Boulevard / Space Park Way (Mountain View)	AM PM	**44.3** 27.2	**E** D	**>120** **>120**	**F** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
33. Shoreline Boulevard / Plymouth Street (Mountain View)	AM PM	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
34. Shoreline Boulevard / Pear Avenue (Mountain View)[5]	AM PM	45.7 46.6	D D	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]
35. Shoreline Boulevard / La Avenida Avenue-US 101 Northbound Ramps (Mountain View)	AM PM	**88.3** **98.2**	**F** **F**	**>120** **>120**	**F** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
36. Shoreline Boulevard / US 101 Southbound Ramps (Mountain View)	AM PM	14.3 12.8	B B	17.4 14.7	B B	N/A[4] N/A[4]	N/A[4] N/A[4]
37. Shoreline Boulevard / Terra Bella Avenue (Mountain View)	AM PM	19.9 22.6	B C	20.5 31.0	C C	N/A[4] N/A[4]	N/A[4] N/A[4]
38. Shoreline Boulevard / Middlefield Road (Mountain View)	AM PM	44.8 **65.8**	D **E**	**72.5** **104.5**	**E** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
39. Shoreline Boulevard / Montecito Avenue-Stierlin Road (Mountain View)	AM PM	22.9 25.7	C+ C	24.2 27.8	C C	+ 0.043 + 0.012	+ 1.4 + 1.0
40. Shoreline Boulevard / Wright Avenue (Mountain View)	AM PM	11.5 13.8	B+ B	11.7 14.2	B+ B	+ 0.039 + 0.011	+ 0.3 + 0.7
41. Shoreline Boulevard / Central Expressway (West)* (Santa Clara County)	AM PM	6.5 5.5	A A	6.8 5.8	A A	+ 0.003 + 0.046	+ 0.1 - 0.3
42. Shoreline Boulevard / Central Expressway (East)[1] (Santa Clara County)	AM PM	13.1 7.5	B A	14.4 7.9	B A	+ 0.006 + 0.045	+ 0.8 + 0.6
43. Shoreline Boulevard / California Street (Mountain View)	AM PM	30.4 33.9	C C-	31.1 35.3	C D+	+ 0.033 + 0.055	+ 1.4 + 2.2
44. Shoreline Boulevard-Miramonte Avenue / El Camino Real* (Mountain View)	AM PM	38.5 38.3	D+ D+	43.4 38.9	D D+	+ 0.131 + 0.013	+ 5.5 + 0.4
45. Miramonte Avenue / Castro Street-Marilyn Drive (Mountain View)	AM PM	15.0 12.1	B B	16.3 12.3	B B	+ 0.031 + 0.025	+ 1.6 + 0.2

Table 4.14-11:
Existing With Project Intersection Level of Service

Intersection	Peak Hour[1]	Existing Conditions		Existing With Project Conditions			
		Delay[2] (sec)	LOS[3]	Delay[2](sec)	LOS[3]	Change in Critical V/C	Change in Critical Delay
46. Miramonte Avenue / Cuesta Drive (Mountain View)	AM PM	33.3 31.7	C- C	33.8 32.0	C- C	+ 0.042 + 0.022	+ 0.7 + 0.3
47. Moffett Boulevard / US 101 Southbound Ramps (Mountain View)	AM PM	12.5 9.3	B A	12.9 10.5	B B+	+ 0.032 + 0.027	+ 0.5 + 5.8
48. Moffett Boulevard / Middlefield Road (Mountain View)	AM PM	32.5 38.6	C- D+	37.0 38.9	D+ D+	+ 0.127 + 0.049	+ 3.3 + 1.2
49. Moffett Boulevard-Castro Street / Central Expressway* (Santa Clara County)	AM PM	48.5 61.9	D E	**93.0** **80.3**	**F** **F**	**+ 0.151** **+ 0.069**	**+ 101.4** **+ 26.4**
50. State Route 85 Southbound Off-Ramps / Central Expressway (Santa Clara County)	AM PM	7.4 15.0	A B	7.6 15.6	A B	+ 0.005 + 0.014	+ 0.2 + 0.3
51. Whisman Road / Middlefield Road (Mountain View)	AM PM	20.5 17.5	C+ B	20.3 17.6	C+ B	+ 0.037 + 0.013	+ 0.0 + 0.2
52. Whisman Station Road / Central Expressway* (Santa Clara County)	AM PM	13.4 15.6	B B	14.8 13.9	B B	+ 0.006 + 0.194	+ 2.1 - 1.1
53. Ellis Street / Middlefield Road (Mountain View)	AM PM	15.8 11.6	B B+	23.5 1.5	C B+	+ 0.249 + 0.204	+ 13.0 + 1.6
54. Ferguson Drive / Central Expressway* (Santa Clara County)	AM PM	7.7 5.3	A A	8.5 5.4	A A	+ 0.021 + 0.025	+ 1.0 + 0.2
55. Bernardo Avenue / Central Expressway (Santa Clara County)	AM PM	10.6 11.3	B+ B+	7.6 8.3	A A	+ 0.019 + 0.014	+ 0.7 - 5.8
56. Mary Avenue / Central Expressway*6 (Santa Clara County)	AM PM	52.0 67.2	D- E	53.2 69.3	D- E	+ 0.020 + 0.012	+ 1.4 + 3.0
57. Bayfront Expressway (SR 84) / University Avenue (Menlo Park)	AM PM	24.2 **82.7**	C **F**	24.9 **116.0**	C **F**	+0.012 **+0.127**	+0.3 **+38.6**
58. Bay Road / University Avenue (East Palo Alto)	AM PM	38.0 47.1	D+ D	39.4 48.3	D D	+0.024 +0.021	+1.8 +1.6
59. Donohoe Street / University Avenue (East Palo Alto)	AM PM	**66.0** 42.5	**E** D	**79.2** 43.2	**E-** D	**+0.080** +0.049	**+18.1** +1.3
60. Donohoe Street / US 101 Northbound Off-Ramp (East Palo Alto)	AM PM	9.1 18.1	A B-	9.2 18.2	A B-	+0.002 +0.005	+0.0 +0.1

Table 4.14-11:
Existing With Project Intersection Level of Service

Intersection	Peak Hour[1]	Existing Conditions		Existing With Project Conditions			
		Delay[2] (sec)	LOS[3]	Delay[2](sec)	LOS[3]	Change in Critical V/C	Change in Critical Delay
61. US 101 Southbound Ramps / University Avenue (East Palo Alto)	AM PM	28.3 25.0	C C	29.1 27.0	C C	+0.026 +0.066	+0.9 +2.8
62. Embarcadero Road / E. Bayshore Road (Palo Alto)	AM PM	44.0 53.6	D D-	53.0 **65.5**	D- **E**	+0.115 **+0.114**	+13.4 **+12.9**
63. Embarcadero Road / Middlefield Road (Palo Alto)	AM PM	33.2 36.6	C- D+	34.2 38.2	C- D+	+0.052 +0.040	+1.2 +1.7
64. Oregon Expressway / Middlefield Road* (Santa Clara County)	AM PM	46.7 47.3	D D	47.7 53.0	D D-	+0.012 +0.050	+0.9 +10.5
65. Arastradero Road-Charleston Road / El Camino Real* (Palo Alto)	AM PM	43.0 46.3	D D	44.0 46.8	D D	+0.035 +0.018	+1.5 +0.7
66. Arastradero Road / Foothill Expressway* (Santa Clara County)	AM PM	59.7 **119.3**	E+ **F**	66.8 **>120**	E **F**	-0.080 **+0.021**	+33.0 **+18.2**
67. Page Mill Road / I-280 Southbound Off Ramp-Arastradero Road (Santa Clara County)	AM PM	**90.4** **73.3**	**F** **F**	**103.0** **84.3**	**F** **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
68. Moffett Boulevard / US 101 Northbound Ramps (Mountain View)	AM PM	15.2 23.5	B C	16.7 26.0	B C	+0.026 +0.048	+1.3 -0.3
69. Moffett Boulevard / Leong Dr (Mountain View)	AM PM	13.6 10.9	B B+	14.6 10.9	B B+	+0.048 0.017	+1.6 +0.4
70. Moffett Boulevard / SR 85 Southbound Ramp (Mountain View)	AM PM	10.0 12.8	A B	12.3 15.6	B C	N/A[4] N/A[4]	N/A[4] N/A[4]
71. New North-South Local Street / Charleston Road (Mountain View)	AM PM	Future Intersection		12.8 25.4	B D	N/A[4] N/A[4]	N/A[4] N/A[4]
72. New North-South Local Street / Shorebird Way (Mountain View)	AM PM	Future Intersection		32.0 **>120**	D **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
73. New North-South Local Street / Space Park Way (Mountain View)	AM PM	Future Intersection		19.7 **>120**	C **F**	N/A[4] N/A[4]	N/A[4] N/A[4]
74. Inigo Way / Pear Avenue (Mountain View)	AM PM	10.2 9.9	B A	23.3 **45.1**	C **E**	N/A[4] N/A[4]	N/A[4] N/A[4]
75. Inigo Way / La Avenida Avenue (Mountain View)	AM PM	10.8 13.4	B B	23.6 **40.1**	C **E**	N/A[4] N/A[4]	N/A[4] N/A[4]

Table 4.14-11:
Existing With Project Intersection Level of Service

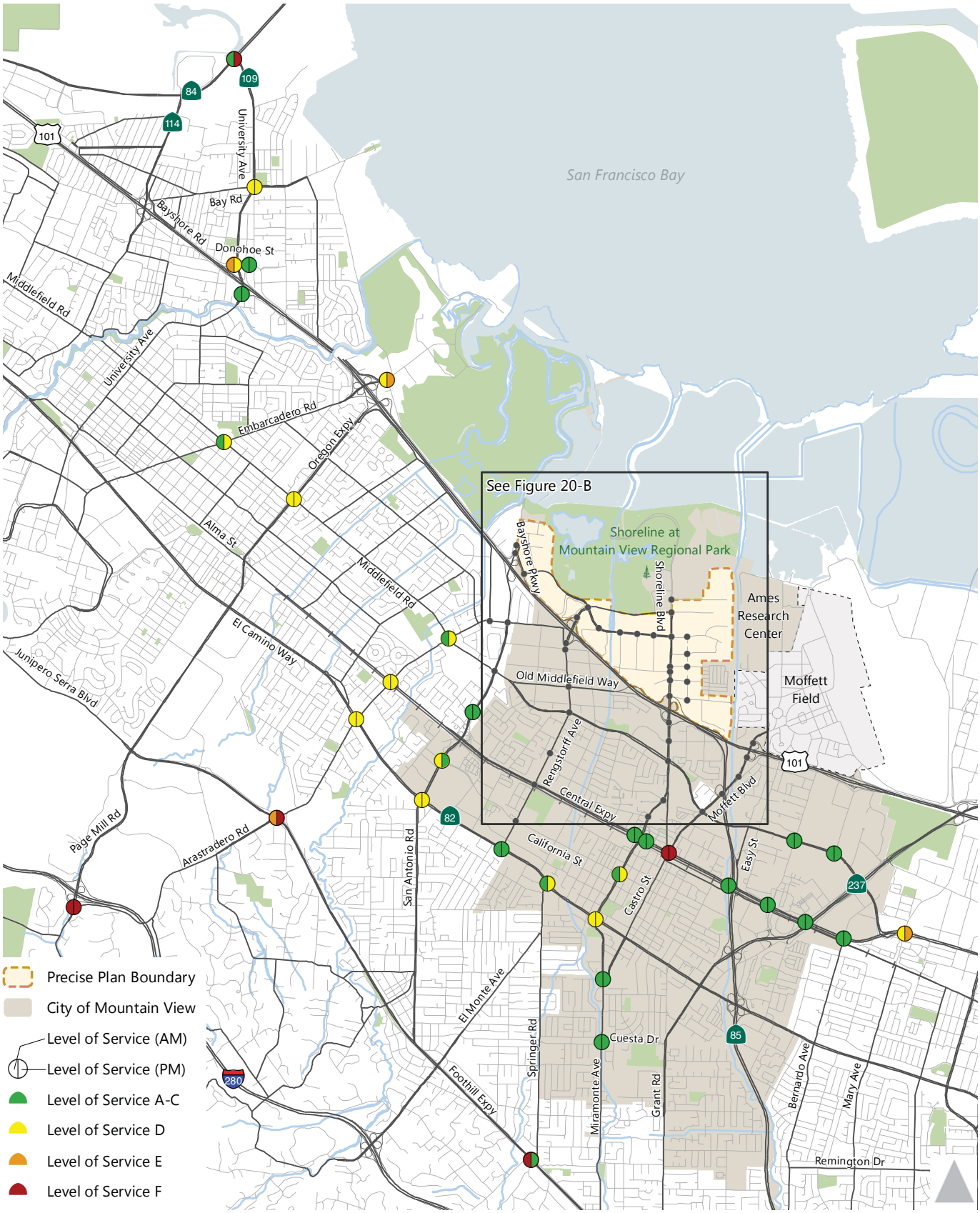
Notes:

1. AM = morning peak hour, PM = evening peak hour.
2. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections and all-way stops-controlled intersections. For Side-Street Stop-Controlled intersections total delay for the worst movement/approach is reported.
3. LOS = Level of Service. LOS calculations conducted using the TRAFFIX and Synchro analysis software packages, which apply the methods described in the 2000 Highway Capacity Manual.
4. Change in critical v/c and change in critical delay are not applicable to Synchro intersections (#1-2, 15-16, 34-38) and unsignalized intersections (#11-12, 32-33). Change in critical v/c and change in critical delay are not applicable to intersection #28 which is unsignalized under Existing Conditions and signalized under Existing with Project Conditions.
5. Evening peak hour observations indicate worse level of service due to Caltrain grade crossing backup at Mary Avenue and Evelyn Avenue. Observed level of service closer to LOS E/F standard.

Bold text indicates unacceptable operations by jurisdiction level of service standard.
Bold and highlighted indicates a significant impact.
* Denotes Congestion Management Program (CMP) intersection.
Source**:** Fehr & Peers, February 2017.

The results for Existing Conditions are included for comparison purposes, along with the projected increases in critical delay and critical volume-to-capacity (V/C) ratios from the addition of project traffic. Critical delay is defined as the delay associated with the critical movements of the intersection, or the movements that require the most "green time" and have the greatest effect on overall intersection operations. The changes in critical delay and critical V/C ratio between Existing and Existing with Project Conditions were used to identify the significant impacts caused by the proposed amended North Bayshore Precise Plan.

The results of the intersection LOS analysis for Existing with Project Conditions are graphically shown in Figures 4.14-12 and 4.14-13.



Source: Fehr & Peers, February 2017.

EXISTING + PROJECT INTERSECTION LEVEL OF SERVICE RESULTS FIGURE 4.14-12

Source: Fehr & Peers, February 2017.

EXISTING + PROJECT INTERSECTION LEVEL OF SERVICE RESULTS, NORTH BAYSHORE AREA FIGURE 4.14-13

The results of the LOS calculations indicate all of the study intersections will operate at levels of service that meet the applicable LOS standard under Existing with Project Conditions except for the following intersections. Implementation of the proposed project would increase motor vehicle traffic and congestion, resulting in potentially significant impacts at the following intersections.

1. San Antonio Road and Bayshore Parkway (Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
12. Salado Drive and Garcia Avenue (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the PM peak hour.
13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and would exacerbate unacceptable intersection operations during the PM peak hour.
15. Rengstorff Avenue and US 101 Southbound ramps (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the AM peak hour.
16. Rengstorff Avenue and Leghorn Street (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
17. Rengstorff Avenue and Old Middlefield Way (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
20. Rengstorff Avenue and Central Expressway (Santa Clara County): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.
24. Springer Road-Magdalena Avenue and Foothill Expressway (Santa Clara County): The addition of project traffic would exacerbate unacceptable intersection operations during the AM peak hour.
32. Shoreline Boulevard and Space Park Way (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the AM peak hour, and would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
33. Shoreline Boulevard and Plymouth Street (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the AM and PM peak hours.
34. Shoreline Boulevard and Pear Avenue (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM and PM peak hours.
35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the AM and PM peak hours.
38. Shoreline Boulevard and Middlefield Road (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and would exacerbate unacceptable intersection operations during the PM peak hour.

49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and would degrade intersection operations from acceptable LOS E to unacceptable LOS F during the PM peak hour.
57. Bayfront Expressway and University Avenue (Menlo Park): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.
59. Donohoe Street and University Avenue (East Palo Alto): The addition of project traffic would exacerbate unacceptable intersection operations during the AM peak hour.
62. Embarcadero Road and East Bayshore Road (Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS E during the PM peak hour.
66. Arastradero Road and Foothill Expressway (Santa Clara County): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.
67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County): The addition of project traffic would exacerbate unacceptable intersection operations during the AM and PM peak hours.
72. New North-South Local Street / Shorebird Way (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.
73. New North-South Local Street / Space Park Way (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.
75. Inigo Way and La Avenida Avenue (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS E during the PM peak hour.

Impact TRANS-1: Implementation of the proposed amended North Bayshore Precise Plan would result in significant impacts to 22 project study intersections under Existing With Project conditions in either the AM and/or the PM peak hours. **[Significant Impact]**

Signal Warrant Analysis

Signal warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared to a sub-set of the standard traffic signal warrants recommended in the 2014 *California Manual on Uniform Traffic Control Devices (CA MUTCD)* guidelines. For the purpose of this TIA, the peak hour warrant was examined for unsignalized intersections operating at LOS F.

The peak-hour signal warrant was evaluated for the unsignalized intersections that operate at LOS F under Existing with Project Conditions. The results of the peak-hour warrant analysis (Table I-1 in Appendix I of the TIA) indicates the following intersections that operate at LOS F and meet peak hour warrants:

12. Salado Drive and Garcia Avenue (PM peak hour)
32. Shoreline Boulevard and Space Park Way (AM and PM peak hours)

33. Shoreline Boulevard and Plymouth Street (AM and PM peak hours)
67. Page Mill Road and Arastradero Road (PM peak hours)
72. North-South Local Street and Shorebird Way (PM Peak Hour)
73. North-South Local Street and Space Parkway (PM Peak Hour)
75. La Avenida Avenue and Inigo Way (PM Peak Hour)

At the intersection of Shoreline Boulevard and Plymouth Street, the peak hour warrant is technically satisfied based on the total eastbound approach volume. Only 20 vehicles, however, turn left from Plymouth Street to Shoreline Boulevard during the AM peak hour, and 30 vehicles make this movement during the PM peak hour. This movement can be difficult to make during the peak hours because of the high volume of traffic on Shoreline Boulevard.

All of the remaining traffic (280 morning and 460 evening vehicles) on the eastbound approach turn right in their own lane and do not require a signal to enter the roadway. Adding a signal at this location would not serve a substantial volume of traffic and would only add delay to traffic on Shoreline Boulevard.

Mitigation Measures for Intersection Impacts: Existing With Project Conditions

Under Existing with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion, resulting in potentially significant impacts at 18 intersections (as described above).

Table 4.14-12 summarizes the affected intersections, potential mitigation measures, and the levels of service for the intersections following mitigation. These measures are described in more detail following the table.

Table 4.14-12:
Existing With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Existing with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
San Antonio Road Gateway							
1. San Antonio Road and Bayshore Parkway (Palo Alto)	Partial Mitigation – Signal timing modifications.	AM PM	24.5 **>120**	C **F**	24.5 **96.1**	C **F**	Significant and Unavoidable
Rengstorff Avenue Gateway							
13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View)	Partial Mitigation – Add an additional northbound right-turn lane and overlap signal phase.	AM PM	**>120** **>120**	**F** **F**	**62.5** **>120**	**E** **F**	Significant and Unavoidable

Table 4.14-12:
Existing With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Existing with Project Conditions				Impact Level After Mitigati
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
15. Rengstorff Avenue and US 101 Southbound Ramps (Mountain View)	No feasible improvements.	AM PM	**81.9** **61.6**	**F** **E**	N/A N/A		Significant and Unavoidable
16. Rengstorff Avenue and Leghorn Street (Mountain View)	Partial Mitigation – Reconfigure eastbound and westbound left turn lanes with a separate left-turn lane and one shared through-right lane with permitted phasing.	AM PM	17.4 **106.1**	B **F**	20.6 **64.4**	C **E**	Significant and Unavoidable
Shoreline Boulevard Gateway							
32. Shoreline Boulevard and Space Park Way (Mountain View)	<u>Two Northbound Left Turn Lanes</u>: Realign Plymouth Street with Space Park Way signalized with protected phasing. (Eastbound/Westbound: left turn and shared through-right, Northbound: two left turns, one through, one shared through-right, Southbound: left turn, one through, one shared through-right). The two northbound left turn lanes should be 425 feet long to minimize queue spillback during the morning peak hour.	AM PM	**>120** **>120**	**F** **F**	14.5 29.6	B C	Significant and Unavoidable
33. Shoreline Boulevard and Plymouth Street (Mountain View)	<u>Option 1 – Two Northbound Left Turn Lanes</u>: Realign Plymouth Street with Space Park Way signalized with protected phasing. (Eastbound/Westbound: left turn and shared through-right, Northbound: two left turns, one through, one shared through-right, Southbound: left turn, one through, one shared through-right). The two	AM PM	**>120** **>120**	**F** **F**	14.5 29.6	B C	Significant and Unavoidable

	northbound left turn lanes should be 425 feet long to minimize queue spillback during the morning peak hour.						
	Option 2 – Single Left Turn Lane with North/South Split Phase: Northbound/southbound split phasing with a single northbound left turn lane.	AM PM	**>120** **>120**	**F** **F**	41.3 24.0	D C	Significant and Unavoidable
34. Shoreline Boulevard and Pear Avenue (Mountain View)	Partial Mitigation – Limited Access from Shoreline Boulevard at Pear Avenue: Modify the northbound approach with three northbound through lanes and a separate right-turn lane with 300 foot storage pocket. Restripe the eastbound approach as a left turn, through lane, and two right turn lanes with a no-right-turn on red condition and the eastbound approach as a left turn lane and one shared through-right lane with east/west split phasing.	AM PM	**>120** **>120**	**F** **F**	29.5 **96.8**	C **F**	Significant and Unavoidable
35. Shoreline Boulevard and La Avenida Avenue-US 101 Northbound Ramps (Mountain View)	Partial Mitigation – Realign US 101 off-ramp with La Avenida Avenue to create a T-intersection.	AM PM	**>120** **>120**	**F** **F**	20.6 **106.5**	C **F**	Significant and Unavoidable
38. Shoreline Boulevard and Middlefield Road (Mountain View)	Partial Mitigation – Add an additional left turn lane for eastbound and westbound movements.	AM PM	**72.5** **104.5**	**E** **F**	**50.3** **104.5**	**D** **F**	Significant and Unavoidable
North Bayshore Precise Plan Intersections							
12. Salado Drive and Garcia Avenue (Mountain View)	Signalize intersection.	AM PM	20.9 **72.7**	C **A**	18.2 21.5	B- C+	Less Than Significant with Mitigation Measures
72. New North-South Local Street /	Signalize the intersection. Each approach would have a left turn lane with	AM PM	32.0 **>120**	D **F**	22.1 23.7	C C	Less Than Significant with

Shorebird Way (Mountain View)	protected left-turn phasing and a shared through-right turn lane.						Mitigation Measures
73. New North-South Local Street / Space Park Way (Mountain View)	Signalize the intersection. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane.	AM PM	19.7 **>120**	C **F**	21.9 28.4	C C	Less Than Significant with Mitigation Measures
32. Inigo Way / La Avenida Avenue (Mountain View)	Signalize the intersection with east/west split phasing.	AM PM	23.6 **40.1**	C **E**	18.5 30.8	B C	Less Than Significant with Mitigation Measures
Off-Site Intersection							
17. Rengstorff Avenue and Old Middlefield Way (Mountain View)	Add a second westbound left turn lane.	AM PM	32.7 **84.8**	C- **F**	32.1 **61.5**	C **E**	Significant and Unavoidable
20. Rengstorff Avenue and Central Expressway (Santa Clara County)	Grade separation.[1]	AM PM	71.5 **104.0**	E **F**	N/A N/A		Significant and Unavoidable
24. Springer Road-Magdalena Avenue / Foothill Expressway* (Santa Clara County)	Restripe northbound approach to include one left-turn lane and one through lane and southbound approach to include one left turn-lane and two through lanes. Modify signal phasing to provide protected left-turns north/south.	AM PM	**>120** 53.3	**F** D-	64.2 47.0	E D	Significant and Unavoidable[3]
49. Moffett Boulevard-Castro Street / Central Expressway (Mountain View)	Closure of northbound movements from Castro Street to Central Expressway and Moffett Boulevard.[4]	AM PM	**93.0** **80.3**	**F** **F**	43.5 26.5	D C	Significant and Unavoidable
57. Bayfront Expressway / University Avenue (Menlo Park)	No feasible improvements.[4]	AM PM	24.9 **116.0**	C **F**	N/A N/A		Significant and Unavoidable
59. Donohoe Street / University Avenue (East	Partial Mitigation – Restripe the westbound approach to include dual left turn lanes, one	AM PM	**79.2** 43.2	**E-** D	**66.8** 24.5	**E** C	Significant and Unavoidable

Palo Alto)	through lane and one right turn lane with protected left turns.						
62. Embarcadero Road / E. Bayshore Road (Palo Alto)	Partial Mitigation – Modify signal cycle length to 120 seconds.	AM PM	53.0 **65.5**	D- **E**	53.0 **61.5**	D **E**	Significant and Unavoidable
66. Arastradero Road / Foothill Expressway (Santa Clara County)	No feasible improvements.[4]	AM PM	66.8 **>120**	E **F**	N/A N/A		Significant and Unavoidable
67. Page Mill Road / I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County)	Signalize the intersection.	AM PM	**103.0** **>120**	**F** **F**	29.9 43.8	C D	Significant and Unavoidable[3]

Notes:
1. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project.
2. Implementation of a grade separated crossing may reduce the impact, but would involve a very high construction cost and is not currently planned. Therefore this mitigation is considered infeasible for the purposes of this document.
3. This facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions.

Bold text indicates intersection operations below the applicable level of service standard.
Bold and highlighted indicates a significant impact per the significance criteria used in this study.
Source: Fehr & Peers, February 2017.

Per the City's policy direction, this environmental analysis assumes no major infrastructure projects that would add significant roadway capacity for automobiles at the North Bayshore gateways. The localized improvements identified as mitigation measures above would marginally improve intersection operations, serve peak vehicle demand, and in some cases improve street connectivity. These improvements are further described below.

San Antonio Road Gateway Improvements

- **#1. San Antonio Road and Bayshore Parkway (Palo Alto).** There are no feasible physical intersection improvements that would improve intersection operations to an acceptable level. The City of Mountain View recently increased vehicle storage for the northbound right-turn lane (San Antonio Road to Bayshore Parkway), and the westbound left-turn lane (Bayshore Parkway to San Antonio Road). The eastbound right-turn lane (Bayshore Parkway to San Antonio Road) should be lengthened to 150 feet. Further lengthening of the westbound left turn lane up to 300 feet, while beneficial to intersection operations, would require additional right-of-way and relocation of the existing sidewalk on the east side of Bayshore Parkway. While not typically considered mitigation, an update of the signal timings would incrementally improve the vehicle operations at this intersection. However, these mitigation measures do not improve intersection operations to acceptable LOS in the PM Peak hour.

Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

Rengstorff Avenue Gateway Improvements

- **#13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View):** To improve operations and improve queueing in the northbound direction, an additional northbound right-turn lane (Rengstorff Avenue to Charleston Avenue) could be added with overlap signal phasing; however, this would not improve intersection operations to an acceptable level of service. The eastbound approach could be reconfigured to include a dedicated right-turn lane; however, this improvement would not improve intersection operations. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#15. Rengstorff Avenue and US 101 Southbound ramps (Mountain View):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Rengstorff Avenue and US 101 Southbound ramps are physically feasible. A northbound right turn lane could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#16. Rengstorff Avenue and Leghorn Street (Mountain View):** Converting the westbound and eastbound approaches to include a separate left-turn lane and a shared through-right lane with permitted east/west phasing would improve intersection operations. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east/west legs. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. Modification of the east/west approaches could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]**

Shoreline Boulevard Gateway Improvements

The intersection improvements described below should be accompanied by a modification of the signal coordination to improve signal progression through the Shoreline Boulevard corridor.

- **#32. Shoreline Boulevard and Space Park Way (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see the mitigation discussion below for the Shoreline Boulevard and Plymouth Street intersection). Because of the high demand for northbound left-turns at this

location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard.

- **#33. Shoreline Boulevard and Plymouth Street (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach. Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. Two options are described here:

  – Option 1 – Dual Northbound Left Turn Lanes: To accommodate the morning peak hour demand, the two left turn lanes would each need to be approximately 425 feet long. This configuration would require additional right-of-way between Space Park Way and Pear Avenue and would affect the configuration of the southbound left turn lane at Shoreline Boulevard and Pear Avenue.

  – Option 2 – Single Split Phase Northbound Left Turn Lane: This improvement would include north/south split phasing and a single northbound left turn lane with an approximately 350 foot storage pocket. To fully accommodate the morning peak hour demand volumes, one of the northbound through lanes would serve as a de facto left turn lane requiring approximately 850 feet of storage; this vehicle queue would extend from Space Park Way through Pear Avenue halfway to the US 101 Northbound Off-Ramps. This configuration could require additional right-of-way. This option improves LOS to acceptable operations during the AM peak hour but does not provide acceptable operations in the PM peak hour.

  Moving Plymouth Street approximately 230 feet further north to align with Space Park Way would increase the potential vehicle storage space along Shoreline Boulevard. Either improvement would require additional right-of-way, removal of trees, and potentially relocation of utilities, but would reduce the project traffic impact to less than significant. However due to the right-of-way constraints and prioritization of bicycle and pedestrian crossing the City is considering the option with the least right-of-way take, which means the northbound left turn lane queue would likely spill back onto Shoreline Boulevard. These improvements would better manage vehicle storage, however, the City is trying to minimize right-of-way and balance considerations to prioritize transit, bicycle, and pedestrians within this corridor too. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. Signalization of Shoreline Boulevard and Plymouth Street as a T-intersection (maintaining the current alignment) is not recommended because the signal would not serve a substantial volume of traffic and would only add delay to traffic on Shoreline Boulevard. **[Significant Unavoidable Impact]**

- **#34. Shoreline Boulevard and Pear Avenue (Mountain View):** This intersection currently acts as a bottleneck during the AM and PM peak hours. To provide more green time to the

through movements along Shoreline Boulevard the Shoreline Boulevard and Pear Avenue intersection could be modified to include:

- Restripe westbound approach as left turn lane and one shared through-right lane.
- Restripe eastbound approach as a left turn lane, through lane, and two right turn lanes with a no-right turn on red condition.
- Reconfigure the northbound approach with three northbound through lanes (no left turn access), and a northbound right turn lane. Create 300 foot northbound right-turn pocket to bypass the Shoreline Boulevard queue and provide space for right turn vehicles to wait while pedestrians cross the east leg of the intersection.

This option limits access from Shoreline Boulevard to/from the parcels currently occupied by the movie theater, fitness center, and dance studio. With this option, the morning peak hour operations would improve to LOS C; the evening peak hour operations would operate at LOS F. This improvement may require additional right-of-way, removal of trees, and potentially relocation of utilities.

These improvements would have secondary effects on the Shoreline Boulevard and Plymouth Street intersection because the northbound left turns at Pear Avenue would need to divert to Plymouth Street. To address the storage space needs, this option would also require two 500-foot northbound left turn lanes from Shoreline Boulevard to Plymouth Street (see the Option 1 mitigation for the Shoreline Boulevard and Plymouth Street-Space Park Way intersection mitigation #33). Under this mitigation measure, the Plymouth Street intersection would operate at LOS B (15.9 seconds of delay) and LOS C (34.6 seconds of delay) during the AM and PM peak hours, respectively.

This limited access configuration results in acceptable level of service at the Shoreline Boulevard and Pear Avenue intersection during the AM peak hour, but would limit access to land uses west of Shoreline Boulevard at Pear Avenue and would shift some traffic to the Shoreline Boulevard and Plymouth Street-Space Park Way intersection. In consideration of the potential for right-of-way constraints that could affect the feasibility, the impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]**

- **#35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View):** This five-legged intersection serves approximately 44 percent of all inbound and outbound traffic accessing the North Bayshore area during the morning peak hour and 51 percent during the evening peak hour. As currently configured, vehicles destined for areas east of Shoreline Boulevard must travel through the Shoreline Boulevard and Pear Avenue intersection to access La Avenida Avenue. The realignment of the US 101 northbound ramps would create a new T-intersection west of the Inigo Way and La Avenida Avenue intersection (shown in mitigation analysis in Appendix J). This intersection would include east/west intersection modifications at the Shoreline Boulevard and La Avenida Avenue intersection and the Inigo Way and La Avenida Avenue intersection. These improvements would improve the overall intersection to an acceptable level of operation in the AM peak hour. Appendix J provides the intersection volume and level of services results for the study

intersections (#31 to 35 and 71 to 75, plus the realigned ramp intersection #76) with affected by the ramp realignment.

With this realignment of the US 101 northbound off-ramp, three notable shifts occur (inbound traffic summarized below):

- Shift from Shoreline Boulevard to the new local north/south street between Charleston Road and Pear Avenue. Approximately 700 inbound vehicles during the morning peak hour (340 inbound vehicles from Shoreline Boulevard and 360 inbound vehicles from US 101 northbound off-ramp), and 280 inbound vehicles during the evening peak hour (80 inbound vehicles from Shoreline Boulevard and 170 inbound vehicles from US 101 northbound off-ramp) would shift to Inigo Way and the new north/south local street connecting La Avenida and Charleston Road parallel to Shoreline Boulevard.

- Shift from Pear Avenue to La Avenida. The realignment provides a more direct access path to La Avenida Avenue and the north/south street north of Pear Avenue. Approximately 250 inbound vehicles shift during the morning peak hour, and 180 inbound vehicles during the evening peak hour to La Avenida from Pear Avenue.

- Redistribution of inbound traffic from Shoreline Boulevard to Pear Avenue accessing the proposed Shoreline Commons site (1400 North Shoreline Boulevard). The realignment also shifts about 240 inbound vehicles during the morning peak hour and 30 inbound vehicles during the evening peak hour from the northbound left turn at pear to the westbound through movement.

This redistribution of off-ramp traffic would reduce the traffic at Shoreline Boulevard and La Avenida-US 101 Northbound Ramps and redistribute traffic at the Shoreline Boulevard and Pear Avenue intersection. Outbound La Avenida traffic to southbound Shoreline Boulevard may have difficulty weaving to the westbound left turn lane due to queuing of inbound vehicles entering into North Bayshore. The short spacing between the realigned ramp and Inigo Way may present difficult weaving conditions for inbound vehicles too.

The realignment of the US 101 northbound off-ramp would increase traffic on the new north/south street; this increase in traffic would require signalization of the new north/south local street intersections at Shorebird Way and Space Park Way. The new north/south local street and Charleston Road would also operate unacceptably during the evening peak hour (see Appendix K of the TIA). Although the peak hour signal warrant is not currently met, it would be possible to improve the intersection operations either by signalizing the intersection or by constructing a single-lane roundabout. The determination of which type of improvement would be most appropriate depends in part on the decision about whether to construct a new crossing of Stevens Creek at the end of Charleston Road.

Realignment of the US 101 northbound off-ramp would require coordination with Caltrans. Since it cannot be assumed Caltrans would approve this mitigation measure and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable. However, the City should diligently pursue measures to fully mitigate this impact. **[Significant Unavoidable Impact]**

- **#38. Shoreline Boulevard and Middlefield Road (Mountain View):** Converting the westbound and eastbound approaches to include two left turn lanes, a through lane, and a shared through-right turn lane and signal timing modifications would reduce the project impact. These additional left-turn lanes may require relocation of existing utilities and removal of trees within the median of Middlefield Road. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. This improvement is designed with reversible bus lane project. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

North Bayshore Precise Plan Intersections

- **#12. Salado Drive and Garcia Avenue (Mountain View):** Signalizing this intersection would reduce the impact to a less than significant level. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]**

- **#72. New North-South Local Street and Shorebird Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Shorebird Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]**

- **#73. New North-South Local Street and Space Park Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Space Park Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]**

- **#75. Inigo Way and La Avenida (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, this intersection would need to be signalized. The eastbound approach would have shared left through lane, the southbound approach would have a separate left-turn and right turn lanes, and the westbound approach would have a shared through right-turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Existing with Project Conditions. **[Less than Significant Impact With Mitigation Measures Incorporated in the Project]**

On-Site Intersections and Streets

The amended North Bayshore Precise Plan includes the priority transportation infrastructure described previously and other new local streets, multi-use paths, modifications to existing streets to include wider sidewalks, landscape areas within the median or along the curb, and cycle tracks on one or both sides of the street (refer to Appendix C). These street improvements may cause secondary impacts often associated with constructing new infrastructure or modifying existing facilities, such as the removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists.

Off-Site Intersections

- **#17. Rengstorff Avenue and Middlefield Road (Mountain View):** Adding a second westbound left-turn lane and signal timing modifications would reduce the project impact. This would require widening curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#20. Rengstorff Avenue and Central Expressway (Santa Clara County):** The widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway are potential mitigation measures at this intersection. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project (VTP Project #R12). **[Significant Unavoidable Impact]**

- **#24. Springer Road-Magdalena Avenue and Foothill Expressway (Santa Clara County):** Restriping the northbound approach to include one left-turn lane and one through lane and restriping the southbound approach to include one left-turn lane and two through lanes with protected left-turns north/south would improve operations to an acceptable LOS during the AM and PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]**

- **#49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks crossing

Central Expressway. The city is also considering closing the northbound movements from Castro Street to Central Expressway and Moffett Boulevard. This traffic would use alternative railroad crossings west of this crossing location at Shoreline Boulevard and east of this location at Whisman Road. With the closure of the northbound movements, intersection operations would improve to acceptable LOS in the AM and PM peak hour.

These improvements would have secondary effects on the Shoreline Boulevard and Central Expressway intersection due to the rerouting of traffic caused by this closure. Under this mitigation measure the Shoreline Boulevard and Central Expressway (east) intersection would operate at LOS D (41.5 seconds of delay) and LOS B (15.7 seconds of delay) during the AM and PM peak hours, respectively. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#57. Bayfront Expressway and University Avenue (Menlo Park):** Potential mitigation at this intersection would require grade separation of Bayfront Expressway and University Avenue. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#59. Donohoe Street and University Avenue (East Palo Alto):** Converting the westbound approach to include dual left turn lanes, one through lane and one right turn lane with protected left turns would reduce the project impact at this intersection. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. These modifications do not improve traffic operations to acceptable LOS in the PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#62. Embarcadero Road and E. Bayshore Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at the intersection of Embarcadero Road and East Bayshore Road are physically feasible within the current right-of-way. Modifying cycle length to 120 seconds would reduce the project impact. This modification, however, would not improve traffic operations to acceptable LOS during the PM peak hour. Therefore, the impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#66. Arastradero Road and Foothill Expressway (Santa Clara County):** Potential mitigation at this intersection would require grade separation of Arastradero Road and Foothill Expressway. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Impact]**

- **#67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County):** The installation of a signal would improve operations to an acceptable LOS D operations or better during both peak hours. Signalization is a part of the I-280 and Page Mill Road interchange improvements (VTP 2040 ID #X15 and B48) to accommodate bicycle travel. In addition, Caltrans has been evaluating a safety project at this location that would include signalization. The signalization and intersection improvements will reduce the intersection level of service impact to an acceptable level. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Existing with Project Conditions. **[Significant Unavoidable Impact]**

Transportation System Management

On the local street system, transportation system management (TSM) measures such as adaptive signal timing and intelligent transportation systems (ITS) can improve vehicle travel time reliability and address case-by-case vehicle incidents affecting local travel patterns. TSM measures help to optimize the steady, safe, and orderly flow of vehicle traffic on congested streets and the regional freeway system. These TSM measures are not typically considered capacity enhancements; rather, they are operational improvements designed to complement vehicle trip reduction strategies from the Transportation Demand Management program and the North Bayshore Precise Plan morning peak period trip cap.

The VTP 2040 (October 2014) the VTA is implementing includes a variety of TSM measures to improve the efficiency of the overall transportation system, to permit land use intensification within the Santa Clara Valley while maintaining personal mobility by a variety of travel modes. Some key regional transportation improvements include:

- US 101 auxiliary lane project to improve ramp operations and merging of the freeway-to-freeway HOV lanes
- Local interchange ramp metering
- Conversion of high occupancy vehicle (HOV) lanes to high occupancy toll (HOT) lanes
- ITS features like changeable message signs (CMS) to communicate driver information from the traffic control center.

The intersection mitigation described above includes signal coordination along the Shoreline Boulevard corridor (#34 to #38) and at closely-spaced intersections on San Antonio Road (#1 and 2) and Rengstorff Avenue (#15 and #16) to maximize efficiency of the streets during peak periods. To ensure steady traffic flow, these signal coordination systems have recently been upgraded to adaptive signal timing systems to serve the start and end of the peak period. The use of existing and future

intelligent transportation systems (ITS) such as changeable message signs improves real-time monitoring and management of local vehicle traffic during an incident or local event by suggesting alternate routes.

The North Bayshore Precise Plan TIA does not presuppose any particular outcome of the Shoreline Boulevard Transportation Corridor Study (including potential TSM measures like reversible travel lanes and dedicated transit lanes on Shoreline Boulevard described in the TIA); therefore, some of the mitigations identified in the transportation analysis may be further elaborated upon in the Corridor Study.

4.14.3.5 *Existing with Project Conditions: Freeway Level of Service*

Freeway segments of SR 85, SR 237, I-880, US 101, I-280, SR 17, and SR 87 were analyzed during the AM and PM peak hours to calculate the amount of project traffic projected to be added (see Appendix J of the TIA). The results of the analysis identifying the segments that exceed the VTA's standard are shown in Table J-1 of Appendix I of the TIA. The results of the freeway LOS analysis for Existing with Project Conditions are shown graphically in Figure 4.14-14 and 4.14-15 for mixed-flow and HOV lanes, respectively.

Measured against the VTA CMP level of service standard, the following freeway segments are projected to operate below the applicable level of service standard:

- State Route 85 – Northbound Mixed-Flow Lanes
  - Cottle Road to El Camino Real (AM peak hour)
  - Saratoga-Sunnyvale Road to Stevens Creek Boulevard (AM peak hour)
  - Interstate 280 to State Route 237 (AM peak hour)
- State Route 85 – Northbound HOV Lanes
  - Blossom Hill Road to Winchester Boulevard (AM peak hour)
  - Stevens Creek Boulevard to El Camino Real (AM peak hour)
- State Route 85 – Southbound Mixed-Flow Lanes
  - US 101 to Saratoga Avenue (PM peak hour)
  - SR 17 to Union Avenue (PM peak hour)
- State Route 85 – Southbound HOV Lanes
  - Stevens Creek Boulevard to Saratoga-Sunnyvale Road
- State Route 237 – Eastbound Mixed-Flow Lanes
  - US 101 Ramps to Zanker Road (PM peak hour)
  - McCarthy Boulevard to Interstate 880 – (PM peak hour)
- State Route 237- Eastbound HOV Lanes
  - Lawrence Expressway to Great America Parkway – (PM peak hour)
- State Route 237 – Westbound Mixed-Flow Lanes
  - Interstate 880 to Zanker Road (AM peak hour)
  - McCarthy Boulevard to Zanker Road (PM peak hour)
  - Maude Avenue to El Camino Real (PM peak hour)
  - 85 Ramps to El Camino Real (AM peak hour)
- State Route 237- Westbound HOV Lanes
  - Interstate 880 to McCarthy Boulevard (AM peak hour)

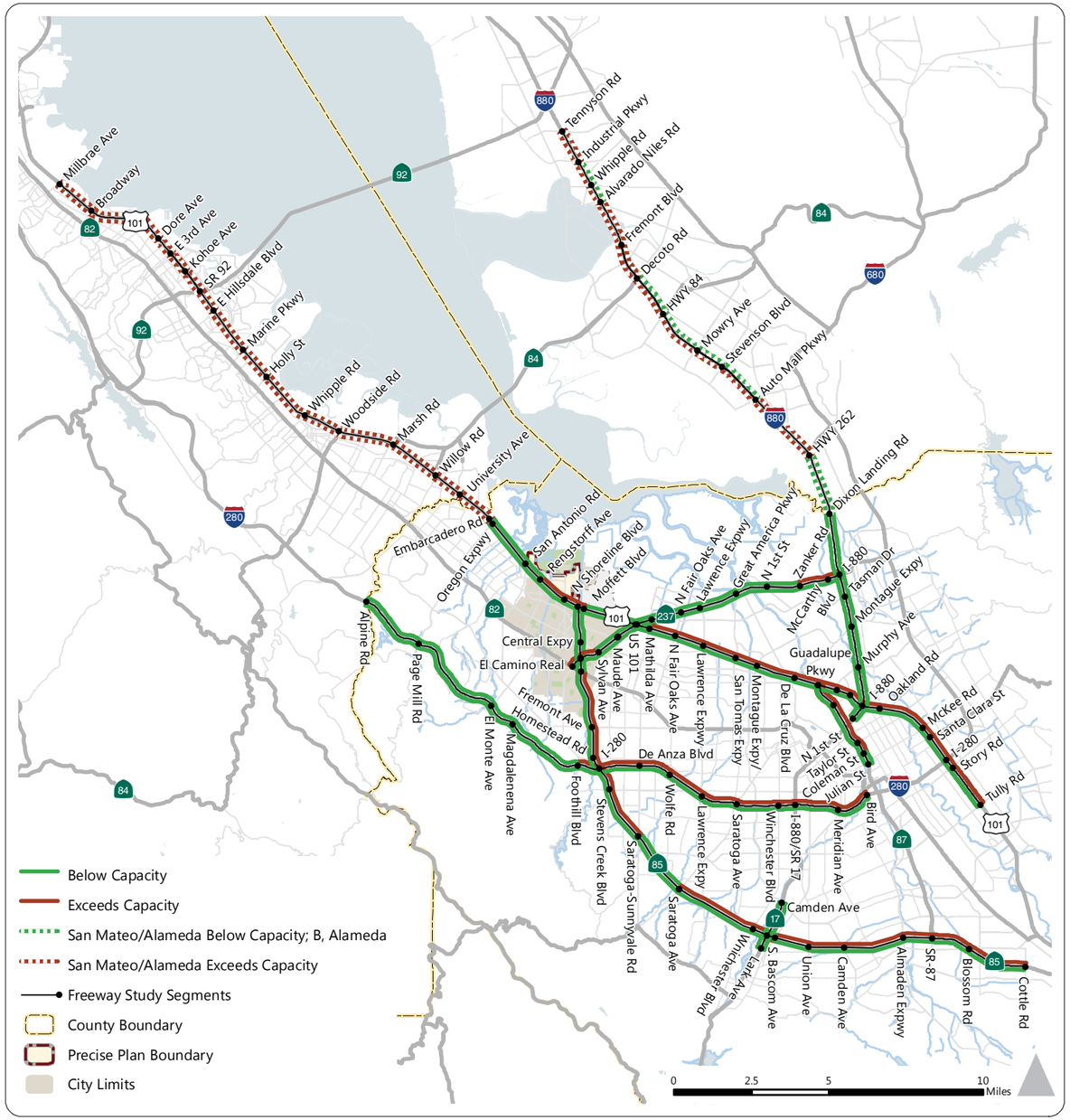
- US 101 – Northbound Mixed-Flow Lanes
  - Tully Road to Mathilda Avenue (AM peak hour)
  - Moffett Boulevard to Millbrae Avenue (AM peak hour)
- US 101 – Northbound HOV Lanes
  - Tully Road to De La Cruz Boulevard (AM peak hour)
  - Montague Expressway/San Tomas Expressway to Bower Avenue/Great America Parkway (AM peak hour)
  - Embarcadero Road to Whipple Road (AM and PM peak hour)
- US 101 – Southbound Mixed-Flow Lanes
  - Embarcadero Road to Rengstorff Avenue (PM peak hour)
  - 85 Ramps to 237 Ramps (PM peak hour)
  - North Fair Oaks to Oakland (PM peak hour)
- US 101 – Southbound HOV Lanes
  - Whipple Road to Oregon Expressway (PM peak hour)
  - Fair Oaks Avenue to De La Cruz Boulevard (PM peak hour)
  - Guadalupe Parkway to Oakland Road (PM peak hour)
- Interstate 280 – Northbound Mixed-Flow Lanes
  - Bird Avenue to Foothill Expressway (AM peak hour)
- Interstate 280 – Northbound HOV Lanes
  - Meridian Avenue to Winchester Boulevard (AM peak hour)
  - Saratoga Avenue to Lawrence Expressway (AM peak hour)
- Interstate 280 – Southbound Mixed- Flow Lanes
  - State Route 85 to Bird Avenue (PM peak hour)
- Interstate 280- Southbound HOV Lanes
  - Winchester Boulevard to Meridian Avenue (PM peak hour)
- State Route 87 – Northbound Mixed-Flow Lanes
  - Skyport Drive to US 101 (AM peak hour)
- State Route 87 – Northbound HOV Lanes
  - Skyport Drive to US 101 (AM peak hour)
- State Route 87 – Southbound Mixed-Flow Lanes
  - US 101 to Skyport Drive (PM peak hour)
- Interstate 880 – Northbound (Mixed-Flow Lanes)
  - State Route 237 to Dixon Landing Road (PM peak hour)
  - State Route 262 to Fremont Boulevard (AM and PM peak hour)
  - Fremont Boulevard to Auto Mall Parkway (PM peak hour)
  - Mowry Avenue to Thornton Avenue (AM peak hour)
  - Fremont Boulevard to Alvarado-Niles Road (AM and PM peak hour)
- Interstate 880 – Southbound (Mixed-Flow Lanes)
  - Tennyson Road to State Route 262 (AM peak hour)
  - Industrial Parkway W to Whipple Road (PM peak hour)
  - Fremont Boulevard to State Route 262 (PM peak hour)
- Interstate 880 – Southbound (HOV Lanes)
  - Tennyson Road to State Route 262 (AM peak hour)
  - Dixon Landing Road to State Route 237 (AM peak hour)

In San Mateo County, detailed freeway density information is not collected regularly for CMP analysis. Rather, floating car travel-time runs are collected every two years. The most recent CMP data shows that US 101 between State Route 92 and the Santa Clara County border (near Embarcadero Road in Palo Alto) operates unacceptably during the morning and evening peak hours: the project contribution to these segments is shown in Table I-1 of Appendix I of the TIA.

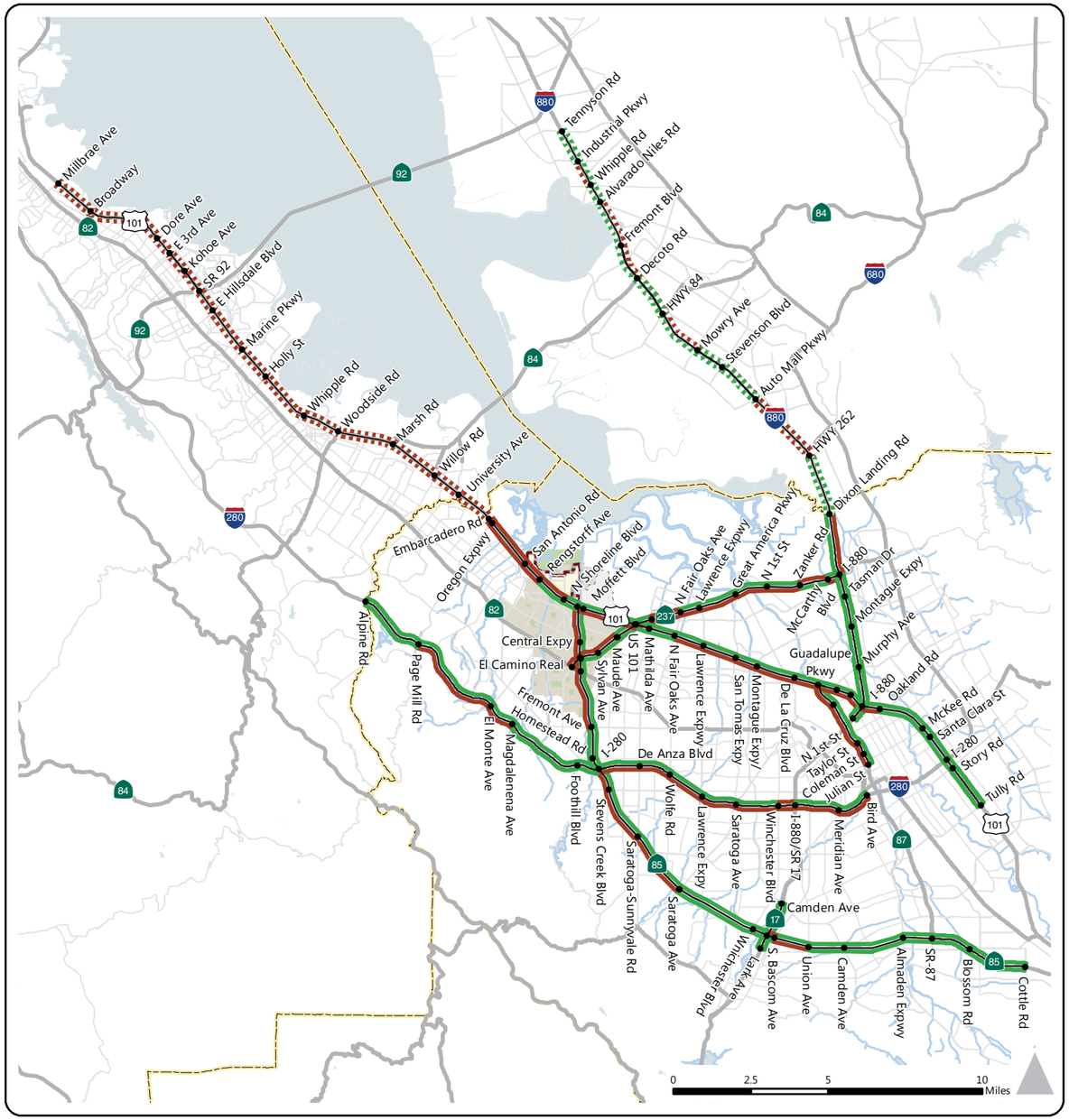
A project is determined to cause a significant impact to freeway facilities based on the criteria described earlier. Existing with Project Conditions freeway segment impact results are shown in Table I-1 of Appendix I of the TIA. Under Existing with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion, resulting in decreased freeway segment levels of service on several segments. This would be considered a potentially significant impact.

Impact TRANS-2: Implementation of the project would result in significant impacts to freeway segments during the AM and/or PM peak hour under Existing with Project Conditions. **[Significant Impact]**

AM Peak Hour



PM Peak Hour

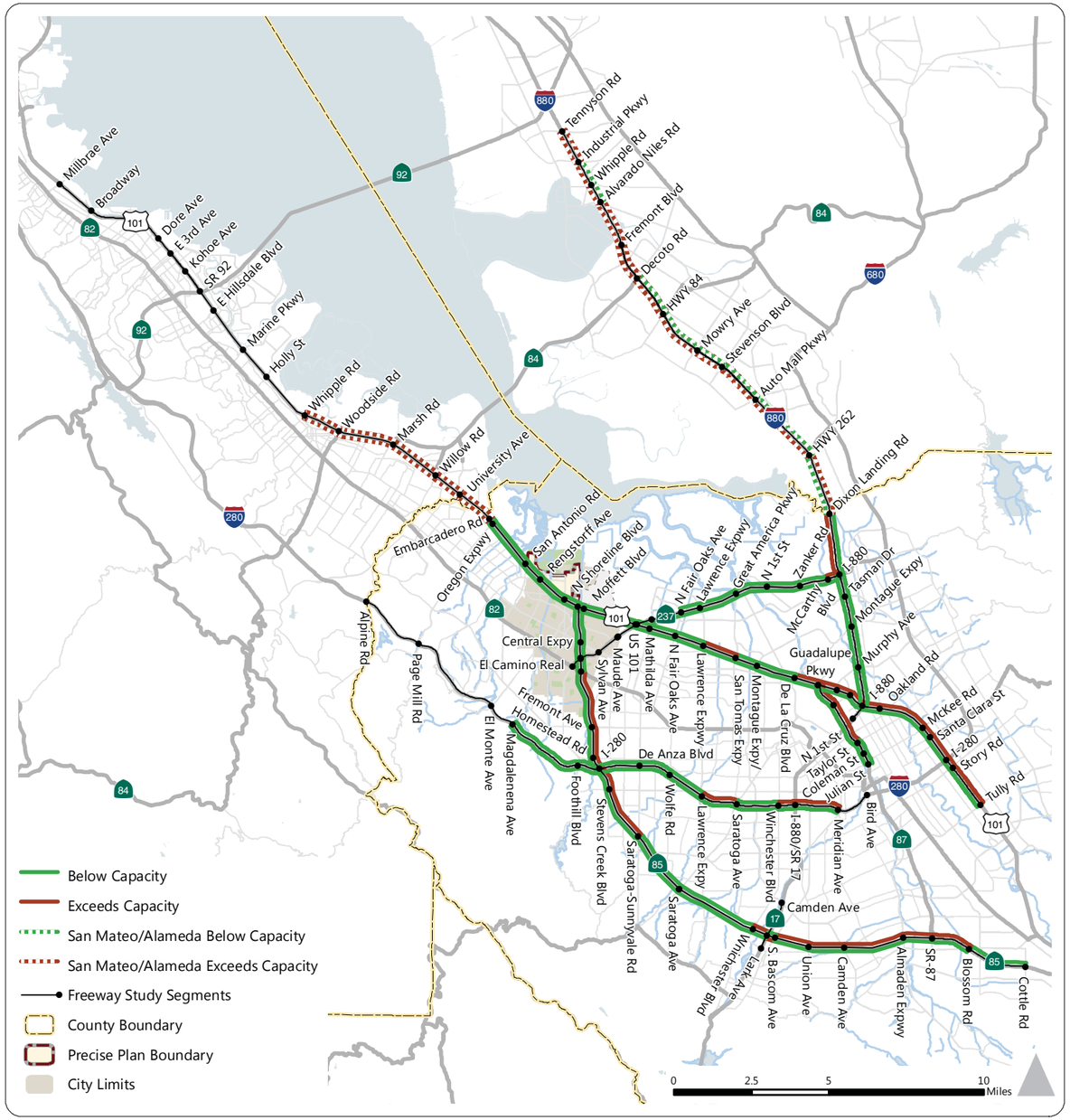


Source: Fehr & Peers, February 2017.

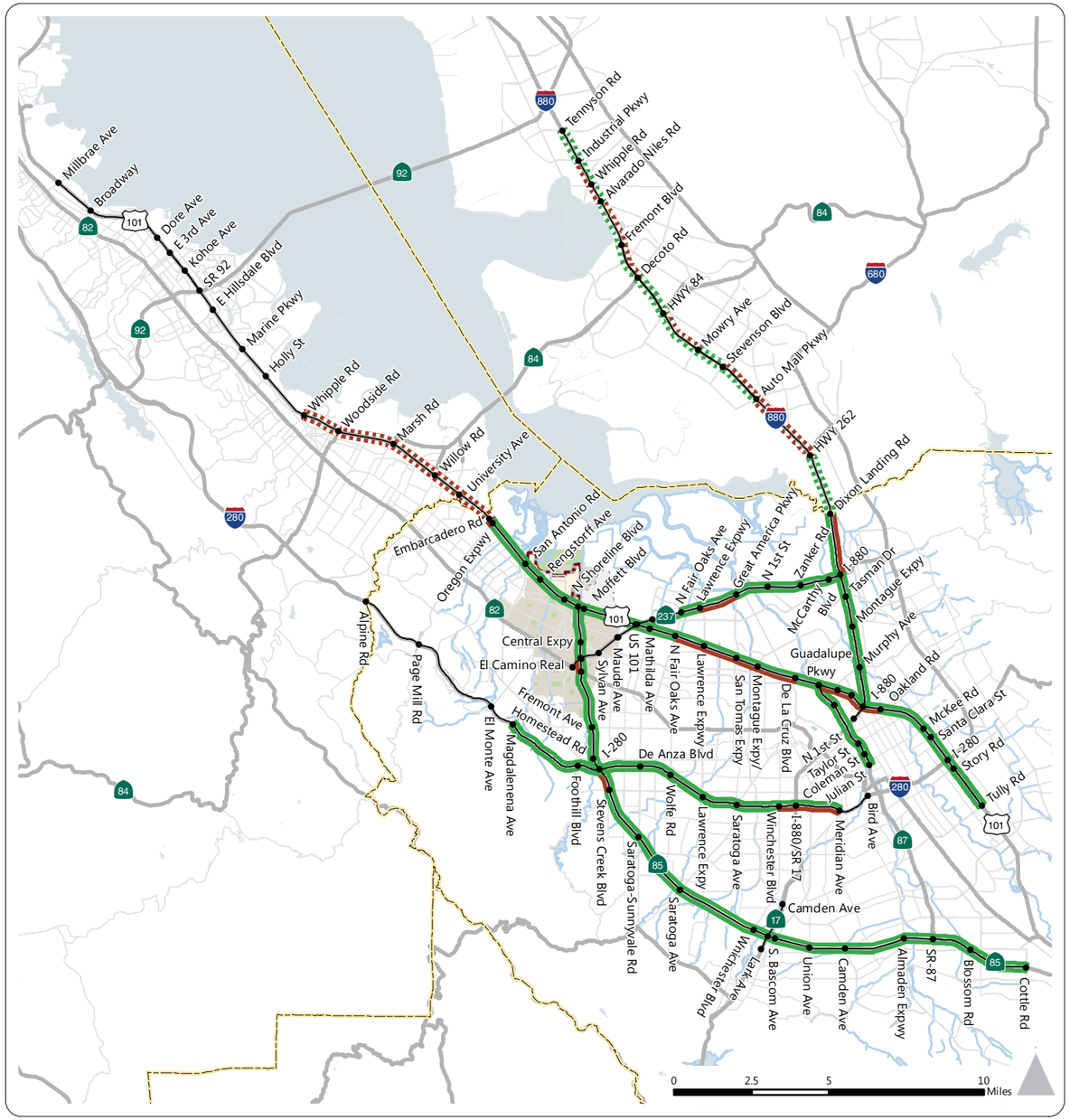
EXISTING + PROJECT FREEWAY ANALYSIS SUMMARY MIXED-FLOW LANES

FIGURE 4.14-14

AM Peak Hour



PM Peak Hour



Source: Fehr & Peers, February 2017.

EXISTING + PROJECT FREEWAY ANALYSIS SUMMARY HOV LANES

FIGURE 4.14-15

Mitigation for Freeway Impacts: Existing With Project Conditions

To improve operations, the affected freeway segments could be widened to meet the current level of service standard. Specifically, the Santa Clara Valley Transportation Authority (VTA) Valley Transportation Plan 2040 (October 2014) identifies freeway express lanes (VTA VTP 2040 Project #H1, H2, H3, and H5), and freeway auxiliary lane projects. These projects will ultimately enhance travel choices for this project, and make more efficient use of the transportation network.

The complete mitigation of freeway impacts, however, is considered beyond the scope of an individual development project, due to the inability of any individual project or City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans, and as such the City cannot guarantee implementation of any improvement in the freeway right-of-way.

The amended North Bayshore Precise Plan includes efforts to reduce single occupant vehicle trips by implementing a comprehensive Transportation Demand Management (TDM) Program, and a morning peak period trip cap. To manage deficient freeway operations, potential TDM measures that reduce peak period vehicle trips are described in the VTA Immediate Implementation Action List (See Appendix L of the TIA). The VTA action list is supplemented by a list of TDM measures described in a report titled *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* by the California Air Pollution Control Officers Association (CAPCOA) (August 2010). While a successful TDM program and trip cap may incrementally reduce peak period freeway traffic, by itself it would not reduce the identified freeway impacts to a less than significant level. Therefore, the addition of project traffic results in a significant and unavoidable impact to the remaining identified freeway segments.

A fair share contribution toward freeway improvement costs could be considered as a mitigation measure and a community benefit for the Statement of Overriding Considerations needed for this significant and unavoidable impact. Significant impacts, however, would not be eliminated until the improvements are constructed. To provide adequate funding, additional sources would be needed, which may include State Transportation Improvement Program funds for projects identified in the VTP, City impact fees, and/or a future regional impact fee. The City of Mountain View could potentially participate in development of a regional fee should it be proposed by regional agencies, such as VTA. **[Significant Unavoidable Impact]**

4.14.3.6 *Existing with Project Conditions: Transit, Bicycle, and Pedestrian Facilities*

Transit Service Impacts

Implementation of the amended North Bayshore Precise Plan may result in an increased demand for transit facilities and services. This project would cause a potentially significant impact to transit facilities and services based on the criteria described earlier in this chapter.

Under Existing with Project Conditions, implementation of the proposed project would increase the number of potential transit users on the various transit systems serving the Precise Plan area. Additional roadway traffic congestion caused by the project may affect several transit corridors by increasing travel times and decreasing headway reliability for transit vehicles.

Potential Impact: Increased Transit Demand

Commuter bus, private shuttle, and fixed-route bus services operate near the site with stops located within walking distance of the Precise Plan area. Rail service also operates within a short shuttle ride of the area. The proposed project is estimated to generate up to approximately 6,800 peak hour transit passengers. The addition of passengers from the project will increase demand on the private and public transit systems. Increasing frequency and/or capacity of the bus service could mitigate this impact. An effort to increase transit capacity would likely be a partnership between the City of Mountain View Transportation Management Association (TMA) and the VTA. The stated purpose of the City of Mountain View TMA is to address concerns of the TMA members and the community to reduce congestion and improve connectivity by the following means (Article 2 section 1.2 of the draft Mountain View TMA):

- Reduce single-occupant vehicle traffic, address traffic congestion (particularly during peak hours), and reduce greenhouse gas emissions within the City of Mountain View, for the benefit of the Mountain View resident and business community alike;
- Develop transportation system and demand management strategies;
- Provide shuttle service that is open to the public;
- Operate shuttle routes to assist Members in satisfying Transportation Demand Management (TDM) goals established in the Members' separate agreements with the City of Mountain View, with the precise shuttle routes to be agreed to by the Corporation and Members under a separate contractual relationship;
- Implement programs to enhance service connectivity with Caltrain and VTA / Light Rail services;
- Connect workplaces to downtown Mountain View and key retail sites;
- Shift travel modes to mass transit and other non-automotive modes of transportation in Mountain View;
- Secure funding from private employers, landowners, city, regional, state and federal agencies;
- Coordinate non-automotive transportation modes, including bike share and incentive-based transportation alternatives;
- Coordinate the monitoring and reporting of data on TDM measures by Members; and
- Expand transit network.

The City of Mountain View General Plan and the amended North Bayshore Precise Plan include policies to encourage increased in transit ridership, decrease dependence on motor vehicles, and reduce transit delays. The increase in demand for transit service caused by the amended Precise Plan with residential uses would be accommodated by existing and planned improvements to the transit system, such as improving access to transit for local residents and employees (e.g., transit stop enhancements, sidewalk widening, etc.), and improving how transit vehicles to move in and around the North Bayshore area (e.g., new and more frequent bus services, expansion of the VTA and Caltrain systems, provision of transit-focused facilities, etc.). Transit vehicle preemption, signal coordination, and other improvements would help reduce the effect of peak hour traffic congestion on transit operations by reducing person delay and improving vehicle travel time reliability.

While the amended North Bayshore Precise Plan would add between 2,400 and 2,800 more peak hour transit riders over existing conditions, implementation of the proposed project would not disrupt existing or interfere with planned transit services or facilities. The project builds on and is consistent at a policy level with the City of Mountain View General Plan policies that support multimodal transportation options, and the City of Mountain View TMA charter to reduce congestion and improve connectivity. The project also includes physical improvements to accommodate transit vehicles (refer to Chapters 6 and 8 of the amended North Bayshore Precise Plan). Therefore, with implementation of the amended North Bayshore Precise Plan, there will be additional 45 to 75 peak hour transit vehicles provided to accommodate the additional demand, and the project would have a less than significant effect on transit ridership and facilities; no mitigation measures would be required.

Impact TRANS-3: Implementation of the amended North Bayshore Precise Plan would not result in significant effects to transit ridership and facilities. **[Less Than Significant Impact]**

Potential Impact: Increased Transit Vehicle Delay at Congested Intersections:

Project impacts associated with increased vehicle delay at intersections are a result of buses and shuttles operating in mixed-flow lanes with other vehicles. Public agencies such as the VTA will make service changes over time, based on ridership performance standards and land use density targets. Increased or modified public transit service is approved by a publicly appointed decision body (like the VTA board). Transit vehicle preemption, signal coordination, and other improvements would help reduce the magnitude of peak hour congestion on transit operations. Furthermore, the TDM program and AM peak hour vehicle trip cap would minimize the increase in vehicle trips due to the proposed project during the peak hour, and with increased transit ridership the number of transit vehicles will increase on the street system.

Implementation of the amended North Bayshore Precise Plan would not disrupt existing or interfere with planned transit services or facilities; however, the increase in transit vehicles, congestion at the North Bayshore gateways, and increased delay at off-site intersections would delay transit vehicles. Therefore, the project would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact. Transit operational improvements such as signal coordination and transit vehicle preemption could potentially improve the overall reliability of transit in congested areas, but are not likely to fully mitigate this effect.

Impact TRANS-4: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact. **[Significant Unavoidable Impact]**

Bicycle Facilities Impacts

To accommodate future growth in the North Bayshore area, the amended North Bayshore Precise Plan proposes a street network and transportation policies that may result in an increased demand for bicycle facilities. Based on the City of Mountain View General Plan policies, and definition of the

amended North Bayshore Precise Plan, the project is determined to cause a less than significant impact to bicycle facilities, as described below.

Implementation of the proposed project may result in increased demand for bicycle facilities. Specifically, the project is expected to generate demand for bicycle lanes and off-street shared-use paths that allow bicyclists to access adjacent land uses and travel to/from the North Bayshore Precise Plan area.

Within the project site area, two bicycle/pedestrian paths allow access to North Bayshore, via the Permanente Creek Trail and the Stevens Creek Trail. In addition, bicycle lanes are currently provided on:

- Bayshore Parkway between San Antonio Road and Garcia Avenue
- Garcia Avenue between Bayshore Parkway and Rengstorff Avenue-Amphitheatre Parkway
- Charleston Road between Rengstorff Avenue-Amphitheatre Parkway and Shorebird Way
- Shoreline Boulevard between US 101 and Charleston Road
- Rengstorff Avenue between US 101 and Garcia Avenue-Charleston Road
- La Avenida between Inigo Way and Stevens Creek trail

Additional multi-use paths and bicycle routes are identified in the draft North Bayshore Precise Plan (see the conceptual bicycle network and the priority transportation improvements). The proposed project encourages bicycling by improving bicycle connectivity with a street grid network and off-street paths to shorten bicycling distances and provide a higher quality bicycle network (with lower vehicle speeds and volumes where possible). Commuting by bicycle is supported with a street system that enhances bicycle connections at the North Bayshore gateways.

Implementation of the proposed project would not interfere with existing bicycle facilities or conflict with planned bicycle facilities or adopted bicycle system plans, guidelines, policies, or standards. Furthermore, implementation of the proposed amended Precise Plan will create new bicycle facilities and will have a beneficial impact on bicycle circulation and access. Therefore, with implementation of the amended Precise Plan, impacts on bicycle facilities would be less than significant and no mitigation measures would be required.

While the project does not cause significant bicycle-related impacts, there are some improvements that could be made to enhance the bicycle system. For example, bicyclists accessing the project site from the west (e.g., from San Antonio Road) encounter a gap in bicycle facilities on San Antonio Road between Charleston Road and Bayshore Parkway. Bicyclists can circumvent this gap and still access the project site by traveling via Rengstorff Avenue or the Permanente Creek trail; however, this route would increase distances by up to 1/4 mile (from the intersection of San Antonio Road and Middlefield Road and midway on Garcia Avenue between Marine Way and Salado Drive).

Bicycle access to/from the North Bayshore area would be improved by closing the gap on San Antonio Road or by providing an alternate route (such as the planned pedestrian/bicycle overcrossing of US 101 at Adobe Creek/Palo Alto Baylands). The City of Mountain View should continue to work with the City of Palo Alto to address this. Similarly, bicycle connectivity between the Precise Plan area and other nearby neighborhoods would be improved if each North Bayshore gateway (San Antonio Road, Rengstorff Avenue, Shoreline Boulevard, Permanente Creek Trail, and Stevens Creek

Trail) had bicycle facilities that connected at least to Middlefield Road. The City of Mountain View should continue to work on ensuring that such connections are provided.

Impact TRANS-5: Implementation of the amended North Bayshore Precise Plan would not result in significant impacts to bicycle facilities. **[Less Than Significant Impact]**

Pedestrian Facilities Impacts

To accommodate future growth in the North Bayshore area, the amended Precise Plan proposes a street network and transportation policies that may result in an increased demand for pedestrian facilities. Based on the City of Mountain View General Plan policies and Precise Plan standards and guidelines, implementation of the amended North Bayshore Precise Plan would not result in a significant impact to pedestrian facilities.

Implementation of the proposed project may result in increased demand for pedestrian facilities. Specifically, the project is expected to generate demand for sidewalks and off-street shared-use paths that allow pedestrians to access nearby transit stops and adjacent land uses. Crosswalks and pedestrian signals are currently provided at signalized intersections in the study area.

Where sidewalk gaps exist, the amended North Bayshore Precise Plan would close those sidewalk gaps and/or create an alternative route for pedestrians. The proposed project encourages walking by improving pedestrian connectivity with a street grid network and off-street paths to shorten walking distances and improve pedestrian connections to transit stops and to adjacent buildings.

Implementation of the proposed project would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards. Furthermore, implementation of the proposed Precise Plan will create new pedestrian facilities and will have a beneficial impact on pedestrian circulation and access. Therefore, implementation of the amended North Bayshore Precise Plan would result in a less than significant impact on pedestrian facilities, and no mitigation measures would be required.

Impact TRANS-6: Implementation of the amended North Bayshore Precise Plan would not result in significant impacts to pedestrian facilities. **[Less Than Significant Impact]**

4.14.3.7 *Existing with Project Conditions: Other Transportation Effects*

Existing With Project Arterial Levels of Service

An arterial level of service analysis was performed for the Shoreline Boulevard corridor to evaluate operations between Pear Avenue and Middlefield Road. This analysis illustrates how the average vehicle speed along the corridor is affected by the level of traffic volume and the closely spaced intersections. The Existing with Project Conditions arterial street level of service table for Shoreline Boulevard is located in Table H-2 of Appendix H of the TIA.

The corresponding LOS calculation sheets are included in Appendix C. Shoreline Boulevard is divided into four segments with average speed for each segment reported during the morning and evening peak hours. Measured against the local jurisdiction level of service standard, the following

roadway segments operate below the applicable level of service standard (i.e., LOS E or worse for City of Mountain View facilities):

- Northbound Direction
  - Shoreline Boulevard between US 101 southbound ramps and Pear Avenue (AM and PM peak hours)

- Southbound Direction
  - Shoreline Boulevard between Pear Avenue and US 101 northbound ramps (AM and PM peak hours)
  - Shoreline Boulevard between US 101 southbound ramps and Middlefield Road (AM and PM peak hours)

Shoreline Boulevard Transportation Corridor Study

The Shoreline Boulevard Transportation Corridor Study was completed in 2016 and City staff has begun developing more detailed designs to better integrate transit, bicycle and pedestrian improvements along the Shoreline Boulevard corridor between the Precise Plan area and the Downtown Transit Center. At the Shoreline Boulevard gateway to the Precise Plan area, the Shoreline Transportation Corridor Study evaluated options for a new pedestrian and bicycle bridge crossing of US 101, as well as either a transit bridge west of Shoreline Boulevard or dedicated transit lanes on Shoreline Boulevard.

4.14.3.8 *Stevens Creek Bridge Crossings*

The transportation effects of a bridge across Stevens Creek on transportation were evaluated at a conceptual level.[112] The discussion of impacts above are based on two potential bridge locations across Stevens Creek, at Charleston Road and La Avenida Avenue. The design for either of these bridges has not been finalized. The discussion in this section is provided for informational purposes – a more complete assessment of a proposed bridge would require further analysis, including analysis of the transportation network the eastern side of the creek on federal property.

Charleston Road: The Charleston Road bridge crossing would provide a direct connection to the Charleston Road transit boulevard west of Shoreline Boulevard, thus allowing for improved transit circulation and travel times. A bridge at this location would also allow shuttle buses to access North Bayshore without using one of the three congested gateways into the area. Its relatively straight approaches to the creek crossing would be more compatible with a potential future light rail extension. A bridge at this location would accommodate bicyclists and pedestrians from the Bay Trail, and have minimal impact on the local street networks on either side of Stevens Creek.

La Avenida Avenue: The La Avenida Avenue crossing is further south than the Charleston Road crossing. To support this crossing, both the east and west approaches will need additional local street improvements. The configurations of the local street approaches would require more turns, which may make it more difficult to accommodate future light rail vehicles. A bridge at this location would accommodate bicyclists and pedestrian from the Bay Trail.

[112] Fehr & Peers. Memorandum. "North Bayshore Stevens Creek Bridge Crossing Evaluation." March 18, 2016.

Based on the TIA, the following additional information may be used to consider a bridge location:

- The TIA indicates that congestion is expected to be heavy along Shoreline Boulevard and along the new north-south street just east of Shoreline (see, for example, the Year 2030 Cumulative with Project Intersection Level of Service Results).

- A bridge crossing at La Avenida Avenue would be very close to the existing highly congested Shoreline Boulevard gateway, while a bridge crossing at Charleston Road would be farther removed from the existing gateways.

- All vehicles using a La Avenida Avenue bridge crossing would also need to use either Shoreline Boulevard or the new north-south street in order to get to any destination in North Bayshore; thus, a crossing at La Avenida Avenue would not substantially reduce the number of vehicles using Shoreline Boulevard or the new north-south street.

- By contrast, many of the vehicles using a Charleston Road bridge crossing could get to their destinations without using the congested sections of Shoreline Boulevard or the new north-south street; thus, a bridge crossing at Charleston Road does have the potential to reduce the number of vehicles along Shoreline Boulevard or the new north-south street, which may help to reduce the impacts identified along those streets.

Further project-level environmental review would be required before approval of a bridge project. Since either bridge would connect to federal property, in addition to CEQA environmental review, a bridge project would also require coordination with federal agencies and environmental review and analysis under the National Environmental Policy Act (NEPA).

4.14.3.9 *Consistency with Plans*

California Transportation Plan 2040

The California Transportation Plan 2040 defines performance-based goals, policies, and strategies to achieve the state's collective vision for California's future statewide, integrated, multimodal transportation system. Transportation policies in the *North Bayshore Precise Plan* and the City's General Plan call for consideration of all modes of travel, the provision of complete streets to accommodate and encourage use of non-automobile transportation modes to reduce vehicle trip generation and VMT, and to actively coordinate with other agencies to ensure that regional GHG emission standards are met.

Consistency: The General Plan Mobility Element Goal MOB-9, and Policy MOB 9.1, and Actions MOB 9.1.1 and 9.1.2; as well as the amended Precise Plan transportation strategies within Chapters 6, 7, and 8, are in keeping with the goals and policies contained within in the California Transportation Plan 2040.

Consistency with Plan Bay Area (SB 375 Implementation)

North Bayshore is within a PDA identified by the City of Mountain View and in *Plan Bay Area*. This PDA allows for an intensification of highly sustainable and innovative development and includes standards for environmental performance in the area of transportation, specifically future

development under the Precise Plan will be required to meet or exceed standards for a reduction in peak-hour drive alone vehicle trips for non-residential projects.

Consistency: The amended Precise Plan increases the amount of development allowed in the North Bayshore area, as compared to what was envisioned when it was designated as a PDA in *Plan Bay Area*. Additionally, this development-potential increase under the amended Precise Plan is not consistent with the City of Mountain View's General Plan and GGRP assumptions for development, as described previously. The amended Precise Plan, therefore, is not consistent with *Plan Bay Area*. Please refer to the further discussion in Section 4.7, Greenhouse Gas Emissions.

Santa Clara County Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the *Santa Clara County Congestion Management Program* (CMP). The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of the increased gas tax revenues. The CMP legislation requires that each CMP contain the following five mandatory elements: 1) a system definition and traffic level of service standard element; 2) a transit service and standards element; 3) a trip reduction and transportation demand management element; 4) a land use impact analysis program element; and 5) a capital improvement element. The Santa Clara County CMP includes the five mandated elements and three additional elements, including: a county-wide transportation model and data base element, an annual monitoring and conformance element, and a deficiency plan element.

Consistency: As described in this section, the proposed Precise Plan would result in significant level of service impacts to several project study intersections under Existing with Project conditions. The Precise Plan would also result in significant impacts to multiple freeway segments during the both the AM and PM peak hour segments. Mitigation measures included in the Precise Plan would reduce impacts to four study intersections to a less than significant level, but 18 would continue to have significant and unavoidable impacts.

The proposed project includes efforts to reduce single occupant vehicle trips by implementing a comprehensive Transportation Demand Management (TDM) Program, and a morning peak period trip cap. While a successful TDM program and trip cap may incrementally reduce peak period freeway traffic, by itself it would not reduce the remaining identified freeway impacts to a less than significant level. Therefore, the addition of project traffic would result in a significant and unavoidable impact to the remaining identified freeway segments.

Consistency: A fair share contribution toward freeway improvement costs could be considered as a mitigation measure and a community benefit for the Statement of Overriding Considerations that would be required to certify the EIR with significant and unavoidable impacts. However, significant impacts would not be eliminated until the improvements are constructed. To provide adequate funding, additional sources would be needed, which may include State Transportation Improvement Program funds for projects identified in the VTP, City impact fees, and/or a future regional impact fee.

The project also includes design elements to promote pedestrian, bicycling, and transit use to reduce vehicle use and miles traveled, as described in the TDM measures in *Chapter 6: Mobility* of the Precise Plan, Appendix C.

4.14.4 Cumulative Impacts

This section contains the results of the level of service calculations under Year 2030 Cumulative Conditions. Year 2030 cumulative traffic volumes are based on forecasts from the citywide traffic model, including the land uses, priority transportation network infrastructure, and TDM programs proposed in the adopted North Bayshore Precise Plan. Per the Precise Plan policies, Year 2030 Cumulative Conditions are defined as the traffic volumes equal to the North Bayshore peak hour vehicle gateway capacity.

The Year 2030 Cumulative with Project Conditions includes the trip generation for North Bayshore with an additional 3.6 million square feet of office and research and development (R&D) building space with supporting land uses (as compared to Year 2015 conditions), and 9,850 dwelling units.[113]

4.14.4.1 *Year 2030 Cumulative Conditions*

Intersection Levels of Service

Level of service calculations were conducted to evaluate intersection operations under Year 2030 Cumulative Conditions. The results of the LOS calculations indicate that 40 study intersections will operate below the applicable level of service standard according to their designated LOS standard under Year 2030 Cumulative Conditions (refer to Table H-5 of Appendix H of the TIA). These LOS calculations are included Table 4.14-13, below, for informational purposes.

These intersections operate below the applicable level of service standard because of the cumulative effects of vehicular traffic growth, both from the adopted North Bayshore Precise Plan and from other local and regional vehicle traffic from existing and new developments in Mountain View and adjacent cities.

Year 2030 Cumulative Arterial Levels of Service

An arterial level of service analysis was performed for the Shoreline Boulevard corridor to evaluate operations between Pear Avenue and Middlefield Road. The analysis illustrated how the average vehicle speed along the corridor is affected by the level of traffic volume and the closely spaced intersections. The Year 2030 Cumulative Conditions arterial street level of service results for Shoreline Boulevard are shown in Table H-4 of Appendix H of the TIA.

Year 2030 Cumulative Conditions: Freeway Levels of Service

Freeway segments of SR 85, SR 237, I-880, US 101, I-280, SR 17, and SR 87 were analyzed during the AM and PM peak hours to calculate the amount of project traffic projected to be added (see Appendix J of the TIA). The results of the freeway LOS analysis for Year 2030 Cumulative Conditions is shown in Table J-2 of Appendix J of the TIA.

[113] A total of 3.6 million feet of new office development includes all the office and commercial development currently being considered in North Bayshore.

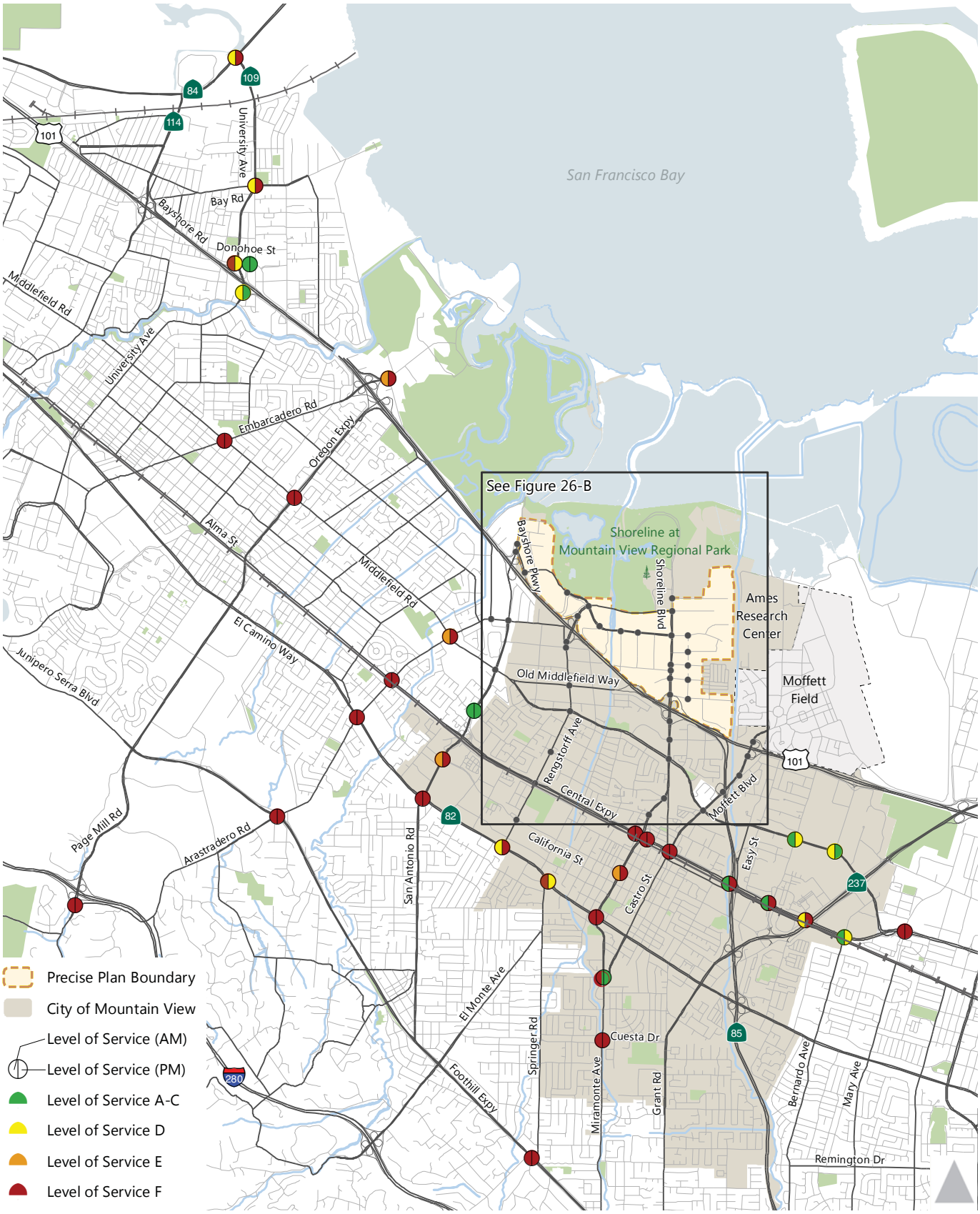
In San Mateo County, detailed freeway density information is not collected regularly for CMP analysis. Rather, floating car travel-time runs are collected every two years. The most recent CMP data shows that US 101 between State Route 92 and the Santa Clara County border (near Embarcadero Road in Palo Alto) operates unacceptably during the morning and evening peak hours.

4.14.4.2 *Year 2030 Cumulative With Project Conditions*

Year 2030 Cumulative With Project Conditions: Intersection Levels of Service

Level of service calculations were conducted to evaluate intersection operations under Year 2030 Cumulative with Project Conditions. The intersection volumes are shown in Appendix D of the TIA and results of the LOS analysis are summarized in Table 4.14-13. The results of the intersection LOS analysis for Year 2030 Cumulative with Project Conditions are graphically shown in Figures 4.14-16 and 4.14-17.

The results for Existing Conditions are included for comparison purposes, along with the projected increases in critical delay and critical volume-to-capacity (V/C) ratios. Critical delay is defined as the delay associated with the critical movements of the intersection, or the movements that require the most "green time" and have the greatest effect on overall intersection operations. The changes in critical delay and critical V/C ratio between Existing and Year 2030 Cumulative with Project Conditions are used to identify cumulative impacts; a comparison to Year 2030 Cumulative Conditions is used as the threshold to identify situations where the amended North Bayshore Precise Plan (i.e., addition of residential uses) makes a significant contribution to that cumulative impact.



Source: Fehr & Peers, February 2017.

YEAR 2030 CUMULATIVE + PROJECT INTERSECTION LOS RESULTS FIGURE 4.14-16

Source: Fehr & Peers, February 2017.

YEAR 2030 CUMULATIVE + PROJECT INTERSECTION LOS RESULTS, NORTH BAYSHORE AREA FIGURE 4.14-17

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
1	San Antonio Rd / Bayshore Pkwy (PA)	AM PM	19.8 29.4	B C	19.5 **57.7**	B **E**	24.5 **>120**	C **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	20.8% **31.8%**
2	San Antonio Rd / US 101 Northbound Ramps (MV)	AM PM	15.1 8.9	B A	46.0 **57.6**	D **E**	**66.0** **88.3**	**E** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**15.6%** **26.4%**
3	San Antonio Rd / Charleston Rd* (PA)	AM PM	45.1 46.1	D D	**84.9** **88.5**	**F** **F**	**88.2** **107.2**	**F** **F**	**+0.453** **+0.450**	**+73.9** **+79.6**	**6.7%** **12.3%**
4	San Antonio Rd / Middlefield Rd* (PA)	AM PM	43.4 57.6	D E+	**86.3** **>120**	**F** **F**	**87.2** **>120**	**F** **F**	**+0.445** **+0.408**	**+75.3** **+92.5**	**2.0%** **4.6%**
5	San Antonio Rd / Nita Ave (PA)	AM PM	3.2 3.3	A A	7.9 24.0	A C	7.9 27.3	A C	+0.250 +0.402	+10.0 +52.3	1.3% 3.9%
6	San Antonio Rd / California St (MV)	AM PM	36.5 33.3	D+ C-	73.4 79.7	E E-	74.3 **83.7**	E **F**	+0.490 **+0.531**	+101.9 **+85.0**	1.3% **2.8%**
7	San Antonio Rd / El Camino Real* (MV)	AM PM	43.7 47.7	D D	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.616** **+0.719**	**+170.9** **+234.3**	**0.6%** **1.1%**
8	Charleston Rd / Fabian Way (PA)	AM PM	22.2 22.9	C+ C+	**72.7** 22.8	**E** C+	**92.7** 24.0	**F** C	**+0.275** +0.253	**+86.1** +2.9	**7.5%** 10.6%
9	Charleston Rd / Middlefield Rd (PA)	AM PM	25.1 37.3	C D+	**57.8** **87.4**	**E+** **F**	**58.6** **101.4**	**E+** **F**	**+0.309** **+0.467**	**+51.7** **+82.9**	**4.8%** **6.9%**
10	Charleston Rd / Alma St (PA)	AM PM	33.3 41.4	C- D	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.639** **+0.813**	**+197.5** **+259.2**	**3.4%** **4.5%**
11	Bayshore Pkwy / Garcia Ave (MV)	AM PM	11.0 11.5	B B	17.8 13.4	C B	17.4 15.0	C B	N/A[5] N/A[5]	N/A[5] N/A[5]	32.2% 40.7%
12	Salado Dr / Garcia Ave (MV)	AM PM	12.2 11.7	B B	16.8 18.0	C C	20.9 **72.7**	C **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	28.9% **40.4%**

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
13	Amphitheatre Pkwy / Garcia Ave-Charleston Rd (MV)	AM PM	36.2 **110.7**	D **F**	**>120** **95.9**	**F** **F**	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**36.3%** **40.6%**
14	Rengstorff Ave / US 101 Northbound Ramps (MV)	AM PM	2.5 5.8	A A	2.7 13.3	A B	2.3 16.5	A B	N/A[5] N/A[5]	N/A[5] N/A[5]	35.2% 35.5%
15	Rengstorff Ave / US 101 Southbound Ramps (MV)	AM PM	**58.3** **72.2**	**E** **E**	**111.6** **>120**	**F** **F**	**108.8** **117.9**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**21.8%** **23.5%**
16	Rengstorff Ave / Leghorn St (MV)	AM PM	18.1 24.7	B C	**59.9** 40.4	**E** D	**86.1** **68.5**	**F** **E**	N/A[5] N/A[5]	N/A[5] N/A[5]	**15.5%** **17.0%**
17	Rengstorff Ave / Old Middlefield Way (MV)	AM PM	31.8 46.2	C D	45.9 **96.4**	D **F**	50.6 **110.1**	D **F**	+0.365 **+0.634**	+28.2 **+111.2**	8.9% **11.5%**
18	Rengstorff Ave / Middlefield Rd (MV)	AM PM	30.3 34.5	C C-	42.3 39.7	D D	44.4 40.4	D D	+0.337 +0.339	+19.9 +9.8	7.6% 9.3%
19	Rengstorff Ave / Montecito Ave-Jewell Pl (MV)	AM PM	8.2 6.4	A A	11.6 11.6	B+ B+	11.5 12.0	B+ B+	+0.318 +0.355	+5.1 +6.7	8.2% 10.2%
20	Rengstorff Ave / Central Expwy* (SCC)	AM PM	50.8 70.9	D E	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.352** **+0.601**	**+175.3** **+139.0**	**3.9%** **4.9%**
21	Rengstorff Ave / California St (MV)	AM PM	28.2 34.5	C C-	**77.7** **>120**	**E-** **F**	**80.9** **>120**	**F** **F**	**+0.678** **+0.935**	**+74.9** **+197.1**	**2.9%** **3.7%**
22	Rengstorff Ave / El Camino Real* (MV)	AM PM	25.3 25.5	C C	39.3 **>120**	D **F**	40.7 **>120**	D **F**	+0.394 **+0.778**	+26.2 **+217.0**	1.5% **2.0%**
23	El Monte Ave / El Camino Real* (MV)	AM PM	34.7 38.6	C- D+	**97.3** 41.4	**F** D	**100.8** 42.7	**F** D	**+0.452** +0.128	**+98.3** +15.1	**1.3%** 1.7%

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
24	Springer Rd-Magdalena Ave / Foothill Expwy* (SCC)	AM PM	**117.0** 51.2	**F** D-	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.773** **+0.482**	**-8.4** **+122.3**	**0.2%** **0.3%**
25	Landings Dr / Charleston Rd (MV)	AM PM	9.6 13.9	A B	22.9 16.9	C+ B	15.8 17.2	B B	+0.366 +0.206	+9.8 +3.7	46.7% 51.3%
26	Alta Ave / Charleston Rd (MV)	AM PM	15.8 28.4	B C	14.4 24.9	B C	21.6 28.9	C+ C	-0.005 +0.050	+7.5 -0.4	46.7% 51.3%
27	Huff Ave / Charleston Rd (MV)	AM PM	17.6 22.1	B C+	15.2 23.8	B C	21.7 19.7	C+ B-	+0.050 +0.003	+5.8 -1.9	46.7% 51.3%
28	Joaquin Rd / Charleston Rd (MV)	AM PM	11.8 17.7	B C	28.6 25.0	C C	24.9 31.4	C C	N/A N/A	N/A N/A	46.7% 51.3%
29	Shoreline Blvd / Crittenden Ln (MV)	AM PM	6.1 8.5	A A	4.5 8.5	A A	5.9 8.1	A A	-0.185 -0.062	+2.2 +1.1	32.7% 43.8%
30	Shoreline Blvd / Stierlin Court (MV)	AM PM	20.8 21.4	C+ C+	21.1 21.4	C+ C+	21.3 24.2	C+ C	+0.070 +0.114	+0.6 +4.7	37.1% 38.4%
31	Shoreline Blvd / Charleston Rd (MV)	AM PM	29.5 53.2	C D-	27.8 40.9	C D	33.6 44.4	C- D	+0.113 -0.186	+7.7 -11.9	39.6% 43.3%
32	Shoreline Blvd / Space Park Way (MV)	AM PM	**44.3** 27.2	**E** D	21.6 25.8	C D	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**42.3%** **50.7%**
33	Shoreline Blvd / Plymouth St (MV)	AM PM	**>120** **>120**	**F** **F**	**75.2** **112.2**	**F** **F**	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**42.3%** **50.7%**
34	Shoreline Blvd / Pear Ave (MV)[6]	AM PM	45.7 46.6	D D	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**39.2%** **49.9%**

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
35	Shoreline Blvd / La Avenida - US 101 Northbound Ramps (MV)	AM PM	**88.3** **98.2**	**F** **F**	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**38.8%** **44.4%**
36	Shoreline Blvd / US 101 Southbound Ramps (MV)	AM PM	14.3 12.8	B B	17.4 21.9	B C	19.7 27.4	B C	N/A[5] N/A[5]	N/A[5] N/A[5]	33.7% 27.3%
37	Shoreline Blvd / Terra Bella Ave (MV)	AM PM	19.9 22.6	B C	35.9 47.4	D D	36.5 **60.5**	D **E**	N/A[5] N/A[5]	N/A[5] N/A[5]	6.4% **14.4%**
38	Shoreline Blvd / Middlefield Rd (MV)	AM PM	44.8 **65.8**	D **E**	**94.1** **>120**	**F** **F**	**101.9** **>120**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**4.8%** **11.0%**
39	Shoreline Blvd / Montecito Ave-Stierlin Rd (MV)	AM PM	22.9 25.7	C+ C	**69.6** **67.0**	**E** **E**	**73.2** **75.1**	**E** **E-**	**+0.593** **+0.487**	**+75.3** **+86.2**	**4.2%** **9.5%**
40	Shoreline Blvd / Wright Ave (MV)	AM PM	11.5 13.8	B+ B	24.7 31.1	C C	25.0 37.0	C D+	+0.396 +0.336	+20.9 +37.5	4.7% 10.6%
41	Shoreline Blvd / Central Expwy (West)* (SCC)	AM PM	6.5 5.5	A A	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.521** **+0.769**	**+256.9** **+527.8**	**1.3%** **1.8%**
42	Shoreline Blvd / Central Expwy (East)* (SCC)	AM PM	13.1 7.5	B A	**104.0** **>120**	**F** **F**	**107.1** **>120**	**F** **F**	**+0.310** **+0.371**	**+205.1** **+284.8**	**1.1%** **2.6%**
43	Shoreline Blvd / California St (MV)	AM PM	30.4 33.9	C C-	**63.5** **>120**	**E** **F**	**66.4** **>120**	**E** **F**	**+0.609** **+0.818**	**+58.4** **+183.4**	**1.9%** **3.7%**
44	Shoreline Blvd-Miramonte Ave / El Camino Real* (MV)	AM PM	38.5 38.3	D+ D+	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.807** **+0.910**	**+242.4** **+305.7**	**1.5%** **2.6%**
45	Miramonte Ave / Castro St-Marilyn Drive (MV)	AM PM	15.0 12.1	B B	**>120** 26.7	**F** C	**>120** 29.2	**F** C	**+0.579** +0.339	**+254.1** +24.1	**2.6%** 4.6%

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
46	Miramonte Avenue / Cuesta Drive (MV)	AM PM	33.3 31.7	C- C	**>120** **93.1**	**F** **F**	**>120** **95.7**	**F** **F**	**+0.808** **+0.658**	**+187.0** **+103.7**	**1.5%** **2.2%**
47	Moffett Blvd / US 101 Southbound Ramps (MV)	AM PM	12.5 9.3	B A	15.8 11.4	B B+	17.2 11.6	B B+	+0.328 +0.102	+5.0 +7.5	6.1% 4.7%
48	Moffett Blvd / Middlefield Rd (MV)	AM PM	32.5 38.6	C- D+	**88.3** **99.4**	**F** **F**	**90.1** **107.4**	**F** **F**	**+0.576** **+0.635**	**+92.9** **+106.2**	**1.3%** **4.8%**
49	Moffett Blvd-Castro St / Central Expwy* (SCC)	AM PM	48.5 61.9	D E	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.596** **1.054**	**+176.1** **+415.0**	**0.8%** **2.4%**
50	SR 85 Southbound Off-Ramp / Central Expwy (SCC)	AM PM	7.4 15.0	A B	16.6 **>120**	B **F**	21.6 **>120**	C+ **F**	+0.340 **+0.782**	+18.4 **+216.9**	2.5% **3.3%**
51	Whisman Rd / Middlefield Rd (MV)	AM PM	20.5 17.5	C+ B	27.7 39.6	C D	27.9 41.3	C D	+0.470 +0.450	+15.0 +38.0	1.6% 3.1%
52	Whisman Station Rd / Central Expwy* (SCC)	AM PM	13.4 15.6	B B	17.5 **>120**	B **F**	18.0 **>120**	B **F**	+0.245 **1.010**	+14.1 **+252.2**	2.8% **4.2%**
53	Ellis St / Middlefield Rd (MV)	AM PM	15.8 11.1	B B+	34.1 16.9	C- B	35.2 17.5	D+ B	+0.370 +0.468	+37.8 +10.1	2.1% 3.9%
54	Ferguson Dr / Central Expwy* (SCC)	AM PM	7.7 5.3	A A	43.1 **114.1**	D **F**	45.2 **>120**	D **F**	+0.475 **+0.765**	+65.3 **+181.5**	2.7% **4.5%**
55	Bernardo Ave / Central Expwy (SCC)	AM PM	10.6 11.3	B+ B+	6.6 41.9	A D	6.6 46.3	A D	+0.013 +0.497	+0.3 +58.2	2.3% 4.4%
56	Mary Ave / Central Expwy*[7] (SCC)	AM PM	52.0 67.2	D- E	**104.4** **>120**	**F** **F**	**103.8** **>120**	**F** **F**	**+0.562** **+0.310**	**+110.8** **+136.7**	**1.6%** **2.8%**
57	Bayfront Expressway (SR 84) / University Ave (MP)	AM PM	24.2 **82.7**	C **F**	49.1 **>120**	D **F**	52.0 **>120**	D- **F**	+0.365 **+0.550**	+45.6 **+191.9**	0.5% **0.8%**

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
58	Bay Rd / University Ave (EPA)	AM PM	38.0 47.1	D+ D	50.9 **95.7**	D **F**	52.2 **98.0**	D- **F**	+0.348 **+0.321**	+21.7 **+68.3**	2.6% **3.9%**
59	Donohoe St / University Ave (EPA)	AM PM	**66.0** 42.5	**E** D	**97.2** 41.5	**F** D	**98.1** 41.9	**F** D	**+0.147** +0.038	**+37.4** -4.9	**2.2%** 3.4%
60	Donohoe St / US 101 Northbound Off-Ramp (EPA)	AM PM	9.1 18.1	A B-	13.7 24.1	B C	13.6 24.1	B C	+0.050 +0.087	+5.2 +5.4	6.3% 8.3%
61	US 101 Southbound Ramps / University Ave (EPA)	AM PM	28.3 25.0	C C	44.0 33.3	D C-	44.0 33.3	D C-	+0.236 +0.174	+16.7 +7.9	0.2% 0.2%
62	Embarcadero Rd / E. Bayshore Rd (PA)	AM PM	44.0 53.6	D D-	**60.7** **76.5**	**E** **E-**	**64.3** **99.2**	**E** **F**	**+0.196** **+0.261**	**+28.7** **+52.1**	**10.0%** **13.7%**
63	Embarcadero Rd / Middlefield Rd (PA)	AM PM	33.2 36.6	C- D+	**87.3** **>120**	**F** **F**	**92.7** **>120**	**F** **F**	**+0.567** **+0.651**	**+64.6** **+129.5**	**2.1%** **3.0%**
64	Oregon Expwy / Middlefield Rd* (SCC)	AM PM	46.7 47.3	D D	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.559** **+0.853**	**+219.4** **+247.1**	**1.8%** **2.1%**
65	Arastradero Rd-Charleston Rd / El Camino Real* (PA)	AM PM	43.0 46.3	D D	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.718** **+0.736**	**+198.8** **+267.6**	**1.4%** **2.2%**
66	Arastradero Rd / Foothill Expwy* (SCC)	AM PM	59.7 **119.3**	E+ **F**	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**+0.692** **+0.889**	**+351.3** **+317.9**	**1.1%** **1.5%**
67	Page Mill Rd / I-280 Southbound Off Ramp-Arastradero Rd (SCC)	AM PM	**90.4** **73.3**	**F** **F**	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	**N/A[5]** **N/A[5]**	**N/A[5]** **N/A[5]**	**2.0%** **2.8%**
68	Moffett Blvd / US 101 Northbound Ramps (MV)	AM PM	15.\2 23.5	B C	17.6 22.6	B C+	17.6 22.4	B C+	+0.335 +0.357	+3.2 +8.8	4.4% 5.7%

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

	Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
			Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)
69	Moffett Blvd / Leong Drive (MV)	AM PM	13.6 10.9	B B+	22.7 15.6	C+ B	24.4 16.1	C B	+0.513 +0.248	+20.2 -1.9	4.1% 4.2%
70	Moffett Blvd / SR 85 Southbound Ramp (MV)	AM PM	10.0 12.8	A B	**>120** **62.1**	**F** **F**	**>120** **90.1**	**F** **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	**2.2%** **4.2%**
71	New North-South Local Street / Charleston Rd (MV)	AM PM	Future Intersection		10.1 17.0	B C	12.8 25.4	B D	N/A[5] N/A[5]	N/A[5] N/A[5]	45.7% 48.3%
72	New North-South Local Street / Shorebird Way (MV)	AM PM	Future Intersection		11.4 15.1	B C	32.0 **>120**	D **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	51.8% **53.6%**
73	New North-South Local Street / Space Park Way (MV)	AM PM	Future Intersection		12.6 15.8	B C	19.7 **>120**	C **F**	N/A[5] N/A[5]	N/A[5] N/A[5]	53.5% **48.5%**
74	Inigo Way / Pear Ave (MV)	AM PM	10.2 9.9	B A	14.1 18.2	B C	23.3 **45.1**	C **E**	N/A[5] N/A[5]	N/A[5] N/A[5]	51.1% 62.4%
75	Inigo Way / La Avenida (MV)	AM PM	10.8 13.4	B B	15.7 16.6	C C	23.6 **40.1**	C **E**	N/A[5] N/A[5]	N/A[5] N/A[5]	54.7% **56.0%**

Notes:

1. Intersection jurisdiction (with Level of Service standard):
   EPA = East Palo Alto (LOS D standard)
   LA = City of Los Altos (LOS D standard)
   MV = City of Mountain View (LOS D standard); LOS E for CMP, Downtown, and San Antonio Shopping Center intersections
   MP = City of Menlo Park (LOS E standard on Bayshore Expressway)
   PA = City of Palo Alto (LOS D standard; LOS E for CMP)
   SCC = Santa Clara County (LOS E standard)
2. AM = morning peak hour, PM = evening peak hour.
3. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 Highway Capacity Manual, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections and all-way stops-controlled intersections. For Side-Street Stop-Controlled intersections total delay for the worst movement/approach is reported.

Table 4.14-13:
Year 2030 Cumulative With Project Intersection Level of Service

Intersection	Peak Hour[2]	Existing Conditions		Year 2030 Cumulative Conditions		Year 2030 Cumulative with Project Conditions				
		Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Δ in Crit. V/C	Δ in Crit. Delay	Project Contribution (%)

4. LOS = Level of Service. LOS calculations conducted using the TRAFFIX and Synchro analysis software packages, which apply the methods described in the 2000 Highway Capacity Manual.
5. Change in critical v/c and change in critical delay are not applicable to Synchro intersections (#1-2, 13-16, 34-38) and unsignalized intersections (#11-12, 32-33). Change in critical v/c and change in critical delay are not applicable to intersection #28 which is unsignalized under Existing Conditions but signalized under Year 2030 Cumulative with Project Conditions.
6. Morning peak hour observations for Existing Conditions indicate worse level of service due to pedestrian crossings and side-street vehicle traffic. Observed level of service closer to LOS E/F threshold.
7. Evening peak hour observations indicate worse level of service due to Caltrain grade crossing backup at Mary Avenue and Evelyn Avenue. Observed level of service closer to LOS E/F threshold.

Bold text indicates intersection operations below the applicable level of service standard.
Bold and highlighted indicates a significant impact per the significance criteria used in this study.
* Denotes Congestion Management Program (CMP) intersection.
Source: Fehr & Peers, February 2017.

Under Year 2030 Cumulative with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion, which would result in potentially significant impacts at 40 intersections. The results of the LOS calculations indicate the following study intersections will operate below the applicable level of service standard according to their designated LOS standard under Year 2030 Cumulative with Project Conditions. These intersections operate below the applicable level of service standard because of the cumulative effects of vehicular traffic growth, both from the amended North Bayshore Precise Plan and from other local and regional vehicle traffic from existing and new developments in Mountain View and adjacent cities.

1. San Antonio Road and Bayshore Parkway (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
2. San Antonio Road and US 101 Northbound Ramps (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the AM peak hour and from acceptable LOS A to unacceptable LOS E during the PM peak hour.
3. San Antonio Road and Charleston Road (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour and from acceptable LOS D to unacceptable LOS F during the PM peak hour.
4. San Antonio Road and Middlefield Road (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour and from acceptable LOS E to unacceptable LOS F during the PM peak hour.
6. San Antonio Road and California Street (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
8. Charleston Road and Fabian Way (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the AM peak hour.
9. Charleston Road and Middlefield Road (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS E during the AM peak hour, and from acceptable LOS D to unacceptable LOS F during the PM peak hour.
10. Charleston Road and Alma Street (Palo Alto): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the AM peak hour, and from acceptable LOS D to unacceptable LOS F during the PM peak hour.
12. Salado Drive and Garcia Avenue (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the PM peak hour.
13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour and would exacerbate unacceptable LOS F intersection operations during the PM peak hour.
15. Rengstorff Avenue and US 101 Southbound Ramps (Mountain View): The addition of cumulative traffic would exacerbate unacceptable intersection operations during the AM

and PM peak hours.

16. Rengstorff Avenue and Leghorn Street (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the AM peak hour, and from acceptable LOS C to unacceptable LOS E during the PM peak hour.
17. Rengstorff Avenue and Old Middlefield Way (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
20. Rengstorff Avenue and Central Expressway (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and from acceptable LOS E to unacceptable LOS F during the PM peak hour.
21. Rengstorff Avenue and California Street (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the AM peak hour, and from acceptable LOS C to unacceptable LOS F during the PM peak hour.
22. Rengstorff Avenue and El Camino Real (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
32 Shoreline Boulevard and Space Park Way (Mountain View): The addition of cumulative traffic would exacerbate unacceptable LOS F intersection operations during the AM peak hour (from LOS E to F), and would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
33. Shoreline Boulevard and Plymouth Street (Mountain View): The addition of cumulative traffic would exacerbate unacceptable intersection operations during the AM and PM peak hours.
34. Shoreline Boulevard and Pear Avenue (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and from acceptable LOS D to unacceptable LOS F during the PM peak hour.
35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View): The addition of cumulative traffic would exacerbate unacceptable LOS F intersection operations during the AM and PM peak hours.
37. Shoreline Boulevard and Terra Bella (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS E during the PM peak hour.
38. Shoreline Boulevard and Middlefield Road (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM peak hour, and from acceptable LOS E to unacceptable LOS F during the PM peak hour.
39. Shoreline Boulevard and Montecito Avenue-Stierlin Road (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS E during the AM peak hour, and from acceptable LOS C to unacceptable LOS E during the PM peak hour.
42. Shoreline Boulevard and Central Expressway (East) (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from LOS B to F in the AM, and acceptable LOS A to unacceptable LOS F during the PM peak hour.

43. Shoreline Boulevard and California Street (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the PM peak hour.
44. Shoreline Boulevard-Miramonte Avenue and El Camino Real (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
45. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the AM peak hour.
46. Miramonte Avenue and Cuesta Drive (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the AM and PM peak hours.
48. Moffett Boulevard and Middlefield Road (Mountain View): The addition of cumulative traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from acceptable LOS E to unacceptable LOS F during the PM peak hour.
50. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the PM peak hour.
52. Whisman Station Road and Central Expressway (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the PM peak hour.
54. Ferguson Drive and Central Expressway (Santa Clara Count): The addition of cumulative traffic would degrade intersection operations from acceptable LOS A to unacceptable LOS F during the PM peak hour.
56. Mary Avenue and Central Expressway (Santa Clara County): The addition of cumulative traffic would degrade intersection operations from acceptable LOS E to unacceptable LOS F during the PM peak hour.
58. Bay Road and University Avenue (East Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
59. Donohoe Street and University Avenue (East Palo Alto): The addition of project traffic would exacerbate unacceptable intersection operations during the AM peak hour.
62. Embarcadero Road and East Bayshore Road (Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS E during the AM peak hour and would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
63. Embarcadero Road and Middlefield Road (Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS C to unacceptable LOS F during the AM peak hour and would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the PM peak hour.
64. Oregon Expressway and Middlefield Road (Santa Clara County): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM and PM peak hours.

65. Arastradero Road-Charleston Road and El Camino Real (Palo Alto): The addition of project traffic would degrade intersection operations from acceptable LOS D to unacceptable LOS F during the AM and PM peak hours.

67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County): The addition of project traffic would exacerbate unacceptable intersection operations during the AM and PM peak hours.

70. Moffett Boulevard and SR 85 Southbound Ramp (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS A to unacceptable LOS F during the AM peak hour and would degrade intersection operations from acceptable LOS B to unacceptable LOS F during the PM peak hour.

72 New North-South Local Street / Shorebird Way (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.

73 New North-South Local Street / Space Park Way (Mountain View): The addition of project traffic would exacerbate unacceptable intersection operations during the PM peak hour.

75. Inigo Way and La Avenida (Mountain View): The addition of project traffic would degrade intersection operations from acceptable LOS B to unacceptable LOS E during the PM peak hour.

Impact C-TRANS-1: Implementation of the proposed Precise Plan would result in significant impacts to 40 project study intersections under Year 2030 Cumulative With Project conditions in either the AM and/or the PM peak hours. **[Significant Impact]**

Mitigation Measures for Intersection Impacts: Year 2030 Cumulative With Project Conditions

Under Year 2030 Cumulative With Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion, resulting in potentially significant impacts at 40 intersections (as described above).

Table 4.14-14 summarizes the affected intersections, potential mitigation measures, and the levels of service for the intersections following mitigation. These measures are described in more detail following the table.

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
San Antonio Road Gateway							
1. San Antonio Road and Bayshore Parkway (Palo Alto)	Partial Mitigation – Signal timing modifications. (Same as Existing with Project Conditions mitigation)	AM PM	24.5 **>120**	C **F**	24.5 **96.1**	C **F**	Significant and Unavoidable
2. San Antonio Road and US 101 Northbound Ramps (Palo Alto)	No feasible improvements.	AM PM	**66.0** **88.3**	**E** **F**	N/A N/A		Significant and Unavoidable
3. San Antonio Road and Charleston (Palo Alto)	No feasible improvements.	AM PM	**88.2** **107.2**	**F** **F**	N/A N/A		Significant and Unavoidable
Rengstorff Avenue Gateway							
13. Amphitheatre Parkway and Garcia-Avenue-Charleston Road (Mountain View)	Partial Mitigation – Add an additional northbound right-turn lane and overlap signal phase. (Same as Existing with Project Conditions mitigation)	AM PM	**>120** **>120**	**F** **F**	**62.5** **>120**	**F** **F**	Significant and Unavoidable
15. Rengstorff Avenue and US 101 Southbound Ramps (Mountain View)	No feasible improvements. (Same as Existing with Project Conditions mitigation)	AM PM	**108.8** **117.9**	**F** **F**	N/A N/A		Significant and Unavoidable
16. Rengstorff Avenue and Leghorn Street (Mountain View)	Partial Mitigation – Reconfigure eastbound and westbound left turn lanes with a separate left-turn lane and one shared through-right lane with permitted phasing. (Same as Existing with Project Conditions mitigation)	AM PM	**86.1** **68.5**	**F** **E**	**59.0** 49.9	**E** D	Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
Shoreline Boulevard Gateway							
32. Shoreline Boulevard and Space Park Way (Mountain View)	Two Northbound Left Turn Lanes: Realign Plymouth Street with Space Park Way signalized with protected phasing. (Eastbound/Westbound: left turn and shared through-right, Northbound: two left turns, one through, one shared through-right, Southbound: left turn, one through, one shared through-right). The two northbound left turn lanes should be 425 feet long to minimize queue spillback during the morning peak hour.	AM PM	**>120** **>120**	**F** **F**	14.5 29.6	B C	Significant and Unavoidable
33. Shoreline Boulevard and Plymouth Street (Mountain View)	Two Northbound Left Turn Lanes: Realign Plymouth Street with Space Park Way signalized with protected phasing. (Eastbound/Westbound: left turn and shared through-right, Northbound: two left turns, one through, one shared through-right, Southbound: left turn, one through, one shared through-right). The two northbound left turn lanes should be 425 feet long to minimize queue spillback during the morning peak hour.	AM PM	**>120** **>120**	**F** **F**	14.5 29.6	B C	Significant and Unavoidable
	Option 2 – Single Left Turn Lane with North/South Split Phase: Northbound/southbound split phasing with a single northbound left turn lane.	AM PM	**>120** **>120**	**F** **F**	41.3 24.0	D C	Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
34. Shoreline Boulevard and Pear Avenue (Mountain View)	Partial Mitigation – Limited Access from Shoreline Boulevard at Pear Avenue: Modify the northbound approach with three northbound through lanes and a separate right-turn lane with 300 foot storage pocket. Restripe the eastbound approach as a two right turn lanes with a no-right-turn on red condition and the eastbound approach as a left turn lane and one shared through-right lane with east/west split phasing. (Same as Existing with Project Conditions mitigation)	AM PM	**>120** **>120**	**F** **F**	32.4 **96.8**	C **F**	Significant and Unavoidable
35. Shoreline Boulevard and La Avenida Avenue-US 101 Northbound Ramps (Mountain View)	Partial Mitigation – Realign off-ramp with La Avenida Avenue to create a T-intersection. (Same as Existing with Project Conditions mitigation)	AM PM	**>120** **>120**	**F** **F**	20.6 **106.5**	C **F**	Significant and Unavoidable
37. Shoreline Boulevard and Terra Bella Avenue (Mountain View)	Reconfigure southbound approach with a right turn lane, two through lanes, and a left turn lane.	AM PM	36.5 **60.5**	D **E**	32.5 51.1	C D	Significant and Unavoidable
38. Shoreline Boulevard and Middlefield Road (Mountain View)	Add an additional left turn lane for eastbound and westbound movements. (Same as Existing with Project Conditions mitigation)	AM PM	**101.9** **>120**	**F** **F**	**75.4** **>120**	**E** **F**	Significant and Unavoidable
North Bayshore Precise Plan Intersections							
12. Salado Drive and Garcia Avenue	Signalize intersection.	AM PM	20.9 **72.7**	C **F**	18.2 21.5	B- C+	Less Than Significant with

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
(Mountain View)							Mitigation Measures
72. New North-South Local Street / Shorebird Way (Mountain View)	Signalize the intersection. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. (Same as Existing with Project Conditions mitigation)	AM PM	32.0 **>120**	D **F**	22.1 23.7	C+ C	Less Than Significant with Mitigation Measures
73. New North-South Local Street (Mountain View)	Signalize the intersection. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. (Same as Existing with Project Conditions mitigation)	AM PM	19.7 **>120**	C **F**	21.9 28.4	C C	Less Than Significant with Mitigation Measures
75. Inigo Way and La Avenida Avenue (Mountain View)	Signalize the intersection with protected left turn phasing. (Same as Existing with Project Conditions mitigation)	AM PM	23.6 **40.1**	C **E**	18.5 30.8	B C	Less Than Significant with Mitigation Measures
Other Off-Site Intersections							
4. San Antonio Road and Middlefield Road (Palo Alto)	No feasible improvements.	AM PM	**87.2** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable
6. San Antonio Road and California Street (Mountain View)	Partial Mitigation – Reconfigure southbound approach with two left-turn lanes, one through lane, one through right lane, and signal timing modifications.	AM PM	**74.3** **83.7**	**E** **F**	47.7 **69.2**	D **E**	Significant and Unavoidable
8. Charleston Road and Fabian Way (Palo Alto)	Change AM cycle length from 40 seconds to 80 seconds.	AM PM	**92.7** 24.0	**F** C	18.0 24.0	B C	Significant and Unavoidable
9. Charleston Road and Middlefield	Partial Mitigation – Change AM cycle length from 60 seconds to 100 seconds.	AM PM	**58.6** **101.4**	**E+** **F**	47.1 **101.4**	D **F**	Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
Road (Palo Alto)							
10. Charleston Road and Alma Street (Palo Alto)	No feasible improvements.[1]	AM PM	**>120** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable
17. Rengstorff Avenue and Old Middlefield Way (Mountain View)	Partial Mitigation – Add a second westbound left turn lane.	AM PM	50.6 **110.1**	D **F**	49.2 **94.7**	D **F**	Significant and Unavoidable
20. Rengstorff Avenue and Central Expressway (Santa Clara County)	Grade separation.[2] (Same as Existing with Project Conditions mitigation)	AM PM	**>120** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable
21. Rengstorff Avenue and California Street Mountain View)	Partial Mitigation – Change AM cycle length from 90 seconds to 110 seconds.	AM PM	**80.9** **>120**	**F** **F**	**78.6** **>120**	**E** **F**	Significant and Unavoidable
22. Rengstorff Avenue and El Camino Real (Mountain View)	No feasible improvements.	AM PM	40.7 **>120**	D **F**	N/A N/A		Significant and Unavoidable
39. Shoreline Boulevard and Montecito Avenue-Stierlin Road (Mountain View)	No feasible improvements.	AM PM	**73.2** **75.1**	**E** **E-**	N/A N/A		Significant and Unavoidable
42. Shoreline Boulevard and Central Expressway (East) (Santa Clara County)	Change PM cycle length from 120 seconds to 150 seconds.	AM PM	**107.1** **>120**	**F** **F**	**107.1** 21.4	**F** C+	Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
43. Shoreline Boulevard and California Street (Mountain View)	No feasible improvements.	AM PM	**66.4** **>120**	**E** **F**	N/A N/A		Significant and Unavoidable
44. Shoreline Boulevard - Miramonte Avenue and El Camino Real (Mountain View)	No feasible improvements.	AM PM	**>120** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable
45. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View)	Modify the intersection to include protected left turns on each approach.	AM PM	**>120** 29.2	**F** C	16.7 15.6	B B	Less Than Significant with Mitigation Measures
46. Miramonte Avenue and Cuesta Drive (Mountain View)	No feasible improvements.	AM PM	**>120** **95.7**	**F** **F**	N/A N/A		Significant and Unavoidable
48. Moffett Boulevard and Middlefield Road (Mountain View)	No feasible improvements.	AM PM	**90.1** **107.4**	**F** **F**	N/A N/A		Significant and Unavoidable
49. Moffett Boulevard - Castro Street and Central Expressway (Santa Clara County)	Partial Mitigation – Closure of northbound movements from Castro Street to Central Expressway and Moffett Boulevard.[2]	AM PM	**>120** **>120**	**F** **F**	44.4 76.6	D E	Significant and Unavoidable
50. Central Expressway and SR-85 Ramps (Santa Clara County)	Partial Mitigation – Reconfigure the westbound approach to include three through lanes.	AM PM	21.6 **>120**	C+ **F**	16.4 **83.3**	B **F**	Significant and Unavoidable
52. Whisman Station Road and Central	No feasible improvements.	AM PM	18.0 **>120**	B **F**	N/A N/A		Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
Expressway (Santa Clara County)							
54. Ferguson Drive and Central Expressway (Santa Clara County)	Partial mitigation – Reconfigure westbound approach to include three through lanes.	AM PM	45.2 **>120**	D **F**	25.8 56.3	C E+	Significant and Unavoidable[3]
56. Mary Ave and Central Expressway (Santa Clara County)	Partial mitigation – Reconfigure eastbound and westbound approach to include four through lanes in each direction.	AM PM	**103.8** **>120**	**F** **F**	**92.6** **>120**	**F** **F**	Significant and Unavoidable
58. Bay Road and University Avenue (East Palo Alto)	Restripe northbound approach to include an exclusive right-turn lane, restripe the westbound approach to include a second westbound left-turn lane, restripe the southbound approach to include a second left-turn lane and modify signal phasing.	AM PM	52.2 **98.0**	D- **F**	37.3 45.6	D+ D	Significant and Unavoidable[3]
59. Donohoe Street and University Avenue (East Palo Alto)	Partial Mitigation – Restripe the westbound approach to include dual left turn lanes, one through lane and one right turn lane with protected left turns. (Same as Existing with Project Conditions mitigation)	AM PM	**98.1** 41.9	**F** D	**87.2** 26.4	**F** C	Significant and Unavoidable
62. Embarcadero Road and E. Bayshore Road (Palo Alto)	Partial Mitigation – Modify signal cycle length to 120 seconds. (Same as Existing with Project Conditions mitigation)	AM PM	**64.3** **99.2**	**E** **F**	**64.3** **82.3**	**E** **F**	Significant and Unavoidable
63. Embarcadero Road and Middlefield Road (Palo Alto)	No feasible improvements.	AM PM	**92.7** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable

Table 4.14-14:
Year 2030 Cumulative With Project Mitigation Summary

Impacted Intersection	Mitigation Measure	Peak Hour	Year 2030 Cumulative with Project Conditions				Impact Level After Mitigation
			Without Mitigation		With Mitigation		
			Delay	LOS	Delay	LOS	
64. Oregon Expressway and Middlefield Road (Santa Clara County)	Partial Mitigation – Construct a second westbound and eastbound left turn lanes.	AM PM	**>120** **>120**	**F** **F**	**>120** **>120**	**F** **F**	Significant and Unavoidable
65. Arastradero Road-Charleston Road and El Camino Real (Palo Alto)	No feasible improvements.	AM PM	**>120** **>120**	**F** **F**	N/A N/A		Significant and Unavoidable
67. Page Mill Road and I-280 Southbound Off Ramp-Arastradero Road (Santa Clara County)	Signalize the intersection with protected left turn phasing and dual left turn lanes and a shared through-right lane on the westbound approach. Restripe the eastbound approach with a dedicated left-turn lane and dedicated right-turn lane.	AM PM	**>120** **>120**	**F** **F**	64.6 68.3	E E	Significant and Unavoidable[23]
70. Moffett Boulevard and SR 85 Southbound Ramp (Mountain View)	Signalize the intersection.	AM PM	**>120** **90.1**	**F** **F**	16.7 13.8	B B	Less Than Significant with Mitigation Measures

Notes:
1. Implementation of a grade separated crossing may reduce the impact but would involve a very high construction cost and is not currently planned. Therefore this mitigation is considered infeasible for the purposes of this document.
2. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project.
3. This facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented: therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions.

Bold text indicates intersection operations below the applicable level of service standard.
Bold and highlighted indicates a significant impact per the significance criteria used in this study.
Source: Fehr & Peers, February 2017.

Per the City's policy direction, this environmental analysis assumes no major infrastructure projects that would add significant roadway capacity for automobiles at the North Bayshore gateways. The localized improvements identified above as mitigation measures above would marginally improve intersection operations, serve peak vehicle demand, and in some cases improve street connectivity. These improvements are further described below.

San Antonio Road Gateway Improvements

- **#1. San Antonio Road and Bayshore Parkway (Palo Alto):** There are no feasible physical intersection improvements that would improve intersection operations to an acceptable level. The City of Mountain View recently increased vehicle storage for the northbound right-turn lane (San Antonio Road to Bayshore Parkway), and the westbound left-turn lane (Bayshore Parkway to San Antonio Road). The eastbound right-turn lane (Bayshore Parkway to San Antonio Road) should be lengthened to 150 feet. Further lengthening of the westbound left turn lane up to 300 feet, while beneficial to intersection operations, would require additional right-of-way and relocation of the existing sidewalk on the east side of Bayshore Parkway. While not typically, considered mitigation an update of the signal timings would incrementally improve the vehicle operations at this intersection. However, these mitigation measures do not improve intersection operations to acceptable LOS in the PM Peak hour. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#2. San Antonio Road and US 101 Northbound Ramps (Palo Alto):** No feasible vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and US 101 Northbound Ramps. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#3. San Antonio Road and Charleston Road (Palo Alto):** No feasible vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and Charleston Road because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

Rengstorff Avenue Gateway Improvements

- **#13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View):** To improve operations and improve queueing in the northbound direction an additional northbound right-turn lane (Rengstorff Avenue to Charleston Avenue) could be added with overlap signal phasing; however, this would not improve intersection operations to an acceptable level of service. The eastbound approach could be reconfigured to include a dedicated right-turn lane; however, this improvement would not improve intersection operations. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#15. Rengstorff Avenue and US 101 Southbound Ramps (Mountain View):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Rengstorff Avenue

and US 101 Southbound ramps are physically feasible. A northbound right-turn lane could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#16. Rengstorff Avenue and Leghorn Street (Mountain View):** Converting the westbound and eastbound approaches to include a separate left-turn lane and a shared through-right lane with permitted east/west phasing would improve intersection operations. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east/west legs. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. Modification of the east/west approaches could be added; however, this would not improve intersection operations to an acceptable level of service. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

Shoreline Boulevard Gateway Improvements

The intersection improvements described below should be accompanied by a modification of the signal coordination to improve signal progression through the Shoreline Boulevard corridor.

- **#32. Shoreline Boulevard and Space Park Way (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see the mitigation discussion below for the Shoreline Boulevard and Plymouth Street intersection). Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. **[Significant Unavoidable Cumulative Impact]**

- **#33. Shoreline Boulevard and Plymouth Street (Mountain View):** The realignment of Plymouth Street with Space Park Way is identified as a potential improvement in the North Bayshore Precise Plan circulation map. To operate acceptably, the new intersection of Shoreline Boulevard with Space Park Way-Plymouth Street should be signalized with protected left-turn phasing on each approach (see Table 14 of the TIA for summary of the geometric configuration). Because of the high demand for northbound left-turns at this location, it is recommended that special consideration be given to accommodating that movement to minimize the likelihood of queue spillback blocking the through movements on Shoreline Boulevard. Two options are described here:

  – Option 1 – Dual Northbound Left Turn Lanes: To accommodate the morning peak hour demand, the two left turn lanes would each need to be approximately 425 feet long. This

configuration would require additional right-of-way between Space Park Way and Pear Avenue and would affect the configuration of the southbound left turn lane at Shoreline Boulevard and Pear Avenue.

- Option 2 – Single Split Phase Northbound Left Turn Lane: This improvement would include north/south split phasing and a single northbound left turn lane with an approximately 350 foot storage pocket. To fully accommodate the morning peak hour demand volumes, one of the northbound through lanes would serve as a de facto left turn lane requiring approximately 850 feet of storage; this vehicle queue would extend from Space Park Way through Pear Avenue halfway to the US 101 Northbound Off-Ramps. This configuration could require additional right-of-way. This option improves LOS to acceptable operations during the AM peak hour but does not provide acceptable operations in the PM peak hour.

Moving Plymouth Street approximately 230 feet further north to align with Space Park Way would increase the potential vehicle storage space along Shoreline Boulevard. This improvement would require additional right-of-way, removal of trees, and potentially relocation of utilities, but would reduce the project traffic impact to less than significant. However due to the right-of-way constraints and prioritization of bicycle and pedestrian crossing the City is considering the option with the least right-of-way take, which means the northbound left turn lane queue would likely spill back onto Shoreline Boulevard. These improvements would better manage vehicle storage, however, the City is trying to minimize right-of-way and balance considerations to prioritize transit, bicycle, and pedestrians within this corridor too. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. Signalization of Shoreline Boulevard and Plymouth Street as a T-intersection (maintaining the current alignment) is not recommended because the signal would not serve a substantial volume of traffic and would only add delay to traffic on Shoreline Boulevard. **[Significant Unavoidable Cumulative Impact]**

- **#34. Shoreline Boulevard and Pear Avenue (Mountain View)**: This intersection currently acts as a bottleneck during the AM and PM peak hours. To provide more green time to the through movements along Shoreline Boulevard the Shoreline Boulevard and Pear Avenue intersection could be modified to include:

  - Restripe westbound approach as left turn lane and one shared through-right lane.
  - Restripe eastbound approach as a left turn lane, through lane, and two right turn lanes with a no-right turn on red condition.
  - Reconfigure the northbound approach with three northbound through lanes (no left turn access), and a northbound right turn lane. Create 300 foot northbound right-turn pocket to bypass the Shoreline Boulevard queue and provide space for right turn vehicles to wait while pedestrians cross the east leg of the intersection.

  This option limits access from Shoreline Boulevard to/from the parcels currently occupied by the movie theater, fitness center, and dance studio. With this option, the morning peak hour operations would improve to LOS C; the evening peak hour operations would operate at LOS F. This improvement may require additional right-of-way, removal of trees, and potentially relocation of utilities.

These improvements would have secondary effects on the Shoreline Boulevard and Plymouth Street intersection because the northbound left turns at Pear Avenue would need to divert to Plymouth Street. To address the storage space needs, this option would also require two 500-foot northbound left turn lanes from Shoreline Boulevard to Plymouth Street (see the mitigation for the Shoreline Boulevard and Plymouth Street-Space Park Way intersection, Mitigation Measure #33). Under this mitigation measure, the Plymouth Street intersection would operate at LOS B (15.9 seconds of delay) and LOS C (34.6 seconds of delay) during the AM and PM peak hours, respectively.

This limited access configuration results in acceptable level of service at the Shoreline Boulevard and Pear Avenue intersection during the AM peak hour, but would limit access to land uses west of Shoreline Boulevard at Pear Avenue and would shift some traffic to the Shoreline Boulevard and Plymouth Street-Space Park Way intersection. In consideration of the potential for right-of-way constraints that could affect the feasibility, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View):** This five-legged intersection serves approximately 44 percent of inbound and outbound traffic accessing the North Bayshore Precise Plan area during the morning peak hour and 51 percent during the evening peak hour. As currently configured, vehicles destined for areas east of Shoreline Boulevard must travel through the Shoreline Boulevard and Pear Avenue intersection to access La Avenida. The realignment of the US 101 northbound ramps would create a new T-intersection west of the Inigo Way and La Avenida intersection (shown in mitigation analysis). This intersection would include east/west intersection modifications at the Shoreline Boulevard and La Avenida Avenue intersection and the Inigo Way and La Avenida Avenue intersection. These improvements would improve the overall intersection to an acceptable level of operation in the AM peak hour. Appendix K of the TIA provides the intersection volume and level of services results for the study intersections (#31 to 35 and 71 to 75 plus the realigned ramp intersection #76) with affected by the ramp realignment.

  With this realignment of the US 101 northbound off-ramp, three notable shifts occur (inbound traffic summarized below):

  – <u>Shift from Shoreline Boulevard to the new local north/south street between Charleston Road and Pear Avenue</u>. Approximately 700 inbound vehicles during the morning peak hour, (340 inbound vehicles from Shoreline Boulevard and 360 inbound vehicles from US 101 northbound off-ramp), and 280 inbound vehicles during the evening peak hour (80 inbound vehicles from Shoreline Boulevard and 170 inbound vehicles from US 101 northbound off-ramp) would shift to Inigo Way and the new north/south local street connecting La Avenida and Charleston Road parallel to Shoreline Boulevard.

  – <u>Shift from Pear Avenue to La Avenida Avenue</u>. The realignment provides a more direct access path to La Avenida Avenue, and the north/south street north of Pear Avenue.

Approximately 250 inbound vehicles shift during the morning peak hour, and 180 inbound vehicles during the evening peak hour to La Avenida from Pear Avenue.

– Redistribution of inbound traffic from Shoreline Boulevard to Pear Avenue accessing the proposed Shoreline Commons site (1400 North Shoreline Boulevard). The realignment also shifts about 240 inbound vehicles during the morning peak hour and 30 inbound vehicles during the evening peak hour from the northbound left turn at pear to the westbound through movement.

This redistribution of off-ramp traffic would reduce the traffic at Shoreline Boulevard and La Avenida-US 101 Northbound Ramps at the Shoreline Boulevard and Pear Avenue intersection. Outbound La Avenida traffic to southbound Shoreline Boulevard may have difficulty weaving to the westbound left turn lane due to queuing of inbound vehicles entering into North Bayshore. The short spacing between the realigned ramp and Inigo Way may present difficult weaving conditions for inbound vehicles too.

The realignment of the US 101 northbound off-ramp would increase traffic on the new north/south street; this increase in traffic would require signalization of the new north/south local street intersections at Shorebird Way and Space Park Way. The new north/south local street and Charleston Road would also operate unacceptably during the evening peak hour (see Appendix K of the TIA). Although the peak hour signal warrant is not currently met it would be possible to improve the intersection operations either by signalizing the intersection or by constructing a single-lane roundabout. The determination of which type of improvement would be most appropriate depends in part on the decision about whether to construct a new crossing of Stevens Creek at the end of Charleston Road.

Realignment of the US 101 northbound off-ramp would require coordination with Caltrans. Since it cannot be assumed Caltrans would approve this mitigation measure and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable. However, the City should diligently pursue measures to fully mitigate this impact. **[Significant Unavoidable Cumulative Impact]**

- **#37. Shoreline Boulevard and Terra Bella Ave (Mountain View):** Converting the southbound approach to include two through lanes and a right turn lane would return the intersection operations to an acceptable level of service. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. The estimated southbound right-turn volume of 150 vehicles does not typically justify a separate right-turn lane and this potential mitigation may require additional right-of-way with the proposed reversible transit lane on Shoreline Boulevard. Therefore, the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#38. Shoreline Boulevard and Middlefield Road (Mountain View):** Converting the westbound and eastbound approaches to include two left turn lanes, a through lane, and a shared through-right turn lane and signal timing modifications would reduce the project

impact. These additional left-turn lanes may require relocation of existing utilities and removal of trees within the median of Middlefield Road. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. This improvement is designed with reversible bus lane project. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

On-Site Intersections and Streets

The North Bayshore Precise Plan includes the priority transportation infrastructure and other new local streets, multi-use paths, modifications to existing streets to include wider sidewalks, landscape areas within the median or along the curb, and cycle tracks on one or both sides of the street (see the North Bayshore Precise Plan for more details). These street improvements may cause secondary impacts often associated with constructing new infrastructure or modifying existing facilities, such as the removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists.

- **#12. Salado Drive and Garcia Avenue (Mountain View):** Signalizing this intersection would reduce the impact to a less than significant level. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

- **#72. New North-South Local Street and Shorebird Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Shorebird Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

- **#73. New North-South Local Street and Space Park Way (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, the intersection of the new north-south local street at Space Park Way would need to be signalized. Each approach would have a left turn lane with protected left-turn phasing and a shared through-right turn lane. This signalization and intersection configuration will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

- **#75. Inigo Way and La Avenida (Mountain View):** With most of the residential development focused east of Shoreline Boulevard, this intersection would need to be signalized. The eastbound approach would have shared left through lane, the southbound approach would have a separate left-turn and right turn lanes, and the westbound approach would have a through right-turn lane. This signalization and intersection improvements will reduce the intersection level of service impact to a less than significant level under Year 2030

Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

Other Off-Site Intersections

- **#4. San Antonio Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of San Antonio Road and Middlefield Road are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#6. San Antonio Road and California Street (Mountain View)**: Reconfiguring the southbound approach to include two southbound left turn lanes, one through lane and one through right-lane, and signal timing modifications would reduce the project impact. However, this would not improve operations to an acceptable level of service in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#8. Charleston Road and Fabian Way (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]**

- **#9. Charleston Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto polices accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]**

- **#10. Charleston Road and Alma Street (Palo Alto):** No vehicle capacity improvements (e.g., intersection turn lanes) at the intersection of Charleston Road and Alma Street are

physically feasible because each quadrant of the intersection is developed and widening of the intersection would likely affect adjacent buildings and/or infrastructure. Furthermore, widening this intersection would intersection would conflict with Palo Alto policies accommodate the needs of bicyclist and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#17. Rengstorff Avenue and Middlefield Road (Mountain View):** Adding a second westbound left-turn lane and signal timing modifications would reduce the project impact. This would require widening curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#20. Rengstorff Avenue and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. The City of Mountain View City Council has approved the grade separation concept and the City is seeking funding for this project (VTP Project #R12). **[Significant Unavoidable Cumulative Impact]**

- **#21. Rengstorff Avenue and California Avenue (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]**

- **#22. Rengstorff Avenue and El Camino Real (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#39. Shoreline Boulevard and Montecito Avenue-Stierlin Road (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030

Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#42. Shoreline Boulevard and Central Expressway (East) (Santa Clara County):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. Although not typically considered an acceptable mitigation measure by itself, signal timing modification (increasing the cycle length) would improve operations to an acceptable LOS (LOS D or better). **[Significant Unavoidable Cumulative Impact]**

- **#43. Shoreline Boulevard and California Street (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#44. Shoreline Boulevard-Miramonte Avenue and El Camino Real (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#45. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View):** Converting the northbound approach to include a separate left-turn lane, two through lanes, and a right-turn lane. Restriping the southbound approach to include a separate left-turn lane, through lane and shared through-right lane. Converting the eastbound approach to include a separate left-turn lane and a shared through-right lane and converting the westbound approach to include a separate left-turn lane, a through lane, and a right-turn lane with protected left turns on all approaches would reduce the project impact to a less than significant level. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

- **#46. Miramonte Avenue and Castro Street-Marilyn Drive (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#48. Moffett Boulevard and Middlefield Road (Mountain View):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County):** Potential mitigation measures that would reduce intersection delay at this intersection include widening of Central Expressway or grade separation of the Caltrain railroad tracks from Central Expressway. The City is also considering closing the northbound movements from Castro Street to Central Expressway and Moffett Boulevard. This traffic would use alternative railroad crossings west of this crossing location at Shoreline Boulevard and east of this location at Whisman Road. The closure of the northbound movements improves operations to acceptable LOS in the AM and PM peak hour.

  These improvements would have secondary effects on the Shoreline Boulevard and Central Expressway intersection due to the rerouting of traffic caused by this closure. Improvements required to reduce the secondary impact at this intersection would include an additional southbound left turn lane and implementation of the 150 second cycle length. Under this mitigation measure the Shoreline Boulevard intersection would operate at LOS E+ (55.1 seconds of delay) and LOS F (>120 seconds of delay) during the AM and PM peak hours respectively.

  However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#50. Central Expressway and State Route 85 Ramps (Santa Clara County):** The addition of a third through lane on the eastbound and westbound approach would reduce the project impact at this intersection. This would require widening curb-to-curb width on the east and west leg, and re-striping the lanes for the east and west leg. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#52. Whisman Station Road and Central Expressway (Santa Clara County):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#54. Ferguson Drive and Central Expressway (Santa Clara County):** The addition of a third through lane on the westbound approach would improve intersection operations to an acceptable level. However this improvement is controlled by another agency and the City of Mountain View cannot guarantee it will be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. This would require widening curb-to-curb width on the west leg, and re-striping the lanes for the west leg. **[Significant Unavoidable Cumulative Impact]**

- **#56. Mary Avenue and Central Expressway (Santa Clara County):** The addition of a fourth through lane on the eastbound and westbound approach would reduce the project impact at this intersection. This would require widening curb-to-curb width on the east and west leg, additional right-of-way, and re-striping the lanes for the east and west leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, these mitigation measures do not improve intersection operation to an acceptable LOS in the PM peak hour. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#58. Bay Road and University Avenue (East Palo Alto):** Reconfiguring the intersection to include an exclusive right-turn lane on the northbound approach, a second left-turn lane on the westbound and southbound approach with signal timing modifications would improve operations to acceptable LOS at this intersection. Secondary impacts associated with the widening of the intersection would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#59. Donohoe Street and University Avenue (East Palo Alto):** Converting the westbound approach to include dual left turn lanes, one through lane and one right turn lane with protected left turns would reduce the project impact at this intersection. This would require widening the curb-to-curb width on the east leg, additional right-of-way, and re-striping the lanes for the east leg. Secondary impacts associated with widening this intersection for vehicle movements would include removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing that could increase the crossing distance/time for pedestrians and bicyclists. These modifications do not improve traffic operations to acceptable LOS in the PM peak hour. However, this facility is controlled by another agency and the City of Mountain View cannot guarantee the mitigation would be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. No other improvements are possible due to right-of-way constraints. **[Significant Unavoidable Cumulative Impact]**

- **#62. Embarcadero Road and East Bayshore Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. Although not typically considered a mitigation measure by itself, signal timing modification (increasing the cycle length) would reduce the project impact at this location. **[Significant Unavoidable Cumulative Impact]**

- **#63. Embarcadero Road and Middlefield Road (Palo Alto):** No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Furthermore, widening this intersection would conflict with Palo

Alto policies to prioritize the needs of bicyclists and pedestrians. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#64. Oregon Expressway and Middlefield Road (Santa Clara County):** The addition of a second westbound and eastbound left-turn lane would mitigate the project impact but would not improve intersection operations to an acceptable level in the PM peak hour (LOS E or better). While signal modifications and intersection improvements will reduce levels of service impacts at this intersection, the City cannot be certain at this time that such improvements will be implemented since Oregon Expressway is under the jurisdiction of Santa Clara County and no other feasible mitigation measures have been identified. This impact would remain significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#65. Arastradero Road-Charleston Road and El Camino Real (Palo Alto)**: No vehicle capacity improvements (such as adding turn lanes) at this intersection are physically feasible due to right-of-way constraints. Therefore the impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#67. Page Mill Road and I-280 Southbound Off Ramp-Arastradero Road (Santa Clara County):** The installation of a signal with dual left-turn lanes and a shared through-right lane on the westbound approach and a dedicated left-turn lane and dedicated right-turn lane on the eastbound approach would improve operations to an acceptable LOS E operations during both peak hours. Signalization is a part of the I-280 and Page Mill Road interchange improvements (VTP 2040 ID #X15 and B48) to accommodate bicycle travel. In addition, Caltrans has been evaluating a safety project at this location that would include signalization. However, this improvement is controlled by another agency and the City of Mountain View cannot guarantee it will be implemented; therefore this impact is considered significant and unavoidable under Year 2030 Cumulative with Project Conditions. **[Significant Unavoidable Cumulative Impact]**

- **#70. Moffett Boulevard and SR 85 Southbound Ramp (Mountain View):** The installation of a signal would improve operations to an acceptable LOS B operations during both peak hours. The signalization and intersection improvements will reduce the intersection level of service impact to a less than significant level under Year 2030 Cumulative with Project Conditions. **[Less Than Significant Cumulative Impact With Mitigation Measures Incorporated in the Project]**

Transportation System Management

Please see *Section 4.14.3.4* describing the TSM measures for local streets and the freeway system. These measures include, on the local street system, transportation system management (TSM) measures such as adaptive signal timing and intelligent transportation systems (ITS) can improve vehicle travel time reliability and address case-by-case vehicle incidents affecting local travel patterns. TSM measures help to optimize the steady, safe, and orderly flow of vehicle traffic on congested streets and the regional freeway system. These

TSM measures are not typically considered capacity enhancements; rather, they are operational improvements designed to complement vehicle trip reduction strategies from the Transportation Demand Management program and the North Bayshore Precise Plan morning peak period trip cap.

Signal Warrant Analysis

Signal warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared to a sub-set of the standard traffic signal warrants recommended in the 2014 *California Manual on Uniform Traffic Control Devices (CA MUTCD)* guidelines. For the purpose of this TIA, the peak hour warrant was examined for unsignalized intersections operating at LOS F.

The peak-hour signal warrant was evaluated for the unsignalized intersections that operate at LOS F under Year 2030 Cumulative with Project Conditions. The results of the peak-hour warrant analysis presented indicates the following unacceptably operating intersections meet peak hour warrants:

12. Salado Drive and Garcia Avenue (PM peak hour)
32. Shoreline Boulevard and Space Park Way (AM and PM peak hours)
33. Shoreline Boulevard and Plymouth Street (AM and PM peak hours)
67. Page Mill Road and Arastradero Road (AM and PM peak hours)
70. Moffett Boulevard and SR 85 Southbound Ramp (AM and PM peak hours)
72. North-South Local Street and Shorebird Way (PM peak hour)
73. North-South Local Street and Space Parkway (PM peak hour)
76. La Avenida Avenue and Inigo Way (PM peak hour)

Please refer to the Existing with Project Conditions section regarding the potential signalization of Shoreline Boulevard and Plymouth Street intersection.

Citywide Multimodal Improvement and Deficiency Plan

The Mountain View 2030 General Plan Mobility Element identifies the citywide goals, policies, and actions that express the City's vision for all modes of the transportation system (e.g., pedestrian, bicycle, transit and motor vehicle). The Mountain View 2030 General Plan Mobility Element includes key policies related to the local street system:

- **Street typology** system that informs future street improvements and performance measures that balance community values related to resource protection, social equity, economic development, consideration of pedestrian, bicycle, transit and other vehicle users.
- **Multimodal planning** to adopt mobility master plans and street design standards to optimize mobility for all modes of transportation.
- **Transportation best management practices** to reduce vehicle trips through strategies such as compact development to support pedestrian, bicycle and transit use, transportation demand management, transportation system management, and parking strategies.

As a part of implementing the General Plan, City of Mountain View staff is developing multimodal improvement plan/area-wide deficiency plan to address below-standard intersections within Mountain View and other transportation infrastructure. The following Mountain View 2030 General Plan Mobility Element policies provide the overarching policy framework to establish the multimodal plans:

- **Policy MOB 1.1: Multimodal planning.** Adopt and maintain master plans and street design standards to optimize mobility for all transportation modes.
- **Policy MOB 1.2: Accommodating all modes.** Plan, design and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.

To address the below-standard intersection operations under cumulative conditions, the City of Mountain View will prepare a city wide multimodal improvement plan, which would also serve as a deficiency plan for congestion management program (CMP)-designated intersections within Mountain View. The multimodal improvement plan would describe the existing conditions, constraints and opportunities, transportation performance metrics, planned transportation strategies (including physical improvements, transportation demand management, and transportation system management), and monitoring and implementation methods.

Year 2030 Cumulative With Project Arterial Levels of Service

An arterial level of service analysis was performed for the Shoreline Boulevard corridor to evaluate operations between Pear Avenue and Middlefield Road. This analysis illustrates how the average vehicle speed along the corridor is affected by the level of traffic volume and the closely spaced intersections. The corresponding LOS calculation sheets are included in Appendix C of the TIA. Shoreline Boulevard is divided into four segments with average speed reported for each segment during the morning and evening peak hours. Measured against the local jurisdiction level of service standard, the following roadway segments operate below the applicable level of service standard (LOS E or worse for City of Mountain View facilities):

- Northbound Direction
  - Shoreline Boulevard between US 101 southbound ramps and Pear Avenue (AM and PM peak hours)
  - Shoreline Boulevard between Middlefield Road and Terra Bella Avenue (AM and PM peak hours)

- Southbound Direction
  - Shoreline Boulevard between Pear Avenue and US 101 northbound ramps (AM and PM peak hours)
  - Shoreline Boulevard between US 101 southbound ramps and Middlefield Road (PM peak hour)
  - Shoreline Boulevard between Terra Bella Avenue and Middlefield Road (AM peak hour)

Shoreline Boulevard Transportation Corridor Study

Please see the section in the TIA that describes the Shoreline Boulevard Transportation Corridor Study and the connections between that study and this analysis.

Year 2030 Cumulative With Project Conditions: Freeway Levels of Service

Freeway segments of SR 85, SR 237, I-880, US 101, I-280, SR 17, and SR 87 were analyzed during the AM and PM peak hours to calculate the amount of project traffic projected to be added. The results of the analysis identifying the segments exceeding VTA's standard are shown in Table J-3 of Appendix J of the TIA. The results of the freeway LOS analysis for Year 2030 Cumulative with Project Conditions are graphically shown in Figures 4.14-18 and 4.14-19 for mixed-flow and HOV lanes, respectively.

In San Mateo County, detailed freeway density information is not collected regularly for CMP analysis. Rather, floating car travel-time runs are collected every two years. The most recent CMP data shows that US 101 between State Route 92 and the Santa Clara County border (near Embarcadero Road in Palo Alto) operates unacceptably during the morning and evening peak hours.

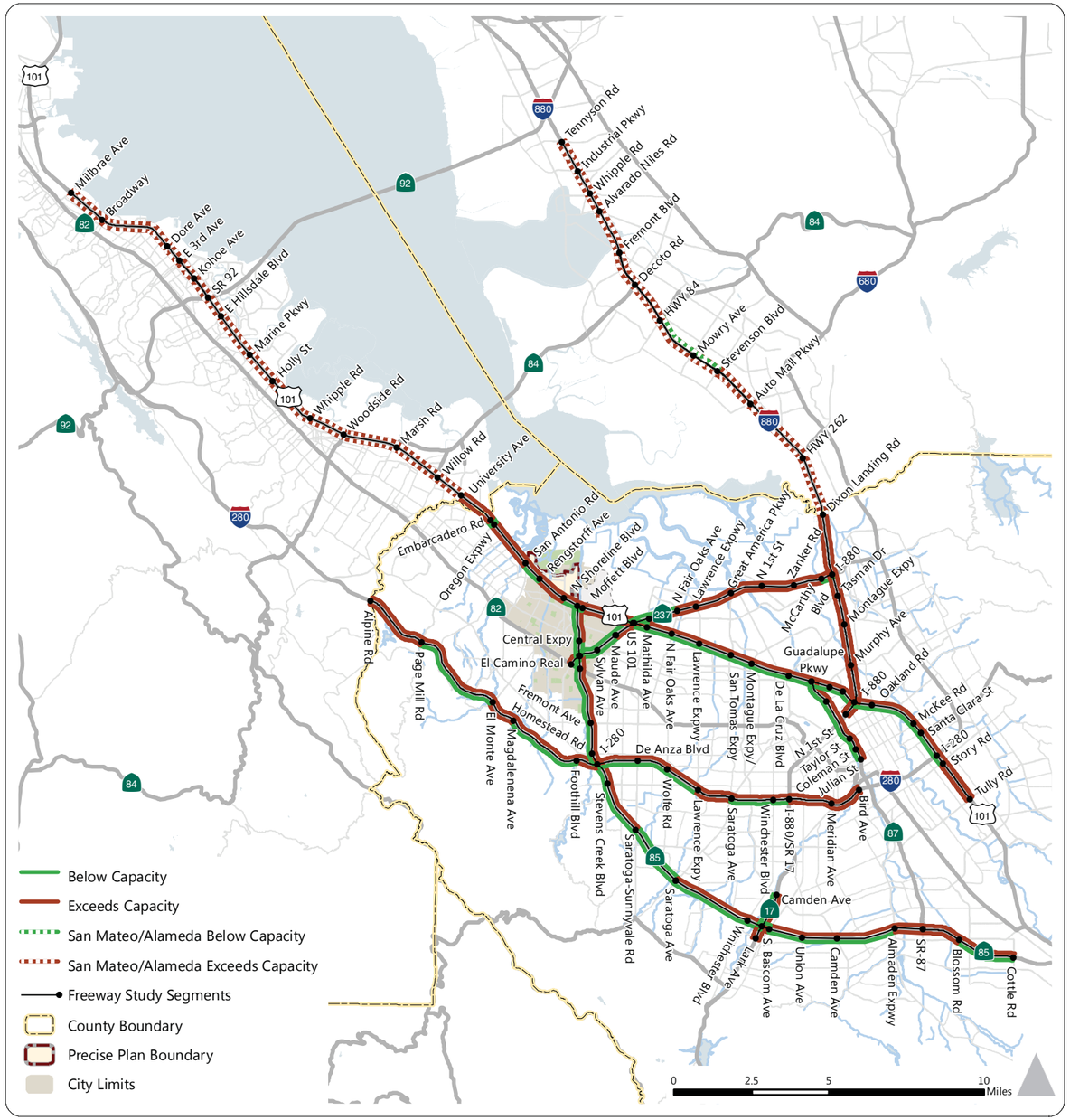
A cumulative project impact was identified for segments exceeding a volume-to-capacity (V/C) ratio greater than one (1.0) and where the proposed new North Bayshore Precise Plan project trips constitute more than one percent of the freeway segment's capacity. Year 2030 Cumulative with Project Conditions freeway impact results are can be found in Appendix J of the TIA. Under Year 2030 Cumulative with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion, which would result in decreased freeway segment levels of service on several segments. This would be considered a potentially significant impact.

To improve operations, these freeway segments could be widened to meet the current level of service standard. The complete mitigation of freeway impacts is considered beyond the scope of individual projects or plans such as the North Bayshore Precise Plan, due to the inability of the City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans and, as such, the City cannot guarantee implementation of any improvement in the freeway right-of-way.

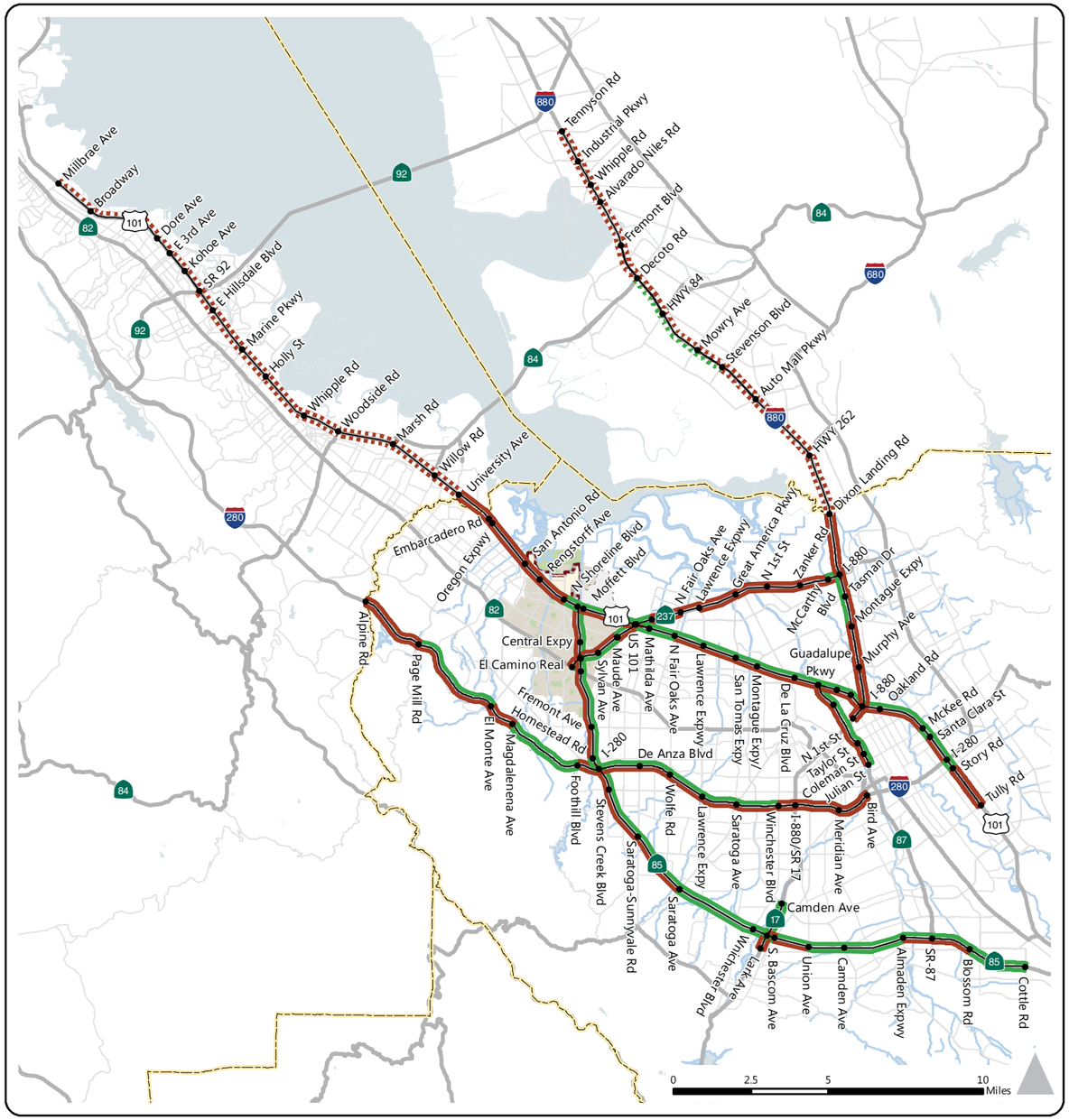
Please see the discussion above of freeway impacts in the Existing with Project section (*Section 4.14.3.5*) for a description of the effects of TDM programs on freeway congestion. For the reasons presented previously, the identified freeway impacts are considered to be a significant and unavoidable impact to the remaining identified freeway segments.

Impact C-TRANS-2: Implementation of the project would result in significant cumulative impacts to freeway segments during the AM and/or PM peak hour. **[Significant Unavoidable Cumulative Impact]**

AM Peak Hour



PM Peak Hour

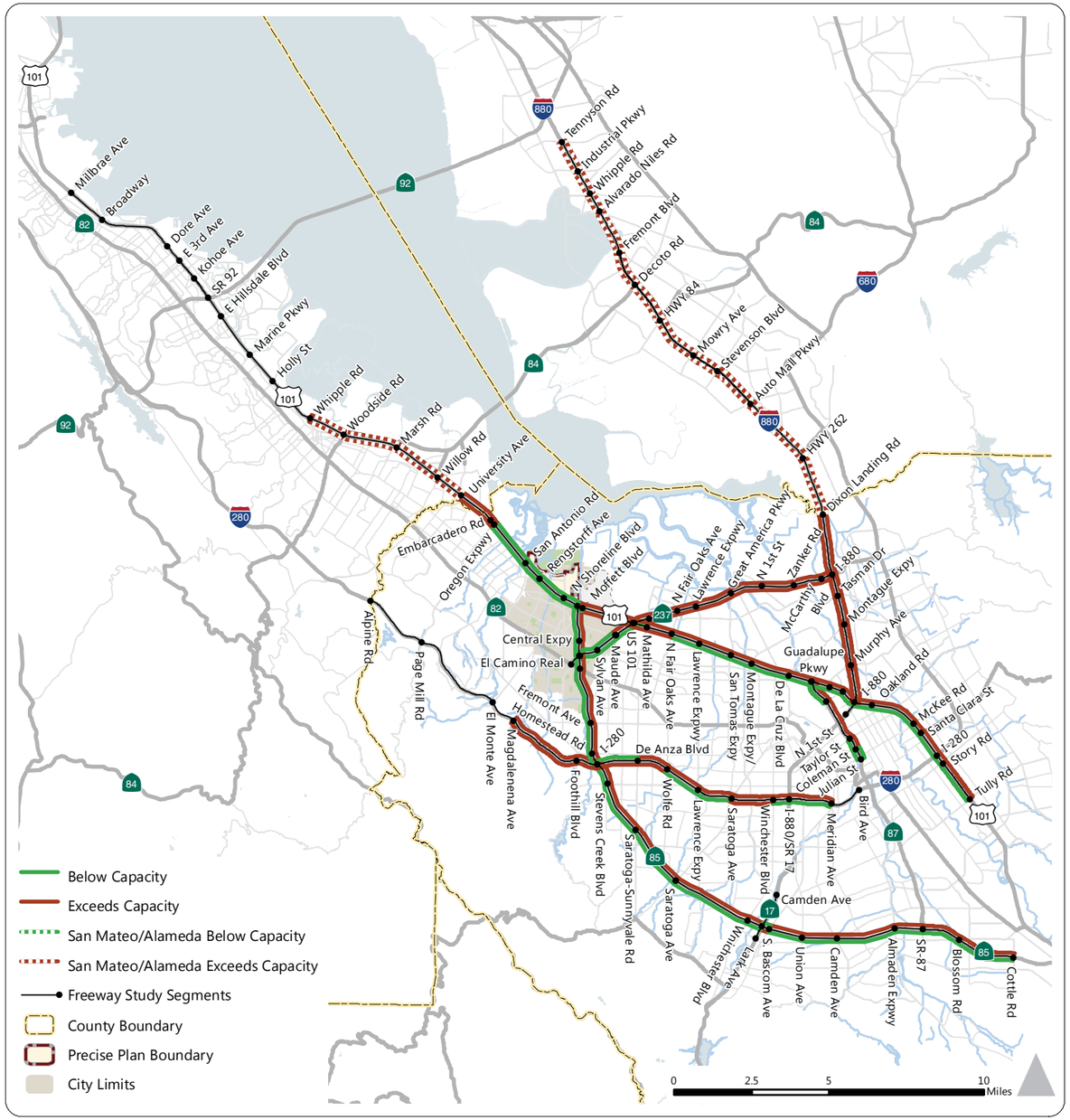


Source: Fehr & Peers, February 2017.

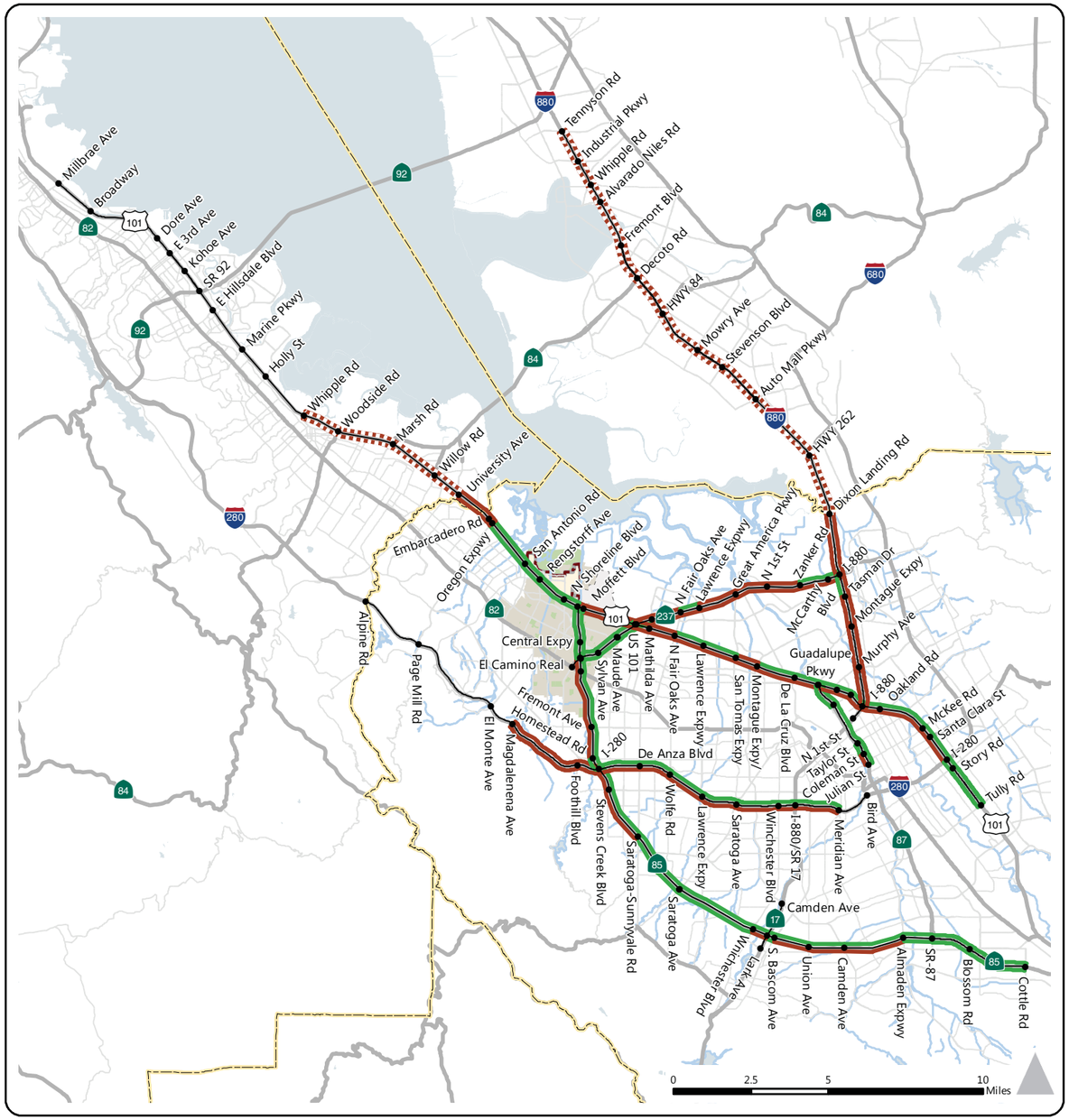
YEAR 2030 CUMULATIVE + PROJECT FREEWAY LOS RESULTS, MIXED FLOW LANES

FIGURE 4.14-18

AM Peak Hour



PM Peak Hour



Source: Fehr & Peers, February 2017.

YEAR 2030 CUMULATIVE + PROJECT INTERSECTION LOS RESULTS, HOV LANES

FIGURE 4.14-19

Year 2030 Cumulative With Project Conditions: Transit, Bicycle, and Pedestrian Impacts

Transit Facilities

Under Year 2030 Cumulative with Project Conditions, implementation of the proposed Precise Plan would increase the number of potential transit users on the various transit systems serving the North Bayshore area. Additional roadway traffic congestion caused by the project may affect several transit corridors by increasing travel times and decreasing headway reliability.

Potential Impact: Increased Transit Demand: The analysis and conclusions related to increased transit demand are the same for the Year 2030 Cumulative Conditions as for the Existing with Project Conditions; refer to the discussion in *Section 4.14.3.6*.

Potential Impact: Increased Transit Vehicle Delay at Congested Intersections: The analysis and conclusions related to increased transit demand are the same for the Year 2030 Cumulative Conditions as for the Existing with Project Conditions; refer to the discussion in *Section 4.14.3.6*.

Impact C-TRANS-3: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable cumulative effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact determination. **[Significant Unavoidable Cumulative Impact]**

Bicycle Facilities

The analysis and conclusions related to bicycle impacts are the same for the Year 2030 Cumulative with Project Conditions as was described previously for the Existing with Project Conditions.

Impact C-TRANS-4: Implementation of the amended North Bayshore Precise Plan would not interfere with existing bicycle facilities or conflict with planned bicycle facilities or adopted bicycle plans, guidelines, policies, or standards under Year 2030 Cumulative Conditions. **[Less Than Significant Cumulative Impact]**

Pedestrian Facilities

The analysis and conclusions related to pedestrian impacts are the same for the Year 2030 Cumulative with Project Conditions as was described above for the Existing with Project Conditions. For the same reasons described above, implementation of the amended North Bayshore Precise Plan would be considered a less than significant cumulative impact on pedestrian facilities and no mitigation measures would be required.

Impact C-TRANS-5: Implementation of the amended North Bayshore Precise Plan would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards under Year 2030 Cumulative Conditions. **[Less Than Significant Cumulative Impact]**

4.14.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
TRANS-1: Implementation of the proposed amended North Bayshore Precise Plan would result in significant impacts to 22 project study intersections under Existing With Project conditions in either the AM and/or the PM peak hours.	Significant Impact	Mitigation measures are available for some of these impacts, refer to Table 4.14-12.	Significant and Unavoidable
TRANS-2: Implementation of the project would result in significant impacts to freeway segments during the AM and/or PM peak hour.	Significant Impact	No feasible mitigation measures available.	Significant and Unavoidable
TRANS-3: Implementation of the amended North Bayshore Precise Plan would not result in significant effects to transit ridership and facilities.	Less Than Significant Impact	No mitigation required.	Less Than Significant Impact
TRANS-4: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact.	Significant Impact	No feasible mitigation measures available.	Significant and Unavoidable
TRANS-5: Implementation of the amended North Bayshore Precise Plan would not result in significant impacts to bicycle facilities.	Less Than Significant Impact	No mitigation required.	Less Than Significant Impact
TRANS-6: Implementation of the amended North Bayshore Precise Plan would not result in significant impacts to pedestrian facilities.	Less Than Significant Impact	No mitigation required.	Less Than Significant Impact
C-TRANS-1: Implementation of the proposed Precise Plan would result in significant impacts to 40 project study intersections under Year 2030 Cumulative With Project conditions in either the AM and/or the PM peak hours.	Significant Cumulative Impact	Mitigation measures are available for some of these impacts, refer to Table 4.14-14.	Significant and Unavoidable

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
C-TRANS-2: Implementation of the project would result in significant impacts to freeway segments during the AM and/or PM peak hour.	Significant Cumulative Impact	No feasible mitigation measures available.	Significant and Unavoidable
C-TRANS-3: Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable cumulative effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable traffic delay impact determination.	Significant Cumulative Impact	No feasible mitigation measures available.	Significant and Unavoidable
C-TRANS-4: Implementation of the amended North Bayshore Precise Plan would not interfere with existing bicycle facilities or conflict with planned bicycle facilities or adopted bicycle plans, guidelines, policies, or standards under Year 2030 Cumulative Conditions.	Less Than Significant Cumulative Impact	No mitigation required.	Less Than Significant Cumulative Impact
C-TRANS-5: Implementation of the amended North Bayshore Precise Plan would not interfere with existing pedestrian facilities or conflict with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards under Year 2030 Cumulative Conditions.	Less Than Significant Cumulative Impact	No mitigation required.	Less Than Significant Cumulative Impact

4.15 UTILITIES AND SERVICE SYSTEMS

The water supply discussion in this section is based on the "Water Supply Assessment for City of Mountain View North Bayshore Precise Plan" prepared by *Todd Groundwater* in February 2017. This report is included in this Draft EIR as Appendix K.

The utilities discussion in this section is based in part on the "North Bayshore Precise Plan Sewer Utility Impact Study," prepared by *Schaaf & Wheeler* and dated October 28, 2016. This report is included in this Draft EIR as Appendix L.

4.15.1 Regulatory Framework

4.15.1.1 *Water Supply and Water Quality*

The following discussion summarizes regulations that apply to water supply and water quality in Mountain View. Staff from the San Francisco Public Utilities Commission (SFPUC), Santa Clara Valley Water District System (SCVWD), and the City regularly collect and test water samples from reservoirs, wells, and designated sampling points to ensure that the water supplied to Mountain View meets applicable drinking water standards. This monitoring and testing program evaluates water turbidity and odors, as well as the presence of microorganisms, organic and inorganic compounds, and other potential pollutants.

Federal

Drinking water is regulated by federal and state laws. The federal government sets minimum standards for water quality, including for drinking water and bodies of water. The Safe Drinking Water Act (SDWA) of 1974 and subsequent amendments gave the U.S. Environmental Protection Agency (EPA) authority to establish standards for contaminants in drinking water supplies. The National Primary Drinking Water Standards establish the maximum contaminant levels (MCLs) allowed in public distribution systems. The National Secondary Drinking Water Standards establish the MCLs that apply to potable water supplies at the point of delivery to the customer. The EPA administers the SDWA at the federal level and establishes MCLs for bacteriological, inorganic, organic, and radiological contaminants.

State of California

The California Environmental Protection Agency administers and enforces the drinking water program and has adopted its own SDWA, which incorporates the federal SDWA requirements, including some requirements specific only to California (California Health and Safety Code, Section 116350 and related sections).

Pursuant to State Water Code requirements, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. The State Water Code requires water agencies to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, and to address a number of related subjects including water conservation, water service reliability, water recycling,

opportunities for water transfers, and contingency plans for drought events. The Mountain View City Council adopted its most recent 2015 Urban Water Management Plan on May 24, 2016.

The Porter-Cologne Water Quality Control Act of 1967, California Water Code Section 13000, requires the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) to adopt water quality criteria to protect waters of the state by ensuring compliance with clean water laws, issuing permits, developing basin plans, monitoring water quality, and taking enforcement actions against illegal discharges of pollutants into waters. The SWRCB approves the use of recycled water, and the RWQCBs regulate and enforce the state's water rights. The project area is located within the jurisdiction of the San Francisco Bay RWQCB.

City of Mountain View

The City of Mountain View promotes the sustainable use of its water resources through outreach and education programs, financial incentive programs, and by implementing water conservation measures at City properties. Many of the City's water conservation measures are implemented in partnership with the SCVWD and the Bay Area Water Supply & Conservation Agency (BAWSCA). Some of the City's conservation measures include incorporating water waste prohibitions into the City Code, monitoring water losses, providing public information and outreach programs, and implementing plumbing and rebate and retrofit programs for residential and business customers.

4.15.1.2 *Wastewater*

Regional

The San Francisco Bay Regional Water Quality Board (RWQCB) requires that each wastewater collection system agency, at a minimum, develop goals for a Sewer System Management Plan (SSMP) to provide adequate capacity to convey peak flows. The RWQCB-required elements of a SSMP operations and maintenance program include:

- **Collection System Map:** Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities.
- **Resources and Budget:** Each wastewater collection system agency shall allocate adequate resources for the operation, maintenance, and repair of its collection system.
- **Prioritized Preventive Maintenance:** Each wastewater collection system agency shall prioritize its preventive maintenance activities.
- **Scheduled Inspections and Condition Assessment:** Each wastewater collection system agency shall identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them.
- **Contingency Equipment and Replacement Inventories:** Each wastewater collection system agency shall provide contingency equipment to handle emergencies and spare/replacement parts intended to minimize equipment/facility downtime.

Other RWQCB regulations include meeting General Waste Discharge Requirements (GWDR). The GWDR for the operations and maintenance program require wastewater collection system agencies to:

- Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities.
- Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance program should have a system to document scheduled and conducted activities, such as work orders.
- Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

4.15.1.3 *General Plan Policies*

The goals and policies of the City of Mountain View 2030 General Plan provide vital direction for the future of the City and its residents. They reflect present-day community values, priorities, and compliance with current state laws and local ordinances. These goals and policies set forth the City's commitment to make appropriate decisions and allocated necessary resources to support fulfillment of the City vision. Implementing actions are the specific to-do steps required to carry out the General Plan's broader goals and policies and are included in a companion Action Plan.

Infrastructure and Conservation

The Infrastructure and Conservation Element of the City of Mountain View 2030 General Plan provides the following goals and policies to ensure that the City's infrastructure is well planned, regularly maintained and replaced to support community needs.

Infrastructure and Conservation	
Goal INC-1	**Citywide infrastructure to support existing development and future growth.**
Policy INC 1.1	Infrastructure management. Manage the city's aging infrastructure.
Policy INC 1.2	Funding. Ensure sustainable funding levels for maintaining infrastructure in the city.
Policy INC 1.3	Utilities for new development. Ensure adequate utility service levels before approving new development.

Policy INC 1.4	Existing capital facilities. Maintain and enhance existing capital facilities in conjunction with capital expansion.
Policy INC 1.5	Utility service. Coordinate with all utility providers to ensure safe and adequate utility services.
Policy INC 1.6	Sustainable materials. Promote the use of sustainable or green materials and products.
Goal INC-2	**Infrastructure systems planned and designed to function during interruptions, emergencies or disasters.**
Policy INC 2.1	Emergency preparedness**.** Ensure that the City is well-prepared for natural and human-induced disasters and emergencies.
Policy INC 2.2	Emergency service providers. Ensure long-term reliability from service providers and suppliers, especially in the case of an emergency or natural disaster.
Policy INC 2.3	Emergency-prepared infrastructure design. Require the use of available technologies and earthquake-resistant materials in the design and construction of all infrastructure projects, whether constructed by the City or others.
Policy INC 2.4	Emergency preparedness. Ensure emergency preparedness for all critical infrastructure including potable water, wastewater, stormwater, recycled water, telecommunications, energy and streets.
Goal INC-3	Functional, safe and well-maintained public rights-of-way that promote environmental sustainability.
Policy INC 3.1	Citywide rights-of-way maintenance. Maintain City streets, sidewalks and other public rights-of-way in good condition, while promoting and adhering to environmental best practices.
Policy INC 3.2	Traffic signals. Maintain and operate the City's traffic signal system.
Policy INC 3.3	Street design for stormwater. Encourage street designs that reduce stormwater flows and accomplish other City stormwater goals.
Policy INC 3.4	Right-of-way regulations. Ensure that right-of-way regulations comply with relevant street and highway codes while still prioritizing multi-modal transportation in all right-of-way design.
Policy INC 3.5	Undergrounding utility lines. Fund and execute efforts and programs to place overhead utility lines underground, including programs administered by other organizations.
Policy INC 3.6	Utility separation. Preserve adequate separations between utilities and reserve future City pipeline corridors in public streets to maintain and continue to provide public utilities.
Policy INC 3.7	Recycled water separation. Ensure that expansion of recycled water infrastructure in the public right-of-way with other utilities adheres to separation criteria provided by the California Department of Public Health.
Goal INC-4	**A sustainable water supply with sufficient supply and appropriate demand management.**

Policy INC 4.1	Water supply. Maintain a reliable water supply.
Policy INC 4.2	Participating in regional organizations. Participate in regional water supply organizations, support their efforts to maintain and improve the water supply and monitor statewide and regional water supplies.
Policy INC 4.3	Prioritizing existing facilities. Prioritize maintenance and enhancement of existing capital facilities in conjunction with capital expansion.
Policy INC 4.4	Expanding water service area. Provide water service to areas outside the City service area if it is mutually beneficial for the City and prospective new users.
Goal INC-5:	**Effective and comprehensive programs utilizing water use efficiency, water conservation and alternative water supplies to reduce per capita potable water use.**
Policy INC 5.1	Community awareness. Raise community awareness about water use efficiency and water conservation.
Policy INC 5.2	Citywide water conservation. Reduce water waste and implement water conservation and efficiency measures throughout the city.
Policy INC 5.3	Water reuse. Remove barriers and provide guidance for the use of rainwater and graywater as alternative water supplies.
Policy INC 5.4	Smart Water Meters. Encourage water meter technologies that provide water usage feedback to customers.
Policy INC 5.5	Landscape efficiency. Promote water-efficient landscaping including drought-tolerant and native plants, along with efficient irrigation techniques.
Policy INC 5.6	Indoor efficiency. Promote the use of water-efficient fixtures and appliances.
Policy INC 5.7	Leadership in City facilities. Provide leadership by promoting water use efficiency, water conservation and the use of recycled water at City-owned facilities.
Goal INC-6	**A coordinated wastewater collection system that protects the community's health and safety.**
Policy INC 6.1	Citywide wastewater. Ensure high-quality wastewater collection services and a well-maintained wastewater system.
Policy INC 6.2	Pollution source control. Implement an effective and comprehensive industrial pretreatment program and industrial, commercial and residential pollution source control programs.
Policy INC 6.3	Wastewater Treatment Partnership. Partner with the Palo Alto Regional Water Quality Control Plant to ensure high-quality water treatment.
Policy INC 6.4	Discharge Regulations. Coordinate with partners and other local agencies to monitor changing rules and regulations regarding wastewater discharge from the Palo Alto Regional Water Quality Control Plant.
Goal INC-7	**A reliable, safe and extensive recycled water infrastructure system.**
Policy INC 7.1	Citywide recycled water use. Promote, require or offer incentives for using recycled water as an alternative to potable water.

Policy INC 7.2	Recycled water system. Expand the use and availability of recycled water throughout the city.
Policy INC 7.3	Recycled water in parks. Promote the use of recycled water at City parks and open spaces or where available.
Policy INC 7.4	Recycled water and trees. Promote appropriate tree and landscape species irrigated by recycled water.
Policy INC 7.5	Rights-of-way and infrastructure. Design public rights-of-way to accommodate recycled water infrastructure.
Goal INC-8	**An effective and innovative stormwater drainage system that protects properties from flooding and minimizes adverse environmental impacts from stormwater runoff.**
Policy INC 8.1	Citywide stormwater system. Maintain the stormwater system in good condition.
Policy INC 8.2	National Pollutant Discharge Elimination System Permit. Comply with requirements in the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP).
Policy INC 8.3	Cost-effective strategies. Encourage stormwater strategies that minimize additional City administrative and maintenance costs.
Policy INC 8.4	Runoff pollution prevention. Reduce the amount of stormwater runoff and stormwater pollution entering creeks, water channels and the San Francisco Bay through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program.
Policy INC 8.5	Site-specific stormwater treatment. Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.
Policy INC 8.6	Green streets. Seek opportunities to develop green streets and sustainable streetscapes that minimize stormwater runoff, using techniques such as on-street bio-swales, bio-retention, permeable pavement or other innovative approaches.
Policy INC 8.7	Stormwater quality. Improve the water quality of stormwater and reduce flow quantities.
Policy INC 8.8	Stormwater infrastructure funding. Develop permanent and ad hoc sources of funding to implement stormwater best practices in the city.
GOAL INC-10	**Reduced waste through supply-chain management, advocacy and outreach to reduce waste.**
Policy INC 10.1	Zero waste. Pursue a citywide goal of zero waste.
Policy INC 10.2	Producer responsibility. Support extended producer responsibility to reduce waste and toxicity at the manufacturing level.
Policy INC 10.3	Source reduction. Encourage and promote source reduction behavior such as utilizing reusable, returnable and repairable goods.
Policy INC 10.4	Construction waste reuse. Encourage building deconstruction and reuse and construction waste recycling.

Policy INC 10.5	Reuse. Encourage product reuse through venues such as garage sales, lending libraries and Internet-based sharing and reuse forums.
Policy INC 10.6	Recovered materials. Encourage uses for recovered materials that save energy, avoid releasing toxic substances and extend the useful life of recovered materials.
Policy INC 10.7	Recycled material demand. Promote increased demand for recycled materials.
Policy INC 10.8	Toxic products. Discourage the use of toxic products throughout the city.
Policy INC 10.9	Preferential purchasing. Give preference in City purchasing to products that minimize packaging, can be reused and are non-toxic.
Policy INC 10.10	Single-use products. Discourage the use of single-use products.
GOAL INC-11	**Services and programs that continue to reduce waste and promote environmental responsibility.**
Policy INC 11.1	Waste diversion and reduction. Meet or exceed all federal, state and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs.
Policy INC 11.2	Recycling. Maintain and expand recycling programs.
Policy INC 11.3	Composting. Provide productive reuse or composting services or both for all discarded organic materials in the city, including all food and green waste.
Policy INC 11.4	Solid waste. Ensure all municipal solid waste generated within the city is collected, transported and disposed of in a manner that protects public health and safety.
Policy INC 11.5	Hazardous waste. Provide convenient household hazardous waste and e-waste disposal services.
Policy INC 11.6	Regional collaboration. Consider opportunities to provide more cost- effective solid waste management by collaborating with surrounding cities and agencies.
Goal INC-14	**Sufficient renewable sources of energy to meet current and future demand.**
Policy INC 14.1	Renewable energy. Promote the deployment of renewable energy technologies throughout the city.
Policy INC 14.2	Solar energy. Encourage active and passive solar energy use.
Policy INC 14.3	Regional renewable energy. Participate in regional initiatives to encourage and develop renewable energy sources.
Policy INC 14.4	Renewable energy advocacy. Support legislation to facilitate and increase renewable energy choices for community residents such as “green” utility power options or distributed generation.

4.15.1.4 *Existing Conditions*

The project site is located in a developed area within the City of Mountain View and is currently served by existing phone, electrical, water, recycled water, stormwater, wastewater, and solid waste service systems. Phone service is provided to the project site by AT&T, and electrical service is provided by the Pacific Gas and Electric Company.

4.15.1.5 *Water Supply*

The City of Mountain View owns and operates its own water utility. In 2015, most of the City's water (approximately 83 percent) came from the City and the County of San Francisco Regional Water System, operated by the SFPUC. This water originates primarily in the Sierra Nevada Mountains and is transported via the Hetch Hetchy water system, but also includes treated water from facilities in Alameda and San Mateo Counties. Mountain View's remaining water comes from the SCVWD system (approximately seven percent), local groundwater wells (four percent), and recycled water delivered for non-potable purposes (five percent).

California has recently endured a serious drought. In 2015, the fourth consecutive year of drought, the SCVWD board of directors called for residents to reduce water use by 30 percent over the amount they used in 2013. In November 2015, the board extended that call to June 2016.[114] Additionally, climate change may affect future water supply availability for the City of Mountain View by reducing the Sierra snowpack and stressing the SCVWD and Hetch Hetchy water systems, changing local precipitation patterns, and increasing water demands. The City's development of a portfolio of different water supplies, including expansion of recycled water use for landscaping and other uses, supports flexibility and reliability in long term water supply planning.

The City of Mountain View's UWMP forecasts that water supplies will be available to meet the City's projected future water demands during normal and we years through at least 2040, based on General Plan growth estimates and supplier projections. During single- and multiple-drought years, the City expects reductions in available supply from the SFPUC and SCVWD. This decrease in imported water is anticipated to be made up through implementation of drought-year water conservation measures, the potential increased use of recycled water, and an increase in groundwater production (as the groundwater basin allows).

The 2015 UWMP was prepared in accordance with the City's 2030 General Plan Strategy, and thereby includes increases in Commercial, Institutional, and Industrial water demand over the 25-year implementation horizon. With its basis in the General Plan Strategy, the UWMP recognizes the intensification of land use in the North Bayshore Precise Plan area, including the mix of *High Intensity Office; North Bayshore Mixed-Use; Mixed-Use Center;* and *Parks, Schools, and City Facilities* land uses, which are shown in the UWMP. It should be noted that the UWMP does not address specific proposed development projects, although it does account for the general land use intensification included in the 2030 General Plan. The residential expansion (almost 10,000 units) was not part of the General Plan. However, the UWMP recognizes a "higher growth" alternative which includes the North Bayshore Precise Plan's proposed residential expansion.

[114] SCVWD. District Board Calls for 20 percent conservation. June 14, 2016. Accessed November 3, 2016. http://www.valleywater.org/EkContent.aspx?id=14253

Water consumption models were developed for the 2030 General Plan; however, the 2015 UWMP showed recent City-wide water usage is lower than the 2030 General Plan projections. As a result, the City has reviewed recent historical water meter record data between the years 2005 and 2015 and developed new unit duty factors for water use: 130 gallons per day (gpd)/1,000 square feet for Research & Development uses; 90 gpd per 1,000 square feet for Office uses; and 100 gpd per residential unit for Multi-Family uses. These unit duty factors were used to estimate the water demand for the existing North Bayshore Precise Plan. These water use factors do not separate indoor and outdoor water use; thus, future potable water demand may be further reduced with offsetting recycled water use.

Recycled Water

The SCVWD is currently in the process of preparing a countywide recycled water master plan that will outline its approach to increasing recycled water use within Santa Clara County to ten percent of total supply by 2025.

In 2009, a joint project with the City of Palo Alto replaced a recycled water supply main from the Palo Alto Regional Water Quality Control Plant (RWQCP), and expended the limits to the North Bayshore area. The City of Mountain View's recycled water distribution system includes 5.5 miles of recycled water mains, serving areas north of Highway 101 and west of California Route 237. The RWQCP provides recycled water through a 2007 agreement that allocates 3.0 mgd of recycled water to Mountain View at through 2035.

A Recycled Water Feasibility Study was completed in 2014[115] by *Carollo Engineering* to determine the feasibility of expanding the existing recycled water system to increase recycled water use and improve system reliability. The study considered several recycled water project alternatives and recommended a project which includes portions of North Bayshore. The project would allow reduced development of additional potable water supplies, including water from the Sacramento-San Joaquin Delta.

The recommended expansion alternative alignment extends from the City's existing recycled water mains on Charleston Road and Crittenden Lane, through NASA Ames and Moffett Field, under Highway 101 and into the Middlefield-Ellis-Whisman area of Mountain View. The Recycled Water Feasibility Study also contains recommendations for future system enhancements, including recycled water storage, pump stations and looping of systems. Recycled water uses considered in the 2014 study included irrigation, toilet flushing, and cooling towers both inside and outside of the City's water service area where recycled water may be feasible in the future.

While recycled water is being used for irrigation in the North Bayshore area, the recycled water has a relatively high salt content, which may harm some plants. The RWQCP and partner agencies (including the City of Mountain View) have developed and implemented strategies for reducing salt content in the wastewater stream, the source of the recycled water. These efforts include rehabilitating sewer systems to prevent infiltration of saline groundwater and rerouting high-saline discharges from the wastewater stream.

[115] Carollo Engineering. *City of Mountain View Recycled Water Feasibility Study*. March 2014.

As of December 2016, there were a total of 50 recycled water accounts connected.[116] The inactive meters correspond to sites that have not yet converted to recycled water but are anticipated to connect in the future. Customers may use recycled water for a variety of uses approved by the California Department of Public Health. These include, but are not limited to, landscape irrigation, agricultural irrigation, construction water, water for industrial purposes, impoundments (fountains), and indoor toilet and urinal flushing.

Water Conservation

As described in the 2015 UWMP, recent updates to the plumbing code (which include requiring more water-efficient features) are expected to reduce Mountain View's water use by two percent in 2020, and up to nine percent in 2040. Additionally, the UWMP projects that implementation of new conservation measures would reduce water use by eight percent in 2020 and 2040, from the base-case scenario.

Current and near-term water conservation measures, as identified in the UWMP, include water waste prohibitions in the Municipal Code, water system audits, leak detection and repair, metering with commodity rates and conservation pricing, public information and education programs. Other City of Mountain View water conservation programs include residential water surveys, turf audits, plumbing retrofits, and washing machine incentives. The Mountain View City Council also adopted *Water Conservation in Landscaping Regulations* in May 2010 (updated in 2016).

Water Use by Existing Development

The North Bayshore Precise Plan area is currently dominated by office and light-industrial buildings, with a smaller amount of retail uses. Water is supplied to the North Bayshore area by the City of Mountain View. Historic water use for 2005 through 2015, based on metered water demand, was provided for the water supply analysis by the City of Mountain View. The historic water use includes potable water and recycled water; the potable water is used for indoor uses and outdoor landscaping, while the recycled water currently is used for outdoor landscaping.

The Water Supply Assessment (Appendix K) prepared for the amended North Bayshore Precise Plan describes the historic metered water demand (compiled on a bimonthly basis) for the project area, which shows a strong seasonal pattern. High water use occurs in the summer months and low water use occurs in the winter wet season when irrigation and cooling needs are minimal.

Total water use in the City of Mountain View has declined sharply since 2012, primarily due to the implementation of drought-related conservation measures. Potable water use has also decreased approximately 36 percent since 2012, from 914 acre feet per year (AFY) in 2012 to 589 AFY in 2015. Recycled water use has increased almost six-fold since 2010 (when the program was started), from 21 AFY in 2010 to 124 AFY in 2015. In 2015, recycled water use represented approximately 17 percent of total water use. Recycled water use replaces potable water use and does not necessarily reflect an increase in demand.

[116]Ed Arango. City of Mountain View Memorandum. December 12, 2016.

Based on the analysis in the WSA, in 2015 the existing uses in the North Bayshore Precise Plan area had a water demand of 1,105 AFY.[117]

4.15.1.6 *Water Facilities*

The City of Mountain View owns and maintains the water infrastructure within the City, including pipelines and valving, pump stations, water storage reservoirs, and groundwater wells. The potable water system is supplied primarily by the SFPUC (which serves the North Bayshore area) and SCVWD, with several small areas being served by Cal Water. Mountain View has seven active groundwater wells supplementing imported supplies; these wells also act as a backup system in the event of temporary interruption of imported water. This diversity of water supply allows the City to have flexibility in serving customers during water shortages or emergency curtailment conditions, whether local or regional.

The Utility Impact Study was completed for the North Bayshore area in September 2016 (Appendix L). The Mountain View water system is divided into three pressure zones to maintain reasonable pressures throughout the City's escalating topography from north to south moving away from the Bay. The North Bayshore area, located at the northern end of the City, is within the lowest pressure zone categorized as Zone 1. Water is currently conveyed to the greater North Bayshore area through three mains passing under Highway 101.

The 2030 General Plan land use and associated water demand is used as the baseline condition for any North Bayshore Precise Plan water system impacts. The original 2030 General Plan model was developed as part of the 2030 General Plan Utility Impact Study and is detailed in the 2030 General Plan Updated Water Model. The model includes developments approved by the City since the 2030 General Plan was adopted. The North Bayshore Precise Plan water demand factors are updated to reflect water use trends within the City. Water demand discussed in this section represents Average Daily Demand (ADD). The ADD is an estimated daily average of water use patterns that varies by season and customer type.

4.15.1.7 *Wastewater Services*

The City of Mountain View maintains its own wastewater collection system. Sanitary and storm drains in the City of Mountain View are operated and maintained by the Wastewater Section of the Public Works Department. The City pumps its wastewater to the RWQCP for treatment. The RWQCP has an overall 40 million gallons per day (mgd) average annual treatment capacity. The City of Mountain View has an average annual flow capacity right of 15.1 mgd at the RWQCP. As of 2015, approximately nine (9) mgd of wastewater from Mountain View was collected and treated by the RWQCP.[118] The terms of Mountain View's Basic Agreement with the City of Palo Alto require that when the City of Mountain View reaches 80 percent of the 15.1 mgd allowed by the agreement (approximately 12.08 mgd), an engineering study would be required of the City to redefine the future needs of the RWQCP and potentially assist in future plant expansions or upgrades outlined in the Long Range Facilities Plan.

[117] One acre-foot contains 325,851.43 gallons.
[118] City of Mountain View. *2015 Urban Water Management Plan.* June 2016.

Mountain View's sanitary sewer system is a gravity system with two sewer lift stations; one located in Shoreline Park and the other is a localized station on Pastel Lane. The system consists of gravity pipelines, pressure pipelines, and pump stations. The Shoreline Sewer Pump Station, located within the North Bayshore Precise Plan area conveys the majority of sanitary sewer flow generated within the City to the RWQCP. The remaining flow is conveyed to the RWQCP through City of Los Altos sewer infrastructure, with the largest portion conveyed through a meter on Alma Road. The joint interceptor pipe (where the Shoreline Pump Station discharges) conveys flow from Mountain View to the RWQCP and has a contractual peak wet weather flow capacity of 50 mgd. The City of Mountain View sanitary sewer system also receives flow from groundwater pumping stations at six locations within the City boundary, including three in North Bayshore, and sanitary sewer flow from neighboring municipalities.

City of Los Altos sewer facilities extend from Los Altos to the south toward the RWQCP. A number of parcels within the North Bayshore area of Mountain View discharge their sanitary sewage to these facilities prior to discharge to the RWQCP. The City of Mountain View has an existing agreement (initiated in 1966) with the City of Los Altos, limiting the amount of sewer flow allowed to the Los Altos trunk sewer from Mountain View. The maximum discharge allowed by the contract from the North Bayshore area is 100,000 gpd. The City of Mountain View has a separate agreement with Los Altos for a maximum discharge of 2,000,000 gpd in the San Antonio collection basin.

Based on the water unit duty factors discussed previously, approximately 75 percent of the water used in Mountain View is returned to the sanitary sewer. The estimated total sewer flow rates are 100 gpd/1,000 square feet for Research & Development uses, 70 gpd per 1000 square feet for Office uses, and 75 gpd per residential unit for Multi-Family uses.

4.15.1.8 *Storm Drainage*

The City of Mountain View Public Works Department operates and maintains the storm drainage system in the City. Permanente Creek flows northward directly through the center of the North Bayshore Precise Plan area, Adobe Creek is located approximately 950 feet northwest of the Precise Plan area and Stevens Creek is adjacent to the Precise Plan area to the east, separated by a powerline easement and a levee. The Precise Plan area is south of wetlands of the San Francisco Bay, particularly on the northwest edge of the area near the Coast Casey Forebay.

The North Bayshore Precise Plan area storm drainage system is a network of pipes, channels, ditches, culverts, ponds and pumps that discharge to Adobe Creek, Permanente Creek, and Stevens Creek. Runoff is collected via inlets into small diameter pipes that convey the flows to 24-inch diameter and larger mains. There are five pump stations that serve the North Bayshore area: Amphitheatre, Charleston, Coast Casey, Crittenden, and High Level Ditch. The Coast Casey pump station receives a large portion of its flow from areas outside the North Bayshore area. A portion of the North Bayshore Area drains into the Palo Alto storm drain network.

Developed portions of the Precise Plan area contain large amounts of impervious surfaces as buildings, parking lot, streets and other hardscape areas that contribute runoff to the storm drain system. Pervious surfaces that generate no runoff or negligible amounts of runoff include open space (such as Charleston Park) landscaped portions of developed areas, and vacant unpaved parcels.

4.15.1.9 *Solid Waste*

Solid waste collection and recycling services for residents and businesses in Mountain View are provided by Recology Mountain View. Commercial waste pick up (including compostables) and recycling services are provided, and Recology provides weekly, residential service waste pick up and recycling services to the North Bayshore area and the Santiago Villa mobile home park. These services would continue under the North Bayshore Precise Plan.

Once collected, solid waste and recyclables are transported to the SMaRT station in Sunnyvale for sorting, and commercial compostables (food scraps) are transported to a composting facility located in Vernalis, California. Non-recyclable waste is transported to Kirby Canyon Sanitary Landfill in south San José, California (which is contracted to the City through 2021). Additional small quantities of waste may be transported to other landfills within the area by private contractors. Kirby Canyon Landfill has a total estimated permitted capacity of 36.4 million cubic yards, a remaining estimated capacity of approximately 16.2 million cubic yards, and an anticipated closing date of December 31, 2022. The landfill is permitted to receive a maximum disposal of 2,600 tons of garbage per day.[119]

The City of Mountain View is working to maintain the waste diversion goal of 50 percent set by state law in 1995. In 2006, the City of Mountain View achieved a diversion rate of 72 percent, which is the last year this rate was calculated.[120]

On March 24, 2009, the Mountain View City Council adopted an Environmental Sustainability Action Plan that calls for, among other actions, the creation of a Zero Waste Plan. The creation of this plan was one of 89 recommendations presented to the Council in the September 2008 final report of the Mountain View Sustainability Task Force. As a first step in this process, Mountain View recently completed a waste characterization study. For 2009, the disposal rate was 4.0 pounds per capita per day against a target of 7.8 pounds (based on population) as measured by CalRecycle's new methodology. The Zero Waste Plan will seek to reduce the per capita disposal rate for both residential and commercial waste.[121] The 2015 CalRecycle per capita disposal rates are 4.7 pounds per resident per day (with a 63 percent diversion rate), and 11.1 pounds per employee per day (with a 65 percent diversion rate).[122]

Immediately north of the North Bayshore Precise Plan area is the Shoreline Landfill, a closed landfill last operated in 1988 for waste collection. The landfill contains 439 acres of buried waste located under various land uses including an 18-hole golf course, restaurants, a boathouse and sailing lake, an amphitheater, and surface parking areas. Decomposing refuse generates gas and liquids (i.e., methane and leachates) that could affect the air and water quality in the Precise Plan area. The City is maintaining the landfill in accordance to the Shoreline Landfill Master Plan which concluded that

[119] CalRecycle. "Facility/Site Summary Details: Kirby Canyon Recycle.& Disp. Facility (43-AN-0008)." http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0008/Detail/. Accessed November 8, 2016.
[120] City of Mountain View. "Zero Waste". http://www.mountainview.gov/depts/pw/recycling/zero/default.asp. Accessed November 8, 2016.
[121] Ibid.
[122] CalRecycle. "California's 2015 Per Capita Disposal Rate". http://www.calrecycle.ca.gov/lgcentral/goalmeasure/DisposalRate/MostRecent/default.htm. Accessed November 8, 2016.

landfill post-closure operations and maintenance would extend through the year 2042, when the landfill is determined no longer a threat to human health, safety, and the environment.[123] Federal, state and local regulations require post closure operation and maintenance during the minimum thirty year post-closure period.

A landfill gas supply pipeline connects to adjacent business within the Amphitheatre Parkway, Charleston Road and Alta Avenue area. The landfill and pipeline supplies landfill gas for power generation that is maintained and operated by Google, Inc.

4.15.2 Utilities and Service Systems Impacts

4.15.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a utilities and service systems impact is considered significant if the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new waste or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

4.15.2.2 *Water Supply Impacts*

The general land use intensification for the amended North Bayshore Precise Plan area was included in the 2015 UWMP. The water supply and demand analysis included in the 2015 UWMP was relied upon for the Water Supply Assessment. Because the North Bayshore Precise Plan project area residential expansion was not part of the General Plan, the WSA adds the project's water demand to the UWMP water demand.

Estimated Future Water Demand

Estimation of future demand for the proposed project area involves application of the unit duty factors described previously. To be conservative, the unit duty factors do not incorporate the proposed green building standards and guidelines proposed in the North Bayshore Precise Plan. The factors also do not separate indoor and outdoor water use and, as such, future potable water demand

[123] City of Mountain View. "Study Session Memo: Shoreline Landfill Master Plan." February 5, 2013.

may be further reduced with offsetting recycled water use. Based on the City's water use unit duty factors (described previously) for Industrial, Research & Development, and Multi-family uses, the buildout of the amended North Bayshore Precise Plan would be expected to require 2,518 AFY, or a net new demand of 1,414 acre feet per year (AFY).

Amended North Bayshore Precise Plan

The North Bayshore Precise Plan project would allow development of an additional 3.6 million square feet of commercial uses and 9,850 residential units in North Bayshore.[124] As described in Chapter 4, Green Building and Site Design of the Precise Plan, conformance with the green building standards and guidelines for the North Bayshore area is required. New construction would be required to meet the intent of the Leadership in Energy and Environmental Design (LEED) rating system and the mandatory CALGreen requirements, consistent with the vision for sustainable development indicated in the 2030 General Plan. LEED consists of a suite of rating systems for the design, construction and operation of buildings. LEED rating involves 100 points (plus bonus points); a Platinum rating (the highest) is based on achieving 80 to 100 points.

Section 4.3, Water Efficiency and Conservation of the Precise Plan calls for reducing potable water consumption and increasing recycled water use, including compliance with the mandatory elements of CALGreen, reducing outdoor water demand consistent with the City's Water Conservation in Landscaping Regulations, and requiring connections to the City's recycled water facilities.

Assuming that future development projects within the Precise Plan area meet the intent of the green building standards, the increased water demands associated with the North Bayshore Precise Plan development would be offset in part by planned water conservation measures. Most of North Bayshore is within the City's recycled water service area. In the North Bayshore area, the City requires recycled water for landscape use by retail, commercial and industrial customers. Additional potable water use reductions can be achieved by planning for dual plumbing in buildings, implementing rainwater harvesting, and constructing on-site graywater systems, as stated in the guidelines in Section 4.3, Water Efficiency and Conservation of the Precise Plan.

Comparison of Water Supply and Demand

The water demand required for buildout of the North Bayshore Precise Plan area is estimated to be a net new demand of 1,414 AFY, based on water demand factors developed by the City for the North Bayshore Precise Plan. Under the 2030 General Plan, the City of Mountain View plans an overall net increase in water demand of 1,325 AFY. The 2015 UWMP, however, recognized the intensification of land uses in Mountain View since the adoption of the General Plan, including the addition of residential uses to the North Bayshore area and elsewhere in the City. Under the UWMP's "higher growth alternative," normal year water demand would be 17,442 AFY, 1,091 AFY of which would be met with recycled water. This normal year water demand would be met by existing supplies.

Based on the City's 2015 UWMP and the project's estimated future water demand (2,518 AFY), water supply shortfalls can be expected in single dry years and multiple dry years. Single dry year

[124] A total of 3.6 million feet of new office development includes all the office and commercial development currently being considered in North Bayshore.

shortfalls would be 11 to 18 percent from 2020 to 2040 and multiple dry year shortfalls would be 13 to 20 percent from 2020 to 2040. This includes SFPUC supply up to 10,597 AFY in single dry years and 13,189 AFY in the first year of multiple dry years and 10,597 AFY in the second and third years of multiple dry years. Because the City conserved 28 percent in 2015 in response to the drought, the 2015 UWMP reasonably assumes that drought reductions of up to this magnitude are feasible in the future. Therefore, conservation programs would reduce the expected dry-year supply shortfall in the higher-growth alternative. In addition, Mountain View may receive more drought allocation from SFPUC in future dry years than was modeled in the 2015 UWMP, if the City exceeds the growth of its neighboring cities. Also, some future projects will be required to use recycled water, thereby decreasing the impact to the City's potable water system. Moreover, these water demand estimates do not account for water conservation beyond the conservation envisioned in the General Plan and 2015 UWMP; accordingly, the shortfall values would be over-estimates.

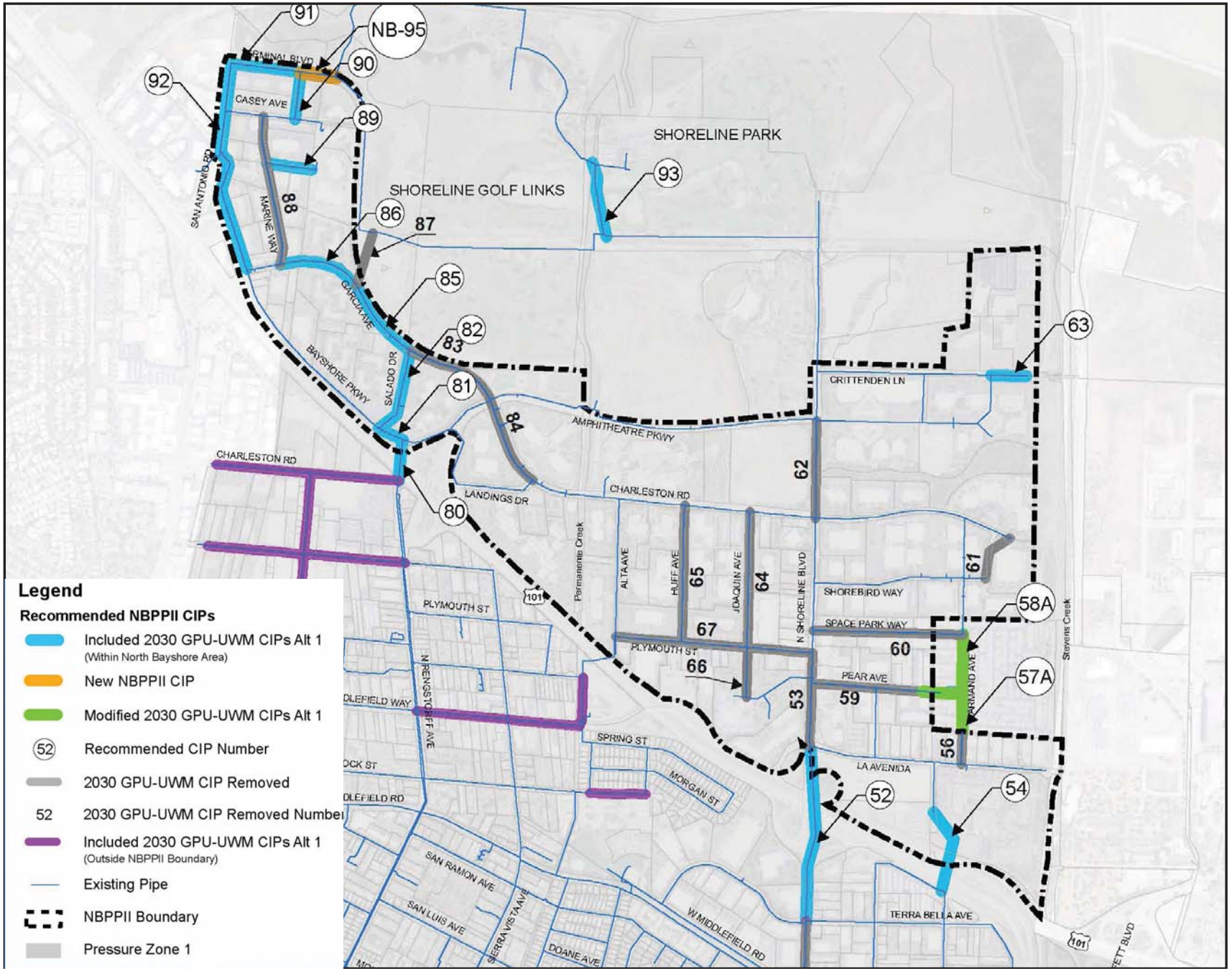
With the addition of future development projects as part of the amended North Bayshore Precise Plan, the City of Mountain View would have sufficient water supply for the proposed project in normal rainfall years. The City of Mountain View has considered potential water shortages in dry years, and has developed a water shortage contingency plan that provides measures to reduce demand to match available supply. In addition, future projects developed under the Precise Plan would be required to comply with 2030 General Plan policies related to water conservation (including Policies INC 5.1 through INC 5.7), as well as Precise Plan standards and guidelines for water conservation and green building. For these reasons, the amended North Bayshore Precise Plan would not result in a significant water supply impact.

Impact UTIL-1: Future development under the amended North Bayshore Precise Plan would be required to comply with Precise Plan goals and policies promoting water conservation. Even without these measures, sufficient supplies of water are available to serve the project during normal and drought years, and the proposed project would not result in significant water supply impacts. **[Less Than Significant Impact]**

4.15.2.3 *Water Facilities Impacts*

The effect that the North Bayshore Precise Plan would have on the water delivery system was analyzed as part of the Utility Impact Study (Appendix L). The study determined that water demand of development allowed by the amended Precise Plan cannot be adequately supplied by the existing system while maintaining required system pressures. One additional Capital Improvement Project (CIP), beyond what was identified in the updated 2030 General Plan analysis,[125] was identified as being necessary to serve future development under the amended Precise Plan and meet the minimum pressure criteria during peak hour demand conditions. The water system improvement projects are summarized in Table 4.15-1. This water line improvement, as well as all the water line improvements identified as part of the 2030 General Plan, are shown in Figure 4.15-1: Water System Improvement Projects. Additionally, removed CIPs are shown in grey in Figure 4.15-1.

[125] Mountain View, City of. *Addendum to Final Environmental Impact Report (SCH 2011012069), 2030 General Plan and Greenhouse Gas Reduction Program.* June 2014. Adopted July 1, 2014.



WATER SYSTEM IMPROVEMENT PROJECTS FIGURE 4.15-1

Table 4.15-1: Recommended Water Line Upgrades					
CIP	**Improvement Location**	**Length (feet)**	**Existing Diameter (inches)**	**2030 General Plan Recommended Diameter (inches)**	**Proposed Project Recommended Diameter (inches)**
52	North Shoreline Boulevard (between La Avenida Avenue and Terra Bella Avenue)	1,900	12	16	16
		1,100	-	Casing	Casing
54	US 101 Crossing (Macon Avenue to San Rafael Avenue)	940	-	12	12
		500	-	Casing	Casing
57A	Armand Avenue Area (Pear Avenue to Villa)	700	-	12	8
58A	Armand Avenue Area (Space Park Way to Pear Avenue)	645	-	12	8
63	Crittenden Lane	375	8	12	12
80	US 101 Crossing (near Rengstorff Avenue)	450	14	16	16
		450	-	Casing	Casing
81	Overland (east of Salado Drive)	320	12	16	16
82	Salado Drive	810	8	12	12
85	Garcia Ave (west of Salado Drive)	935	8	12	12
86	Garcia Ave (east of Marine Way)	890	8	12	12
89	Coast Way	495	8	12	12
90	Broderick Way	520	8	12	12
91	Terminal Boulevard, west of Broderick Way	760	8	12	12
92	Bayshore Parkway and San Antonio Road	2,355	8	12	12
93	Shoreline Golf Links	760	8	12	12
NB-95	**Terminal Boulevard, east of Broderick Way**	**385**	**8**	**-**	**12**

Notes: Highlighting indicates new pipe, all others involve replacement of existing pipe.
Bold indicates the additional improvement specifically associated with implementation of the North Bayshore Precise Plan.

Impact UTIL-2: With implementation of infrastructure improvements identified in the utilities impact prepared for the project, the amended North Bayshore Precise Plan would not result in an impact to water facilities. **[Less Than Significant Impact]**

4.15.2.4 *Wastewater Services Impacts*

Palo Alto Regional Water Quality Control Plant

The Mountain View 2030 General Plan EIR found that, given the average annual flow capacity right of 15.1 mgd, the Palo Alto RWQCP has adequate capacity to serve anticipated growth anticipated under the General Plan. According to the City of Palo Alto's 2015 UWMP, the RWQCP's capacity is sufficient for current dry and wet weather loads and for future load projections, and there are no plans for expanding the treatment plant. In conformance with General Plan Goal INC-6, and Policies INC 6.1-6.4, the City of Mountain View will continue to coordinate with their partners and local agencies to monitor changing rules and regulations regarding wastewater discharge from the Palo Alto RWQCP.

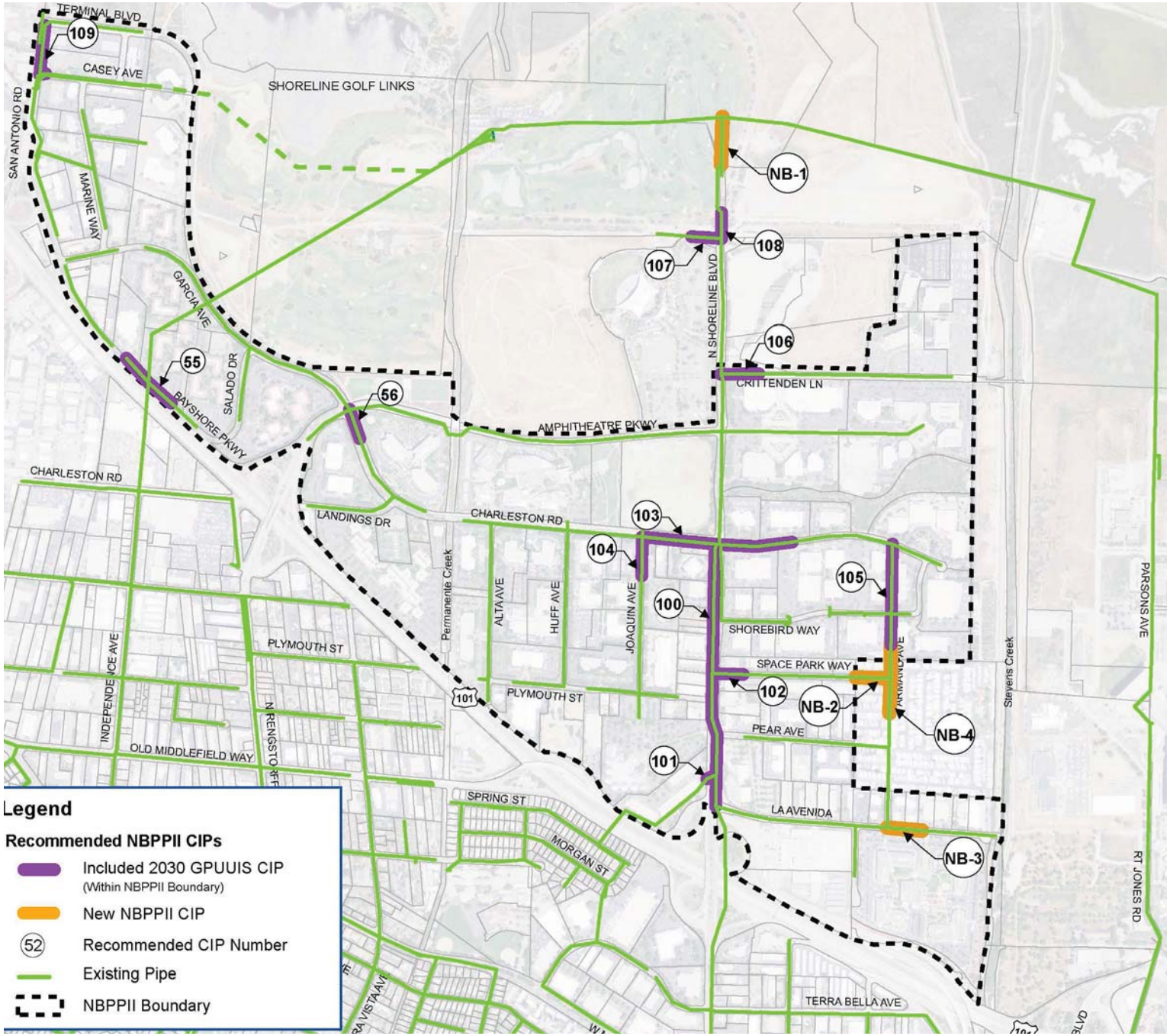
The build out under the amended North Bayshore Precise Plan would increase development in the Precise Plan area by an additional 3.6 million square feet of commercial development and 9,850 multi-family residential units. The quantity of wastewater that would be generated would be approximately 0.32 mgd (average annual flow). As of 2015, approximately 6.4 mgd of wastewater from Mountain View was collected and treated by the RWQCP; therefore, development associated with the North Bayshore Precise Plan would not result in an exceedance of the City's 15.1 mgd treatment capacity right at the RWQCP. Further, implementation of the RWQCP Long Range Facilities Plan would address aging equipment, new regulatory requirements, and sustainability. Therefore, the impact is less than significant.

Sanitary Sewer Infrastructure

Shoreline Sewage Pump Station

The Shoreline Sewage Pump Station (SPS) receives the majority of the sewage generated within the City and conveys the flow through a forcemain to the San Antonio Meter Station and on to the RWQCP. The SPS pumping capacity is 25.9 mgd, which is greater than the North Bayshore Precise Plan projected wet weather flow of 20.9 mgd.

The Utility Impact Study prepared for the North Bayshore Precise Plan determined that the existing unimproved sewer system, with sewer flows from the anticipated commercial and residential development allowed under the North Bayshore Precise Plan, would exceed the City's flow-depth design criteria. Even with the implementation of the CIPs included as part of the 2030 General Plan, the system would not meet design performance criteria in three pipe segments. Additional improvements are necessary to increase system capacity in the Precise Plan area to adequately convey the increased sewer flow, while satisfying the flow-depth design criteria. The locations of the three necessary improvements are listed in the following Table 4.15-2. The overall sanitary sewer improvements included as part of the 2030 General Plan are shown in Figure 4.15-2.



SANITARY SEWER SYSTEM IMPROVEMENT PROJECT FIGURE 4.15-2

Table 4.15-2: Recommended Sanitary Sewer Upgrades					
CIP	**Improvement Location**	**Existing Diameter (inches)**	**2030 General Plan Recommended Diameter (inches)**	**Proposed Project Recommended Diameter (inches)**	**Length (feet)**
NB-1	North Shoreline Boulevard	21	21	27	435
NB-4	Armand Avenue near Space Park Way	10	10	15	325
		12	12	12	320

The identified North Bayshore area sanitary sewer improvements would be built in existing roadways and utility rights-of-way, and are not expected to impact sensitive habitat areas or result in other environmental impacts, aside from short-term construction disturbance, including temporary construction noise and air quality impacts.

As described in Chapter 8, Implementation of the North Bayshore Precise Plan, future development would be required to contribute to a funding program for capital improvements to the sanitary sewer system. In addition, future development projects under the Precise Plan would be required to comply with the following sanitary sewer guidelines included in Chapter 7 Infrastructure of the Precise Plan:

- **Upgrade timing**. Sewer infrastructure upgrades should occur in advance of transportation and streetscape improvements and in conjunction with other utility upgrades.
- **Ongoing maintenance and system replacement**. Maintenance and system replacement projects should occur in conjunction with future North Bayshore development.

For these reasons, the amended North Bayshore Precise Plan would not result in significant impacts to the sanitary sewer system.

Impact UTIL-3: The implementation of the amended North Bayshore Precise Plan would result in a greater quantity of wastewater generated than the existing condition, but the increase would be within the capacity of the RWQCP. With the implementation of the sanitary sewer line upgrades NB-1 (along North Shoreline Boulevard) and NB-4 (at Armand Avenue near Space Park Way), as well as required to contributions to a funding program for capital improvements to the sanitary sewer system, future development under the Precise Plan would result in less than significant sewage infrastructure impacts. **[Less Than Significant Impact]**

4.15.2.5 *Storm Drainage Impacts*

A comparison of the proposed land uses in the Precise Plan area with the existing land uses shows little potential increase in overall impervious surfaces. Therefore, there should not be any significant

impact on the drainage system resulting from implementation of the Precise Plan. Compliance with the guidelines contained within the Precise Plan, Section 7.4, Storm Drainage and Flooding would further reduce the impacts on the region's drainage systems. Additionally, the City would review each development project and compare drainage characteristics and patterns to those assumed in the North Bayshore Storm Drain Master Plan, which is described further below.

The North Bayshore Storm Drain Master Plan was prepared to evaluate the capacity of the storm drain system serving the entire North Bayshore area, which also includes the Precise Plan area, and to identify a prioritized plan of capital improvements to reduce the risk of flood, improve system reliability and reduce operations costs. The Master Plan identifies limited areas within North Bayshore that experience minor flooding. No severe flooding has occurred in the larger North Bayshore area during the past 30 years. Within the Precise Plan area, storm drain capacity modeling indicated that under existing conditions, some nodes (e.g. storm drain inlets and laterals) along Plymouth Street would flood during the ten-year storm event.

Prioritized improvements identified by the Master Plan that would eliminate all flooding include the installation of a flap gate at the Plymouth Street outfall to Permanente Creek, the connection of drainage ditches to an existing retention basin, and other drainage ditch improvements. The Storm Drain Master Plan concluded that the majority of the existing North Bayshore storm drain system does provide adequate conveyance of the ten-year storm event, and that development proposed for the North Bayshore area will not significantly impact the drainage system or require additional capital improvements.

The improvements identified in the North Bayshore Storm Drain Master Plan would address existing deficiencies, rather than the requirements of the potential new development. When implemented by the City, the improvements identified in the storm drain study would be required to undergo separate environmental review for their construction and operational impacts.

The Precise Plan stormwater management standards and guidelines include measures such as minimizing impervious surfaces, capturing rainwater runoff for non-potable use, and using green roofs in new construction. Each of these measures reduces runoff, and widespread implementation of such practices throughout the Plan area would reduce the overall volume of runoff conveyed by the storm drain system when compared to conventional development.

Impact UTIL-4: New development under the amended North Bayshore Precise Plan would continue to contribute runoff to the storm drain system serving the North Bayshore area, however the capacity of the North Bayshore drainage system is adequate to accommodate runoff from new development planned for the area. The stormwater management standards and guidelines identified in the amended North Bayshore Precise Plan would minimize runoff from new development projects. Therefore, development under the Precise Plan would not exceed the capacity of the storm drainage system, alter existing drainage patterns or degrade water quality from excess flows. **[Less Than Significant Impact]**

4.15.2.6 *Solid Waste Impacts*

Future developments in the North Bayshore Precise Plan area would be required to comply with the California mandated 50 percent waste diversion, CalGreen Standards, and the guidelines and standards as outlined Section 4.5 Materials Management of the North Bayshore Precise Plan. The following standards from the Precise Plan pertain to solid waste:

- **Areas for waste, compost, and recycling.** All new construction shall provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recycling, compost, and general waste.
- **Construction waste reduction.** New construction, additions, and alterations shall recycle or salvage 65 percent of nonhazardous construction and demolition debris generated at the site.
- **Containers for recyclables, compostables, and waste.** Separate containers for recyclables, compostables, and waste shall be placed in all common areas, including all gathering areas, such as cafeterias and break rooms.

New developments in the North Bayshore Precise Plan area would be required to divert and dispose of waste in accordance with the policies in the General Plan, and standards and guidelines in the North Bayshore Precise Plan. Solid waste from the North Bayshore Precise Plan area would be disposed at the Kirby Canyon Landfill in San José through 2021, until the end of the City's current contract. Kirby Canyon Landfill has capacity until at least 2022. Therefore, future developments in the North Bayshore Precise Plan area would not result in a substantial increase in waste landfilled at Kirby Canyon, or be served by a landfill without sufficient capacity.

Impact UTIL-5: New developments in the Precise Plan area would be required to divert and dispose of waste in accordance with the policies in the General Plan, and the standards and guidelines in the amended North Bayshore Precise Plan. Solid waste from the North Bayshore Precise Plan area would be disposed at the Kirby Canyon Landfill in San José through 2021. Kirby Canyon Landfill has capacity until 2022. Therefore, future developments in the North Bayshore Precise Plan area would not result in a substantial increase in waste landfilled at Kirby Canyon, or be served by a landfill without sufficient capacity. **[Less Than Significant Impact]**

4.15.3 Consistency with Plans

4.15.3.1 *Mountain View 2030 General Plan*

The proposed project includes amendments to the text and map of the Mountain View 2030 General Plan to allow up to 9,850 dwelling units in the North Bayshore area, which would be an increase of 8,750 dwelling units over the 1,100 dwelling units currently allowed under the amended 2030 General Plan.

Consistency: The proposed project would not result in significant impacts with the implementation of standard City of Mountain View conditions of approval. The proposed amendments to the General Plan would not result in additional utilities impacts, when compared to the implementation of the adopted North Bayshore Precise Plan. The proposed project would allow the construction of

residential and commercial uses in an identified Change Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.15.3.2 *Mountain View 2015 Urban Water Management Plan*

The population growth anticipated in the City from approval of the amended North Bayshore Precise Plan was considered in the 2015 Urban Water Management Plan analysis. Based on this plan and the project's Water Supply Assessment, adequate water supplies are available to serve the City following approval of the proposed General Plan amendment. For these reasons, the project is consistent with the Mountain View 2030 General Plan.

4.15.4 Cumulative Utilities Impacts

Utilities are generally provided or delivered on a local level, but often originate from sources outside of the City and/or as a part of a regional distribution system. Development associated with the amended North Bayshore Precise Plan could contribute to City-wide or regional impacts associated with the provision of utilities.

4.15.4.1 *Cumulative Water Supply Impacts*

With the exception of the groundwater supply, the majority of potable water supplies in Mountain View originate from outside the City. In addition to Santa Clara County, the water supply from the SFPUC is distributed to other wholesale customers in Alameda and San Mateo counties. The SCVWD is Santa Clara County's principal water wholesaler, and serves surrounding communities, like Palo Alto and Sunnyvale. Most new urban land uses within the surrounding area and development associated with implementation of the North Bayshore Precise Plan and the 2030 General Plan would be dependent on these two water supply sources.

As described in the 2015 Urban Water Management Plan, which encompasses the likely growth in water demand, and as described in the North Bayshore Precise Plan Water Supply Assessment, the City's available potable and non-potable water supplies are expected to be sufficient to meet demands of existing uses and future uses under a Normal Year scenario through 2035. For this reason, implementation of the North Bayshore Precise Plan would not make a significant cumulative contribution to impacts on water supply, and cumulative water supply impacts would be less than significant.

4.15.4.2 *Cumulative Wastewater Impacts*

The total future cumulative wastewater generated within the City of Mountain View would be 14.3 mgd, which is more than 80 percent of the 15.1 mgd capacity at the RWQCP. The City of Mountain View would be required to conduct an engineering study define the future needs of the treatment plant (per the RWQCP Basic Agreement with the City of Mountain View and consistent with the RWQCP's Facility Plan) when their respective service area reaches 80 percent of their contractual capacity rights. Preparation of the engineering study and implementation of improvements as part of the RWQCP's Facility Plan would reduce cumulative wastewater impacts to a less than significant level.

4.15.4.3 *Cumulative Stormwater System Impacts*

Future development within Mountain View and surrounding communities must comply with the NPDES MRP regulations currently in place, which regulate storm drainage facilities. New stormwater infrastructure that would be required to serve expected growth under the 2030 General Plan and the North Bayshore Precise Plan would be developed in compliance with existing local, State, and federal regulations, and would be appropriately sized for each development. Therefore, implementation of the North Bayshore Precise Plan would not make a significant cumulative contribution to impacts on the stormwater drainage systems, and cumulative stormwater system impacts would be less than significant.

4.15.4.4 *Cumulative Solid Waste Impacts*

New development estimated to occur under the North Bayshore Precise Plan, together with the 2030 General Plan buildout would increase the generation of solid waste in Mountain View. As described in the 2030 General Plan EIR, growth associated with the General Plan buildout (including the North Bayshore area) would represent approximately 3.5 percent of the permitted daily throughput of the Kirby Canyon Landfill. It is anticipated the landfill would have adequate capacity to accommodate solid waste generation from its surrounding communities. Therefore, implementation of the North Bayshore Precise Plan would not make a significant cumulative contribution to impacts on solid waste management.

Impact C-UTIL-1: The proposed project, together with projects built as part of the 2030 General Plan, would not result in significant cumulative utilities impacts. **[Less Than Significant Cumulative Impact]**

4.15.5 Conclusion

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
UTIL-1: Future development under the Precise Plan would be required to comply with Precise Plan goals and policies promoting water conservation. Even without these measures, sufficient supplies of water are available to serve the project during normal and drought years, and the proposed project would not result in significant water supply impacts.	Less Than Significant	No mitigation required	Less Than Significant
UTIL-2: With implementation of infrastructure improvements identified in the utilities impact prepared for the project, the amended North Bayshore Precise Plan would not result in an impact to water facilities.	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
UTIL-3: Implementation of the amended North Bayshore Precise Plan would result in a greater quantity of wastewater generated than the existing condition, but the increase would be within the capacity of the RWQCP. With the implementation of the sanitary sewer line upgrades NB-1 (along North Shoreline Boulevard) and NB-4 (at Armand Avenue near Space Park Way), as well as required contributions to a funding program for capital improvements to the sanitary sewer system, future development under the Precise Plan would result in less than significant sewage infrastructure impacts.	Less Than Significant	No mitigation required	Less Than Significant
UTIL-4: New development under the Precise Plan would continue to contribute runoff to the storm drain system serving the North Bayshore area, however the capacity of the North Bayshore drainage system is adequate to accommodate runoff from new development planned for the area. The stormwater management standards and guidelines identified in the North Bayshore Precise Plan would minimize runoff from new development projects. Therefore, development under the Precise Plan would not exceed the capacity of the storm drainage system, alter existing drainage patterns or degrade water quality from excess flows.	Less Than Significant	No mitigation required	Less Than Significant
UTIL-5: New developments in the North Bayshore Precise Plan area would be required to divert and dispose of waste in accordance with the policies in the General Plan, and the standards and guidelines in the amended North Bayshore Precise Plan. Solid waste from the North Bayshore Precise Plan area would be disposed at the Kirby Canyon	Less Than Significant	No mitigation required	Less Than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Landfill in San José through 2021. Kirby Canyon Landfill has capacity until 2022. Therefore, future developments in the North Bayshore Precise Plan area would not result in a substantial increase in waste landfilled at Kirby Canyon, or be served by a landfill without sufficient capacity.			
C-UTIL-1: The proposed project, together with projects built as part of the 2030 General Plan, would not result in significant cumulative utilities impacts.	Less Than Significant	No mitigation required	Less Than Significant

SECTION 5.0 GROWTH-INDUCING IMPACTS

5.1 INTRODUCTION AND THRESHOLDS:

As stated in the CEQA Guidelines, Section 15126.2(d), a project is considered growth-inducing if it would:

- Directly or indirectly foster economic or population growth, or the construction of additional housing in the surrounding environment.
- Remove obstacles to population growth or tax community service facilities to the extent that the construction of new facilities would be necessary.
- Encourage or facilitate other activities that would cause significant environmental effects.

Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

5.1.1 Economic or Population Growth

5.1.1.1 *Economic and Employment Growth*

The North Bayshore area was identified as a Change Area in the 2030 General Plan, and the adopted North Bayshore Precise Plan proposed to implement non-residential growth envisioned in the General Plan. The 2030 General Plan EIR concluded that implementation of the General Plan would directly induce population and employment growth in the City by designating land within the City for development that is more intense than previous designations allowed. The 2030 General Plan found that because much of the housing and commercial growth that would occur would be centered near transit nodes, anticipated growth would have several beneficial effects. This growth would support regional transit systems by increasing ridership and access to transit systems, including VTA light rail and Caltrain, and would benefit bicycle and pedestrian access. Strengthening the transit system and improving bicycle and pedestrian circulation under the 2030 General Plan direction and through the North Bayshore Precise Plan's proposed strategies and improvements would help minimize traffic and associated environmental effects, such as air pollution and noise, within the Bay Area.

The adopted 2014 North Bayshore Precise Plan project resulted in employment growth in the City, because it increased the net amount of office and commercial space in the area. The Mountain View 2030 General Plan, adopted in July 2012, anticipated similar employment density in the North Bayshore area, along with the continued transition of jobs in the area from the manufacturing to the information sector. Implementation of the 2030 General Plan and adopted North Bayshore Precise Plan were projected to result in a total of 28,080 jobs in North Bayshore and 82,230 jobs in the City in 2030.

Amended North Bayshore Precise Plan

The proposed amended North Bayshore Precise Plan includes approximately the same amount of commercial and office space as the adopted North Bayshore Precise Plan, which was consistent with

the 2030 General Plan. The North Bayshore area has experienced a continued transition of jobs from the manufacturing to the information sector, which has resulted in higher employment densities. Changes in the type of employment space and the way space is used has resulted in a higher projection of jobs for buildout of the North Bayshore Precise Plan area. Buildout of the amended North Bayshore Precise Plan is projected to result in 38,910 jobs, an increase of 10,180 jobs, over the number of jobs anticipated under the adopted Precise Plan. Since the Precise Plan was approved in 2014, much of this commercial and office space has either been built out, or office developments are proposed for the available development capacity. The individual subject areas of this SEIR (i.e., traffic, air quality, GHG) address the indirect effects of the increased employment. For these reasons, while the proposed amended North Bayshore Precise Plan would result in more jobs than the currently adopted Precise Plan, the proposed project is not considered to directly or indirectly foster economic growth.

5.1.1.2 *Population Growth*

The North Bayshore Precise Plan area currently contains approximately six dwelling units.[126] The 2030 General Plan allows an additional 1,100 dwelling units within the Precise Plan Area and projects a North Bayshore population of 2,960 at buildout of the General Plan.

Amended North Bayshore Precise Plan

The proposed amended North Bayshore Precise Plan includes a total of 9,850 dwelling units, 8,750 more units than allowed under the existing General Plan. The proposed units would accommodate a population of approximately 18,000 in the North Bayshore area, a population increase of 15,040 over the adopted Precise Plan and General Plan. The project would almost double new dwelling units allowed under the Mountain View General Plan.

The project proposes residential development to meet a housing demand resulting from approved and allowed economic growth in Mountain View and the surrounding region. Mountain View currently has more jobs than housing, and the proposed residential development in a job-rich area like North Bayshore is intended to reduce development pressure for housing elsewhere in Mountain View and in nearby cities. Some new residents may live and work in the North Bayshore area, a Priority Development Area (PDA), and others may commute out of the area for work. Growth would occur within a developed area of Mountain View and the proposed project is consistent with the General Plan goals for focused and sustainable growth, because it supports the intensification of development in an urbanized area that is currently served by existing roads, transit, utilities, and public services.

Buildout of the amended North Bayshore Precise Plan could incrementally increase economic pressure and contribute to rising rents and housing prices, which could indirectly contribute to increased development pressures for additional housing within Mountain View and nearby cities. Additional residential development in Mountain View or other nearby cities would generally be in accordance with the General Plans of those cities, and would be anticipated to occur mainly within the developed, urban service areas, as outlined in local and regional plans. Such other projects would undergo their own environmental review under CEQA at the time they are proposed. While some

[126] The Santiago Villa Mobile Home Park, which is in North Bayshore, but outside of the Precise Plan area, contains approximately 362 dwelling units.

incremental, indirect pressure for additional housing in the region is likely, this is not expected to be a significant growth inducing impact of the amended North Bayshore Precise Plan.

5.1.2 Removal of Obstacles to Growth

The project site is located within the incorporated limits of the City of Mountain View, and implementation of the amended North Bayshore Precise Plan would not result in an expansion of urban services or the pressure to expand beyond the City's existing Sphere of Influence.

The project would not open undeveloped land to further growth, or provide expanded utility capacity that would be available to serve future unplanned development. With development consistent with policies of the North Bayshore Precise Plan, the project would not tax community services to the extent that construction of new facilities would be necessary. The project would not encourage or facilitate other activities that would cause significant environmental effects. Instead, it would facilitate the reuse and intensification of office/light industrial land in an existing urban setting, consistent with goals and policies the City's General Plan.

For the reasons described above, the project would not result in a significant growth-inducing impact.

Impact GRO-1: Based on the above discussion, the project would not result in significant growth-inducing impacts. **[Less Than Significant Growth-Inducing Impact]**

SECTION 6.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

This section was prepared pursuant to CEQA Guidelines Section 15126.2(c), which requires a discussion of the significant irreversible changes that would result from the implementation of a proposed project. Significant irreversible changes include the use of nonrenewable resources, the commitment of future generations to similar use, irreversible damage resulting from environmental accidents associated with the project, and irretrievable commitments of resources.

6.1 USE OF NONRENEWABLE RESOURCES

Implementation of the proposed amended North Bayshore Precise Plan, including demolition of existing buildings and structures and construction of newer, likely larger buildings would require the use and consumption of nonrenewable resources. Nonrenewable resources include fossil fuels and metals, and cannot be regenerated over time.

As discussed in *Section 4.5.2, Energy Impacts*, energy will be consumed during both the construction and operational phases of new uses in the Precise Plan area. The demolition and construction phase will require energy for the manufacture and transportation of building materials, preparation of sites (e.g., demolition of the existing buildings and grading), and the actual construction of the buildings. The operation of the proposed uses would consume energy (in the form of electricity and natural gas) for building heating and cooling, lighting, water heating, and the operation of appliances, electronic equipment, and commercial machinery. Operational energy will also be consumed during each vehicle trip associated with these proposed uses. The standards and guidelines in the proposed Precise Plan would support sustainable energy consumption through efficiency, conservation and sustainable production through increased use of renewable energy sources. The development of the Precise Plan would promote transit ridership, and would result in the conservation of fossil fuels.

6.2 CHANGE IN LAND USE

Nearly all of the Precise Plan area is currently developed with office, industrial, commercial, or residential uses, or has been designated for future development, or as open space or park land. Implementation of the amended North Bayshore Precise Plan would result in the introduction of residential and commercial uses in an already urbanized area that was designated in the 2030 General Plan as a Change Area. The intensification of development in this area would serve several purposes, including utilization of underutilized land and efficient use of existing roadways and infrastructure within the City limits.

Although development associated with the North Bayshore Precise Plan would commit future generations to more intense development in this area, these land uses would benefit the City and the region by providing sustainably-developed and well-planned commercial and residential development within an existing urban area.

6.3 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Implementation of the amended North Bayshore Precise Plan would result in the redevelopment of previously developed office and industrial properties. Associated irreversible environmental changes

associated with the modification of existing land uses include: the potential degradation of existing biological and cultural features, loss of aesthetic integrity, and the installation of utility and roadway infrastructure. Although it is unlikely that a major hazardous waste release would occur as a result of implementation of the amended North Bayshore Precise Plan, such a release would also constitute a significant irreversible change from an environmental action. The mitigation measures outlined in this Draft SEIR would reduce all such irreversible or nearly irreversible effects to less than significant levels.

SECTION 7.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The project would result in the significant unavoidable impacts discussed below. All other impacts of the proposed project would be mitigated to a less than significant level with incorporation of the Precise Plan standards and guidelines, applicable mitigation measures, and General Plan policies and actions identified in this SEIR.

Transportation and Traffic:

- **Intersection Impacts:** As shown in Table 4.14-11, under Existing with Project Conditions, implementation of the proposed project would increase motor vehicle traffic and congestion. This congestion would result in significant and unavoidable impacts to 18 intersections in the AM and/or PM peak hours.

  These significant, unavoidable intersection impacts are as follows:

  1. San Antonio Road and Bayshore Parkway (Palo Alto)
  13. Amphitheatre Parkway and Garcia Avenue-Charleston Road (Mountain View)
  15. Rengstorff Avenue and US 101 Southbound ramps (Mountain View)
  16. Rengstorff Avenue and Leghorn Street (Mountain View)
  17. Rengstorff Avenue and Old Middlefield Way (Mountain View)
  20. Rengstorff Avenue and Central Expressway (Santa Clara County)
  24. Springer Road-Magdalena Avenue and Foothill Expressway (Santa Clara County)
  32. Shoreline Boulevard and Space Park Way (Mountain View)
  33. Shoreline Boulevard and Plymouth Street (Mountain View)
  34. Shoreline Boulevard and Pear Avenue (Mountain View)
  35. Shoreline Boulevard and La Avenida-US 101 Northbound Ramps (Mountain View)
  38. Shoreline Boulevard and Middlefield Road (Mountain View)
  49. Moffett Boulevard-Castro Street and Central Expressway (Santa Clara County)
  57. Bayfront Expressway and University Avenue (Menlo Park)
  59. Donohoe Street and University Avenue (East Palo Alto)
  62. Embarcadero Road and East Bayshore Road (Palo Alto)
  66. Arastradero Road and Foothill Expressway (Santa Clara County)
  67. Page Mill Road and I-280 Southbound Off-Ramp-Arastradero Road (Santa Clara County)

  Mitigation measures were considered for these impacts (refer to Table 4.14-12 in *Section 4.14.3.4*), and improvements identified would not ultimately improve the intersection operations to an acceptable level of service, or are not guaranteed to be implemented. For example, re-alignment of the US 101 northbound off-ramp (a potential mitigation measure for impacts at Intersection #35) would require coordination with Caltrans. Since it cannot be assumed that Caltrans would approve this mitigation measure, and the City cannot solely guarantee its implementation, this impact is designated as significant and unavoidable.

  The City will diligently pursue measures to fully mitigate these impacts. No other improvements are feasible due to right-of-way constraints or other issues, therefore the project's impact to these 18 intersections is considered significant and unavoidable.

- **Freeway Impacts:** Project traffic would result in impacts to 74 freeway segments in the AM peak hour (45 mixed-flow, 29 HOV lanes), and 84 freeway segments in the PM peak hour (62 mixed-flow and 22 HOV lanes) under Existing with Project Conditions (refer to the TIA in Appendix J). The complete mitigation of freeway impacts is considered beyond the scope of an individual development project or City plan, due to the inability of any individual project or City to: 1) acquire right-of-way for freeway widening, and 2) fully fund a major freeway mainline improvement. Freeway improvements also would require approval by VTA and Caltrans, and as such the City cannot guarantee implementation of any improvement in the freeway right-of-way. Therefore, impacts to these freeway segments is considered significant and unavoidable.

- **Transit Vehicle Delay Impacts:** Implementation of the amended North Bayshore Precise Plan would not disrupt existing or interfere with planned transit services or facilities; however, the increase in transit vehicles, congestion at the North Bayshore gateways, and increased delay at off-site intersections would delay transit vehicles. Therefore, the project would have a significant and unavoidable effect on transit vehicle operations, in particular at those intersections with a significant and unavoidable impact determination for traffic delay. Transit operational improvements such as signal coordination and transit vehicle preemption could potentially improve the overall reliability of transit in congested areas, but are not likely to fully mitigate this effect.

- **Cumulative Transportation Impacts:** The cumulative projects, including the amended Precise Plan, would result in cumulatively significant and unavoidable impacts to intersections, freeway segments, and transit levels of service.

  - Implementation of the proposed Precise Plan would result in significant and unavoidable impacts to 45 intersections during either the AM and/or PM peak hours under Year 2030 Cumulative with Project Conditions.

  - Implementation of the project would result in a cumulatively considerable contribution to impacts to 130 freeway segments in the AM peak hour (67 mixed-flow, 63 HOV lanes) and 122 freeway segments in the PM peak hour (66 mixed-flow and 56 HOV lanes) under Year 2030 Cumulative with Project conditions.

  - Implementation of the amended North Bayshore Precise Plan would have a significant and unavoidable cumulative effect on transit vehicle operations under Year 2030 with Cumulative with Project Conditions, in particular at those intersections with a significant and unavoidable impact determination for traffic delay.

Greenhouse Gas Emissions

- **Operational Emissions:** Under the 2030 full buildout of the amended North Bayshore Precise Plan, annual service population emissions of CO_2e/yr/service population would exceed the City's established GGRP threshold of 4.5 MT of CO_2e/year/service population. The project proposes to implement feasible energy efficiency and TDM measures identified

in the City's GGRP and North Bayshore Precise Plan to minimize impacts; however, these measures would not reduce impacts to a less than significant level. This impact is, therefore, significant and unavoidable.

- **Consistency with Plans:** New development will be required to implement TDM measures and other emissions-reduction features in the GGRP and the additional housing could allow for internalization of trips or increased walking or bicycling trips. However, total emissions in the North Bayshore area are projected to increase beyond those previously assumed in the City's GGRP and Plan Bay Area. Therefore, implementation of the Precise Plan would conflict with plans, policies, or regulations for reducing GHG emissions adopted by the California legislature, CARB, BAAQMD, and City of Mountain View. This impact is, therefore, significant and unavoidable.

- **Cumulative Greenhouse Gas Emissions:** The amended Precise Plan would result in a significant cumulative impact to global climate change because the projected GHG emissions per service population in 2030 would exceed the average carbon-efficiency target in the City's GGRP to maintain a trajectory to meet statewide 2050 goals. These are the same impacts as those identified previously in the project impacts. This impact is, therefore, significant and unavoidable.

SECTION 8.0 ALTERNATIVES TO THE PROPOSED PROJECT

8.1 INTRODUCTION

The CEQA Guidelines give direction on identifying and evaluating alternatives to a proposed project in an EIR (Section 15126.6). The purpose of analyzing alternatives in an EIR is to identify ways to substantially lessen or avoid the significant effects that a proposed project may have on the environment. The range of alternatives selected for analysis is governed by the "rule of reason," which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice. Although the alternatives do not have to meet every goal and objective set for the proposed project, they should "feasibly attain most of the basic objectives of the project."

The CEQA Guidelines (Section 15126.6) do not require that all possible alternatives be evaluated, only that a range of potentially feasible alternatives be discussed so as to encourage both meaningful public participation and informed decision making. In selecting alternatives to be evaluated, consideration may be given to their potential for reducing significant unavoidable impacts, reducing significant impacts that are mitigated by the project to less than significant levels, and further reducing less than significant impacts.

The three critical factors to consider in selecting and evaluating alternatives are, therefore: (1) the significant impacts from the proposed project which could be reduced or avoided by an alternative, (2) the project's objectives, and (3) the feasibility of the alternatives available. Each of these factors is described below.

8.1.1 Significant Impacts of the Project

As mentioned above, the CEQA Guidelines advise that the alternatives analysis in an EIR should be limited to potentially feasible alternatives that would avoid or substantially lessen any of the significant effects of the project, and would achieve most of the project objectives. As discussed previously in Section 7.0, the project would result in the following significant, unavoidable impacts:

Significant Unavoidable Impacts

- Significant, unavoidable impacts to 18 project intersections under Existing with Project Conditions.

- Significant, unavoidable impacts to freeways, including 74 freeway segments in the AM peak hour (45 mixed-flow, 29 HOV lanes), and 84 freeway segments in the PM peak hour (62 mixed-flow and 22 HOV lanes) under Existing with Project Conditions.

- A significant and unavoidable effect on transit vehicle operations at congested intersections and gateways under Existing with Project Conditions.

- Greenhouse gas emissions impacts from operational emissions and inconsistency with and the City's Greenhouse Gas Reduction Program (GGRP).

Alternatives may also be considered if they would further reduce impacts that are already less than significant because of required or proposed mitigation. Impacts that would be significant, but for which the mitigation is available to reduce them to less than significant levels include:

Less Than Significant Impacts with Mitigation

Operational:

- Impacts to four project study intersections during the AM and/or PM peak hours.
- Health risks associated with exposure to TACs as a result of operation of future uses.

Construction:

- Impacts from construction air quality emissions (dust, diesel exhaust, toxic air contaminants).
- Hazardous materials impacts from contaminated soils and groundwater.
- Groundborne vibration impacts from construction activities.
- Biology impacts from construction of a bridge across Stevens Creek.

Other construction impacts from future development projects, including impacts from construction noise, impacts to Heritage trees and cultural resources, etc., would not result in significant impacts with the application of General Plan policies, conformance with Precise Plan standards and guidelines, and conformance with existing laws and regulations.

8.1.2 Objectives of the Project

The proposed amended Precise Plan would provide new residential development standards and design guidelines for future development projects within the Precise Plan area. The overall development objectives described in the draft amended North Bayshore Precise Plan (Appendix C) combine the original objectives of the adopted North Bayshore Precise Plan, and add additional objectives relevant to the addition of residential uses in the area, as described below.

The objectives of the City of Mountain View for the North Bayshore Precise Plan project, approved in 2014, were as follows:

- Create four distinct character areas within North Bayshore, differing their physical character, form, interfaces with habitat and open space, building intensity and scale, and building massing.
- Make the area a model for a highly sustainable and innovative development area, which will be implemented by building-, site-, and district-scale improvements.
- Concentrate growth to support transit, directing higher intensity development towards Gateway and Core Areas.
- Enhance ecosystems and habitat areas within and adjacent to the Precise Plan area.
- Promote transit, carpools, biking, and walking for access to and between the businesses of North Bayshore.
- Create walkable, human-scale blocks to promote bike and pedestrian transportation.
- Improve connectivity to North Bayshore through more effective connections to Downtown

and across US 101.

- Improve infrastructure in the area, including a new transit, bicycle, and pedestrian connection over US 101 and the improved design of existing facilities such as the North Bayshore off-ramp from US 101.
- Allow for new and emerging technologies such as Intelligent Transportation Systems and autonomous vehicles that maximize the functionality of roadways even as more vehicles are added to the network.
- Construct buildings that support public areas and support the safety, comfort, and use of the transportation network and community open spaces.
- Encourage and support a diverse economic base to ensure the long-term fiscal health of the area and the City.
- Promote retail, entertainment and the arts through expanded retail, civic, lodging, arts and entertainment uses.
- Proactively address climate change.
- Minimize the potential consequences of sea-level rise through strategies, including improving levees, upgrading stormwater facilities, and elevating development.
- Expand and improve recreation and open spaces, creating a diverse network of public and private open spaces.

The additional objectives of the City of Mountain View for the amended North Bayshore Precise Plan (residential uses), are as follows:

- Blend residential, commercial, and office uses to create complete neighborhoods with services, open space, and transportation options for residents and area employees.
- Improve the jobs-housing balance of the area and City by including residential uses in North Bayshore.
- Promote housing affordability, with an affordable housing goal of 20 percent or more for new housing within the area.
- Improve connections to/from NASA-Ames and North Bayshore.
- Develop residential urban design principles to help create an urban neighborhood with buildings up to 15 stories in certain locations and under specific circumstances.
- Incentivize new housing through an affordable housing strategy that allows increased FAR (floor area ratio) and more affordable units, and allowing demolished office FAR to be rebuilt.
- Support vehicle trip reduction and reduced parking standards for residential uses to reduce private car usage and increase other transportation modes.
- Create new residential street standards to make biking/walking for area residents more convenient and comfortable.

8.1.3 Feasibility of Alternatives

CEQA, the CEQA Guidelines, and the case law on the subject have found that feasibility can be based on a wide range of factors and influences. The CEQA Guidelines [Section 15364] define feasibility as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." The Guidelines advise that the factors to be taken into account when addressing the feasibility of

alternatives can include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can "reasonably acquire, control or otherwise have access to the alternative site" [Section 15126.6(f)(1)].

Notably, the inclusion of an alternative in an EIR requires only that the alternative be "potentially feasible," typically an initial determination made by agency staff and consultants. The ultimate determination of "actual feasibility" of the alternatives considered in an EIR can only be made by final agency decision-makers, who have the discretion under CEQA to reject as "infeasible" alternatives that embody what the decision-makers believe to be unacceptable policy tradeoffs. After weighing "economic, environmental, social, and technological factors," such decision-makers "may conclude that an alternative is impractical or undesirable from a policy standpoint and reject it as infeasible on that ground." Similarly, "an alternative 'may be found infeasible on the ground it is inconsistent with the project objectives as long as the finding is supported by substantial evidence in the record" (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1001).

8.1.4 Selection of Alternatives

In addition to the "No Project Alternative," the CEQA Guidelines advise that the range of alternatives discussed in the EIR should be limited to those that "would avoid or substantially lessen any of the significant impacts of the project" [CEQA Guidelines Section 15126.6(f)]. The discussion below addresses several alternatives which could reduce project impacts.

CEQA encourages consideration of an alternative site when significant effects of the project might be avoided or substantially lessened. Only locations that would avoid or substantially lessen any of the significant impacts of the project and meet most of the project objectives need be considered for inclusion in the EIR [CEQA Guidelines Section 15126.6(f)(2)].

8.2 PROJECT ALTERNATIVES

The project would result in significant unavoidable impacts to numerous freeway segments, local intersections, transit, and greenhouse gas emissions. Based on these impacts, this section evaluates, in addition to the No Project alternative, a project alternative to reduce vehicle trips and greenhouse gas emissions by reducing the size of the project, or improve traffic circulation by constructing a bridge across Stevens Creek. This section also considers alternatives that would further reduce impacts that are less than significant because of required or proposed mitigation.

The components of these alternatives are described below, followed by a discussion of their impacts, relationship to the project objectives, and how they would differ from those of the proposed Precise Plan.

8.2.1 No Project Alternative

8.2.1.1 *Description of Alternative*

The CEQA Guidelines stipulate that an EIR specifically include a "No Project" alternative. The purpose of a No Project alternative is to allow decision-makers to compare the impacts of approving

the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project alternative is "what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services." When the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the "No Project" alternative will be the continuation of the plan, policy, or operation into the future. Thus, the projected impacts of the proposed plan or alternative plans are compared to the impacts that would occur under the existing plan." [Section 15126.6(e)(3)(A)].

The North Bayshore area was zoned *P(39) North Bayshore Precise Plan* in 2014. The adopted North Bayshore Precise Plan allows development of 3.4 million square feet of office and commercial development within the area, consistent with the 2030 General Plan and the policies of the Precise Plan. In 2015, the 2030 General Plan was amended to allow up to 1,100 multi-family dwelling units in the area, although the underlying zoning was not changed.

The North Bayshore Precise Plan area currently contains approximately 7.3 million square feet of existing commercial, R&D, industrial, and offices uses, in addition to a small number of residential uses. The North Bayshore area is characterized almost entirely by large building footprints that reflect the commercial and industrial nature of the land uses. Most of the older buildings have large setbacks, substantial landscape buffers, and expansive surface parking lots, although more recent, intensive office development has constructed parking structures.

The North Bayshore Precise Plan area is currently developed with numerous existing office/industrial buildings, so the "No Project" alternative may include continued occupancy or re-occupancy of these buildings, at least in the near term. Under the adopted Precise Plan, development projects would continue to be proposed within the North Bayshore area, and many would seek approval to redevelop sites to the maximum development allowed by the existing zoning.

The No Project alternative includes redevelopment of existing, older light industrial or R&D buildings with newer, more efficient office uses to serve the current commercial office market. Since the adoption of the North Bayshore Precise Plan in 2014, a number of office developments have been constructed or proposed, reducing the office development capacity in the area. Implementation of infrastructure projects described in the adopted Precise Plan and funded by development fees would also continue.

8.2.1.2 *No Project Alternative -- Comparison of Impacts*

Transportation

Under the No Project alternative, the adopted Precise Plan would not be amended to allow an increase in residential units within the area, and the 2030 General Plan would not be amended to allow an increase in dwelling units over the currently allowed 1,100 units. Future development in the North Bayshore area would continue to follow the existing standards and guidelines in the adopted 2014 North Bayshore Precise Plan. The improvements to the transportation network and the extensive TDM program included in the adopted Precise Plan would continue to be implemented, per the Precise Plan requirements.

Traffic conditions at buildout of the adopted 2014 North Bayshore Precise Plan are represented by the 2030 Cumulative Conditions. Year 2030 cumulative traffic volumes are based on forecasts from the citywide traffic model, including the land uses, priority transportation network infrastructure, and TDM programs proposed in the adopted North Bayshore Precise Plan. Per the Precise Plan policies, Year 2030 Cumulative Conditions are defined as the traffic volumes equal to the North Bayshore peak hour vehicle gateway capacity.

Intersection levels of service under the 2030 Cumulative Conditions (No Project) are shown in Table 4.11-14. Under this scenario, 44 of the 76 study intersections would operate at unacceptable levels of service during the AM and/or PM peak hour. Traffic from the adopted North Bayshore Precise Plan makes a significant (i.e., cumulatively considerable) contribution to the cumulative impact at 16 intersections (refer to Table H-3 of the TIA Appendix H).[127]

The Year 2030 Cumulative with Project Conditions includes the trip generation for North Bayshore with an additional 3.6 million square feet of office and research and development (R&D) building space with supporting land uses (as compared to year 2015 conditions), and 9,850 dwelling units. Intersection levels of service under 2030 Cumulative with Project Conditions are shown in Table 4.11-14. Under Year 2030 Cumulative with Project conditions, a total of 51 of the 76 study intersections would operate at unacceptable levels of service during either the AM peak hour and/or PM peak hour. The cumulative impacts of the project were evaluated by comparing the results of the analysis under Year 2030 Cumulative with Project Conditions to the results under Existing Conditions. Traffic from the proposed amended North Bayshore Precise Plan makes a significant (i.e., cumulatively considerable) contribution to the cumulative impact at 45 intersections – twenty (20) during both the AM and PM peak hours, three (3) during only the AM peak hour and twenty-two (22) during only the PM peak hour (refer to Table H-5 of the TIA Appendix H).[128]

Similar to the adopted North Bayshore Precise Plan, the proposed amended Precise Plan would result in significant and unavoidable traffic and transportation impacts to local intersections, freeways, and transit delays. As described above, the No Project alternative (buildout of the adopted North Bayshore Precise Plan), would result in fewer intersection and freeway impacts than buildout of the proposed amended Precise Plan.

The transportation network in the North Bayshore area is already at capacity along Shoreline Boulevard and in the surrounding vicinity. Based on the current traffic congestion in the area, an increase of up to 9,850 new dwelling units in North Bayshore, together with the buildout of the approved office and commercial development, would result in increased intersection and freeway impacts over the adopted Precise Plan.

Greenhouse Gas Emissions

Since the adopted North Bayshore Precise Plan is consistent with the 2030 General Plan and the Greenhouse Gas Emissions Program (GGRP), the No Project alternative would not result in the significant, unavoidable greenhouse gas emissions impacts anticipated under the amended Precise

[127] The contribution of the adopted North Bayshore Precise Plan to the cumulative impact is considered to be significant if it contributes at least a two (2) percent increase in vehicle traffic at that location.
[128] The contribution of the proposed amended North Bayshore Precise Plan to the cumulative impact is considered to be significant if it contributes at least a two (2) percent increase in vehicle traffic at that location.

Plan. Development under the adopted Precise Plan would be subject to the several measures and policies in the General Plan and GGRP aimed at reducing GHG emissions as well as potential evolving state regulatory requirements.

Other Impacts

As described previously, the primary difference between the No Project alternative and the amended Precise Plan (Project) alternative is the introduction of 9,850 dwelling units into the North Bayshore area, 8,750 more dwelling units than are currently allowed by the General Plan.

Without the implementation of new residential uses in the North Bayshore area, impacts to new residents from construction and operational activities, including air quality, groundborne vibration, and hazardous materials impacts, would not occur. Mitigation measures are included in the proposed amended Precise Plan to reduce these impacts to a less than significant level; however, these impacts would not occur without the introduction of sensitive receptors into the area.

The No Project alternative would not include a policy supporting a new bridge crossing over Stevens Creek, avoiding impacts to biological resources in and near the creek, although these impacts may be mitigated to a less than significant level.[129]

Other site development impacts from future office and commercial development under the adopted Precise Plan would be generally mitigated by adherence to Precise Plan standards and guidelines, General Plan policies, the Mountain View Municipal Code, and project-specific conditions of approval.

8.2.1.3 *No Project Alternative -- Relationship to Project Objectives*

The original objectives of the adopted North Bayshore Precise Plan would continue to be fulfilled under the No Project alternative. The No Project alternative would not fulfill the new, additional objectives of the City for the amended North Bayshore Precise Plan, including the objectives of the City to construct new housing, develop blended residential neighborhoods, improve the jobs-housing balance, and promote housing affordability. The No Project alternative would not provide as many opportunities for vehicle trip reductions resulting from area 'trip internalization' and increased pedestrian and bicycle use through higher density residential development in close proximity to the jobs-rich North Bayshore area when compared to the amended plan.

8.2.1.4 *No Project Alternative -- Conclusion*

The No Project alternative would result in fewer significant transportation impacts than the amended North Bayshore Precise Plan, with the introduction of up to 9,850 multi-family dwelling units. The No Project alternative would avoid the proposed amended Precise Plan's significant greenhouse gas emissions impacts, and would avoid the amended Precise Plan's impacts from construction air quality, groundborne vibration, and hazardous materials.

[129] The 2030 General Plan includes Policy LUD 17.1 that supports a new connection between the North Bayshore area and the NASA Ames Research Center.

The No Project alternative would not fulfill the new, additional objectives of the City for the amended North Bayshore Precise Plan, including the objectives of the City to construct new housing, develop blended residential neighborhoods, improve the jobs-housing balance, and promote housing affordability.

8.2.2 Reduced Residential Alternative

8.2.2.1 *Reduced Residential Alternative -- Description of Alternative*

As described in *Section 4.14.2.14* of this SEIR, the physical capacity of the three main gateways to the North Bayshore area (San Antonio Road, Rengstorff Avenue, and Shoreline Boulevard) constrain the number of vehicles that can be served during the peak morning and evening commute periods. The North Bayshore area traffic is predominantly inbound in the morning and outbound in the evening.

One of the City's intentions in proposing to amend the North Bayshore Precise Plan to include residential uses is to address "gateway" vehicle capacity issues at the three North Bayshore gateways (San Antonio Road, Rengstorff Avenue, and Shoreline Boulevard) in the AM peak hour (and exiting in the PM peak hour) by providing residential uses near employment centers. The addition of residential uses to North Bayshore does slightly increase the total capacity of the gateways. With the addition of residential uses, the combined total capacity of the three gateways increases from 8,100 to 8,290 two-way vehicles in the AM peak hour and from 7,940 to 8,030 two-way vehicles in the PM peak hour. The amended Precise Plan's proposed 9,850 residential units, however, create new trips both entering and exiting the area in the morning, exceeding the capacity of the gateways.

A Reduced Residential alternative could include allowing only the estimated maximum number of residential units within North Bayshore that could be accommodated by the capacity of the three gateways into North Bayshore. Under this scenario, up to approximately 3,000 multi-family dwelling units could be developed in the North Bayshore area. In order to implement the maximum amount of residential development (3,000 dwelling units), unit sizes similar to those assumed for the project would be combined with a reduced parking ratio (e.g., 0.6 spaces per unit). The 3.6 million square feet of office and commercial development in the adopted Precise Plan would still be included under this Reduced Residential alternative. This alternative assumes that the standards and guidelines contained in the proposed amended Precise Plan would still be implemented, but with a much lower density of residential development than the proposed amended Precise Plan.

8.2.2.2 *Reduced Residential Alternative -- Comparison of Impacts*

Transportation

The Reduced Residential alternative includes approximately 30 percent of the proposed project's residential units and would have a proportionate reduction in vehicle trips. Since up to 3,000 dwelling units would be accommodated within the North Bayshore gateway capacity, the traffic impacts for buildout of the Reduced Residential would be similar to the impacts of the adopted North Bayshore Precise Plan (the No Project alternative), described previously.

This alternative would avoid many of the project's impacted intersections and freeway segments. As described above, since freeways in the vicinity of the project have little capacity under existing

conditions, nearly all projects proposed for the North Bayshore area could still result in significant impacts to freeway traffic, even at a small percentage of the proposed Precise Plan buildout. A substantially reduced amount of development, however, may not be enough to substantially support transit use and other efforts to increase mode share.

Greenhouse Gas Emissions

The residential units included in the Reduced Residential alternative would still require a General Plan amendment for development of over 1,100 dwelling units, and, therefore, would not be consistent with the Greenhouse Gas Reduction Program (GGRP). Since the number of residents within the area would decrease, the ratio of emissions per service population would increase (refer to Table 4.7-1). For this reason, greenhouse gas emissions impacts would not be reduced to a less than significant level under a Reduced Residential alternative.

Other Impacts

Because this alternative would develop approximately 30 percent of the residential units proposed by the Precise Plan, the Reduced Residential alternative would result in reduced impacts for air pollutant emissions, hazardous materials, noise and vibration, energy, and utilities. Reduction of the new residential units by two-thirds would reduce impacts to new residents from construction and operational activities. Although construction impacts would be reduced, including those from air quality, groundborne vibration, and hazardous materials, they would still occur. Mitigation measures are included in the proposed amended Precise Plan to reduce these impacts to a less than significant level.

Similar to the proposed project, the Reduced Residential alternative could include a policy supporting a new bridge crossing over Stevens Creek. Any potential impacts from a bridge crossing could be reduced to a less than significant level with the implementation of mitigation measures included in the amended Precise Plan.[130]

Other site development impacts from a reduced residential alternative would be generally mitigated by adherence to Precise Plan standards and guidelines, General Plan policies, the Mountain View Municipal Code, and project-specific conditions of approval.

8.2.2.3 *Reduced Residential Alternative -- Relationship to Project Objectives*

A Reduced Residential alternative would fulfill the objectives of the adopted Precise Plan, which are also included as objectives of the amended Precise Plan. A Reduced Residential alternative would not significantly fulfill the new objectives of the amended Precise Plan regarding development of new neighborhoods and improvement of the jobs-housing balance. The Reduced Residential alternative would provide fewer affordable housing units in the City. This alternative would fulfill objectives related to developing urban design principles, creating new residential street standards, and creating connections with NASA-Ames Research Center to a similar extent as the proposed project, although the density of residential development would be substantially reduced.

[130] The 2030 General Plan includes Policy LUD 17.1 that supports a new connection between the North Bayshore area and the NASA Ames Research Center.

8.2.2.4 *Reduced Residential Alternative -- Conclusion*

The Reduced Residential alternative would reduce some of the intersection and freeway impacts that would be anticipated under the Precise Plan. Other impacts associated with development would be reduced, but would still remain. This alternative scenario, however, would not completely fulfill the objectives of the Precise Plan to develop residential neighborhoods, improve the jobs-housing balance, reduce vehicle trips through internalization and increased mode share, and provide affordable housing units.

8.2.3 Increased Gateway Capacity Alternative

8.2.3.1 *Increased Gateway Capacity – Description of Alternative*

The proposed amended North Bayshore Precise Plan considers the possible addition of a Stevens Creek bridge crossing for pedestrian/bicycle and transit vehicle access. An alternative to the proposed project to reduce vehicular congestion by addressing vehicle capacity limits at the gateways would be to provide an additional vehicular access to the North Bayshore area, either via a bridge over Stevens Creek, or another crossing of US 101. The addition of a new gateway would provide additional capacity for travel in and out of the North Bayshore area. Possible gateway connections might include a bridge over Stevens Creek near Charleston Road or La Avenida Avenue, and/or an additional crossing location of US 101 connecting Charleston Road to Landings Drive. Any new gateway connection would need to be further evaluated to determine its benefits and impacts. It is assumed this alternative would include the same amount of commercial and residential development as the proposed amended Precise Plan.

It is assumed this alternative would include the same amount of commercial and residential development as the proposed amended Precise Plan.

8.2.3.2 *Increased Gateway Capacity – Comparison of Impacts*

Transportation

The Increased Gateway Capacity alternative would generate the same number of vehicle trips as the proposed project. This alternative would allow North Bayshore traffic to be distributed to four vehicle gateways, instead of the current three gateways. This would likely help reduce traffic congestion into and out of North Bayshore, and within North Bayshore, since drivers would have more access options and traffic could be more dispersed, unless a new gateway was limited to transit vehicles, bicyclists, and pedestrians. Outside of North Bayshore, this alternative would have similar impacts to the proposed project, because the same volume of trips would be using the freeway system and intersections outside of the North Bayshore area.

Greenhouse Gas Emissions

The Increased Gateway Capacity alternative would result in the same level of commercial and residential development as the proposed project, so it would require a General Plan amendment for development over 1,100 dwelling units and would not be consistent with the City's adopted Greenhous Gas Reduction Program. It would result in similar significant, unavoidable greenhouse gas emissions impacts as the proposed project. The provision of a fourth vehicle gateway may actually encourage driving and result in an increase in vehicle miles traveled.

Other Impacts

The Increased Gateway Capacity alternative would result in the same level of commercial and residential development as the proposed project, so all other impacts related to the introducing new residents to construction and operational air pollutant emissions would be comparable. This alternative would also have similar impacts related to hazardous materials, noise and vibration, energy, and utilities.

The impacts of constructing a new vehicle gateway could include increased biological impacts from a new bridge crossing of Stevens Creek and increased use of that bridge crossing, and from impacts from constructing a crossing of US 101. Either option for a new vehicle gateway would be subject to a separate environmental review and design and approval process.

8.2.3.3 *Increased Gateway Capacity -- Relationship to Project Objectives*

Historically, whenever new developments were proposed, the street system would often be expanded to accommodate the increase in vehicle traffic associated with the increased land use density. In the case of North Bayshore, however, the City's General Plan policy direction is that no substantial new transportation infrastructure should be constructed to increase the physical capacity for automobiles. Instead, both the adopted and proposed amended North Bayshore Precise Plan accommodates growth through limited priority transportation improvements and through a land use and transportation policy framework that more effectively uses the existing physical capacity at the gateways, reduces single-occupancy vehicles through extensive TDM measures, and manages the timing of arrivals and departures by imposing a cap on the number of trips during the AM peak period.

8.2.3.4 *Increased Gateway Capacity -- Conclusion*

The Increased Gateway Capacity alternative would improve traffic circulation within North Bayshore and reduce congestion of vehicles entering and exiting the area. All other impacts of the project would be similar under this alternative, with the exception of potential increased biological impacts. This alternative is contrary to adopted General Plan policies to not widen streets or construct substantial new transportation infrastructure that prioritizes automobile vehicle travel over other modes of transportation.

8.2.4 Alternatives Considered But Rejected

8.2.4.1 *Location Alternative*

The CEQA Guidelines encourage consideration of an alternative site when significant effects of the project might be avoided or substantially lessened (Section 15126.6(f)(2)(A)). Only locations that would avoid or substantially lessen any of the significant impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

The project proposes amending a City-initiated rezoning of approximately 650 acres into a new Precise Plan. An alternative site would need to be at least of comparable size, within the urbanized area of Mountain View or nearby jurisdictions, and with adequate transit access, roadway access, and utility capacity to serve the development proposed.

No location alternatives were identified, due to the large size and site-specific nature of the proposed project. This quantity of development within Mountain View could be expected to have similar intersection and freeway impacts, or possibly other traffic impacts, as well as greenhouse gas emissions impacts and cumulative regional air quality impacts.

Therefore, since no suitable alternative site was found that could meet the basic objectives of the project and suitably reduce the significant impacts of the project, a location alternative was not analyzed further.

8.2.4.2 *Design Alternative*

An alternative to the proposed project would be to adjust (reduce) the parking supply. The amount of parking provided for residential development influences the vehicle trip generation. Lower parking ratios typically mean that fewer residents own and regularly operate vehicles, while higher parking ratios allow more vehicle ownership and operation. Parking supply is a key consideration in the market feasibility of any new residential development, so this factor must be carefully balanced with the availability of alternative travel modes and infrastructure.

The proposed amended North Bayshore Precise Plan includes a single occupancy vehicle rate of 45 percent for commercial office development, in addition to a "standard" residential parking ratio of 1.2 spaces per unit. The Precise Plan's goals for increasing alternative mode shares to help reduce vehicle trips are ambitious. A further reduction in the residential parking ratio was not considered feasible at this time for the purpose of this environmental analysis, given the currently limited multi-modal infrastructure and services available in the area. However, the amended Precise Plan's goals, policies, and actions will continue to guide more innovative and sustainable development, which could include parking standards below 1.2 spaces per unit and a vehicle trip 'performance standard,' and through project design characteristics, TDM strategies, shared parking, and other strategies.

8.2.4.3 *Increased Residential Density Alternative*

An alternative to the proposed project to avoid the project's significant, unavoidable GHG impact would be to substantially increase the residential population within the North Bayshore Precise Plan area, such that the GGRP threshold of 4.5 MT CO_2e/year/service population would not be exceeded. While a detailed quantitative analysis was not completed for this alternative, it is estimated that approximately 15,750 additional residents or an additional 9,000 residential units (assuming 1.75 residents per unit) above what is proposed by the amended Precise Plan, with the additional residents not generating any mobile emissions, would be necessary to reduce annual CO_2e emissions per service population below the 4.5 MT threshold of significance.

This Increased Residential Density alternative assumed the additional 9,000 dwelling units generate no mobile source GHG emissions, which is not likely to be feasible. As described previously, the proposed amended Precise Plan contains residential and office TDM requirements already considered aggressive in terms of reducing vehicle trips. A further increase in population assuming that it could result in zero additional vehicle trips would not be practicable, given the current infrastructure and transit options available to the area. For these reasons, this alternative was rejected from further consideration.

8.3 COMPARISON OF ALTERNATIVES

When reviewing the various alternatives, it is important to keep in mind that the consideration of each alternative by decision-makers includes the evaluation of three basic questions:

1. Would the alternative avoid or substantially lessen any of the significant environmental effects of the project? In other words, is the alternative environmentally preferable compared to the project?

2. Is the alternative infeasible from a land use, economic, physical, or regulatory standpoint?

3. Does the alternative meet or not meet the stated project objectives? If it does not meet any objective, which one or ones?

Because the project is fairly broad (a Precise Plan for a large portion of Mountain View), the comparison of impacts is also necessarily broad, since it is not always possible to narrowly define the location or limits of the differences between impacts. On a general level, the differences between the alternatives is shown in Table 8.3-1, below.

Table 8.3-1:
Comparison of Impacts from Alternatives to the Proposed Project

Significant Impacts of the Proposed Precise Plan	Level of Impact		
	No Project	**Reduced Residential**	**Increased Gateway Capacity**
Transportation: Intersections	Less	Less	Less inside NB Area, Similar outside NB Area
Transportation: Freeways	Less	Less	Similar
Transportation: Transit (Delay at Congested Intersections)	Less	Less	Similar
Greenhouse Gas Emissions	Avoided	Similar	Similar
Operational Air Quality	Avoided	Similar	Similar
Construction Air Quality	Less	Similar	Similar
Biological Resources (Bridge)	Avoided	Similar	Potentially Greater
Hazardous Materials	Less	Similar	Similar
Groundborne Vibration	Less	Similar	Similar

Similar: Similar to the proposed project.
Less: Substantial impact reduction compared to the proposed project, but not to a less than significant level.
Greater: Substantially greater impact than proposed project.

The primary impacts of the North Bayshore Precise Plan are transportation-related. Historically, whenever new developments were proposed, the street system would often be expanded to accommodate the increase in vehicle traffic associated with the increased land use density, but in the case of North Bayshore, the City Council policy direction has been that no substantial new

transportation infrastructure should be constructed to increase the physical capacity for automobiles in and around the area, beyond what has been identified in the Precise Plan. Instead, the proposed amended North Bayshore Precise Plan accommodates the growth by developing a land use and transportation policy framework to:

- More effectively use the existing physical capacity at the gateways;
- Achieve a targeted mode shift (i.e., a goal of no more than 45 percent single-occupancy vehicles) through application of an extensive TDM Program; and,
- Manage the timing of arrivals and departures by imposing a cap on the number of trips that occur during the AM peak period.

As described in *Section 4.14, Transportation and Traffic*, the amount of additional traffic that could be added to the system without impacting the local street and freeway system is relatively small. So from a vehicle intersection or freeway operations perspective, the impacts of the project would be similar for most of the alternatives. The "Reduced Residential" alternative would be superior to the project in regards to transportation impacts, as it would reduce congestion at the gateways, and the "Increased Gateway Capacity" alternative would also be superior to the project in terms of transportation, as it would reduce congestion inside the plan area.

This comparison indicates that the "No Project Alternative" would result in fewer overall impacts, including those to transportation, since sensitive users would not be introduced to the area, and fewer overall trips would be on the roadway network.

8.3.1 Environmentally Superior Alternative

The CEQA Guidelines state than an EIR shall identify an environmentally superior alternative. If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6(e)(2)).

Based upon the previous discussion, the "No Project Alternative," which is the existing North Bayshore Precise Plan, would be the environmentally superior alternative. Although significant freeway and intersection impacts would still occur, these impacts would be greater with the residential development allowed under the amended North Bayshore Precise Plan. The "No Project Alternative" would not result in impacts to sensitive uses from hazardous materials contamination, groundborne vibration, and other construction impacts from the development of new residential uses.

Apart from the "No Project" alternative, the alternatives considered would not substantially reduce the significant intersection and freeway impacts. The Reduced Residential alternative would somewhat reduce intersection and freeway impacts and, therefore, would be the environmentally superior alternative. This alternative, however, would not fulfill most of the amended Precise Plan's objectives for the density of new residential units in the area.

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9.1 PERSONS AND ORGANIZATIONS CONSULTED

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9.2 ACRONYMS AND ABBREVIATIONS

Acronym	Definition
µg/m^3	Micrograms per Cubic Meter
ABAG	Association of Bay Area Governments
ACE	Altamont Commuter Express
ACM	Asbestos-containing materials
ADD	Average Daily Demand
AFY	Acre Feet per Year
AIA	Airport Influence Area
AICUZ	Air Installation Compatibility Use Zone
ALUC	Airport Land Use Commission
AP	Alquist-Priolo
APN	Assessor's Parcel Number
ARB	Air Resource Board
AST	Aboveground Storage Tank
AUL	Activity and Use Limitations
BAAQMD	Bay Area Air Quality Management District
BCDC	San Francisco Bay Conservation and Development Commission
BFD	Bird Flight Diverters
bgs	Below Ground Surface
BMP	Best Management Practice
BMR	Below-Market Rate
Btu	British Thermal Unit
CA	Conditionally Authorized
CAA	Clean Air Act
CA MUTCD	California Manual on Uniform Traffic Control Devices
CA SLIC	California Spills, Leaks, Investigations and Cleanup
CAAQS	California Ambient Air Quality Standards
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Code

Acronym	Definition
C/CAG	City/County Association of Governments
CCAR	California Climate Action Registry
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDP	Countywide Deficiency Plan
CE	Conditionally Exempt
CEQA	California Environmental Quality Act
CEQA	California Environmental Quality Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESA	California Endangered Species Act
CFC	Chlorofluorocarbon
CFC	California Fire Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CGS	California Geological Survey
CHHSL	California Human Health Screening Level
CHRIS/NWIC	California Historical Resources Information System, Northwest Information Center
CII	Commercial, Institutional, and Industrial
CIP	Capital Improvement Projects
CLUP	Comprehensive Land Use Plan
CMA	Congestion Management Agency
CMP	Congestion Management Program
CMS	Changeable Message Signs
CNEL	Community Equivalent Noise Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
COC	Contaminants of Concern
COPC	Chemicals of Potential Concern
CORRACTS	Corrective Action Report
CRWQCB	California Regional Water Quality Control Board
CUPA	Certified Unified Program Agency (CUPA) Listings:
CUWCC	California Urban Water Conservation Council

Acronym	Definition
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted Decibel
DDT	Dichloro-diphenyl-trichloroethane
DNL	Day-Night Level
DPM	Diesel Particulate Matter
DPR	California Department of Pesticide Regulation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EMS	Emergency Medical Service
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment (Phase I)
ESL	Environmental Screening Level
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FID	Facility Inventory Database
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Maps
FTA	Federal Transit Administration
GCC	Global Climate Change
GGRP	Greenhouse Gas Reduction Program
GHG	Greenhouse Gas
GP	General Plan
GPUUIS	General Plan Update Utility Impact Study
GW	Gigawatt
GWDR	General Waste Discharge Requirement
HAP	Hazardous Air Pollutants
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCM	Highway Capacity Manual
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan

Acronym	Definition
HDM	Highway Design Manual
HFC	Hydrofluorocarbon
HM	Hydromodification Management
HMBP	Hazardous Materials Business Plan
HMP	Hydrograph Modification Management Plan
HMZ	Hazardous Materials Zone
HOT	High Occupancy Toll
HOV	High Occupancy Vehicle
HOZ	Habitat Overlay Zone
HSP	Health and Safety Plan
IPCC	Intergovernmental Panel on Climate Change
ISZ	Inner Safety Zones
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
kWhr	Kilo-watt Hour
Ldn	Day-Night Level
LEED	Leadership in Energy and Environmental Design
Leq	Noise Equivalent Level
LID	Low Impact Development
LOS	Level of Service
LUD	Land use and Design
LRT	Light Rail Transit
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MEP	Maximum Extent Practicable
MEW	Middlefield-Ellis-Whisman (Superfund Site)
MF	Mixed Flow
Mg/kg	Milligrams per Kilogram
MGD	Million Gallons per Day
ML	Limited Industrial (Zoning District)
MM	General Industrial (Zoning District)
MMP	Mitigation and Monitoring Program

Acronym	Definition
MND	Mitigated Negative Declaration
MPG	Miles per Gallon
MPO	Metropolitan Organizations
MRP	Municipal Regional Stormwater Permit
MSL	Mean Sea Level
MT	Metric Tons
MTC	Metropolitan Transportation Commission
MVFD	Mountain View Fire Department
MVGBC	Mountain View Green Building Code
MVPD	Mountain View Police Department
MVTMA	Mountain View Transportation Management Association
NAAQS	National Ambient Air Quality Standards
NAHC	California Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NBPP	North Bayshore Precise Plan
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NIST	National Institute of Standards and Technology
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NOT	Notice of Termination
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NWIC	Northwest Information Center
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration

Acronym	Definition
OSZ	Outer Safety Zones
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethylene (also known as perchloroethylene)
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
PMP	Pedestrian Master Plan
PPB	Parts per Billion
PPM	Parts per Million
RCRA-LQG	Resource Conservation and Recovery Act-Large Quantity Generators
RCRA-SQG	Resource Conservation and Recovery Act-Small Quantity Generators
RCRIS	Resource Conservation and Recovery Information System
R&D	Research and Development
RGA	Recovered Government Archive
RHNA	Regional Housing Needs Allocation
ROG	Reactive Organic Gases
RPS	Renewables Portfolio Standard
RPZ	Runway Protection Zones
RWQCB	Regional Water Quality Control Board
RWQCP	Palo Alto Regional Water Quality Control Plant
SB	Senate Bill
SCS	Sustainable Communities Strategy
SCV	Santa Clara Valley
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SDWA	Safe Drinking Water Act
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SFPUC	San Francisco Public Utilities Commission
SLIC	Spills, Leaks, Investigations and Cleanup
SLR CIP	Shoreline Regional Park Community Sea Level Rise Study: Feasibility Report and Capital Improvement Program
SMARA	State Surface Mining and Reclamation Act
SMaRT	Sunnyvale Materials Recovery and Transfer Station
SMP	Site Management Plan
SOV	Single Occupant Vehicle

Acronym	Definition
SPCC	Spill Prevention Countermeasure and Control
SPS	Sewage Pump Station
SSMP	Sewer System Management Plan
SSZ	Sideline Safety Zone
SUV	Sport Utility Vehicle
SWCV	Solid Waste Collection Vehicle
SWEEPS	Statewide Environmental Evaluation and Planning System
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCE	Trichloroethene
TCM	Transportation Control Measures
TDM	Transportation Demand Management
TDR	Transfer Development Rights
TIA	Transportation Impact Analysis
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbons
TPZ	Traffic Pattern Zones
TSCA	Toxic Substance Control Act
TSD	Treatment, Storage, or Disposal
TSM	Transportation System Management
TSZ	Turning Safety Zones
TTLC	Total Threshold Limit Concentration
UDF	Unit Duty Factor
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
UWMP	Urban Water Management Plan
V/C	Volume to Capacity (ratio)
VCP	Voluntary Cleanup Program
VdB	Groundborne Vibration in Decibels
VMT	Vehicle Miles Traveled

Acronym	Definition
VOC	Volatile Organic Compounds
VTA	(Santa Clara) Valley Transportation Authority
VTP	Valley Transportation Plan
WSA	Water Supply Assessment

SECTION 10.0 LEAD AGENCY AND CONSULTANTS

10.1 LEAD AGENCY

City of Mountain View
Community Development Department
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Terry Blount, Assistant Community Development Director/Planning Manager
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