



2040 Union City General Plan Update

Draft Environmental Impact Report

SCH#2018102057

prepared by

City of Union City

Planning Division, Economic and Community Development

34009 Alvarado-Niles Road

Union City, California 94587

Contact: Carmela Campbell, AICP, Planning Manager

prepared with the assistance of

Rincon Consultants, Inc.

4825 J Street, Suite 100

Sacramento, California 95819

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Executive Summary

The section summarizes the characteristics of the 2040 Union City General Plan Update, referred to herein as the 2040 General Plan or proposed project, as well as the 2040 General Plan's environmental impacts and recommended mitigation measures.

Project Synopsis

Project Applicant

City of Union City
34009 Alvarado-Niles Road
Union City, California 94587

Project Location

Union City is located in Alameda County on the east side of the San Francisco Bay. Union City is bounded by the city of Hayward to the north, the city of Fremont to the south, the Bay lands on the west, and hillsides to the east. Union City encompasses approximately 18 square miles (11,520 acres) and is surrounded on all sides by incorporated lands of other cities or the San Francisco Bay waters. As a result, future growth in Union City will occur within the current City limits. The Planning Area for the 2040 General Plan is, therefore, the current City limits. Accordingly, this EIR uses the current City limits as the land use boundary for the 2040 General Plan as it represents the potential area where land use changes and/or physical changes to the environment may occur as a result of implementation of the 2040 General Plan. For the purposes of this EIR the area inside the City limits is defined as the "General Plan Area" for the 2040 General Plan.

Project Description

The 2040 General Plan builds on the current 2002 General Plan, but also is a comprehensive effort to update the current General Plan. The update responds to the current needs, values, and preferences of the community, as well as changes in State law that may not have been in effect when the current General Plan was last updated. The General Plan Housing Element was last updated in January 2015, covering the period from January 2015 through January 2023, and was subject to a separate environmental review process. The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan.

The 2040 General Plan defines the policy framework by which the City's physical and economic resources are to be managed and used through the planning horizon year, which is 2040. The 2040 General Plan clarifies and articulates the City's intentions with respect to the rights and expectations of various community stakeholders, including residents, property owners, and business owners. Through the General Plan, the City informs these groups of its goals, policies, and standards, and thereby communicates expectations of the public and private sectors for meeting community objectives.

The 2040 General Plan has been organized into ten elements: Land Use; Economic Development; Community Design; Mobility; Health and Quality of Life; Safety; Public Facilities and Services; Resource Conservation; and Housing. These ten elements describe the existing conditions and context for the related topic areas, followed by goals, policies, and implementation programs to guide the City's management and development into the future.

Project Objectives/Guiding Principles

The 2040 General Plan presents a vision for the future of Union City and a set of guiding principles for how the City will achieve that vision. This vision and guiding principles capture the City's key values and aspirations for the future. They reflect the collective ideas from community members and City leaders that provided input to help shape the 2040 General Plan.

The 2040 General Plan vision for the future is as follows:

Union City is the heart of the Bay Area and a regional center for commerce, community, and culture. Our economy is strong and diverse and provides high paying jobs across a broad range of local businesses, high profile companies, and emerging industries. Our residents and neighborhoods are safe and healthy and our community is celebrated for its diversity and equitable treatment of everyone. Union City provides effective and efficient public services and is fiscally stable.

The 2040 General Plan guiding principles are contained in the 2040 General Plan Introduction and abbreviated below:

- **Economic Development:** Promote Union City as a civic, cultural, and economic destination within the greater Bay Area to attract new businesses and facilitate new economic development opportunities and succeed in global marketplace; expand the skills and knowledge of the workforce, protect and expand economic assets in Union City, and expand the job base.
- **Health and Quality of Life:** Promote a healthy and safe way of life in Union City; prioritize education; promote access to healthy foods; attract and retain accessible, affordable, and quality health services and facilities; support and expand Youth and Family Services programs.
- **Land Use:** Maintain a balanced mix of residential, employment, and commercial uses; create a vibrant 24-hour Station District; ensure livable, healthy, and well-designed neighborhoods that are walkable and bicycle friendly; encourage higher-density developments and mixed-use projects in appropriate areas; promote and increase infill and reuse, while maintaining quality of life and important community character; and implement sustainable and resilient development practices.
- **Community Design:** Enhance gateways into the community; ensure new development respects the community's natural setting; ensure new development is compatible with the scale and character of existing neighborhoods; preserve and protect important historic and cultural resources; create attractive commercial and mixed-use corridors and centers; create vibrant public places that serve as gathering places; and locate and design buildings, streetscapes, and public spaces that contribute to walkable neighborhoods, corridors, and districts.
- **Housing:** Promote a mix of housing types and affordability; and include a mix of housing types within neighborhoods to promote a diversity of household types and housing choices.
- **Mobility and Access:** Develop a balanced, integrated, multimodal transportation system that is efficient and safe; create a safe and convenient transportation network that incorporates complete streets concepts; continue providing a variety of transportation choices that promote

alternatives to the automobile; and support the integration of emerging transportation technologies and modes.

- **Sustainability and Resiliency:** Reduce greenhouse gas (GHG) emissions to help achieve reduction goals to address climate change; protect natural resources; continue to promote sustainable levels of energy, water, and resource consumption; encourage residents and businesses to live, work, and operate in a more sustainable manner; and enhance the understanding of future risks ability to absorb, respond to, and recover from emergencies or other changes.
- **Parks and Recreation:** Maximize public access and use of city and regional open space and recreational areas; support the development of regional open spaces that connect Union City to the Bay Area; support the development of additional parkland for active recreational uses; expand and improve existing pedestrian and bike trails; and provide innovative recreational and sports facilities, services, and programs.
- **Public Safety:** Improve coordination among residents and businesses and City Departments to address security issues and maintain a safe community; support and expand the City’s Youth Violence Prevention Program and community policing unit; minimize vulnerability to natural disasters and manmade hazards; strengthen emergency response capabilities; modernize older public facilities to improve seismic safety; support and expand the Community Emergency Response Team (CERT) program; and ensure public facilities and infrastructure investment contribute to the safety and security of residents.
- **Services and Facilities:** Provide quality public services, facilities, and infrastructure throughout the city; expand and enhance telecommunication and broadband access; maintain transparency and improve accountability in all City decisions, practices, and service areas; promote opportunities for community education and involvement; ensure the fair treatment of residents of all races, cultures, and incomes with respect to City plans and policies; promote joint use of public facilities; ensure City revenues are sufficient to maintain and enhance City services, programs, and facilities; and ensure new development is fiscally neutral or positive to the City and provides a net social or economic benefit to the community.

Required Discretionary Approvals

With recommendations from the City’s Planning Commission, the City Council would need to take the following discretionary actions in conjunction with the proposed project:

- Certification of the Final EIR
- Adoption of the proposed 2040 Union City General Plan

The City adopted its current Housing Element in January 2015, covering the period of January 2015 through January 2023. This Housing Element was submitted to the HCD for review and comment, and the City received certification of the Housing Element from HCD in February 19, 2015 (HCD 2015). The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan.

Summary of Impacts and Mitigation Measures

Table ES-1 lists the environmental impacts of the proposed 2040 General Plan, the proposed mitigation measures, and residual impacts or significance after mitigation. Impacts are defined as significant, unavoidable adverse impacts that require a statement of overriding consideration, pursuant to Section 15093 of the *CEQA Guidelines* if the proposed 2040 General Plan is approved; significant, adverse impacts that can be feasibly mitigated to less than significant levels and that require findings to be made under Section 15091 of the *CEQA Guidelines*; adverse impacts that are less than those allowed by adopted significance thresholds; and no impact.

Table ES-1 Summary of Environmental Impacts and Mitigation Measures

Impact	Mitigation Measure (s)	Significance After Mitigation
Aesthetics		
<p>Impact AES-1. The 2040 General Plan will facilitate development in some areas of the city with a view of the hillside area, marshlands along the bay, or other open space areas. Adherence with goals and policies in the 2040 General Plan would maintain some visual access to natural features surrounding the City but would not reduce impacts to scenic vistas related to the hillside area and Bayshore. Impacts on scenic vistas would be significant and unavoidable.</p>	None available	Significant and unavoidable
<p>Impact AES-2. There are no designated state scenic highways in union city. The 2040 General Plan would not facilitate new land uses or growth in areas of the city adjacent to State Route 84, a designated state scenic highway. Therefore, the 2040 General Plan would have no impact.</p>	None required	Less than significant without mitigation
<p>Impact AES-3. Goals and policies from the 2040 General Plan indicate that development would integrate into the community visually and protect and enhance the neighborhoods in which development occurs. Adherence to the prescribed goals and policies in Land Use, Community Design, and Special Areas Elements of the 2040 General Plan for new construction, parking, gateways, and streetscapes would direct the quality of the City’s visual character. However, the 2040 General Plan envisions more intensive future development including buildings that are taller than what is generally existing in the urbanized areas of Union City. Impacts to visual character and quality would be significant and unavoidable.</p>	None available	Significant and unavoidable
<p>Impact AES-4. New development facilitated by the 2040 General Plan would result in new sources of light and glare. New development would occur in already urbanized areas of the City, where lights are</p>	None required	Less than significant without mitigation

Impact	Mitigation Measure (s)	Significance After Mitigation
<p>glare are already common. Light and glare would also be minimized by the 2040 General Plan policies. Impacts would be less than significant.</p>		
Air Quality		
<p>Impact AQ-1. The 2040 General Plan would be consistent with BAAQMD’s 2017 Clean Air Plan and the rate of increase for vehicle miles traveled under buildout of the 2040 General Plan would not exceed the rate of service population increase associated with the 2040 General Plan. This impact would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact AQ-2. Buildout of the 2040 General Plan would result in the temporary generation of air pollutants during construction, which would affect local air quality. The 2040 General Plan policies incorporate the BAAQMD Basic Construction Mitigation Measures, which would reduce construction emissions. Therefore, impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact AQ-3. Buildout of the 2040 General Plan may expose sensitive receptors to additional sources of toxic air contaminants. Impacts would be less than significant with mitigation incorporated.</p>	<p>AQ-1 Health Risk Assessments. Implement Bay Area Air Quality Management District (BAAQMD) <i>CEQA Air Quality Guidelines</i> and State Office of Environmental Health Hazard Assessment policies and procedures requiring health risk assessments (HRAs) for new residential development and other sensitive receptors, as defined in the BAAQMD <i>CEQA Air Quality Guidelines</i>, within 1,000 feet of sources of toxic air contaminants, including freeways and roadways with over 10,000 vehicle trips per day. Based on the results of the HRA, identify and implement measures, such as air filtration systems, to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards in accordance with the receptor thresholds contained in BAAQMD’s <i>CEQA Air Quality Guidelines</i>, Table 2-6.</p>	Less than significant
<p>Impact AQ-4. Buildout of the 2040 General Plan would not introduce new odor-generating land uses intermixed with residential or mixed-use land uses. Compliance with 2040 General Plan policies would ensure that new odor-generating land uses do not generate objectionable odors off-site. Impacts related to odors would be less than significant.</p>	None required	Less than significant without mitigation
Biological Resources		
<p>Impact BIO-1. Development facilitated by the 2040 General Plan could result in isolated impacts to habitat for special-status species and impacts to migratory bird nest sites. Impacts would be less than significant with mitigation incorporated.</p>	<p>*BIO-1 Nesting Bird Protection Policy. The following policy shall be added to the 2040 General Plan Resource Conservation Element as Policy RC-2.10: The City shall require project applicants to retain the services of a qualified biologist(s) to conduct a pre-construction nesting bird survey during the nesting season (February 1 through August 31) prior to all new</p>	Less than significant

Impact	Mitigation Measure (s)	Significance After Mitigation
	development that may remove any trees or vegetation that may provide suitable nesting habitat for migratory birds or other special-status bird species. If nests are found the qualified biologist(s) shall identify appropriate avoidance measures, and these measures shall be incorporated into the project and implemented accordingly.	
<p>Impact BIO-2. The 2040 General Plan would facilitate development that could result in construction within riparian habitat, and direct placement of fill in wetlands. However, compliance with existing regulations, and implementation of 2040 General Plan policies would reduce potential impacts to a less than significant level.</p>	None required	Less than significant without mitigation
<p>Impact BIO-3. Development facilitated by the 2040 General Plan could result in construction within streams and associated riparian zones that serve as wildlife movement corridors. However, implementation of 2040 General Plan policies preserving streams and wildlife movement corridors, as well as open space would reduce impacts to less than significant.</p>	None required	Less than significant without mitigation
<p>Impact BIO-4. Development facilitated by the 2040 General Plan would result in removal of trees. However, the 2040 General Plan policies require new development to comply with the City’s Tree Conservation Ordinance. With adherence to the Tree Conservation Ordinance, impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact BIO-5. There are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to the 2040 General Plan. Therefore, the 2040 General Plan would have no impacts.</p>	None required	Less than significant without mitigation
Cultural Resources		
<p>Impact CR-1. Development facilitated by the 2040 General Plan would have the potential to impact historical resources and unique archaeological resources. Impacts would be potentially significant but mitigable.</p>	<p>*CR-1 Cultural Resources Study Implementation Program. The following Implementation Program shall be added to Resource Conservation Element of the 2040 General Plan: If a project requires activities that have the potential to impact cultural resources, the City shall require the applicant to retain a qualified archaeologist meeting the Secretary of the Interior’s (SOI) Professional Qualification Standards (PQS) in archaeology and/or an architectural historian meeting the SOI PQS standards in architectural history to complete a Phase 1 cultural resources inventory of the project site (NPS 1983). A Phase 1 cultural resources inventory should include a pedestrian survey of the project site and sufficient background archival research and field sampling to determine whether subsurface prehistoric or historic remains may be present. Archival research should include a records search conducted at the Northwest</p>	Less than significant

Impact	Mitigation Measure (s)	Significance After Mitigation
	Information Center (NWIC) and a Sacred Lands File (SLF) search conducted with the Native American Heritage Commission (NAHC). The technical report documenting the Phase 1 cultural resources inventory shall include recommendations to avoid or reduce impacts to cultural resources. These recommendations shall be implemented and incorporated in the project.	
Impact CR-2. Ground-disturbing activities associated with development facilitated by the 2040 General Plan could result in damage to or destruction of human burials. Impacts would be less than significant.	None required	Less than significant without mitigation
Energy		
Impact E-1. The development and population growth facilitated by the 2040 General Plan would result in overall consumption of energy beyond existing conditions. However, the 2040 General Plan is based on a land-use strategy that promotes greater overall energy efficiency in community and municipal operations. 2040 General Plan policies and implementation programs would ensure that development under the 2040 General Plan would comply with existing energy efficiency regulations, and would encourage new development to take advantage of voluntary energy efficiency programs. Wasteful, inefficient, or unnecessary consumption of energy would not occur and impacts would be less than significant.	None required	Less than significant without mitigation
Impact E-2. The 2040 General Plan would be consistent with energy efficiency goals contained in the Union City Climate Action Plan. Construction and operation of projects facilitated by the 2040 General Plan would comply with relevant provisions of the State’s CalGreen and Title 24 of the California Energy Code. Impacts would be less than significant.	None required	Less than significant without mitigation
Geology and Soils		
Impact GEO-1. Construction and occupancy of development facilitated by the 2040 General Plan could result in exposure of people or structures to a risk of loss, injury, or death from seismic events. However, required adherence to the requirements of the CBC, Union City Municipal Code, and implementation of the goals and policies of the 2040 General Plan would minimize the potential for loss, injury, or death following a seismic event. Impacts would be less than significant.	None required	Less than significant without mitigation
Impact GEO-2. Construction of development facilitated by the 2040 General Plan would include ground disturbance such as	None required	Less than significant without

Impact	Mitigation Measure (s)	Significance After Mitigation
<p>excavation and grading that would result in loose or exposed soil, increasing the potential for erosion and soil loss. Compliance with applicable regulations, including the Clean Water Act, and implementation of the goals and policies of the 2040 General Plan would minimize the potential for erosion and loss of topsoil and would reduce this impact to less than significant.</p>		mitigation
<p>Impact GEO-3. Development facilitated by the 2040 General Plan may result in the construction of structures on expansive soils, which could create a substantial risk to life or property. However, development would be required to comply with the CBC, which would ensure that expansive soils are remediated or that foundations and structures are engineered to withstand the forces of expansive soil. With mandatory compliance with the CBC, impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact GEO-4. Development facilitated by the 2040 General Plan would occur where existing sewer systems are in place. There would be no impact.</p>	None required	Less than significant without mitigation
<p>Impact GEO-5. Development facilitated by the 2040 General Plan has the potential to impact paleontological resources. Impacts would be less than significant with mitigation incorporated.</p>	<p>*GEO-1 Protection of Paleontological Resources. The following Policy shall be added to the Resource Conservation Element of the 2040 Union City General Plan:</p> <p>Policy: Protection of Paleontological Resources. Require avoidance and/or mitigation for potential impacts to paleontological resources for any development in Union City that occurs within high sensitivity geologic units, whether they are mapped at the surface or occur at the subsurface. High sensitivity geology units include Great Valley Sequence (Panoche and Knoxville Formations), Monterey Group (Claremont Shale and Hambre Sandstone), Briones Formation, Orinda Formation, and Pleistocene age alluvial fan and fluvial deposits. When paleontological resources are uncovered during site excavation, grading, or construction activities, work on the site will be suspended until the significance of the fossils can be determined by a qualified paleontologist. If significant resources are determined to exist, the paleontologist shall make recommendations for protection or recovery of the resource.</p> <p>The City shall require the following specific requirements for projects that could disturb geologic units with high paleontological sensitivity:</p> <ul style="list-style-type: none"> ▪ Retain a Qualified Paleontologist to Prepare a PMMP. Prior to initial ground disturbance in previously undisturbed strata of geologic units with high sensitivity, as shown on Figure 4.6-3, the project applicant shall retain a Qualified Paleontologist, as defined by the SVP (2010), to direct all mitigation measures related to paleontological resources and design a Paleontological Mitigation and Monitoring 	Less than significant

Impact	Mitigation Measure (s)	Significance After Mitigation
<p>Program (PMMP) for the project. The PMMP should include measures for a preconstruction survey, a training program for construction personnel, paleontological monitoring, fossil salvage, curation, and final reporting, as applicable.</p>		
<p>Greenhouse Gas Emissions/Climate Change</p>		
<p>Impact GHG-1. Development facilitated by the 2040 General Plan would generate GHG emissions that would exceed the 2040 efficiency threshold of 1.12 MT of CO₂e per service population per year. Implementation of policies contained in the 2040 General Plan and Mitigation Measure GHG-1 would minimize GHG emissions under buildout of the 2040 General Plan; however, this impact would remain significant and unavoidable.</p>	<p>GHG-1 Update to Climate Action Plan. In accordance with Implementation Program RC-7.A of the 2040 General Plan, the City of Union City shall update its Climate Action Plan (CAP). The updated CAP shall demonstrate a pathway to achieving the GHG reduction targets for Union City’s fair share contribution consistent with SB 32 and Executive Order S-3-05. Implementation measures in the updated CAP may include but are not limited to the following:</p> <ul style="list-style-type: none"> ▪ Develop and adopt Zero Net Energy requirements for new residential and non-residential development ▪ Develop and adopt a building electrification ordinance ▪ Implement VMT reduction measures such as improvements to public transit, full buildout of the Pedestrian and Bicycle Master Plan, and incentivization of transit-oriented development ▪ Expand charging infrastructure for electric vehicles ▪ Implement carbon sequestration by expanding the urban forest, participating in soil-based or compost application sequestration initiatives, supporting regional open space protection, and/or incentivizing rooftop gardens ▪ Purchase carbon offsets from a validated source¹ 	<p>Significant and unavoidable</p>
<p>Impact GHG-2. The 2040 General Plan would be consistent with GHG reduction measures contained in the City’s Climate Action Plan and ABAG/MTC’s Plan Bay Area 2040. Impacts would be less than significant.</p>	<p>Mitigation Measure GHG-1 would apply to this impact.</p>	<p>Significant and unavoidable</p>
<p>Hazards/Hazardous Materials</p>		
<p>Impact HAZ-1. Implementation of the 2040 General Plan could result in an incremental increase in the overall routine transport, use, storage, and disposal of hazardous materials in Union City and increase the risk of hazardous materials releases. Compliance with applicable regulations related to hazardous materials and compliance with General Plan policies would minimize the risk of releases and exposure to these substances. Impacts would be less than significant.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Impact HAZ-2. Implementation of the 2040 General Plan could result in hazardous emissions or handling of hazardous or</p>	<p>None required</p>	<p>Less than significant without</p>

¹ Validated sources are carbon offset sources that follow approved protocols and use third-party verification. At this time, appropriate offset providers include only those that have been validated using the protocols of the Climate Action Registry, the Gold Standard, or the Clean Development Mechanism (CDM) of the Kyoto Protocol. Credits from other sources will not be allowed unless they are shown to be validated by protocols and methods equivalent to or more stringent than the CDM standards.

Impact	Mitigation Measure (s)	Significance After Mitigation
acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; however, compliance with existing regulatory requirements would minimize risks to schools and students, resulting in a less than significant impact.		mitigation
Impact HAZ-3. Implementation of the 2040 General Plan could facilitate development on hazardous materials sites. However, compliance with applicable regulations relating to site cleanup and the 2040 General Plan policies would minimize hazards from development on contaminated sites. Impacts would be less than significant impact.	None required	Less than significant without mitigation
Impact HAZ-4. There are no airports within two miles of Union City, and the City is not within the influence area of an airport. There would be no impact.	None required	Less than significant without mitigation
Impact HAZ-5. The 2040 General Plan policies address maintaining a Local Hazard Mitigation Plan and emergency access implementation. Therefore, the 2040 General Plan would not result in interference with these types of adopted plans. Impacts would be less than significant.	None required	Less than significant without mitigation
Hydrology and Water Quality		
Impact HWQ-1. Development projected by the 2040 General Plan could result in violation of water quality standards or waste discharge requirements or degradation of groundwater quality. Compliance with applicable laws and regulations and implementation of the goals and policies of the 2040 General Plan would reduce this impact to a less-than-significant level.	None required	Less than significant without mitigation
Impact HWQ-2. Development projected by the 2040 General Plan could result in the depletion of groundwater supplies or the interference with groundwater recharge. Implementation of the goals and policies of the 2040 General Plan would reduce this impact to a less-than-significant level.	None required	Less than significant without mitigation
Impact HWQ-3. Development facilitated by The 2040 General Plan would not alter the course of a stream or river but has the potential to add impervious surfaces that may alter drainage patterns and increase runoff. However, this increase would be minimal. Impacts would be less than significant.	None required	Less than significant without mitigation
Impact HWQ-4. Development facilitated by the 2040 General Plan could increase the risk of pollutant release due to project inundation within flood hazard zones. Compliance with applicable regulations and	None required	Less than significant without mitigation

Impact	Mitigation Measure (s)	Significance After Mitigation
implementation of the goals and policies of the 2040 General Plan would minimize the potential for adverse effects and would reduce this potential impact to a less than significant level.		
Impact HWQ-5. Development facilitated by the 2040 Union City General Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.	None required	Less than significant without mitigation
Land Use and Planning		
Impact LU-1. Implementation of the proposed 2040 General Plan would provide for orderly development in Union City and would not physically divide an established community. Impacts would be less than significant.	None required	Less than significant without mitigation
Impact LU-2. Implementation of the 2040 General Plan would be generally consistent with applicable land use plans, policies, or regulations adopted to avoid or mitigate environmental effects, such as ABAG/MTC's <i>Plan Bay Area 2040</i> . Impacts would be less than significant.	None required	Less than significant without mitigation
Noise		
Impact N-1. Construction of individual projects facilitated by the 2040 General Plan would temporarily generate increased noise levels, potentially affecting nearby noise-sensitive land uses. Provisions in the Union City Municipal Code and 2040 General Plan policies would limit noise disturbance to the extent feasible. However, construction noise may still exceed noise standards and impacts would be significant and unavoidable.	<p>N-1 Construction Noise Reduction. For projects involving impact pile-drivers that are located within 400 feet of noise-sensitive receptors, projects involving sonic pile-drivers that are located within 200 feet of construction, and projects without pile-driving that are located within 175 feet from noise-sensitive receptors, the following mitigation would be required:</p> <ul style="list-style-type: none"> ▪ Equipment Staging Areas. Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors. ▪ Electrically-Powered Tools and Facilities. Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities. ▪ Smart Back-up Alarms. Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction. ▪ Additional Noise Attenuation Techniques. During the clearing, earth moving, grading, and foundation/conditioning phases of construction, temporary sound barriers shall be installed and maintained between the construction site and 	Significant and unavoidable

Impact	Mitigation Measure (s)	Significance After Mitigation
	the sensitive receptors. Temporary sound barriers shall consist of sound blankets affixed to construction fencing or temporary solid walls along all sides of the construction site boundary facing potentially sensitive receptors.	
<p>Impact N-2. Development projected by the 2040 General Plan would introduce new on-site noise sources associated with residential, commercial, and industrial land uses and would contribute to increases in traffic noise. The continued regulation of on-site noise, consistent with the Union City Municipal Code, and implementation of goals and policies in the 2040 General Plan would minimize disturbance to adjacent land uses. Impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact N-3. Construction of individual projects facilitated by the 2040 General Plan could temporarily generate groundborne vibration, potentially affecting nearby land uses. Policies in the 2040 General Plan would limit vibration disturbance and ensure that high vibration levels during working construction hours to the extent feasible. However, construction vibration from pile-drivers may disturb people or damage buildings. Impacts would be significant and unavoidable.</p>	N-1 Construction Noise Reduction , listed above.	Significant and unavoidable
Population and Housing		
<p>Impact PH-1. Implementation of General Plan 2040 would facilitate the construction of new housing in Union City, which would allow the City's population to increase over time and slightly exceed ABAG population forecasts. However, the 2040 General Plan is intended to accommodate and plan for population growth and includes policies to manage new development. Therefore, impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact PH-2. Implementation of General Plan 2040 would not result in the displacement of substantial numbers of housing or people. To the contrary, General Plan 2040 would facilitate the development of new housing in accordance with State and local housing requirements, while preserving existing residential neighborhoods. Impacts would be less than significant.</p>	None required	Less than significant without mitigation

Impact	Mitigation Measure (s)	Significance After Mitigation
Public Services		
<p>Impact PS-1. Development facilitated by the 2040 General Plan would increase population in Union City, generating additional need for fire protection and Police Protection services. However, adherence to the 2040 General Plan policies would reduce impacts related to the construction of fire and police protection facilities to a less than significant level.</p>	None required	Less than significant without mitigation
<p>Impact PS-2. Development facilitated by the 2040 General Plan would result in an increase in population of school-aged children in Union City. This would increase demand for school services and potentially create the need for new school facilities. Compliance with 2040 General Plan policies would reduce impacts related to the construction of school facilities and new development would be required to pay impact fees which would result in less than significant impacts with regard to the provision of school facilities.</p>	None required	Less than significant without mitigation
<p>Impact PS-3. Development facilitated by the 2040 General Plan would result in an increase in the City’s population. This would increase demand for library services and potentially create the need for new library facilities. Compliance with 2040 General Plan policies would reduce impacts related to the construction of library facilities to a less than significant level.</p>	None required	Less than significant without mitigation
<p>Impact PS-4 Development facilitated by the 2040 General Plan would result in an increase in the City’s population. This would increase demand for parks and potentially create the need for new park facilities. Compliance with 2040 General Plan policies would reduce impacts related to the construction of park facilities to a less than significant level.</p>	None required	Less than significant without mitigation
Transportation		
<p>Impact T-1. New development facilitated by the 2040 General Plan would accommodate increases in traffic throughout Union City. This traffic increase would not conflict with policies contained in the <i>Plan Bay Area 2040</i> or the City’s Pedestrian and Bicycle Master Plan. Impacts would be less than significant.</p>	None required	Less than significant without mitigation
<p>Impact T-2. Development and population growth facilitated by the 2040 General Plan would increase VMT in Union City and VMT per service population would not be 15 percent below the nine bay area regional VMT per service population. Therefore, the 2040 General Plan would be inconsistent</p>	None available	Significant and unavoidable

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Impact	Mitigation Measure (s)	Significance After Mitigation
with CEQA Guidelines Section 15064.3, subdivision (B). Impacts would be significant and unavoidable. .		
Impact T-3. The proposed 2040 General Plan is a program-level plan that does not directly address project-level design features. Roadway improvements and site access measures would be designed and reviewed in accordance with City standards. This impact would be less than significant.	None required	Less than significant without mitigation
Impact T-4. The proposed 2040 General Plan identifies circulation improvements and policies that would support emergency access throughout the City. This impact would be less than significant.	None required	Less than significant without mitigation
Impact T-5. New development facilitated by the 2040 General Plan would increase traffic in Union City. This traffic may cause delays that conflict with applicable City LOS standards. Impacts would be significant and unavoidable.	None available	Significant and unavoidable
Impact T-6. New development facilitated by the 2040 General Plan would increase traffic on CMA roadways surrounding Union City. This traffic may conflict with the LOS standards of the Alameda County CMA. Impacts would be significant and unavoidable.	None available	Significant and unavoidable
Tribal Cultural Resources		
Impact TCR-1. Development projected by General Plan 2040 may involve excavation, which has the potential to impact previously unidentified tribal cultural resources. Impacts on tribal cultural resources would be less than significant.	None required	Less than significant without mitigation
Utilities and Service Systems		
Impact UTL-1. Development projected by the 2040 General Plan would increase demand for electric power, natural gas, telecommunications, and stormwater drainage. However, development facilitated by the 2040 General Plan would occur in developed areas of the City where these facilities exist and relocation, if applicable, would occur in previously disturbed or developed areas generally. Impacts would be less than significant.	None required	Less than significant without mitigation
Impact UTL-2. Development projected by the 2040 General Plan would increase demand for water supply. However, with adherence to the 2040 General Plan policies and ACWD drought contingency plans, water supplies would be adequate to support new development. Impacts would be less than significant.	None required	Less than significant without mitigation

Impact	Mitigation Measure (s)	Significance After Mitigation
<p>Impact UTL-3. Development projected by the 2040 General Plan would increase demand for wastewater treatment. However, the existing wastewater treatment plant has sufficient capacity for future development, and the 2040 General Plan contains policies to ensure treatment is adequate. Impacts would be less than significant.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Impact UTL-4. Development facilitated by the 2040 General Plan would increase the volume of solid waste generated in Union City. However, local infrastructure serving Union City has adequate capacity to accept the additional waste. Further, the 2040 General Plan contains policies to increase recycling and comply with federal, State, and local management reduction regulations. Therefore, impacts would be less than significant.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Wildfire</p>		
<p>Impact WFR-1. The 2040 General Plan policies address emergency access, response, and preparedness. The policies enforce maintaining an emergency management plan. Therefore, the 2040 General Plan would not impair an emergency response plan or emergency evacuation plan. Impacts would be less than significant.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Impact WFR-2. The 2040 General Plan does not facilitate urban development in areas most susceptible to wildfire. Prevailing wind and slopes would generally spread fire and related smoke away from areas where urban development is envisioned. Additionally, the 2040 General Plan policies would reduce the potential for the uncontrolled spread of a wildfire. Impacts would be less than significant.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Impact WFR-3. The 2040 General Plan facilitates growth primarily as infill and redevelopment within urbanized areas of the City where infrastructure and roads currently exist. The General Plan policies require maintenance of fire access roads, which could have temporary or ongoing noise impacts and vegetation removal impacts. Impacts would be less than significant because maintenance would be infrequent and would reduce the potential for fire risk.</p>	<p>None required</p>	<p>Less than significant without mitigation</p>
<p>Impact WFR-4. If a severe wildfire were to occur in the hillside area of Union City, structures downslope would not be at risk of flooding or landslides. The 2040 General</p>	<p>None required</p>	<p>Less than significant without mitigation</p>

Impact	Mitigation Measure (s)	Significance After Mitigation
Plan does not include changes to the land use designations in the hillside area or areas adjacent to the base of the hillside area that would allow for more or increased development. In addition, 2040 General Plan policies would reduce the potential for wildfire in the hillside area. Therefore, impacts would be less than significant.		
<hr/> <p>Notes: Mitigation measures indicated by asterisks (*) are new or revised policies or implementation measures recommended for incorporation into the 2040 General Plan.</p> <hr/>		

1 Introduction

This Environmental Impact Report (EIR) examines the potential environmental effects of proposed 2040 Union City General Plan Update, defined as the proposed project or as the 2040 General Plan for purposes of this environmental review. The environmental review process for the proposed project, and legal basis for preparing an EIR under the California Environmental Quality Act (CEQA), are described below.

1.1 Environmental Impact Report Background

This document is an EIR that evaluates the potential environmental impacts associated with implementation of the 2040 General Plan. The General Plan establishes the community's vision for the future development of the Union City and provides comprehensive polices for the entire city relating to land use, economic development, community design, mobility, safety, public facilities and services, resource conservation, and housing. The 2040 General Plan also provides comprehensive polices for distinctive areas of Union City, including key infill areas and areas with important existing features that require special attention to preserve and protect.

This section of the EIR:

1. Provides an overview of the background behind the 2040 General Plan
2. Describes the purpose of and legal authority of the EIR
3. Summarizes the scope and content of the EIR
4. Lists lead, responsible, and trustee agencies for the EIR
5. Describes the intended uses of the EIR
6. Provides a synopsis of the environmental review process required under CEQA

The contents of other EIR sections are as follows:

- Section 2, *Project Description*, provides a detailed discussion of the proposed project.
- Section 3, *Environmental Setting*, describes the general environmental setting for Union City.
- Section 4, *Environmental Impact Analysis*, describes the potential environmental effects associated with development facilitated by the proposed project.
- Section 5, *Other CEQA Required Sections*, discusses issues such as growth inducement and significant irreversible environmental effects.
- Section 6, *Alternatives*, discusses alternatives to the proposed project, including the CEQA-required "no project" alternative.
- Section 7, *References and Report Preparers*, lists informational sources for the EIR and persons involved in the preparation of the document.

1.2 Overview of the 2040 Union City General Plan

State law (Government Code Section 65300) requires that each city and county adopt a comprehensive general plan. The existing City of Union City 2002 General Plan was adopted by the City Council on February 12, 2002. The 2040 General Plan builds on the current 2002 General Plan, but also is a comprehensive effort to update the current General Plan. The update is to respond to the current needs, values, and preferences of the community, as well as changes in State law that may not have been in effect when the current General Plan was last updated.

The 2040 General Plan has been organized into ten elements: Land Use; Economic Development; Community Design; Health and Quality of Life; Mobility; Safety; Public Facilities and Services; Resource Conservation; Special Areas; and Housing. The General Plan Housing Element was last updated in January 2015, covering the period from January 2015 through January 2023, and was subject to a separate environmental review process. The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan. Together these ten elements cover all of the topics that are required to be included in a General Plan under State law, which are Land Use, Open Space, Conservation, Housing, Circulation, Safety, Environmental Justice, and Noise.

The 2040 General Plan defines the policy framework by which the City's physical and economic resources are to be managed and used through the planning horizon year, which is 2040. City decision-makers will use the 2040 General Plan as a blueprint for:

- Choices about the use of land
- Protection of environmental resources
- Conservation and development of housing
- Provision of supporting infrastructure and public and human services
- Protection of people and property from natural and man-made hazards

The 2040 General Plan clarifies and articulates the City's intentions with respect to the rights and expectations of various community stakeholders, including residents, property owners, and business owners. Through the General Plan, the City informs these groups of its goals, policies, and standards, and thereby communicates expectations of the public and private sectors for meeting community objectives.

Because the 2040 General Plan serves as a constitution for future development in Union City, decisions by the City affecting land use and development must be consistent with the General Plan. This includes development projects that may be proposed in the future. An action, program, or project would be considered consistent with the General Plan if, considering all of its aspects, it will further the objectives and policies of the General Plan or not obstruct their attainment.

The 2040 General Plan contains goals, policies, and implementation programs to implement the City's overarching objectives. Goals are statements that provide direction and state the desired end condition. Policies establish basic courses of action to achieve these goals, and directly guide the response of elected and appointed officials to development proposals and related community actions. Implementation programs are specific actions, procedures, standards or techniques that the City must take to help achieve a specified goal or implement an adopted policy.

1.3 Purpose and Legal Authority

This EIR has been prepared in accordance with CEQA and the *State CEQA Guidelines*. In accordance with Section 15121 (a) of the *State CEQA Guidelines* (California Code of Regulations, Title 14, Division 6, Chapter 3), the purpose of an EIR is to:

Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are by necessity more conceptual and may contain a more general discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the *State CEQA Guidelines*, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides Union City (City), as Lead Agency, the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides the City with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically, are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program, or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. By its nature, a Program EIR considers the broad effects associated with implementing a program (such as a General Plan or Specific Plan) and does not, and is not intended to, examine the specific environmental effects associated with specific projects that may be accommodated by the provisions of General or Specific Plans.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documentation may not be required (*State CEQA Guidelines* Section 15168(c)). When a Lead Agency relies on a Program EIR for a subsequent activity, it must incorporate applicable mitigation measures and alternatives developed in the Program EIR into the subsequent activities (*State CEQA Guidelines* Section 15168(c)(3)). If a subsequent activity would have effects not contemplated or not within the scope of the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or a project-level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. Section 15168(b) of the *State CEQA Guidelines* encourages the use of Program EIRs, citing five advantages:

1. Provision of a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR.
2. Focus on cumulative impacts that might be slighted in a case-by-case analysis.
3. Avoidance of continual reconsideration of recurring policy issues.
4. Consideration of broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them.
5. Reduction of paperwork by encouraging the reuse of data (through tiering).

As a wide-ranging environmental document, the Program EIR uses expansive thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined not to be significant at a program level would not be significant at a project level. In other words, determination that implementation of the proposed project as a program would not have a significant environmental effect does not necessarily mean that an individual project would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the 2040 General Plan.

This EIR has been prepared to analyze potentially significant environmental impacts associated with future development resulting from implementation of the 2040 General Plan, and also addresses appropriate and feasible mitigation measures or project alternatives that would minimize or eliminate these impacts. Additionally, this EIR will provide the primary source of environmental information for Union City, which is the Lead Agency, to use when considering the proposed project.

This EIR is intended to provide decision-makers and the public with information that enables intelligent consideration of the environmental consequences of the proposed project. This EIR identifies significant or potentially significant environmental effects, as well as ways in which those impacts can be reduced to less-than-significant levels, whether through the imposition of mitigation measures or through the implementation of specific alternatives to the proposed project. In a practical sense, this document functions as a tool for fact-finding, allowing concerned citizens and City staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure.

1.4 Scope and Content

In accordance with the *State CEQA Guidelines*, a Notice of Preparation (NOP) of a Draft EIR was circulated to potentially interested parties on October 22, 2018. The NOP, included in Appendix A, indicated that the EIR would evaluate potential impacts in each of the following resources and issue areas:

- Aesthetics
- Agricultural and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions/Climate Change
- Hazards/Hazardous Materials
- Hydrology/Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Circulation
- Tribal Cultural Resources
- Utilities/Service Systems
- Wildfire

The City staff circulated the NOP of this EIR and received six written comments. The comments, included in Appendix A, are addressed, as appropriate, in the analysis contained in the various subsections of Section 4, *Environmental Impact Analysis*. The City staff also conducted an EIR scoping meeting on November 8, 2018, at the Mark Green Sports Center in Union City with a

number of members of the public in attendance. A summary of the comments received at this meeting is included at the end of Appendix A. Copies of the written comments received in response to the NOP are also included at the end of Appendix A. Section 4.18, *Effects Found Not to be Significant*, includes a brief description of agriculture, mineral, and recreation impacts that were determined not to have a significant environmental impact and are therefore not discussed in detail in the EIR.

The focus of this EIR is to:

- Provide information about the 2040 General Plan for consideration by the City Council in its selection of the proposed project, an alternative to the proposed project, or a combination of various elements from the proposed project and its alternatives, for approval
- Review and evaluate the potentially significant environmental impacts that could occur as a result of the growth and development envisioned in the 2040 General Plan
- Identify feasible mitigation measures that may be incorporated into the 2040 General Plan in order to reduce or eliminate potentially significant effects
- Disclose any potential growth-inducing and/or cumulative impacts associated with the proposed project
- Examine a reasonable range of alternative growth scenarios, including growth according to the existing General Plan, reduced growth, and increased employment growth that could feasibly attain the basic objectives of the proposed project, while eliminating and/or reducing some or all of its potentially significant adverse environmental effects

1.5 Intended Uses of the EIR

This EIR is as an informational document for use in the City's review and consideration of the proposed 2040 General Plan. This document is a Program EIR. Section 15168(a) of the *State CEQA Guidelines* states that:

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) as logical parts in a 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.

As a programmatic document, this EIR presents and discloses a region-wide assessment of the environmental impacts of the 2040 General Plan. The information and analysis in this EIR will be used by the Union City Planning Commission and City Council, trustee agencies, and the general public.

The 2040 General Plan will guide subsequent actions taken by the City in its review of new development projects and the establishment of new and/or revised City-wide or area-specific programs. This Program EIR serves as a first-tier environmental document under CEQA, supporting second-tier environmental documents for projects with detailed designs that have been developed for implementation within the City. Analysis of site-specific impacts of individual projects is not the intended use of a Program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis at this time. Individual and specific environmental analysis of each project will be undertaken as necessary in the future by the City prior to each project being

considered for approval. Therefore, the City, acting as the Lead Agency, would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. If the City finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on significant effects specific to the project, or its site that have not been considered in this Program EIR.

1.6 Lead, Responsible, and Trustee Agencies

The City of Union City is the Lead Agency under CEQA for this EIR because it has primary discretionary authority to determine whether or how to approve the proposed project.

Section 15381 of the *State CEQA Guidelines* defines responsible agencies as other public agencies that are responsible for carrying out/implementing a specific component of a proposed project or for approving a project that implements the goals and policies of a General Plan. There are no responsible agencies for the proposed project.

Although responsible agencies under CEQA, several other agencies have review authority over aspects of the proposed project or approval authority over projects that could potentially be implemented in accordance with various objectives and policies included in the 2040 General Plan. These agencies and their roles are listed below.

- The California Department of Transportation (Caltrans) has responsibility for approving future improvements to the state highway system, including Interstate 880 and State Route 238.
- The California Department of Fish and Wildlife (CDFW) has responsibility for issuing take permits and streambed alteration agreements for any projects with the potential to affect plant or animal species listed by the State of California as rare, threatened, or endangered or that would disturb waters of the State.
- Other public agencies which may own land within City boundaries.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. Section 15386 of the *State CEQA Guidelines* designates four agencies as trustee agencies: CDFW with regards to fish and wildlife, native plants designated as rare or endangered, game refuges, and ecological reserves; the State Lands Commission, with regard to state-owned "sovereign" lands, such as the beds of navigable waters and State school lands; the California Department of Parks and Recreation, with regard to units of the State park system; and, the University of California, with regard to sites within the Natural Land and Water Reserves System. The CDFW, due to the potential for rare or endangered species, is the only trustee agencies for the 2040 General Plan EIR.

1.7 Environmental Review Process

The environmental impact review process required under CEQA is summarized below. The steps appear in sequential order.

1. **Notice of Preparation Distributed.** Immediately after deciding that an EIR is required, the Lead Agency must file a NOP soliciting input on the EIR scope to "responsible," "trustee," and

involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The NOP must be posted in the County Clerk's office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the Lead Agency. The NOP public comment period for the 2040 General Plan EIR was from October 22, 2018, to November 21, 2018, and a scoping meeting was held on November 8, 2018. Public comments were received in response to the NOP and scoping process.

2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts, including direct, indirect, cumulative, growth-inducing and unavoidable impacts; f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.
3. **Public Notice and Review.** A Lead Agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The Lead Agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the State Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse. This EIR is being circulated for a 45-day public review and being sent to the State Clearinghouse with the required Notice of Completion (NOC).
4. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
5. **Certification of Final EIR.** Prior to making a decision on a proposed project, the Lead Agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the Lead Agency; and c) the decision making body reviewed and considered the information in the Final EIR prior to approving a project (*State CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** The Lead Agency may a) disapprove the project because of its significant environmental effects; b) require changes to the project to reduce or avoid significant environmental effects; or c) approve the project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*State CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the Lead Agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*State CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.

8. **Mitigation Monitoring Reporting Program.** When the Lead Agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination.** The Lead Agency must file a Notice of Determination (NOD) after deciding to approve a project for which an EIR is prepared (*State CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30 day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

2 Project Description

The project analyzed in this EIR is the proposed 2040 Union City General Plan Update, referred to herein as the 2040 General Plan or proposed project. This section of the EIR describes the key characteristics of the 2040 General Plan, including the project proponent/Lead Agency, the geographic extent of the 2040 General Plan, project objectives, required approvals and types and extent of development forecasted under the 2040 General Plan.

2.1 2040 General Plan

The 2040 General Plan is a comprehensive update of the City's current 2002 General Plan, and establishes the community's vision for future development of the City through 2040. As part of the general plan process, the 2040 General Plan has been reorganized and reformatted, with updated goals and policies that reflect the community's vision of Union City. The City's General Plan Land Use Map has also been updated to reflect the community's vision and the underlying theme that threads through the 2040 General Plan: creating quality places that improve the quality of life for residents, attract new and retain existing businesses, and enhance the City's fiscal stability, while preserving successful areas of the community.

State law (Government Code Sections 65300 through 65303.4) sets forth the requirement for each municipality to adopt and periodically update its General Plan, and sets the requirement that a General Plan include the following eight mandatory subject areas, or "elements": Land Use, Circulation, Housing, Open Space, Conservation, Noise, Safety, and Environmental Justice. State law also allows for optional elements that can be organized or combined at the city's discretion. As described below, the 2040 General Plan has been organized into ten elements: Land Use; Economic Development; Community Design; Mobility; Health and Quality of Life; Safety; Public Facilities and Services; Resource Conservation; and Housing.¹ Together these ten elements cover all of the topics that are required to be included in a General Plan under State law, as described above. These ten elements describe the existing conditions and context for the related topic areas, followed by goals, policies, and implementation programs to guide the City's management and development through 2040.

With limited opportunities for new development in Union City, the 2040 General Plan emphasizes infill and reuse development within the City limits, encourages higher-density and mixed use projects where appropriate, and supports development that compliments the existing natural and built environment. New development would occur primarily where existing roads, water, and sewer are in place and in a manner that minimizes the impact of development on existing infrastructure and services.

The 2040 General Plan also provides the policy framework to guide future development toward land uses that support walking, biking, and transit ridership, including a Vision Zero policy. The 2040

¹ The General Plan Housing Element was last updated in January 2015, covering the period from January 2015 through January 2023, and was subject to a separate environmental review process. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan. The California Department of Housing and Community Development (HCD) certified the Housing Element in 2015.

General Plan places a greater emphasis on active transportation infrastructure such as protected bike lanes and enhanced pedestrian crossings, improved transit facilities and services, and American with Disabilities Act (ADA) accessibility.

Focus areas for growth in Union City include the Greater Station District, Union City Boulevard Corridor, and the Alvarado Historic District / Horner-Veasy Area. Focus areas are described below in detail and are shown on Figure 2-5.

2.1.1 Greater Station District

The City has planned for the highest intensity development within the Greater Station District area. The Greater Station District is a 293-acre area surrounding the Union City Intermodal Station. The Greater Station District has its roots in the Decoto Industrial Park Study Area (DIPSA) Specific Plan, originally adopted in 1994 and amended in 2006. A separate effort to update the DIPSA Specific Plan and related environmental review is currently underway. The Core Station District, the area directly surrounding the Intermodal Station, is identified for the most intensive development. This area has a General Plan designation of Station Mixed Use Commercial (CSMU). The Greater Station District is developed with 828 multi-family units including 221 affordable rental units. There are four (4) vacant city-owned parcels; three (3) of which are identified for very intensive office development (up to a FAR of 4.0). The remaining parcel, referred to as the Restoration Site, consists of a capped mound rising approximately 22 feet above ground level that contains dirt and slag material and is identified for future mixed-use development.

The Core Station District is identified as a Priority Development Area (PDA), which is a designation given by the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). A PDA designation implies that the area is suitable for accommodating higher density development and is accessible by public transit. Focusing jobs and housing growth in PDAs is a major component of Plan Bay Area 2040², which seeks to focus growth in a way that is more environmentally sustainable than traditional greenfield development by locating jobs and housing near public transit. When the application window opens up, the City will be applying to MTC/ABAG to expand the PDA to include the adjacent Station East area, where high density residential and job uses are planned within a 10-minute walking distance of BART. The Station East Area is identified for future high-density residential, mixed-use residential, and flex-office uses.

The Greater Station District also includes the 35-acre Gateway Site. The site contains area for future multi-family residential and the right-of-way for Quarry Lakes Parkway; a planned roadway that will extend from Mission Boulevard to Paseo Padre Parkway. The four lane parkway will include enhanced bicycle and pedestrian facilities. The Final Environmental Impact Report (EIR) for the Quarry Lakes Parkway was completed, certified, and approved in April 2009. Therefore, the Quarry Lakes Parkway project is not within the scope of this EIR.

2.1.2 Union City Boulevard District

The Union City Boulevard (UCB) District (Figure 2-5) is a 65-acre largely industrial area located in northwestern Union City between the Historic Alvarado District and Whipple Road. The UCB District is envisioned to redevelop as a full-service employment district with supportive commercial uses.

² Plan Bay Area 2040 is a long-range Regional Transportation Plan and Sustainable Communities Strategy for the nine-county San Francisco Bay Area that addresses how the Bay Area will grow over the next two decades.

There is potential for residential/commercial mixed-use developments subject to preparation of an Area Plan for the District.

2.1.3 Historic Alvarado District / Horner-Veasy Area

The Horner-Veasay Area and Alvarado Historic District are located south and west of the Union City Boulevard District. See Figure 2-5 for a map of these areas. The boundaries of the Alvarado-Historic District are generally the same as the historic settlement of Alvarado, whose beginnings date back to the 1840s. Future growth is attributed to development of mixed-use residential projects on the remaining vacant parcels and redevelopment of some underutilized parcels. The area includes the Diamond Mines Storage facility that is identified for future residential growth at a density of 20 to 30 units per acre.

The Horner-Veasay Area is a largely industrial area located on the west side of Union City north of the Union Sanitary District (USD) Plant. The City's vision of the Horner-Veasay Area is a job-intensive and revenue-enhancing light industrial/manufacturing area. The area contains several vacant and underutilized parcels.

2.1.4 Additional City Growth

Future growth is also anticipated through the development of vacant and underutilized lots throughout the City that can accommodate a variety of land uses including single-family residential, multi-family residential, mixed-use residential, commercial, and industrial as well as intensification of existing shopping centers and business parks.

2.2 Project Proponent/Lead Agency

The City is both the project proponent and the lead agency for the proposed 2040 General Plan. The City's Planning Division, which is located at 34009 Alvarado-Niles Road, Union City, California, 94587, prepared this EIR with the assistance of Rincon Consultants, Hexagon Transportation Consultants, and Mintier Harnish.

2.3 Project Location

Union City is located in Alameda County on the east side of the San Francisco Bay. Union City is bounded by the city of Hayward to the north, the city of Fremont to the south, the Bay lands on the west, and hillsides to the east. Figure 2-1 shows a regional map of the city's relationship to nearby cities, communities, and the state highway system.

Regional access is provided by Interstate 880, a major eight-lane freeway, and State Route 238, which is also known as Mission Boulevard in Union City. Interstate 880 is a limited-access freeway that runs north-south between Oakland and San Jose, and bisects Union City. State Route 238 is a four- to six-lane State highway that runs north-south along the base of the foothills at the eastern side of the Union City. The City is served by a surface street system ranging from multi-lane arterial roadways with medians to two-lane streets in the majority of the City's residential neighborhoods.

Union City is also served by a network of designated bicycle facilities including on-street facilities and regional recreational trails. These trails, as well as sidewalks and paths also provide a network of pedestrian facilities in Union City. Transit services, including local and regional bus services and rapid transit and regional rail services, provide additional access to Union City. Union City is directly

served by Bay Area Rapid Transit (BART) and the Dumbarton Express via the Union City BART Station connecting Union City to four Bay Area counties: Alameda, Contra Costa, San Francisco, and San Mateo. The nearest airport to Union City is the Hayward Executive Airport, which is located approximately 7 miles to the north the City. The San Francisco International Airport is located approximately 25 miles west of Union City and the Oakland International Airport is located approximately 15 miles to the north.

Union City encompasses approximately 18 square miles, and according to the 2040 General Plan approximately 58 percent of the City's land area is open space/agriculture. With an estimated 2018 population of 72,991, Union City is the ninth most populous of Alameda County's 14 cities (California Department of Finance [DOF] 2018). The City has a relatively young housing stock with almost one-quarter of the housing units less than 30 years old (Union City 2015). However, the majority of the housing units in Union City, approximately 43 percent, were constructed between 1970 and 1979.

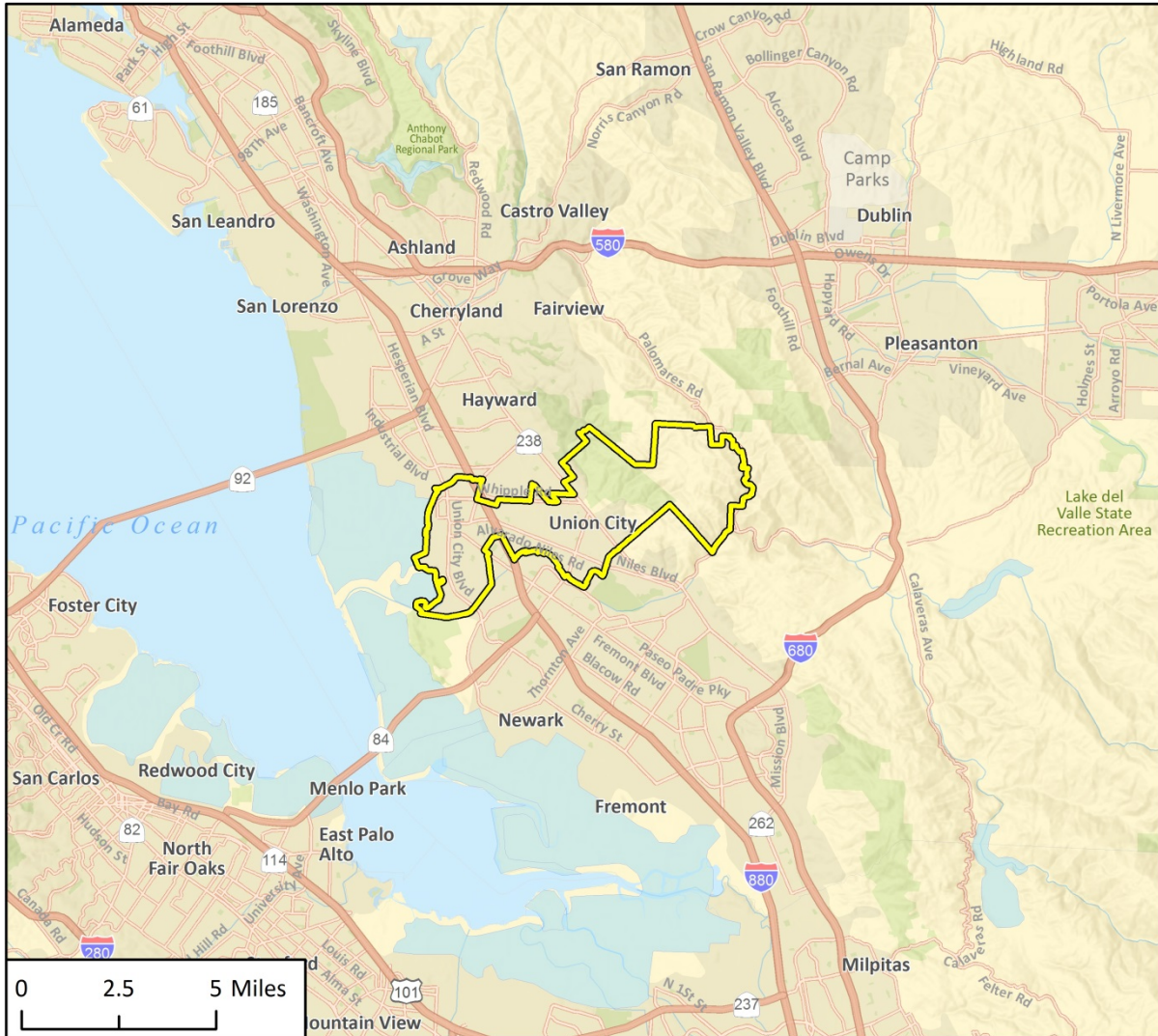
Union City is surrounded on all sides by incorporated lands of Fremont Hayward, or the unincorporated lands of Alameda County. The unincorporated lands of Alameda County are at the far eastern city boundary are remote and not contiguous with the urbanized area of Union City. The planning area for the 2040 General Plan includes the current City limits. Accordingly, this EIR uses the current City limits as the land use boundary for the 2040 General Plan as it represents the potential area where land use changes and/or physical changes to the environment may occur as a result of implementation of the 2040 General Plan. For the purposes of this EIR the area inside the City limits is defined as the "General Plan Area" for the 2040 General Plan. Figure 2-2 illustrates the General Plan Area used for analysis within this EIR. The proposed 2040 General Plan goals, policies and implementation programs as well as proposed land use changes will not result in physical changes to areas outside of the General Plan Area.

2.4 Land Use and Regulatory Setting

The 2040 General Plan is a comprehensive update of the City's current 2002 General Plan. The current land use plan specifies 17 separate land use designations. These land use designations define the basic categories of land use allowed in the City, and are implemented through the City's Zoning Ordinance and Zoning Map, which contain more specific regulations and standards governing development on individual properties.

The 2040 General Plan is made up of ten elements: Land Use; Economic Development; Community Design; Health and Quality of Life; Mobility; Safety; Public Facilities and Services; Resource Conservation; Special Areas; and Housing. The Land Use Element describes the general distribution, location, and extent of various land uses. Twenty-two separate land use designations have been established in the 2040 General Plan to provide a mixture of land uses for the City. Figure 2-3 shows the existing land use designations from the current 2002 General Plan. Figure 2-4 shows the proposed new land use map under the 2040 General Plan. After the 2040 General Plan is adopted, the City will be reviewing its Zoning Ordinance, including its Zoning Map, to make sure it is consistent with the 2040 General Plan.

Figure 2-1 Regional Location



Imagery provided by Esri and its licensors © 2018.

 Union City Limits

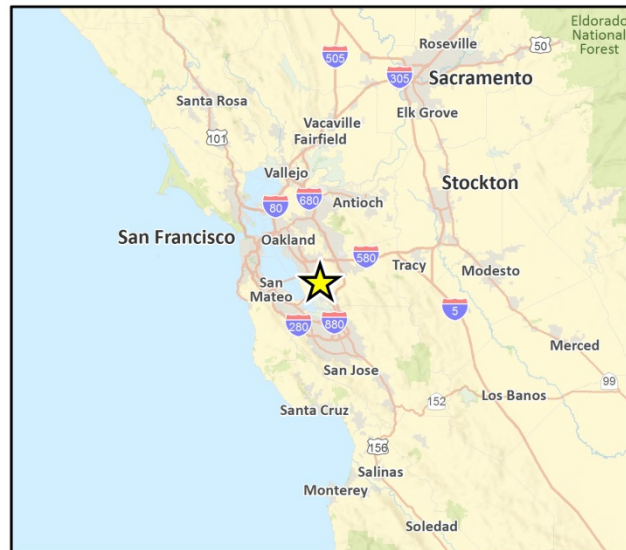
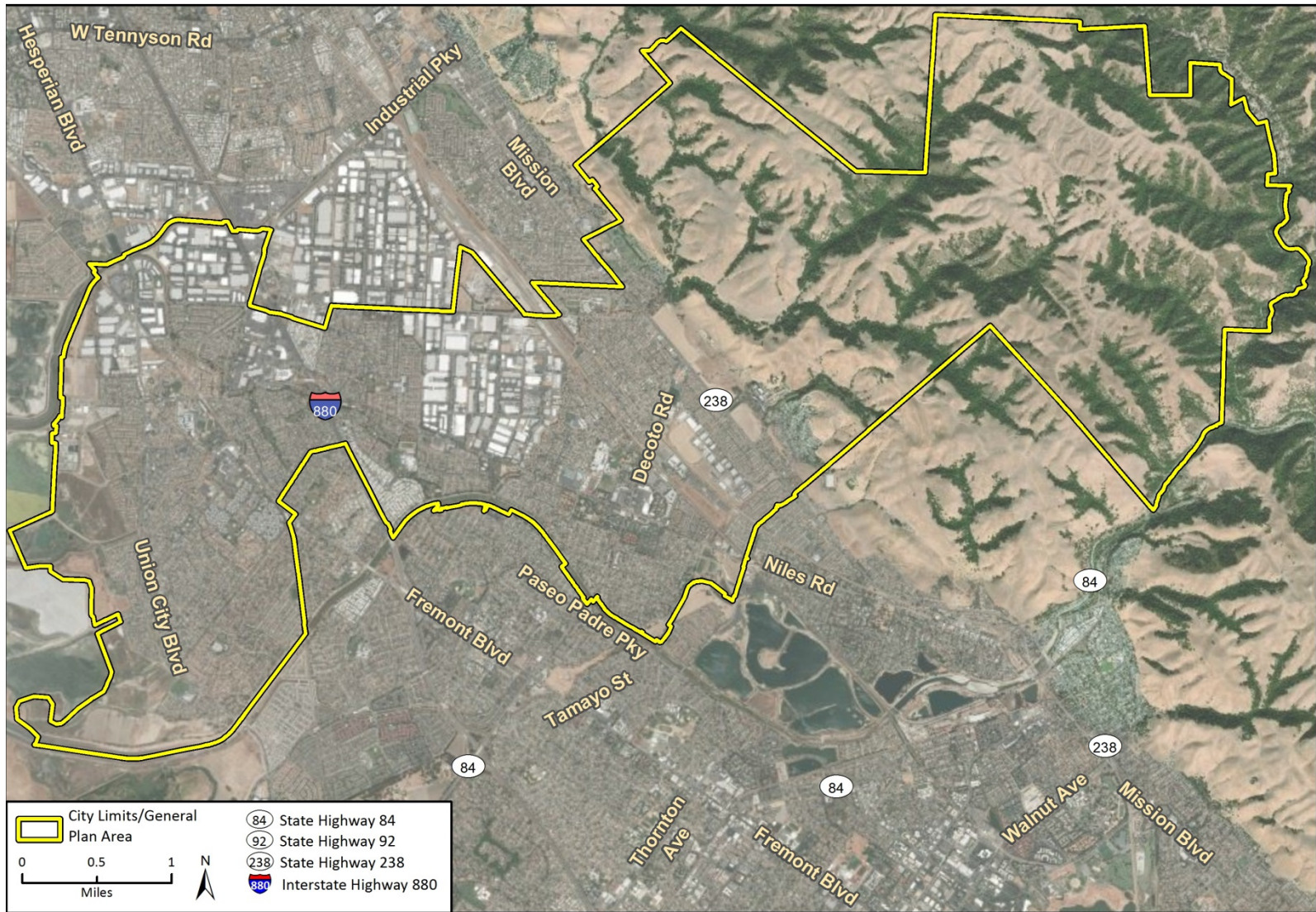


Fig 2-1 Regional Location Map

Figure 2-2 Project Site and General Plan Area



Imagery provided by Microsoft Bing and its licensors © 2019.

Fig 2-2 Project Site General Plan Area Lscsp

Figure 2-3 2002 General Plan Land Use Map

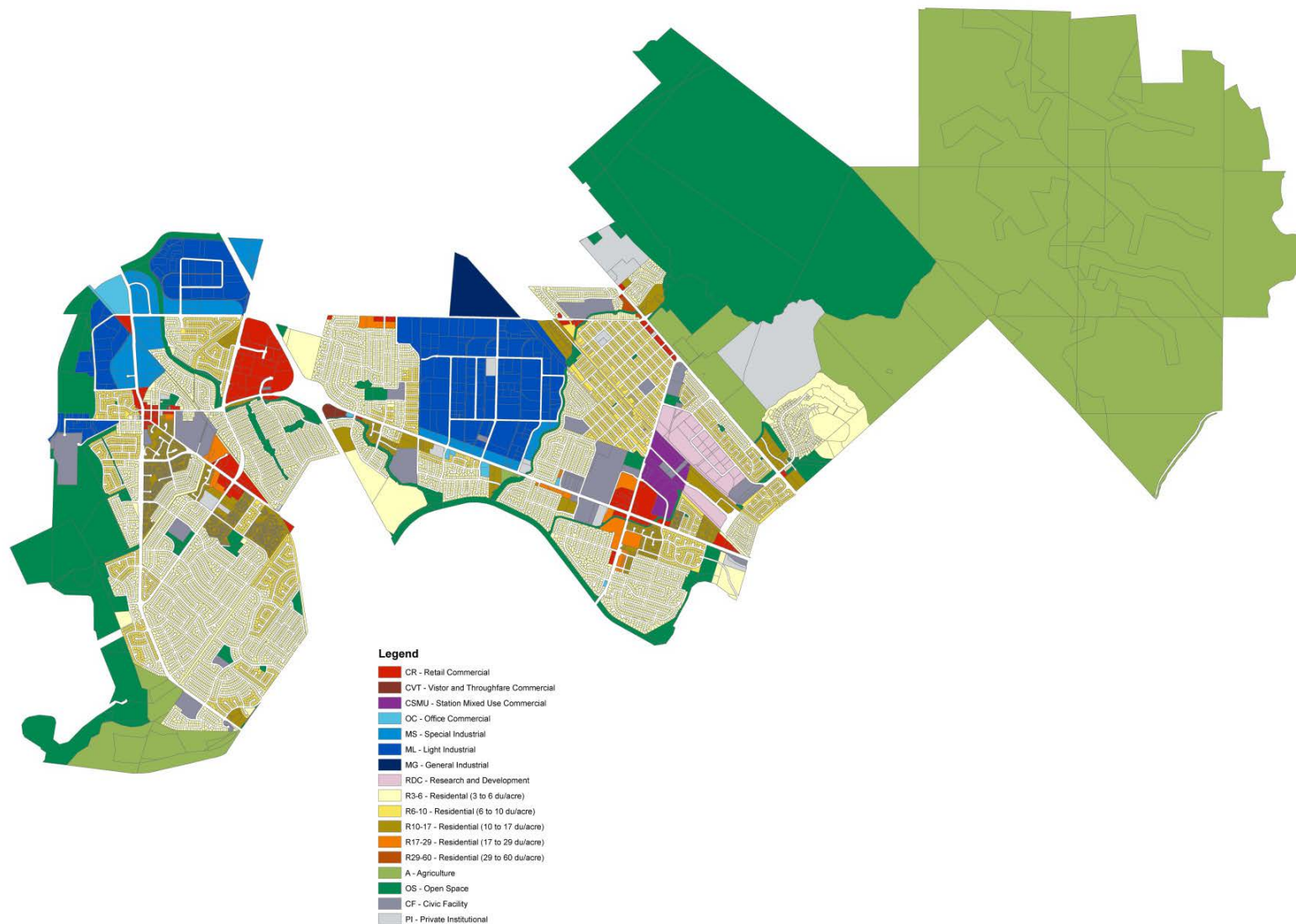
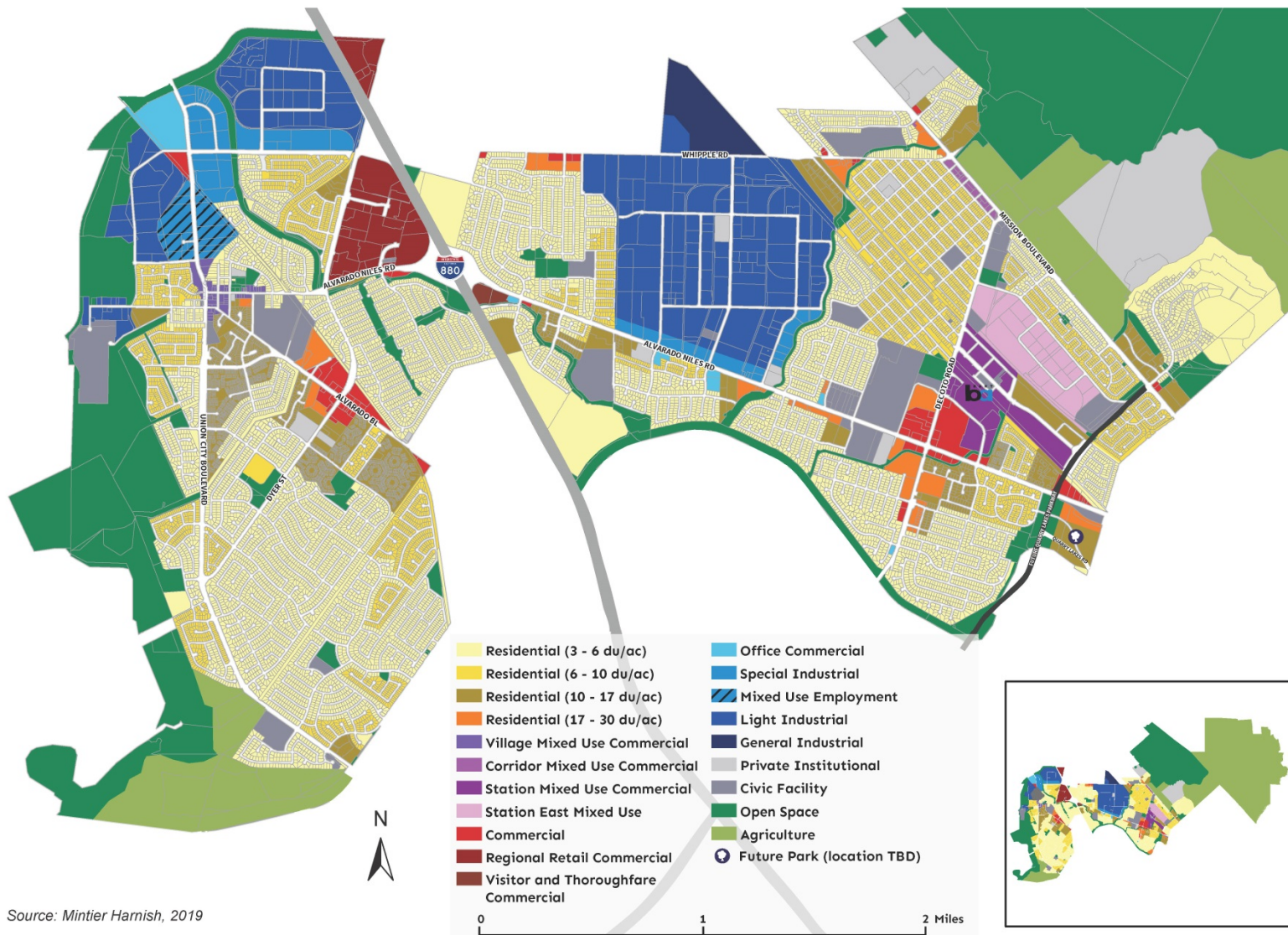


Figure 2-4 General Plan Proposed Land Use Map



Source: Mintier Hamish, 2019

2.5 Project Objectives/Guiding Principals

The 2040 General Plan presents a vision for the future of Union City and a set of guiding principles for how the City will achieve that vision. This vision and guiding principles capture the City's key values and aspirations for the future. They reflect the collective ideas from community members and City leaders that provided input to help shape the 2040 General Plan.

The 2040 General Plan vision for the future is as follows:

Union City is the heart of the Bay Area and a regional center for commerce, community, and culture. Our economy is strong and diverse and provides high paying jobs across a broad range of local businesses, high profile companies, and emerging industries. Our residents and neighborhoods are safe and healthy and our community is celebrated for its diversity and equitable treatment of everyone. Union City provides effective and efficient public services and is fiscally stable.

The 2040 General Plan guiding principles and thus project objectives are contained in the 2040 General Plan Introduction and abbreviated below:

- **Economic Development:** Promote Union City as a civic, cultural, and economic destination within the greater Bay Area to attract new businesses and facilitate new economic development opportunities and succeed in a global marketplace; expand the skills and knowledge of the workforce, protect and expand economic assets in Union City, and expand the job base.
- **Health and Quality of Life:** Promote a healthy and safe way of life in Union City; prioritize education; promote access to healthy foods; attract and retain accessible, affordable, and quality health services and facilities; support and expand Youth and Family Services programs.
- **Land Use:** Maintain a balanced mix of residential, employment, and commercial uses; create a vibrant 24-hour Station District; ensure livable, healthy, and well-designed neighborhoods that are walkable and bicycle friendly; encourage higher-density developments and mixed-use projects in appropriate areas; promote and increase infill and reuse, while maintaining quality of life and important community character; and implement sustainable and resilient development practices.
- **Community Design:** Enhance gateways into the community; ensure new development respects the community's natural setting; ensure new development is compatible with the scale and character of existing neighborhoods; preserve and protect important historic and cultural resources; create attractive commercial and mixed-use corridors and centers; create vibrant public places that serve as gathering places; and locate and design buildings, streetscapes, and public spaces that contribute to walkable neighborhoods, corridors, and districts.
- **Housing:** Promote a mix of housing types and affordability; and include a mix of housing types within neighborhoods to promote a diversity of household types and housing choices.
- **Mobility and Access:** Develop a balanced, integrated, multimodal transportation system that is efficient and safe; create a safe and convenient transportation network that incorporates complete streets concepts; continue providing a variety of transportation choices that promote alternatives to the automobile; and support the integration of emerging transportation technologies and modes.
- **Sustainability and Resiliency:** Reduce greenhouse gas (GHG) emissions to help achieve reduction goals to address climate change; protect natural resources; continue to promote

sustainable levels of energy, water, and resource consumption; encourage residents and businesses to live, work, and operate in a more sustainable manner; and enhance the understanding of future risks ability to absorb, respond to, and recover from emergencies or other changes.

- **Parks and Recreation:** Maximize public access and use of city and regional open space and recreational areas; support the development of regional open spaces that connect Union City to the Bay Area; support the development of additional parkland for active recreational uses; expand and improve existing pedestrian and bike trails; and provide innovative recreational and sports facilities, services, and programs.
- **Public Safety:** Improve coordination among residents and businesses and City Departments to address security issues and maintain a safe community; support and expand the City’s Youth Violence Prevention Program and community policing unit; minimize vulnerability to natural disasters and manmade hazards; strengthen emergency response capabilities; modernize older public facilities to improve seismic safety; support and expand the Community Emergency Response Team (CERT) program; and ensure public facilities and infrastructure investment contribute to the safety and security of residents.
- **Services and Facilities:** Provide quality public services, facilities, and infrastructure throughout the city; expand and enhance telecommunication and broadband access; maintain transparency and improve accountability in all City decisions, practices, and service areas; promote opportunities for community education and involvement; ensure the fair treatment of residents of all races, cultures, and incomes with respect to City plans and policies; promote joint use of public facilities; ensure City revenues are sufficient to maintain and enhance City services, programs, and facilities; and ensure new development is fiscally neutral or positive to the City and provides a net social or economic benefit to the community.

2.6 Characteristics of the Proposed 2040 General Plan

The 2040 General Plan has been organized into ten elements: Economic Development; Health and Quality of Life; Land Use; Community Design; Mobility; Safety; Public Facilities and Services; Resources Conservation; Special Areas; and Housing. The ten elements included in the 2040 General Plan are further described below.

2.6.1 Economic Development Element

The Economic Development Element provides a framework for establishing long-term economic and fiscal stability, while increasing economic opportunity and prosperity for residents and businesses of Union City. The Element reflects the City’s aspirations to be a key contributor to the Bay Area economy. The goals and policies in the Economic Development Element support the continued growth of the local economy, increased fiscal solvency of Union City, and overall improvement in the quality of life for Union City residents. A goal of the Economic Development Element is to attract businesses that diversify the local economy, provide high-paying jobs for Union City residents, and increase City revenues. This element also reflects a key theme of the 2040 General Plan, which is about cultivating a stronger sense of place and creating opportunities for authentic experiences. Policies in this element support the increase of experience-oriented shopping, workplace innovation, and improvements to the quality of life that will make Union City a more desirable place to live and do business.

2.6.2 Health and Quality of Life Element

The purpose of the Health and Quality of Life Element is to promote healthy lifestyle choices by ensuring access to parks and recreation, healthy foods, health care facilities, resources, and programming that enrich people's lives. This Element also focuses on celebrating the City's diversity and encourages citizen participation to create a greater sense of civic engagement which builds social capital and improves mental well-being. In addition, the Element includes an Environmental Justice section that focuses on identifying disadvantaged communities within the City and goals and policies to ensure all members of the community have equal access to a clean and healthy environment.

2.6.3 Land Use Element

The Land Use Element contains the Land Use Map as well as the policies and standards that directly shape land use decisions and the resulting physical development of Union City. The Land Use Element serves as the primary means for ensuring that new land uses are logically organized and developed sustainably. With limited opportunities for new development, the Land Use Element promotes and emphasizes infill development and redevelopment of underutilized parcels. This Element also promotes transit-oriented development and walkable communities, encouraging mixed use development where residents can live close to businesses and employment opportunities. This Element establishes twenty-two separate land use designations to provide a mixture of land uses for the City. The specific land use designations in the Land Use Element are shown in Table 2-1. Figure 2-4 shows the proposed Land Use Map.

Table 2-1 Description of Land Use Designations

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
Residential			
Residential- 3 to 6 units/acre (R-3-6)	Land use designation allows single family detached homes and accessory dwelling units. This is the predominant residential development type in Union City. The allowed density range is 3 to 6 units per gross acre. The lot size range for this designation is 6,000 to 10,000 square feet.	3-6 units/gross acre	n/a
Residential- 6 to 10 units/acre (R-6-10)	Land use designation allows detached single-family homes, mobile home parks, zero lot line developments, and accessory dwelling units. This designation is typically applied to areas of predominantly single-family character where a greater diversity of housing type is intended. The allowed density range is 6 to 10 units per gross acre. The lot size range for this designation is 3,500 to 6,000 square feet.	6-10 units/gross acre	n/a
Residential- 10 to 17 units/acre (R-10-17)	Land use designation allows duplexes and multifamily dwellings. This designation is typically applied to transitional areas between higher intensity uses and lesser density single family residential areas. The allowed density range is 10 to 17 units per net acre.	10-17 units/net acre	n/a
Residential- 17 to 30 units/acre (R-17-30)	Land use designation allows multifamily dwellings. This designation is typically applied to areas where a mixture of higher intensity activities is desired, such as near major transportation routes and facilities and core shopping areas. This designation also serves as a transitional land use between single family and higher intensity non-residential areas. The allowed density range is 17 to 30 units per net acre.	17-30 units/net acre	n/a
Residential- 30 to 45 units/acre (R-30-45)	Land use designation allows multifamily dwellings. This designation is typically applied to areas where public transit is readily available. The allowed density range is 30 to 45 units per net acre.	30-45 units/net acre	n/a
Residential- 45 to 60 units/acre (R-45-60)	Land use designation allows multifamily dwellings. This designation is typically applied to areas where public transit is readily available. The allowed density range is 45 to 60 units per net acre.	45-60 units/net acre	n/a
Mixed Use			
Village Mixed Use Commercial (VCMU)	Land use designation allows stand-alone commercial uses and residential uses that are vertically integrated with ground floor commercial uses. It applies to properties within the Historic Alvarado District, but could be applied to other areas where mixed-use is appropriate. The purpose of this designation is to create neighborhood-serving commercial centers where commercial uses are the primary use, but mixed-use residential development is allowed to support	17-30 units/net acre	0.2-1.0 for standalone commercial (up to 1.5 for mixed use)

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
Corridor Mixed Use Commercial (CMU)	<p>the commercial uses and create vibrant places for people to live, work, shop, and play. The allowed floor area ratio range for buildings is between 0.5 and 1.50, and the allowed residential density range is 17-30 units per acre.</p> <p>This designation allows stand-alone commercial uses and residential uses that are vertically integrated with ground floor commercial uses. It applies to properties along the Mission Boulevard Corridor, but could apply to other areas along major arterials. The purpose of this designation is to allow for the construction of commercial uses and mixed-use higher-density residential development that will support the commercial uses and create vibrant places for people to live, work, shop, and play. The allowed floor area ratio (FAR) range for buildings is between 0.5 and 1.50, and the allowed residential density range is 17-45 units per acre.</p>	17-45 units/net acre	0.2-1.0 for standalone commercial (up to 1.5 for mixed use)
Station Mixed Use Commercial (CSMU)	<p>Land use designation allows a mix of high-intensity retail, office, hotels, residential uses, and public plazas in the immediate vicinity of the Intermodal Station. The purpose of the Station Mixed Use Commercial designation is to create a new walkable town center that is identified by an area of visual prominence, which is expressed through high intensity development with the goal of creating an inviting place to live, work, shop, and play. The designation is primarily commercial in nature; however, high density residential land uses between 60 and 165 units per net acre are also allowed where it will promote, in a coordinated manner with the commercial development, the purpose of this designation. The allowed floor area ratio range for buildings located in this designation is between 1.0 and 4.0, with an average floor area ratio of 2.0, with the goal of increasing intensity as the parcels near the BART station.</p>	60-165 units/net acre	1.0-4.0
Mixed Use Employment (EMU)	<p>Land use designation allows a mix of employment uses, including but not limited to light industrial, research and development, office, and "flex" space, as well as supportive commercial uses that are vertically or horizontally integrated. Residential/commercial mixed use development may be allowed where it has been identified by the City as part of the development of an Area Plan (see Program SA-7A). The Employment Mixed Use designation is intended to foster innovation and emerging technologies; promote the creation of an employment district with travel patterns that are oriented toward pedestrian, transit, and bicycle use; and provide amenities to employees</p>	n/a	0.4-2.0

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
	as well as surrounding neighborhoods. The allowed floor area ratio (FAR) range for buildings located in this designation is between 0.40 and 2.0.		
Station East Mixed Use (SEMU)	This mixed-use designation allows a range of uses, which include industrial, research and development, office, retail and entertainment, hotels, residential, and public plazas. The goal of the designation is to create an urban mixed-use environment that capitalizes on proximity to the BART station where people are encouraged to live, work, shop, and play. The designation is intended to foster innovation and emerging technologies; promote an employment district that is oriented toward pedestrians, transit, and bicycle use; and provide amenities to employees as well as surrounding neighborhoods. The targeted mix of uses in this area is a minimum 65 percent employment uses, minimum 15 percent commercial uses including commercial/residential mixed-use projects that emphasize retail development, and maximum 20 percent residential uses. The allowed floor area ratio range for buildings located in this designation is between 0.40 and 3.0, and the allowed residential density range is 30 to 100 dwelling units per acre, with an average density of no less than 45 units per acre (see Policy SA-4.3).	30-100 units/net acre, with an average density of no less than 45 units per acre	0.4-3.0
Commercial			
Commercial (C)	Land use designation allows retail uses, personal services, professional offices, banks, restaurants, and entertainment uses. Multiple zoning designations apply within this category to distinguish between community-serving, neighborhood-serving, and professional office commercial areas. Office uses above first floor retail are allowed. The allowed floor area ratio range for buildings located in this designation is between 0.20 and 1.00. The minimum parcel size for this designation is 5,000 square feet.	n/a	0.2-1.0
Regional Commercial (RC)	Land use designation allows commercial uses serving a citywide or regional market, typically on large sites along freeways or major arterials. Retail uses within this category usually have large floor areas and high sales volumes and may be considered shopping "destinations" by consumers from Union City and other cities across the Bay Area. Smaller and more local-serving retail stores and personal services are generally not appropriate, but could be allowed if complementary to a regional use. The allowed floor area ratio range for buildings located in this designation is between 0.25 and 1.50. The	n/a	0.25-1.5

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
	minimum parcel size for this designation is 5,000 square feet.		
Visitor and Thoroughfare Commercial (CVT)	Land use designation allows commercial activities oriented to serve the traveling public, such as hotels, motels, restaurants, service stations, and convenience stores. This designation is typically applied to areas near freeway interchanges and high capacity major arterials in such a fashion as to provide safe and convenient access and minimize conflicts with nearby residential land uses. The allowed floor area ratio range for buildings located in this designation is between 0.35 and 2.00. The minimum parcel size for this designation is 5,000 square feet.	n/a	0.35-2.0
Office Commercial (CO)	This designation allows professional and administrative services and offices and retail commercial activities that compliment or are accessory to the primary uses. Because of the potential intensity of uses, this designation is typically located on major arterials, oriented away, by design or location, from residential areas. The allowed floor area ratio range for buildings located in this designation is between 0.30 and 1.50. The minimum parcel size for this designation is 5,000 square feet.	n/a	0.3-1.5
Industrial			
General Industrial (MG)	Land use designation allows a broad range of light to heavy industrial uses, including manufacturing, transportation, warehousing, and distribution uses. It is applied where unsightliness, noise, odor, traffic, and the hazards associated with certain industrial uses will not impact residential, commercial, schools, other less intense use areas. The maximum allowed floor area ratio for buildings located in this designation is 0.75. The minimum parcel size for this designation is one acre.	n/a	0.75 (max)
Light Industrial (ML)	Land use designation allows light manufacturing and assembly, distribution of manufactured products, R&D facilities, industrial supply, incidental warehousing, offices, and supportive sales. The purpose of the Light Industrial designation is to provide space for manufacturing and industrial uses which evidence no or very low nuisance characteristics. The vision for Light Industrial designated areas is to promote high quality industrial and office park developments. The designation is applied to areas where nuisance characteristics of noise, odor, traffic generation, unsightliness, or hazardous materials manufacturing or storage are undesirable. Performance standards are applied to ensure minimum potential for adverse effects, that any	n/a	1.0 (max)

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
	<p>unavoidable adverse effects are contained on-site, and that the general objective of a high standard of property and use maintenance is met. The maximum allowed floor area ratio for buildings located in this designation is 1.0. The minimum parcel size for this designation is 20,000 square feet.</p>		
<p>Special Industrial (MS)</p>	<p>Land use designation allows the lightest industrial operations, including limited manufacturing, assembly, distribution of manufactured products, R&D facilities, industrial supply, incidental warehousing, offices, and supportive sales, as well as limited commercial uses along major arterials. The vision for Special Industrial designated areas is to promote high quality industrial and office park developments. This designation provides for a smaller scale of uses, on smaller sites than would typically be found in Light Industrial designated areas. This designation is often applied as a buffer adjacent to major thoroughfares where large landscaped setbacks are provided and as a transition area between higher intensity industrial uses and residential, commercial, or other lower intensity uses. The maximum allowed floor area ratio for buildings located in this designation is 1.0. The minimum parcel size for this designation is 20,000 square feet.</p>	<p>n/a</p>	<p>1.0 (max)</p>
Resource			
<p>Open Space (OS)</p>	<p>Land use designation provides for open space, passive and active recreation, resource management, flood control management and public safety, and similar and compatible uses. Uses that would be appropriate in this land use designation include but are not limited to public parks, playgrounds, golf courses and driving ranges, parkways, vista areas, wetlands, wildlife habitats and outdoor nature laboratories; stormwater management facilities; and buffer zones separating urban development and ecologically sensitive resources.</p>	<p>n/a</p>	<p>n/a</p>
<p>Agricultural (A)</p>	<p>Land use designation provides for agriculture and other low-intensity open space uses. This designation is used to conserve lands that should remain as open space because of their value for agricultural production. The minimum parcel size for this designation is 20 acres.</p>	<p>1 unit/20 acres</p>	<p>n/a</p>

Land Use Designation	Description	Residential Density	Non-residential Intensity (Floor Area Ratio)
Public/Institutional			
Civic Facility (CF)	Land use designation provides for public uses that include but are not limited to government offices, public educational facilities, community centers, libraries, museums, transit facilities and stations, public safety facilities, wastewater treatment facilities, water tanks, and electrical substations.	n/a	n/a
Private Institutional (PI)	Land use designation provides for private institutional uses that include but are not limited to cemeteries, churches, private educational facilities, private non-profit and service organizations, and continuing care retirement communities.	n/a	n/a

Source: 2040 Union City General Plan

2.6.4 Community Design Element

The Community Design Element addresses the overall city form and identity, as well as the natural setting, corridors, gateways, public spaces, and public art. This element considers topics related to the physical structures and appearance of the City's built environment. The policies in this Element seek to ensure that every new addition or change made to the city fabric will make a positive contribution to the city's form and identity and help to create a stronger sense of place. This Element contains policies that emphasize providing visual and physical access to Union City's natural features, such as the San Francisco Baylands at the west side of the City and the foothills of the Coastal Range at the east side. It prioritizes aesthetic and design enhancements to the City's gateways and major corridors. The policies in the Community Design Element also call for the continued installation of art in public places.

2.6.5 Mobility Element

The Mobility Element addresses the movement of people and goods in and around Union City. It works in tandem with the Land Use Element to create a more livable city, where residents and workers can travel safely, easily, and affordably using a variety of transportation modes. The Mobility Element seeks to create an efficient, safe, balanced, and integrated multi-modal transportation system that is accessible to all users.

The Mobility Element takes a comprehensive approach to transportation planning that supports both policies for regional collaboration to advance a well-connected regional transportation system, and a local perspective to address neighborhood connectivity. The Element considers complete streets that incorporate walking and biking as well as vehicular and goods movement. A balanced vision for mobility planning provides more transportation options to the Union City community.

Union City is transitioning to higher-density, transit-oriented development around the Bay Area Rapid Transit (BART) Station and along major roadway corridors where public transit service is well developed. The Mobility Element emphasizes linking the transit-rich areas to adjacent neighborhoods, shopping districts, and employment centers with a multi-modal transportation planning approach. This Element contains policies for continued development of the City's Greater

Station District, centered on the existing BART station and future passenger rail station, and provides for improved multi-modal access with the planned Quarry Lakes Parkway.³..

2.6.6 Safety Element

To maintain a high quality of life for Union City residents, the City must minimize natural hazard risks, such as earthquakes, wildfire, and flooding, as well as manmade hazards and nuisances, such as hazardous materials and noise. Climate change is now acknowledged as a risk that cities must plan for, and consider how the community will adapt and be resilient to sea-level rise, temperature change, and other impacts. The Safety Element addresses these risks, and also addresses disaster preparedness and emergency response. The purpose of this Element is to minimize the risk to the public health, safety, and welfare of the community and minimize damage to structures, property, and infrastructure resulting from natural and man-made hazards.

Union City adopted a Local Hazard Mitigation Plan (LHMP) in 2017. The LHMP identifies mitigation measures to reduce the risks posed by potential hazards and to strengthen community resilience. The LHMP is incorporated by reference into the Safety Element and forms the basis of several of the policies in this Element, ensuring a coordinated approach to public safety and qualifying the City for additional funding opportunities consistent with California Government Code Section 65302.6.

The Safety Element contains policies that support the continued use of procedures, such as development review, and regulations to protect people, property, and the environment from natural and manmade hazards. The policies in this Element support the City's disaster preparedness and emergency response efforts, and also support efforts to better prepare members of the community to respond to major emergencies or disasters, including flooding. The policies in this Element also aim to protect the community from geologic and seismic hazards, such as earthquakes and liquefaction, and reduce the risk of urban and wildland fires. The Safety Element also contains policies that support efforts to adapt to climate change. Finally, policies in this Element are designed to minimize exposure to excessive noise by establishing development standards and implementing practices that reduce the potential for excessive noise and vibration exposure.

2.6.7 Public Facilities and Services Element

The Public Facilities and Services Element focuses on the variety of public facilities that are necessary to sustain existing households and businesses and to accommodate future population and employment growth. Public facilities addressed include: water supply, wastewater collection and treatment, stormwater collection and drainage, solid waste, utilities, and communications infrastructure. This Element also contains policy guidance to ensure excellent public services, which include: law enforcement, fire protection, schools, and libraries. Within Union City, these facilities and services are provided by the City and several partner districts and service providers.

The Public Facilities and Services Element emphasizes maintaining, upgrading, and modernizing the public facilities and services that serve the community, support a prosperous economy and excellent quality of life, and protect public health and safety. This Element also addresses the need to expand public facilities and services in keeping with planned population growth and to provide an equitable distribution of public facilities and services to the City's diverse neighborhoods.

³ Quarry Lakes Parkway was formerly referred to as the East West Connector

2.6.8 Resource Conservation Element

The purpose of the Resource Conservation Element is to preserve, protect, and enhance the natural and historical resources that make Union City a unique place. This Element addresses a broad range of topics, including habitat and open space, water resources, historic and cultural resources, air quality, energy conservation, and the reduction of greenhouse gas (GHG) emissions.

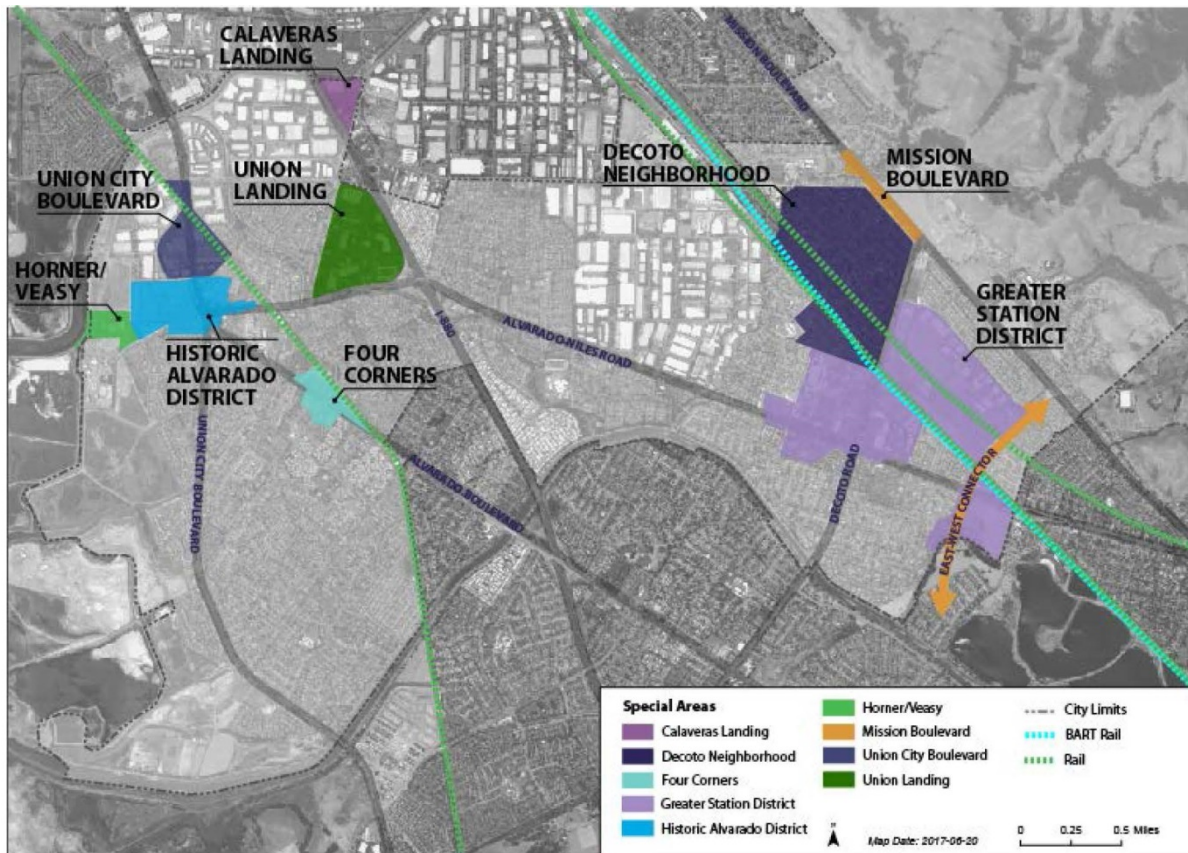
Approximately 58 percent of Union City is open space and agricultural lands, which includes the wetland ecosystems of the bay shoreline to the west and the vast hillside open space lands to the east. These open space areas are important habitat for wildlife and public access areas provide quiet retreats and recreation opportunities for residents. This Element seeks to preserve and enhance open space and wildlife habitat, while accommodating specific projects that are for public benefit.

Another goal of this Element is to improve water and air quality and to conserve energy through programs that reduce consumption and promote sustainable alternatives. This Element provides a framework for reducing GHG emissions by establishing targets for GHG reduction.

2.6.9 Special Areas Element

Union City has a number of distinctive districts / areas that serve as important commercial, employment, and residential areas. These areas are either key infill areas that provide unique opportunities for redevelopment during the life of the 2040 General Plan, or have important existing features that require special attention to preserve and protect. Special areas identified in the 2040 General Plan include: Calaveras Landing; Decoto Neighborhood; Four Corners; Greater Station District; Historic Alvarado District; Horner/Veasby; Mission Boulevard; Union City Boulevard; and Union Landing. The Special Areas Element contains policies specific to each of these special areas. These special areas are shown on Figure 2-5.

Figure 2-5 2040 General Plan Special Areas



2.6.10 Housing Element

The Housing Element addresses housing opportunities for present and future residents through 2023. The purpose of the Housing Element is to identify and analyze existing and projected housing needs in order to preserve, improve, and develop housing for all economic segments of the community. The General Plan Housing Element was last updated in January 2015, covering the period from January 2015 through January 2023, and was subject to a separate environmental review process. The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan. The California Department of Housing and Community Development (HCD) certified the Housing Element in 2015.

2.7 General Plan Buildout

The potential growth associated with the 2040 General Plan is based on development assumptions/projections for residential and non-residential development for all land within the General Plan Area through the year 2040. Vacant and underutilized parcels were identified using existing land use data from the Assessor’s Office. Parcels classified by the Assessor as “vacant” were verified through aerial imagery and confirmed by City staff. Underutilized parcels were identified where redevelopment is anticipated by 2040. Existing uses were taken from the Alameda County Transportation Commission (ACTC) Travel Model, which includes estimated housing and employment by Traffic Analysis Zone (TAZ) for 2015. The existing housing and employment numbers

were then reviewed by City staff and updated to more accurately reflect recent 2018 development activity. The assumptions for the different land use designations were applied to all vacant and underutilized parcels to calculate the projected number of employees, square footage of non-residential development, and number of housing units by type under each land use designation. The assumptions include assumed densities, floor-area ratio (FAR), distribution of uses, vacancy rates, and square footage per employee. The City also compiled a list of planned and approved projects that included expected non-residential square footage and/or housing units for each project, which were included in the buildout analysis. Business parks and shopping districts in Union City currently have large areas covered by parking lots. There are several policies in the 2040 General Plan supporting the intensification of business parks and shopping districts. Within the planning horizon of 2040, some of these parking areas may be redeveloped with more intensive uses. The buildout model accounts for this by applying a 10 percent intensification of existing square footage to the following business parks and shopping districts: The Marketplace Shopping Area; Four Corners Shopping Area; Calaveras Landing; Union Landing; Alvarado Business Park; Central Bay; and Lincoln-Alvarado Business Park (Mintier Harnish 2018).

Collectively, the existing uses, development capacity on the vacant and underutilized sites, planned and approved projects, and intensified development for shopping areas and business parks sum up to be Union City’s total buildout capacity in 2040, not accounting for lost housing and employment in underutilized areas. To account for the loss of some existing uses that may be replaced with new uses, predicted loss of housing and employment and are netted out from the total buildout capacity, resulting in the net new buildout capacity for Union City (Mintier Harnish 2018).

As shown in Table 2-2, based on the buildout of vacant and under-utilized parcels within Union City by 2040, an estimated 4,330 new dwelling units would be added to Union City. The residential growth is anticipated to consist of up to 444 new single family dwelling units and 3,886 new multifamily dwelling units. As shown in Table 2-2, when combined with the number of existing dwelling units in Union City, and accounting for the existing dwelling units that would be demolished during new development, there would be a total of 24,813 dwelling units in Union City in 2040. This is roughly equivalent to an average annual growth rate of approximately 179.8 dwelling units, or approximately 0.9 percent, from 2018 to 2040.

Table 2-2 Projected Dwelling Units

Unit Type	Existing Units (2018)	Estimated New Units (2018-2040)	Existing Units Loss ¹	Estimated 2040 Total Units	Estimated Units Per Year
Single Family	14,918	444	10	15,352	18.1
Multifamily	5,580	3,886	5	9,461	161.7
Total	20,498	4,330	15	24,813	179.8

¹ Indicates loss of existing dwelling units due to new development or redevelopment.

See Appendix B for Union City General Plan buildout methodology

Source = Mintier Harnish 2018

As shown in Table 2-3, based on the number of new dwelling units projected under buildout of the 2040 General Plan, and an assumed persons per unit rate by unit type, full buildout of the 2040 General Plan would result in an additional estimated 11,486 new residents in Union City. Table 2-3 identifies the assumed persons per unit type rate used in projecting the population growth from buildout of the 2040 General Plan. When combined with the existing 2018 population of 72,991, the total population of Union City in 2040 would be 84,477.

Table 2-3 Projected Population Growth

Dwelling Unit Type	Assumed Persons Per Dwelling Unit	Estimated New Units (2018-2040)	Estimated Population Growth (2018-2040)
Single Family	3.96	444	1,757
Multifamily – Low Density	3.96	85	337
Multifamily – Medium Density	2.51	504	1,265
Multifamily – High Density	2.51	3,297	8,127
Total	–	4,330	11,486

Source = Mintier Harnish 2018

Table 2-4 identifies the nonresidential levels of development that are projected from buildout of the 2040 General Plan based on the planned distribution of land uses described in the 2040 General Plan Land Use Element and implementation of land use policies established by the 2040 General Plan. As shown in Table 2-4, a total of 8,069,113 square feet of non-residential space could be constructed within Union City under full buildout of the 2040 General Plan. This additional non-residential space would generate an estimated 18,758 new jobs in the City by 2040 in the retail, service, office, manufacturing, and wholesale trade sectors.

Table 2-4 Projected Non-Residential Development by Sector

Land Use	Subtotal (sf)	Approved/ Pending Projects (sf)	Retail/Employment Intensification (sf)	Total (sf)
Retail	398,415	110,500	151,402	660,317
Services	204,432	32,500	52,937	289,869
Office/Other	1,417,799	2,193,800	287,240	3,898,839
Manufacturing	1,597,930	30,600	535,321	2,163,851
Wholesale Trade	500,414	30,600	525,223	1,056,237
Total				8,069,113

Note: development presented in this table is net new development projected through 2040 and does not include existing development
Sf = square feet

Source: Mintier Harnish 2018

2.7.1 Required Discretionary Approvals

With recommendations from the City’s Planning Commission, the City Council would need to take the following discretionary actions in conjunction with the proposed project:

- Certification of the Final EIR and adoption of a statement of overriding considerations
- Adoption of the proposed 2040 Union City General Plan

The City adopted its current Housing Element in January 2015, covering the period of January 2015 through January 2023. This Housing Element was submitted to the HCD for review and comment, and the City received certification of the Housing Element from HCD in February 19, 2015 (HCD 2015). The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan.

3 Environmental Setting

According to CEQA Guidelines Section 15125, an EIR must include a description of the existing physical environmental conditions in the vicinity of a project to provide the baseline condition against which project-related impacts are compared. In order to fulfill this requirement, and to inform the reader of the context in which the 2040 General Plan would be carried out, this section describes current environmental conditions in and around Union City. More detailed setting information is included within the impact analysis for each issue area (as detailed in Sections 4.1 through 4.18).

3.1 Regional Setting

Union City is located in western Alameda County on the east side of the San Francisco Bay Area, west of the Diablo Range, at the edge of Silicon Valley. The City limits are roughly bounded by the city of Hayward to the north and west, the unincorporated Alameda County lands to the east, and the City of Fremont to the south.

The western half of Union City lies on a flat coastal plain and is intensely developed, while the eastern half comprises hillside areas which are primarily undeveloped and mostly designated as open space and agriculture.

Surface drainage through the area flows toward the San Francisco Bay. Elevations within Union City range from about 0 feet to 1,850 feet above sea level. The Mediterranean climate of the region and coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months. The region is subject to various natural hazards, including: earthquakes, landslides, dam failure, drought, extreme heat, fault rupture, flood, liquefaction, and wildfires.

3.2 Physical Setting

3.2.1 General Geographic Setting

Union City encompasses approximately 18 square miles, and according to the 2040 General Plan approximately 58 percent of the City's land area is open space/agriculture. Union City is located between the City of Hayward to the north and west, a salt marsh to the west, and the City of Fremont to the south. Unincorporated lands of Alameda County form the eastern boundary of the City in the vicinity of Palomares Road. Union City is located approximately 20 miles north of the city of San Jose and 20 miles south of the City of Oakland, the Alameda County seat. The foothills of the Coastal Range are located east of the Highway 238 (Mission Boulevard) and form a scenic backdrop for the urbanized area of the City.

Interstate 880 (I-880), an eight-lane freeway, bisects Union City from north to south, providing regional access to Union City and connecting it to the rest of the San Francisco Bay Area. State Route 238 (Mission Boulevard) also connects Union City to the regional transportation system. Three active railroads and a Bay Area Rapid Transit (BART) line traverse Union City, which is also served by Union City Transit, Dumbarton Express and AC Transit bus lines. Figure 2-1 in Section 2, *Project Description*, shows Union City's regional location.

Union City is a residential community where most of the development consists of 1- or 2-story buildings, and is dominated by low-density residential neighborhoods connected by an automobile-oriented street pattern. Most of Union City's urban development is located west of State Route 238, which is also called Mission Boulevard.

3.2.2 Topography and Drainage

Union City is within the Alameda Creek watershed, and the area drains west toward the San Francisco Bay. The western, urbanized half of Union City is characterized by low-lying, nearly level land around the San Francisco Bay. The eastern half of Union City is characterized by strongly sloping topography that is part of the northwest-trending Coastal Range.

3.2.3 Climate

The climate of Union City is a cold-summer Mediterranean climate, characterized by dry, mild summers and moderately moist, cool winters. Temperatures in Union City have historically averaged about 58 degrees Fahrenheit (°F) and are projected to rise between 3.2 and 5.5°F by 2090 (Union City 2015). Union City receives most of its precipitation during the months of October through May, though rainfall is most heavily concentrated between December and February.

3.3 Demographics

Union City's population has grown rapidly since incorporation of the Alvarado and Decoto neighborhoods in 1959. Growth in Union City has outpaced that of Alameda County and the State of California as a whole. Since 1990 Union City population has increased 32.7 percent, resulting in an estimated city population of approximately 73,000 people in 2018 (Union City 2015).

Union City has a higher percent of families and married couples than Alameda County. However, the population of Union City is aging, and there is currently an increasing percentage of residents over age 45 and a decreasing percentage of residents younger than 45.

Compared to Alameda County, Union City is more ethnically diverse, with about half the percentage of white non-Hispanic residents compared to Alameda County, and over 45 percent of City residents were born outside the U.S.

As of 2018, household size in Union City is 3.51 persons per household (DOF 2018). As shown in Table 2-2, in Section 2, *Project Description*, there are an estimated 20,498 dwelling units in Union City. These consist of 14,918 single family units and 5,580 multifamily units (Mintier Harnish 2018).

3.4 Cumulative Development

CEQA defines cumulative impacts as two or more individual actions that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis allows an EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

Because the proposed project is comprised of a General Plan, cumulative impacts are treated somewhat differently than would be the case for a project-specific development. CEQA Guidelines

Section 15130 provides the following direction relative to cumulative impact analysis and states that the following elements are necessary for an adequate discussion of environmental impacts:

A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

By its nature, a general plan considers cumulative impacts insofar as it considers cumulative development that could occur within the City limits. In addition, the General Plan analysis considers cumulative traffic impacts from a regional perspective because traffic modeling was based on regional trips and includes vehicle trips that pass through Union City. The regional trip estimates are incorporated into the air quality, greenhouse gas, noise, and traffic EIR sections to incorporate cumulative impacts in General Plan analysis for traffic growth occurring outside the City. Other impacts, such as geology and soils and cultural resources impacts, are site specific and would not result in an overall cumulative impact from growth outside of the City. Therefore, the analysis of project impacts also constitutes the cumulative analysis.

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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the 2040 General Plan for the specific issue areas that were identified through the scoping process, NOP responses, the City, and expert consultation as having the potential to experience significant effects. “Significant effect” is defined by the *CEQA Guidelines* §15382 as:

“...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria adopted by the City and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

Significant and Unavoidable. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the *CEQA Guidelines*.

Less than Significant with Mitigation Incorporated. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the *CEQA Guidelines*.

Less than Significant. An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.

No Impact. The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact.

The Executive Summary of this EIR summarizes all impacts and mitigation measures that apply to the proposed project.

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4.1 Aesthetics

This section evaluates the potential impacts to aesthetics that could arise from implementation of the proposed 2040 General Plan. The analysis includes possible impacts to scenic resources, visual character, and visual quality, as well as those arising from the possible introduction of new sources of light and glare. The focus of the visual quality analysis, for the purposes of CEQA compliance, is on the potential for project implementation to result in a loss of scenic resources or the introduction of contrasting features that could degrade the visual character of the city.

4.1.1 Setting

a. Definitions

Most communities identify **scenic resources** as important visual assets that contribute to community identity. These resources can include landforms, trees, water features, and the built environment in so far as they enhance and define the visual character of a landscape. Scenic resources include natural and open spaces, as well as the built environment, particularly if certain architecture is of historic or artistic value.

Visual quality is defined as the overall visual impression or attractiveness of an area based on the scenic resources, both natural and built. The attributes of visual quality include variety, vividness, coherence, uniqueness, harmony, and pattern. **Viewshed** is a term used to describe a range of resources and their context that relate to what people can see in the immediate environment in terms of foreground, middle ground, and background distances.

Impacts to visual quality are perceived by different **viewer types** and to different degrees, depending on the **viewer exposure**. Different land uses, such as open space or commercial districts, derive value from the quality of their settings and, for the purposes of this study, include regionally designated scenic highways, city gateways, and surrounding land features. Viewers driving in the city might be exposed to the dramatic hills or the marshlands along the Bay as they travel. Their exposure would vary based on proximity and ability to see the viewshed. Scenic resources are of particular importance relative to the way **viewer sensitivity** may be impacted. This sensitivity is determined by two measures: exposure and awareness. Exposure is the relative proximity of potential viewers to a given project implemented under the 2040 General Plan, and awareness indicates the attention and focus viewers bring to the experience of the area.

b. Existing Visual Conditions

The urbanized portion of Union City has a development pattern that primarily includes single-story and two-story structures and that leaves little vacant land for new infill. It is bordered by other, similarly developed cities: Hayward in the north and Fremont to the south. The surrounding natural setting of hillsides, canyons, and wetlands form an integral part of the community character. Tidal wetlands form a boundary in the shoreline region to the west. Formerly salt production ponds, the tidal wetlands of Eden Landing Ecological Reserve offer long vistas along approximately three miles of the San Francisco Bay Trail (California Department of Fish and Wildlife 2018a; 2018b). As Figure 4.1-1 shows, they serve as a prominent visual feature as they form a western edge for the city, although they are mostly located in Hayward.

Figure 4.1-1 Eden Landing Ecological Reserve

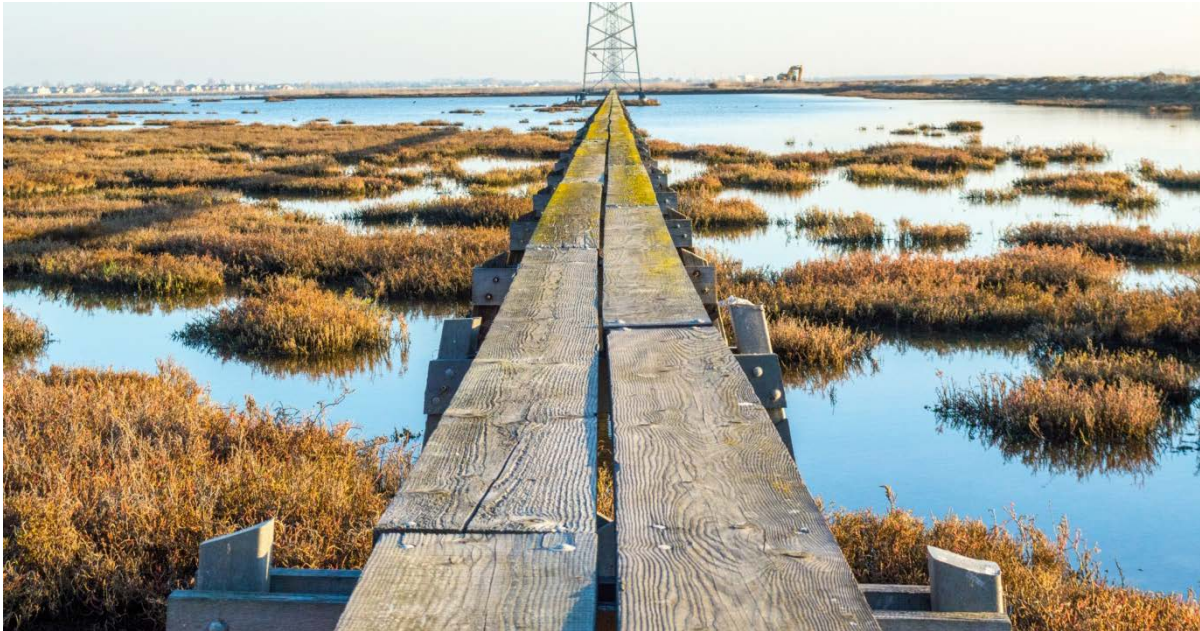


Photo courtesy Alameda County Flood Control and Water Conservation District

To the east, the rolling hills along the California Coast Ranges form another boundary with higher elevations than that of the western side of the city. The undeveloped hillside area provides scenic views of San Francisco Bay limited in part by existing development (Figure 4.1-2). State Route 84, also called Niles Canyon Road, follows the contours of Niles Canyon and the general alignment of Alameda Creek. A small portion of Niles Canyon Road forms the city limit boundary between Fremont and Union City in this vicinity. Niles Canyon Road is a state-designated scenic route (California Department of Transportation [Caltrans] 2011). Other highways and streets also offer scenic view of the hills, open space, and the bay from various vantage points.

Figure 4.1-2 East Bay Hills Looking Toward San Francisco Bay



Alameda Creek flows in a westerly direction through Niles Canyon toward San Francisco Bay, and it intermittently establishes the city limit line along portions of the southern boundary of Union City. It features the Alameda Creek Regional Trail with recreational access on each side of the creek. According to the Rails to Trails Conservancy, the trail is used heavily along its roughly 12 miles by cyclists, pedestrians, and equestrian users (Figure 4.1-3). Views of the marshlands and the bay, along with other natural settings, are visible from the trail, a portion of which is a significant component of the San Francisco Bay Trail (Rails to Trails Conservancy 2018).

Figure 4.1-3 Alameda Creek Regional Trail Looking Northeast



Photography credit Nina Stawski, San Francisco Bay Area

The northern boundary of the city is characterized by single-story industrial buildings with minimal landscaping and large parking areas along Whipple Road on the east side of I-880. South of Whipple Road, single-family residential neighborhoods extend into the core of the city, with intervening industrial and commercial uses.

A mix of development types characterizes much of the urbanized portion of the city. Early development in the Alvarado and Decoto neighborhoods feature relatively compact, diverse commercial and residential land uses within walking distance of each other. Development since the 1950s features a more sprawling, uniform format, characterized by single-family homes on looped streets, separated from major roadways by walls, fences, and landscaping. While this type of neighborhood layout reduces cut-through traffic, a car is usually required to access retail and support services.

Three primary commercial districts serve the city: Union Landing, located east of I-880, which serves local and sub-regional retail needs (Figure 4.1-4); Four Corners, located at the intersection of Alvarado Boulevard and Dyer Street; and the Marketplace shopping area, located at the corner of Alvarado-Niles and Decoto roads. Four Corners is a community commercial shopping center that serves the east side of Union City, while the Marketplace serves the west side. Strip commercial buildings and/or large-format retail complexes with expansive surface parking lots characterize all of

these shopping centers. The form of these complexes discourages pedestrian access from the surrounding community in favor of automobile travel.

Figure 4.1-4 Union Landing Shopping Center, Alvarado-Niles Road and Interstate 880



Photo Rincon Consultants, Inc.

Areas of large industrial warehouse and manufacturing uses are situated among residential development. Four major industrial parks in the city represent the style of this development in Union City. They include the Decoto Industrial Park, Central Bay Business Park, the Alvarado Business Park, and Lincoln-Alvarado Business Park. These centers are characterized by blocks of large one- to two-story buildings with surface parking lots. Wide streets feature some landscaping and trees are planted on property lines to screen parking to some extent. Little interface occurs between industrial districts and surrounding neighborhoods, as most residential development is oriented away from adjacent industrial uses and walls provide screening and separation between the uses.

More recent development has included denser construction that updates the community design in the city. Notably, the City has worked to upgrade the Bay Area Rapid Transit (BART) station and redevelop the surrounding area, referred to as the Core Station District area. Projects include construction of multi-family housing, a pedestrian promenade, the East Plaza, and playgrounds with artistically designed play equipment and public art (Figure 4.1-5).

Figure 4.1-5 Station District with Multi-family Housing in Background



c. Gateways

Union City is traversed by several major boulevards that provide gateway opportunities to mark the transition between Hayward to the north and Fremont to the south. On the western edge of the city, Ardenwood Boulevard in Fremont becomes Union City Boulevard as it passes into Union City, and then changes to Hesperian Boulevard as it moves into Hayward to the north. Alvarado Boulevard establishes another gateway as it traverses northwest from I-880 between Union City and Fremont and intersects with Union City Boulevard mid-city.

On the eastern edge of the city, at the base of the hillside area, State Route 238 (Mission Boulevard) transitions from Fremont in the south and Hayward in the north, and features residential neighborhoods and some retail services. In Fremont and the southerly portion of Union City, walled, residential development blends together with no clear break in the land use pattern and no obvious sign at the city boundary. Traveling north, State Route 238 opens up to the east to an area at the base of the hillsides commonly referred to as the Flatlands. This area has historically been used for dry farming and is owned by Masonic Homes. To the west is the Decoto neighborhood.

Interstate 880 forms an important East Bay north-south corridor, bisecting Union City nearly halfway between San Francisco Bay and the hillside area. Finally, Alvarado-Niles Road traverses the city from the Niles District in Fremont to Dyer Street. From Dyer Street Alvarado-Niles Road narrows to a two lane roadway and is renamed Smith Street, but through circulation is provided along this roadway to Union City Boulevard and it is an important cross-town connector. Also on the easterly side of the city, Decoto Road crosses the Alameda Creek tributary as it transitions from Fremont to Union City. Decoto Road is an important east-west connector as it links to State Route 238 and I-880 and provides a gateway to the Greater Station District. Traveling northbound on I-880 from

Fremont, sound walls dominate the views to protect adjacent residential neighborhoods from noise. The sound walls cease where commercial retail and industrial land uses interface with the freeway.

d. Scenic Corridors

While not designated officially by the City, Mission Boulevard is called out in the County General Plan as a potential scenic corridor. The hillside area is visible from this corridor, although in some places existing residential development is in the foreground and becomes a part of the view.

State Route 84, also called Niles Canyon Road, between Interstate 680 and Highway 238 (Mission Boulevard) is a Caltrans-designated scenic highway (Caltrans 2011). Most of this route falls outside the city limits, but a section of the highway coincides with the city's boundary (Figure 4.1-6).

Figure 4.1-6 Union City Gateways and State-Designated Scenic Corridor



Imagery provided by Microsoft and its licensors © 2018.

Fig 4.1-7 Gateways and State-designated Scenic Corridors

e. Light and Glare

Existing development and motor vehicles produce light and glare throughout Union City. Primary sources of light are street lights, parking lot lights, and automobile headlights. Glare refers to the discomfort or impairment of vision experienced when a person is exposed to a direct or reflected source of light, causing objectionable brightness greater than that to which the eyes are adapted. Sources of glare in urban settings include sunlight reflected in the windows of buildings, including glass façades, and cars. Lighted signs on multi-story buildings are another source of light. Existing conditions in the city feature glare sources of these types.

Figure 4.1-7 Nighttime Lighting in Commercial District in Union City



f. Regulatory Setting

Federal

No existing federal regulations pertain to visual resources in Union City.

State

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 of the view, as described in *Guidelines for Official Designation of Scenic highways* (Caltrans 1995).

- Vividness is the extent to which the landscape is memorable. This is associated with the distinctiveness, diversity, and contrast of visual elements. A vivid landscape makes an immediate and lasting impression on the viewer.

- Intactness refers to the integrity of visual order in the landscape and the extent to which the natural landscape is free from visual intrusions, such as buildings, structures, equipment, and grading.
- Unity describes the extent to which development is sensitive to and visually harmonious with the natural landscape.

Caltrans has designated State Route 84 as a scenic highway (Caltrans 2018). A small portion of this coincides with the Union City boundary with Fremont but does not pass into Union City.

Local

Union City 2002 General Plan

In the City's current 2002 General Plan, adopted in February 2002, the City addresses visual character and quality and scenic resources primarily in the Community Design Element, Land Use Element, and Natural and Historical Resources Element. The Hillside Area Plan, an appendix to the 2002 General Plan, also addresses the scenic resources of the hillside area. Goals place importance on orderly growth patterns with balanced types of uses, high-quality appearance of development, and a balance between open space, residential, and other land uses.

Union City Municipal Code

The City's Municipal Code, specifically Title 18 - Zoning Ordinance, protects the character and stability of residential, business, and industrial areas in the City by encouraging orderly and beneficial development of these areas, which includes providing adequate light, air, privacy, and convenient access to property (Union City Municipal Code Title 18, Chapter 18.04). Other provisions throughout the zoning ordinances address development standards such as setbacks and building and site design.

The Municipal Code 18.30 regulates sign standards in residential, commercial, and industrial uses in the City. Lighted signs are required to conform to these standards.

4.1.2 Impact Analysis

The following section discusses the CEQA Guidelines Appendix G thresholds for aesthetics impacts and includes a discussion of the methodology and significance thresholds for each.

a. Methodology and Thresholds of Significance

Methodology

Aesthetics impacts assessments involve qualitative analysis that is subjective but informed by the basic guidelines provided above. Reactions to the same aesthetic conditions vary according to viewer taste and interests. The project is a general plan and not a specific development proposal. This analysis focuses, therefore, on a general discussion of the aesthetic impacts on Union City, in terms of the arrangement of built space to open space, the density and intensity of development, and how new development visually fits with the existing landscape characteristic of the area.

The impacts on visual character or quality attributable to General Plan implementation were evaluated relative to visual conditions under buildout, estimated by those experienced from existing

development in and around the City. Photographs of the City were reviewed in preparation of this analysis, along with Google Earth imagery and other online visual sources.

Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, implementation of the General Plan 2040 may have a significant adverse impact if it would do any of the following:

1. Have a substantial adverse effect on a scenic vista
2. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
3. In non-urbanized areas, substantially degrade existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

Threshold 1: Would the General Plan have a substantial adverse effect on a scenic vista?

Impact AES-1 THE 2040 GENERAL PLAN WILL FACILITATE DEVELOPMENT IN SOME AREAS OF THE CITY WITH A VIEW OF THE HILLSIDE AREA, MARSHLANDS ALONG THE BAY, OR OTHER OPEN SPACE AREAS. ADHERENCE WITH GOALS AND POLICIES IN THE 2040 GENERAL PLAN WOULD MAINTAIN SOME VISUAL ACCESS TO NATURAL FEATURES SURROUNDING THE CITY BUT WOULD NOT REDUCE IMPACTS TO SCENIC VISTAS RELATED TO THE HILLSIDE AREA AND BAYSHORE. IMPACTS ON SCENIC VISTAS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Scenic vistas in Union City include the rolling hills in the hillside area, marshlands in the Eden Landing Ecological Reserve, and other open space areas on the edges of the City (Figure 4.1-1, Figure 4.1-3, and Figure 4.1-7). The 2040 General Plan maintains the open space designations in the existing 2002 General Plan, and would not facilitate new development in these areas, including hillside area or marshlands. Development facilitated in the City would be in the existing urbanized area, and generally would not affect views of the hillside areas or other scenic vistas. However, new structures could be oriented or scaled in such a way that views of the hillside area are blocked from specific locations in the City.

The type of new development anticipated under the 2040 General Plan is primarily focused on existing vacant and underutilized lots throughout the City. Areas anticipated for growth are described further in the Special Area's Element. The 2040 General Plan anticipates more intensive development to efficiently accommodate new employment and housing growth. The majority of new housing growth would be developed as multi-family residential ranging from three to eight stories with parking accommodated within proposed buildings (e.g. podium, wrap, etc.). Along major arterials and within the Greater Station District, residential uses would also include ground floor commercial. It is anticipated that new industrial/commercial development would be more intensive and include flex space with high ceilings that can accommodate a variety of uses and multi-story commercial buildings with office, research and development, and lab space. These buildings could range in height from 40 to 75 feet in the City's business parks and up to 160 feet in the Greater Station District and therefore have the potential to block scenic views throughout the City, particularly of the hillside areas and Baylands.

New development in the urbanized area may also be visible from the ridges in the hillside area or from isolated locations in other open space areas of Union City.

The 2040 General Plan Community Design Element contains goals and policies to minimize potential visual impacts on scenic vistas from future development. Goal CD-2 and associated policies, listed below, would reduce potential impacts to views of scenic open space in the City. Goal RC-1 and associated policies in the 2040 General Plan Resource Conservation Element, listed below, would also provide protection of open space areas in the City, including scenic vistas of these areas.

Goal CD-2: Protect and enhance the visual and physical access to the hillsides, Baylands, and creeks.

Policy CD-2.1 Frame Visual Access to Hillside Views. As the city redevelops, the City shall use the layout of streets, blocks, and pedestrian corridors to provide visual access to hillside views.

Policy CD-2.2 Minimize Hillside Viewshed Impacts. The City shall minimize the viewshed impacts of development at the base of the hillsides.

Policy CD-2.5 Minimize Visual Impact on Baylands. The City shall ensure that new development near the Baylands respects its natural setting by maintaining visual harmony with the Baylands and using buffers such as pedestrian trails, linear parks, and landscaped rights-of-way.

Policy CD-2.8 Provide Visual Access to Creeks. Wherever practical, new development shall provide visual access to creeks.

Goal RC-1: To provide for a continuous system of open spaces for the preservation, enhancement, and protection of open space land.

Policy RC-1.1 Provide for a Variety of Open Spaces. The City shall provide a variety of open spaces including open space for public use and enjoyment and for the protection of agricultural uses including grazing, wildlife habitats, and scenic vistas.

Policy RC-1.2 Protect Scenic Views. The City shall strive to protect areas of outstanding natural scenic qualities and outstanding views of natural or man-made significance, such as ridgelines and valley sides in the eastern hillsides and the critical wetland areas at the western end of the city through regulation, public acquisition, or dedication of development rights or scenic easements.

Policy RC-1.3 Observation Areas. The City shall encourage observation areas with outstanding vistas be provided in coordination with recreational trails.

These 2040 General Plan goals and policies would minimize visual intrusion and assist in reducing obstructions of view of the scenic vistas associated with the open space areas of the City. While potential exists for development in the Greater Station District to obstruct views of the hillside area due the higher density / intensity development allowed in the District, these changes are consistent with the area's designation as a Priority Development Area and the standards that govern it. Although development facilitated by the 2040 General Plan would occur in existing urbanized areas of the City, and implementation of these policies would encourage vistas and visibility of scenic open space, potential impacts from tall buildings within the area's identified for growth throughout the City may block scenic vistas and reduce views. Impacts of the 2040 General Plan would be potentially significant.

Mitigation Measures

Development envisioned under the 2040 General Plan has the potential to block scenic vistas and reduce views of the hillside area and Baylands by construction buildings ranging in height from 40 to 75 feet in the City's business parks and up to 160 feet in the Greater Station District. There are no mitigation measures available to reduce the loss of scenic vistas impact associated with proposed taller buildings proposed in the 2040 General Plan. Therefore, impacts would be significant and unavoidable.

Significance After Mitigation

Impacts would be significant and unavoidable.

Threshold 2: Would the General Plan substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact AES-2 THERE ARE NO DESIGNATED STATE SCENIC HIGHWAYS IN UNION CITY. THE 2040 GENERAL PLAN WOULD NOT FACILITATE NEW LAND USES OR GROWTH IN AREAS OF THE CITY ADJACENT TO STATE ROUTE 84, A DESIGNATED STATE SCENIC HIGHWAY. THEREFORE, THE 2040 GENERAL PLAN WOULD HAVE NO IMPACT.

Caltrans has designated State Route 84 as a scenic highway (Caltrans 2011). A small portion of this roadway coincides with the Union City boundary with Fremont but does not pass into Union City. The segment of State Route 84 that coincides with the City limits is in the hillside area. The 2040 General Plan maintains the land use designations in the existing 2002 General Plan for the hillside area, and would not facilitate new development in this area or adjacent to State Route 84. Therefore, the 2040 General Plan would have no impacts on scenic resources within a state scenic highway.

Mitigation Measures

Mitigation is not required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 3: Would the General Plan, if in non-urbanized areas, substantially degrade existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 GOALS AND POLICIES FROM THE 2040 GENERAL PLAN INDICATE THAT DEVELOPMENT WOULD INTEGRATE INTO THE COMMUNITY VISUALLY AND PROTECT AND ENHANCE THE NEIGHBORHOODS IN WHICH DEVELOPMENT OCCURS. ADHERENCE TO THE PRESCRIBED GOALS AND POLICIES IN THE LAND USE, COMMUNITY DESIGN, AND SPECIAL AREAS ELEMENTS OF THE 2040 GENERAL PLAN FOR NEW CONSTRUCTION, PARKING, GATEWAYS, AND STREETSAPES WOULD DIRECT THE QUALITY OF THE CITY'S VISUAL CHARACTER. HOWEVER, THE 2040 GENERAL PLAN ENVISIONS MORE INTENSIVE FUTURE DEVELOPMENT INCLUDING BUILDINGS THAT ARE TALLER THAN WHAT IS GENERALLY EXISTING IN THE URBANIZED AREAS OF UNION CITY. IMPACTS TO VISUAL CHARACTER AND QUALITY WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The 2040 General Plan would facilitate changes that will incrementally and unavoidably change the visual character of Union City. The development and redevelopment of land within City limits. Development would include reuse of existing urbanized lands and infill development on vacant parcels. The General Plan 2040 would change the nature of some land uses to include more dense and diverse types of land uses including residential, office and industrial development, and the character of commercial development to adapt the style of new construction to a street-fronted and pedestrian-oriented design model. Infill development or redevelopment could have different height, bulk, massing, and other visual characteristics than existing development, and by default, would alter the existing visual character of the site and surroundings.

Future infill development and redevelopment projects envisioned by the General Plan are intended to upgrade the appearance of land uses across the city while encouraging pedestrian-friendly districts, enhancing economic vitality through increased mixes of uses, and emphasizing high-quality architectural, public space, and public art standards. Even though the historic areas in the city are also subject to changes in visual character from infill and redevelopment, new development would be designed to preserve and enhance the long-standing character of these areas. This would include considering the existing design of the surrounding uses and designing new development to be compatible with that design while considering aspects, such as finishes, massing, and landscaping, that would add to the aesthetic quality of the area.

The higher intensity of development in areas such as the Station District would need to cohere with the design principals indicated in the Land Use, Community Design, and Special Areas elements of the General Plan that encourage mixed use projects, actively engage the street to encourage pedestrian and other non-automobile uses, and create memorable places among other objectives. Figure 4.1-8 shows a potential design for the Station District that incorporates design elements appropriate to meeting the General Plan goals and policies.

Figure 4.1-8 Potential Station District Development Design



The majority of new housing growth in Union City would be developed as multi-family residential ranging from three to eight stories with parking accommodated within proposed buildings (e.g. podium, wrap, etc.). Along major arterials and within the Greater Station District, residential uses would also include ground floor commercial. It is anticipated that new industrial/commercial development would be more intensive and include flex space with high ceilings that can accommodate a variety of uses and multi-story commercial buildings with office, research and development, and lab space. These buildings could range in height from 40 to 75 feet in the City's business parks and up to 160 feet in the Greater Station District. Proposed taller buildings in the City's business parks and Greater Station District are inconsistent with existing primarily one- and two-story development and thus would degrade existing visual character.

While the 2040 General Plan would facilitate development that could change visual character, adherence with the goals and policies contained in the 2040 General Plan would guide new development to prevent degradation of the visual character or quality of the city. Adherence to the 2040 General Plan policies would assist in guiding design and ensuring the overall visual quality of the city is considered as development is planned and implemented in the City. Applicable 2040 General Plan goals and policies are listed below.

General Plan Land Use Element

Goal LU-1: Strategically support infill development and redevelopment to transform Union City into a distinctive community with a dynamic transit-oriented city center, attractive shopping and entertainment areas, and thriving and innovative work places.

Policy LU-1.1 Healthy Balance of Land Uses. The City shall promote and support the development of a healthy balance of residential, commercial, open space, institutional, and industrial businesses with the city.

Policy LU-1.6 Integrate New Development into the Community. The City shall require new large-scale development projects to be integrated into the fabric of the existing community rather than allowing projects to be self-contained, walled off, or physically separated/segregated from surrounding uses. To the extent feasible, circulation networks and open spaces in such development should be linked to existing streets and open spaces to improve connectivity between neighborhoods.

Goal LU-3: Encourage development that integrates a mix of commercial, office, and/or residential uses in appropriate areas, enabling residents to live close to businesses and services.

Policy LU-3.2 Mixed Use Objectives. The City shall require mixed use projects to comply with the following objectives [relative to aesthetics].

- A blend of uses that are physically and functionally integrated through site layout, architectural design, and landscaping to create synergy between different uses and a unique sense of place.
- A comfortable public realm that encourages community members to gather and socialize.

Goal LU-4: To preserve and enhance residential neighborhoods so they remain desirable places to live, maintain a variety of housing types, and contribute to the quality of life for Union City residents.

Policy LU-4.1 Maintain Neighborhoods. The City shall strive to protect and enhance positive elements that define each neighborhood.

Policy LU 4.5 Encourage Planting Trees. The City shall encourage the planting of trees in existing residential neighborhoods to enhance the visual quality, reduce the urban heat island effect, and sequester carbon.

Policy LU 4.6 Appropriate Scale and Massing. The City shall protect neighborhood character by requiring building scale and massing that is compatible with existing development in single-family residential neighborhoods.

Goal LU-5: Foster development of residential communities that are attractive and safe.

Policy LU-5.2 High Quality Residential Development. The City shall ensure that residential developments are of high architectural quality, provide high-quality amenities, and are designed to minimize exposure to nuisances.

Policy LU 5.5 Garages and Accessory Structures. The City shall require new residential develop to locate and design garages, parking areas, and accessory structures so they do not dominate the appearance of the dwelling from the street.

Goal LU-7: Protect the supply of land in Union City's business parks, and ensure development and design standards encourage business parks to adapt and transition into vibrant employment centers.

Policy LU-7.4. Encourage Stronger Sense of Place in Industrial Areas. The City shall encourage industrial development to create a stronger sense of place and a more positive image by including the following features:

- a. Attractive building frontages that are readily visible from the public street
- b. Variation in roofline

- c. Articulation in the walls (insets, projections, canopies, wing walls, trellis)
- d. Large parking areas with tree coverage separated into a series of smaller parking areas through the use of landscaping and the location of buildings
- e. Outdoor service areas, loading bays, and outdoor storage areas that are not readily visible to the public
- f. Attractive landscaping to enhance the business by softening the visual impact of buildings and parking areas
- g. Public art

Policy LU-7.10. Minimize Impacts of Industrial Uses. The City shall require that industrial development avoids or minimizes the creation of substantial pollution, noise, glare, odor, or other significant activity that would negatively affect adjacent uses and other areas of the city.

General Plan Community Design Element

Goal CD-1: Ensure physical changes to the built environment enhance the city's form and help create a stronger sense of place.

Policy CD-1.1 Improve the City Image. The City shall strive to ensure that land use, transportation, and infrastructure decisions made through development approvals and capital improvement programs improve the visual quality of the built environment and help to positively shape the image of Union City.

Policy CD-1.2 Create Memorable Places. The City shall promote infill development and redevelopment projects that create memorable places throughout Union City through high-quality architecture, pedestrian-friendly streetscape improvements, and thoughtfully-designed public spaces.

Policy CD-1.3 Strengthen Identity of Business Parks and Shopping Centers. The City shall strive to strengthen the identity and visual quality of its business parks and shopping centers through appropriate infill development, high-quality architectural design, streetscape improvements, signage and wayfinding, and appropriate buffering and screening.

Policy CD-1.4 Encourage Aesthetic Improvements to Shopping Centers. The City shall encourage aesthetic improvements to its shopping centers that include the following features, as appropriate:

- a. A common architectural theme that is contemporary and attractive and has a unique relationship to the surrounding community
- b. Attractive building frontages that are readily visible from the public street
- c. Variation in the roofline (multi-planed, pitched roofs, varied cornice lines)
- d. Articulation in the walls (insets, projections, canopies, wing walls, trellis)
- e. Parking areas with tree coverage that are attractive and provide adequate shading
- f. Main entryways and primary internal driveways defined by using landscaping, textured paving, etc.
- g. Attractive landscaping to enhance business by softening buildings and parking areas
- h. Pedestrian-friendly design

- i. Imaginative solutions to providing development features such as water features, public art, project lighting, signs, and screening.

Policy CD-1.8 Buildings that Engage the Street. The City shall require new commercial, industrial, and residential mixed-use buildings to be oriented to and actively engage and complement the public realm through such features as building orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking.

Policy CD-1.10 Encourage Compatible Development. The City shall encourage development that is visually and functionally compatible with the surrounding neighborhoods.

Policy CD 1.14 Protect Neighborhood Character. The City shall protect neighborhood character by encouraging single-family infill development that is compatible with existing single-family neighborhoods through appropriate scale, massing, design, and/or the use of increased setbacks.

Policy CD-1.15 Accented Neighborhood Entries. The City shall encourage entries to new neighborhoods to be accented with different landscaping, pavement, and signage treatments.

Policy CD-1.16 Accessible Design. Single-story units (minimum 10 percent of total) shall be provided in all new single-family residential developments to break up building massing and provide accessible units.

Goal CD-2: Protect and enhance the visual and physical access to the hillsides, Baylands, and creeks.

Policy CD-2.1 Frame Visual Access to Hillside Views. As the city redevelops, the City shall use the layout of streets, blocks, and pedestrian corridors to provide visual access to hillside views.

Policy CD-2.2 Minimize Hillside Viewshed Impacts. The City shall minimize the viewshed impacts of development at the base of the hillsides.

Policy CD-2.4 Landscaped Open Space Required in New Development. The City shall require landscaped open space areas in new developments, including in commercial and industrial areas and along streets and trails. Specimen trees and significant stands of existing trees shall be protected to the extent possible in the design of new development.

Policy CD-2.5 Minimize Visual Impact on Baylands. The City shall ensure that new development near the Baylands respects its natural setting by maintaining visual harmony with the Baylands and using buffers such as pedestrian trails, linear parks, and landscaped rights-of-way.

Policy CD-2.8 Provide Visual Access to Creeks. Wherever practical, new development shall provide visual access to creeks.

Goal CD-3: To create distinct and attractive corridor environments along Union City's major roadways and transit lines.

Policy CD-3.1 Prepare Streetscape Master Plans. The City shall prepare streetscape master plans for major corridors, on an as-needed basis, that identify various improvements such as providing a variety of light fixture styles, accent landscaping, street furniture, decorative signage, landscape medians, and bollards.

Policy CD-3.2 Reinforce Alvarado-Niles Road as the Central Spine. The City shall reinforce Alvarado-Niles Road as Union City's "central spine" by implementing design concepts that

reflect its civic importance, emphasizing continued streetscape investments, visible landmarks, and focal points.

Policy CD-3.4 Collaborate to Beautify Major Corridors. The City shall work collaboratively with the Cities of Hayward and Fremont to improve and beautify Mission Boulevard, Union City Boulevard, and Whipple Road.

Policy CD-3.6 Require Masonry Walls on Major Arterials. The City shall encourage the replacement of wooden fences on major arterials with well-designed masonry walls.

Goal CD-4: To create positive first impressions for travelers entering the city through enhancement of the city's gateways.

Policy CD-4.1 Enhance City Gateways. The City shall enhance all city gateways by providing city identification signs, additional lighting, and accent planting. The City shall consider installation of public art at city gateways.

Policy CD-4.3 Provide Landscaping Near Gateways. The City shall provide attractive landscaping that reduces the visual impact of sound walls near gateways into Union City.

Policy CD-4.4 Site New Development to Define Gateways. In addition to landscape and signage improvements, the City shall site new development to help define gateways.

Goal CD-5: To create a vibrant and inviting public realm that enhances Union City's identity and encourages community gathering.

Policy CD-5.2 Public Gathering Spaces. The City shall encourage new development to include public gathering spaces, including plazas, pocket parks, and similar spaces, that are designed to stimulate pedestrian activity, provide community gathering places, and complement the overall appearance and form of adjoining buildings.

Goal CD-6: Use public art as a way to beautify and enhance the public realm and create a sense of identity for Union City's different neighborhoods and districts.

Policy CD-6.1 Require Public Art Installation. The City shall continue to require new development to install public art or provide an in-lieu contribution where the installation of public art is not feasible due to site constraints or not preferable due to limited visibility.

Policy CD-6.2 Placement of Public Art. Public art shall be placed in highly visible and high traffic areas, such as along major thoroughfares or in public gathering spaces.

General Plan Special Areas Element

Goal SA-1: To continue to transform the Greater Station District into a transit-oriented district with a diversity of uses that creates an atmosphere where people, live, work, and socialize.

Policy SA-1.4 Architectural Quality. The City shall require that development in the Greater Station District be of the highest architectural quality and reflect the image of Union City in the 21st century. The City shall avoid visual monotony by encouraging a variety of architectural styles.

Policy SA-1.5 Preserve View Corridors. The City shall continue to use the Pedestrian Promenade and the existing block and street configuration established in the Core Station area to preserve

view corridors through Station East to the hillside area and Masonic Homes, to the extent feasible.

Policy SA-1.15 Public Art in the Greater Station District. The City shall require the installation of public art as part of major public and private developments throughout the Greater Station District.

Goal SA-2: To develop the core of the Station District surrounding the Intermodal Station as a major transit hub, business center, and residential address that is well connected with the rest of the city.

Policy SA-2.2 Strong Public Spaces. The City shall ensure that the Core Station District includes strong public spaces, including inviting parks, plazas, and community gathering places, which are integrated with ground floor retail uses and complement the Intermodal Station.

Policy SA-2.4 Design the Station as a Civic and Regional Landmark. The City shall ensure that the design of the Intermodal Station and the adjacent mixed-use buildings project a landmark image and identity for the area that reflects its civic and regional importance.

Goal SA-4: To transform the Station East area into a vibrant, 21st century employment district that is a center of prosperity and innovation, focused on providing a quality experience for those who live and work in Union City.

Policy SA-4.14 Scale of Development on 7th Street. The scale of new development along 7th Street shall transition to the adjacent single-family neighborhood to the extent feasible and include other site planning and building design methods that minimize potential conflict.

Goal SA-6: To transform the Marketplace shopping area into a vibrant, walkable, well-designed community-serving retail center that maintains its focus on meeting the needs of Union City residents and employees, and becomes an integral destination as part of the emerging transit-oriented development of the Greater Station District.

Policy SA-6.2 Enhance Street Corners and Edges. The City shall encourage buildings to be developed along the edge of streets at the corners to visually connect the four sites and to support the pedestrian environment.

Goal SA-8: To encourage the unified development of the Horner/Veasby Area with job-intensive, revenue-enhancing light industrial/manufacturing uses that are compatible with City objectives for safety, environmental quality, visual quality, employment generation, and successful infill development.

Goal SA-10: To enhance the Decoto neighborhood and preserve the neighborhood's historic character by protecting its historic buildings and the neighborhood's pattern and scale.

Policy SA-10.1 Preserve character of the Decoto Neighborhood. The City should continue to preserve historic structures, conserve and protect the existing housing stock, avoid incompatible land uses in the Decoto neighborhood, and preserve the Decoto neighborhood's overall historic pattern and scale by ensuring that new/infill development is compatible with the surrounding built environment.

Policy SA-10.5 Plant Street Trees in the Decoto Neighborhood. The City shall proactively work with property owners to plant street trees within the Decoto neighborhood.

Goal SA-11: To preserve and enhance the “Old California Town” character of the Historic Alvarado District and continue to redevelop the Historic Alvarado District as a vibrant destination-oriented commercial center.

Policy SA-11.1 Preserve Old Town Character of the Historic Alvarado District. The City shall emphasize commercial revitalization and infill housing development in the Historic Alvarado District while protecting the existing housing stock and retaining the District’s “Old California Town” character.

Policy SA-11.2 Comply with Old Alvarado Design Guidelines. The City shall require development in the Historic Alvarado District to comply with the Old Alvarado Design Guidelines to the extent feasible in order to ensure development is consistent with the predominant architectural styles of the District.

Policy SA-11.3 Design of New Residential Development. The City should require that new residential development in the Historic Alvarado District be designed consistent with the scale and style of existing homes in the immediate area of the development.

Policy SA-11.4 Preserve Historic Structure in the Historic Alvarado District. The City shall strive to preserve important historical structures in the Historic Alvarado District.

Policy SA-11.5 Preserve Character of Smith Street. The City shall ensure new development retain and enhance the historic character and intimate scale of Smith Street, the primary commercial street in the Historic Alvarado District.

Goal SA-14: To enhance the Four Corners shopping area with improved connectivity; a variety of retail uses that meet the needs of all residents; and a unified streetscape and architectural theme that creates a stronger identity for the area.

Policy SA-14.1 Support the Revitalization of the Four Corners. The City shall support efforts to revitalize and unify the Four Corners shopping area through consistent architectural design standards and improvements to the urban design, streetscape, landscaping, and signage that will connect the four neighborhood shopping centers into one unified shopping area.

General Plan Resource Conservation Element

Goal RC-1: To provide for a continuous system of open spaces for the preservation, enhancement, and protection of open space land.

Policy RC-1.1 Provide for a Variety of Open Spaces. The City shall provide a variety of open spaces including open space for public use and enjoyment and for the protection of agricultural uses including grazing, wildlife habitats, and scenic vistas.

Policy RC-1.2 Protect Scenic Views. The City shall strive to protect areas of outstanding natural scenic qualities and outstanding views of natural or man-made significance, such as ridgelines and valley sides in the eastern hillsides and the critical wetland areas at the western end of the city through regulation, public acquisition, or dedication of development rights or scenic easements.

Policy RC-1.3 Observation Areas. The City shall encourage observation areas with outstanding vistas be provided in coordination with recreational trails.

Adherence with the goals and policies listed above would guide development facilitated by the 2040 General Plan to prevent degradation of visual character and quality of Union City. However, infill development in urbanized areas of Union City proposed as part of the 2040 General Plan may result in buildings ranging in height from 40 to 75 feet in the City's business parks and up to 160 feet in the Greater Station District. These heights are inconsistent with existing buildings in the City that mainly range from one- and two-story. Therefore, the 2040 General Plan would alter the overall visual character of Union City by allowing taller buildings. Impacts of the 2040 General Plan on visual character and quality would be potentially significant.

Mitigation Measures

Development envisioned under the 2040 General Plan has the potential to result in buildings ranging in height from 40 to 75 feet in the City's business parks and up to 160 feet in the Greater Station District. The majority of structures in Union City are one- or two-stories in height. Therefore, development proposed by the 2040 General Plan would reduce the visual character and quality of Union City. There are no mitigation measures available to reduce the visual impact associated with taller than City average buildings in the 2040 General Plan because taller buildings are proposed to accommodate anticipated growth in Union City. Therefore, impacts would be significant and unavoidable.

Significance After Mitigation

Impacts would be significant and unavoidable.

Threshold 4: Would the General Plan create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?
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Impact AES-4 NEW DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN NEW SOURCES OF LIGHT AND GLARE. NEW DEVELOPMENT WOULD OCCUR IN ALREADY URBANIZED AREAS OF THE CITY, WHERE LIGHTS AND GLARE ARE ALREADY COMMON. LIGHT AND GLARE WOULD ALSO BE MINIMIZED BY THE 2040 GENERAL PLAN POLICIES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

New development facilitated under the 2040 General Plan would increase the development intensity throughout the City, and thus introduce new sources of light. Potential sources of new nighttime light from new development include light spillover from the windows of residences and businesses, outdoor security lighting, lighted signs, and streetlights. New development also could produce glare from sunlight reflecting off windows, reflective surfaces, and unshielded equipment. Motor vehicle windows, parked or passing by, or vehicle headlights at night form another potential source of light and glare.

The development that would be facilitated by the 2040 General Plan would occur in already urbanized areas of Union City, where existing lights and surfaces with glare are common. Therefore, the additional light and glare created under the 2040 General Plan would not illuminate or contribute to light pollution in currently dark or unlit areas without reflective or glaring surfaces. Additionally, Policy CD.5-1 in the Community Design Element of the 2040 General Plan requires the City to prioritize lighting improvements in public spaces in Union City. Lighted signs and safety lighting in commercial and industrial areas would need to conform to City-prescribed lighting regulations provided in Section 18.30.070 of the Union City Municipal Code. Large development projects would require a lighting plan as part of the planning approval process in keeping with regulations that indicate the standard lumens and positioning of lights on buildings and in parking

areas. New sources would not substantially increase the amount of nighttime lighting or glare in the already urbanized City. The 2040 General Plan overall intent to improve the visual quality of the City considers light and glare impacts from new development in the City. Impacts associated with light and glare would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.2 Air Quality

This section analyzes both temporary air quality impacts relating to construction activity and possible long-term air quality impacts associated with development facilitated by the 2040 General Plan. The analysis herein is based partially on the growth forecasts prepared by Mintier Harnish (2018), as well as traffic modeling and vehicle miles traveled (VMT) data provided by Hexagon (2018). Greenhouse gas emissions and global climate change impacts are discussed in Section 4.7, *Greenhouse Gas Emissions/Climate Change*.

4.2.1 Setting

a. Regional Climate and Meteorology

Union City is located in the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB includes the counties of San Francisco, Santa Clara, San Mateo, Marin, Napa, Contra Costa, and Alameda, along with the southeastern portion of Sonoma County and the southwestern portion of Solano County. The SFBAAB contains mountain ranges, inland valleys, and bays. This complex terrain often alters normal wind flow patterns. Breaks in the coastal range create both a western coast gap at the Golden Gate Bridge and an eastern coast gap at the Carquinez Strait. These gaps allow air flow in and out of the SFBAAB and the Central Valley. The Pacific Ocean helps to moderate Bay Area temperatures in both summer and winter (Union City 2015).

Union City is located in Alameda County on the east side of the San Francisco Bay, which is a subregion of the SFBAAB. This subregion includes the southeast side of the San Francisco Bay, from Dublin Canyon to north of Milpitas. It is bounded on the east by the East Bay hills and on the west by the San Francisco Bay. Most of the area is flat and indirectly affected by marine air flow. Marine air entering through the Golden Gate is blocked by the East Bay hills, forcing the air to diverge into northerly and southerly paths. The southern flow is directed down the Bay, parallel to the hills, where it eventually passes through Union City and over southwestern Alameda County. These sea breezes are strongest in the afternoon. The further from the ocean the marine air travels, the more the ocean's effect is diminished. Although the climate in this region is affected by sea breezes, it is affected less so than the regions closer to the Golden Gate (Union City 2015).

The climate of southwestern Alameda County is affected by the nearby San Francisco Bay. The San Francisco Bay cools the air during warm weather and warms the air during cold weather. During the summer, average maximum temperatures are in the mid-70's degrees Fahrenheit. Average maximum winter temperatures are in the high 50's to low 60's Fahrenheit. Average minimum temperatures are in the low 40's in winter and mid-50's in the summer (Union City 2015).

The normal northwest wind pattern carries air onshore. Bay breezes push cool air onshore during the daytime and draw air from the land offshore at night. Winds are predominantly out of the northwest during the summer months. In the winter, winds are equally likely to be from the east. Easterly-southeasterly surface flow into southern Alameda County passes through three major gaps: Hayward/Dublin Canyon, Niles Canyon, and Mission Pass. Areas north of the gaps experience winds from the southeast, while areas south of the gaps experience winds from the northeast. Wind speeds are moderate in this subregion, with annual average wind speeds close to the San Francisco Bay at about seven miles per hour (mph), while further inland they average six mph (Union City 2015).

Pollution potential is relatively high in the subregion during the summer and fall. When high pressure dominates, bay and ocean wind patterns can concentrate and carry pollutants from other cities to the subregion, adding to the locally emitted pollutant mix. The polluted air is then pushed up against the East Bay hills. In the winter, the air pollution potential in southwestern Alameda County is moderate (Union City 2015).

b. Air Pollutants of Primary Concern

Primary criteria pollutants are emitted into the atmosphere directly from a source, such as a vehicle tailpipe or an exhaust stack of a factory. Primary criteria pollutants include carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), fine particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions; ROGs together with NO_x form the building blocks for the creation of photochemical (secondary) pollutants. Secondary pollutants include oxidants, ozone (O₃), and sulfate and nitrate particulates, otherwise known as smog. The characteristics, sources and effects of critical air contaminants are described below.

Ozone

O₃ is produced by a photochemical reaction between NO_x and ROG triggered by sunlight. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because O₃ requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. O₃ is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to O₃ include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant that is found in high concentrations only near the source. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities (U.S. Environmental Protection Agency [USEPA] 2018).

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant. A relationship between NO₂ and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 ppm may occur (USEPA 2008). NO₂ absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM₁₀ and acid rain.

Suspended Particulates

PM₁₀ is particulate matter measuring no more than 10 microns in diameter, while PM_{2.5} is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM₁₀ and PM_{2.5} are by-products of fuel combustion

and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates between 2.5 and 10 microns in diameter and fine particulates (PM_{2.5}) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes, as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

c. Current Air Quality

The USEPA is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent in California. Federal and State ambient air quality standards have been established for six criteria pollutants, including O₃, CO, NO₂, SO₂, PM₁₀ and PM_{2.5}, and Pb.

Local control in air quality management is provided by CARB through county-level or regional, multi-county Air Pollution Control Districts (APCDs). CARB establishes statewide air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide. Union City is located in the SFBAAB, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The local APCDs are required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Air quality monitoring stations measure pollutant ground-level concentrations. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Table 4.2-1 lists the current federal and state standards for each of these pollutants as well as the attainment status of the SFBAAB. California air quality standards are identical to or stricter than federal standards for all six criteria pollutants, except for lead and the eight-hour average for CO, as shown in Table 4.2-1.

Table 4.2-1 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
	1 Hour	0.09 ppm	N		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	A
	1 Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	A
Sulfur Dioxide	24 Hour	0.04 ppm	A	0.14 ppm	A
	1 Hour	0.25 ppm	A	0.075 ppm	A
	Annual Arithmetic Mean			0.030 ppm	A
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N		
	24 Hour	50 µg/m ³	N	150 µg/m ³	U
Particulate Matter - Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	N	12 µg/m ³	U/A
	24 Hour			35 µg/m ³	N
Sulfates	24 Hour	25 µg/m ³	A		
Lead	Calendar Quarter			1.5 µg/m ³	A
	Rolling 3 Month Average			0.15 µg/m ³	
	30 Day Average	1.5 µg/m ³			A
Hydrogen Sulfide	1 Hour	0.03 ppm	U		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing particles	8 Hour(10:00 to 18:00 PST)		U		

A=Attainment N=Nonattainment U=Unclassified; mg/m³=milligrams per cubic meter ppm=parts per million µg/m³=micrograms per cubic meter

Source: BAAQMD 2017a, <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>

The Hayward-La Mesa Monitoring Station, located at 3466 La Mesa Drive in Hayward, is the closest monitoring station to Union City, approximately 1.5 miles north of City limits. The Hayward-La Mesa Monitoring Station is used for O₃, the only criteria pollutant recorded at the station. The next closest monitoring station to Union City is the Livermore-793 Rincon Avenue Monitoring Station, located in Livermore; however, the Livermore station would not be representative of the air quality in Union City as the two communities are physically separated by the Walpert and Sunol Ridges. Therefore, the next closest monitoring station that would be appropriate for characterizing air quality in Union City is the Oakland-9925 International Blvd Monitoring Station, located at 9925 International Boulevard, Oakland, approximately 10.4 miles north of Union City. The Oakland-9925 International Blvd Monitoring Station was used to identify PM_{2.5} and NO₂ concentrations in the City for 2015 through 2017. No information for PM₁₀ or CO concentrations was available at any monitoring stations in Alameda County. Table 4.2-2 summarizes the representative annual air quality data for the City over the years 2015 through 2017 based on monitoring data from these two stations. As shown in Table 4.2-2, one-hour O₃ concentrations exceeded State standards twice in 2017 and eight-hour O₃ concentrations exceeded federal and State standards two and three times in 2017, respectively. Additionally, PM_{2.5} concentrations exceeded federal standards twice in 2017. No other standards were exceeded in the years 2015 through 2017.

Table 4.2-2 Ambient Air Quality Data

Pollutant	2015	2016	2017
Ozone (ppm), Worst 1-Hour	0.103	0.083	0.139
Number of days of State exceedances (>0.09 ppm)	2	0	2
Ozone (ppm), 8-Hour Average	0.084	0.064	0.110
Number of days of State exceedances (>0.07 ppm)	2	0	3
Number of days of Federal exceedances (>0.07 ppm)	2	0	2
Nitrogen Dioxide (ppm), Worst 1-Hour	0.048	0.059	0.065
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of Federal exceedances (>0.100 ppm)	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average	*	*	*
Number of days of above State or Federal standard (>9.0 ppm)	*	*	*
Particulate Matter <10 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	*	*	*
Number of days above State standard (>50 $\mu\text{g}/\text{m}^3$)	*	*	*
Number of days above Federal standard (>150 $\mu\text{g}/\text{m}^3$)	*	*	*
Particulate Matter <2.5 microns, $\mu\text{g}/\text{m}^3$, Worst 24 Hours	44.7	15.5	70.2
Number of days above Federal standard (>35 $\mu\text{g}/\text{m}^3$)	1	0	7

ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

* There was insufficient (or no) data available to determine the value.

Source: CARB 2018

d. Regulatory Setting

The Federal Clean Air Act (CAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the USEPA administers the CAA. The CAA is administered by CARB at the state level and by AQMDs at the regional and local levels. The BAAQMD regulates air quality at the regional level, which includes the nine-county Bay Area.

Federal

The USEPA is responsible for enforcing the federal CAA. The USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the 1977 CAA and subsequent amendments. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g. beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by the CARB.

State

In California, CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for meeting the state requirements of the federal CAA, administering the California CAA, and establishing the California Ambient Air Quality Standards (CAAQS). The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal

standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective on March 1996. CARB oversees the functions of local AQMDs, which in turn administer air quality activities at the regional and county level.

Regional

BAAQMD is responsible for assuring that the federal and State ambient air quality standards are attained and maintained in the Bay Area. BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities.

BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) on April 19, 2017 as an update to the 2010 Clean Air Plan. The 2017 Plan, which focuses on protecting public health and the climate, defines an integrated, multi-pollutant control strategy that includes all feasible measures to reduce emissions of ozone precursors, including transport of ozone and its precursors to neighboring air basins, PM, and toxic air contaminants (TACs). To protect public health, the control strategy will decrease population exposure to PM and TACs in communities that are most impacted by air pollution with the goal of eliminating disparities in exposure to air pollution between communities. The control strategy will protect the climate by reducing GHG emissions and developing a long-range vision of how the Bay Area could look and function in a post-carbon economy in 2050 (BAAQMD 2017b).

BAAQMD recommends that general plans include buffer zones to separate sensitive receptors from sources of TACs and odors. In April 2005, CARB released the final version of the *Air Quality and Land Use Handbook*, which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors, such as homes or daycare centers, near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those issues are considered in the planning process. CARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These recommendations are based primarily on modeling information and may not be entirely reflective of conditions in the Plan Area. The *Air Quality and Land Use Handbook* notes that siting of new sensitive land uses within these distances may be possible, but recommends that site-specific studies be conducted to identify actual health risks. CARB acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities, and other quality of life issues.

e. Sensitive Receptors in Union City

Ambient air quality standards represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic

respiratory diseases. Most sensitive receptor locations are therefore residences, schools, and hospitals and are located throughout the City.

4.2.2 Impact Analysis

a. Methodology and Thresholds of Significance

This analysis uses the BAAQMD's May 2017 *CEQA Air Quality Guidelines* to evaluate air quality. The plan-level thresholds specified in the May 2017 BAAQMD *CEQA Air Quality Guidelines* were used to determine whether the 2040 General Plan impacts exceed the thresholds identified in CEQA Guidelines Appendix G.

Significance Thresholds

Based on Appendix G of the CEQA Guidelines, the 2040 General Plan would have a significant impact on air quality if it would:

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

Short-Term Emissions Thresholds

The BAAQMD's May 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions (BAAQMD 2017c). However, short-term emissions associated with the 2040 General Plan are discussed qualitatively to evaluate potential air quality impacts.

Long-Term Emissions Thresholds

The BAAQMD's 2017 *CEQA Air Quality Guidelines* contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures
- Vehicle miles traveled (VMT) or vehicle trips increase is less than or equal to the plan's projected population increase, measured on a percentage basis

While the BAAQMD guidance on operational plan-level significance thresholds regarding the comparison of the rate of increase of VMT versus population growth may be appropriate for many other cities in the San Francisco Bay Area, Union City has unique characteristics which make this threshold inappropriate. Union City is a narrow, east-west trending City that experiences a prolific interaction of Union City residents working outside City limits and residents of surrounding cities commuting through Union City in order to reach workplaces elsewhere in the Bay Area, such as San Jose, Oakland, and Mountain View. As a result, Union City is substantially influenced by the regional housing-to-jobs balance. As Union City is projecting a much larger rate of increase in jobs (approximately 91 percent) than population (approximately 16 percent), as discussed in Section 4.12, *Population and Housing*, the City is susceptible to a substantial increase in VMT due to an equalization of its local housing-to-jobs balance. Therefore, the City has determined that the

application of service population in place of population growth is more appropriate as a metric for comparison with the increase in VMT. If the 2040 General Plan can demonstrate consistency with current air quality plan control measures and that the rate of increase for VMT or vehicle trips is less than or equal to the 2040 General Plan's project service population (population and jobs) increase, either with or without mitigation, then impacts are considered less than significant.

Methodology for Estimating Emissions

Short-Term Emissions

Construction-related emissions are generally short term in duration but may still cause adverse air quality impacts. Construction of development projected under the 2040 General Plan would generate temporary emissions from three primary sources: the operation of construction vehicles, such as scrapers, loaders, and dump trucks; ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, sufficient detail to allow project-level analysis is not available for development facilitated by the 2040 General Plan, and thus it would be speculative to analyze project-level impacts. Rather, construction impacts for the 2040 General Plan as a whole are discussed qualitatively and emissions are not compared to the project-level thresholds.

Long-Term Emissions

Per plan-level guidance from the BAAQMD 2017 *CEQA Air Quality Guidelines*, long-term operational emissions associated with implementation of the 2040 General Plan are discussed qualitatively by comparing the 2040 General Plan to the 2017 Plan goals, policies, and control measures. In addition, comparing the rate of increase of plan VMT and population is recommended by BAAQMD for determining significance of criteria pollutants. If the 2040 General Plan does not meet either criterion then impacts would be potentially significant.

4.2.1.2 *Project Impacts and Mitigation Measures*

Threshold 1: Would the General Plan conflict with or obstruct the implementation of the regional air quality management plan?
Threshold 2: Would the General Plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Impact AQ-1 THE 2040 GENERAL PLAN WOULD BE CONSISTENT WITH BAAQMD'S 2017 CLEAN AIR PLAN, AND THE RATE OF INCREASE FOR VEHICLE MILES TRAVELED UNDER BUILDOUT OF THE 2040 GENERAL PLAN WOULD NOT EXCEED THE RATE OF SERVICE POPULATION INCREASE ASSOCIATED WITH THE 2040 GENERAL PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

2040 General Plan Consistency with Current Air Quality Plan

The most recently adopted air quality plan in the SFBAAB is the 2017 Clean Air Plan (2017 Plan). The 2017 Plan is a roadmap showing how the San Francisco Bay Area will achieve compliance with the State one-hour O₃ standard as expeditiously as practicable, and how the region will reduce transport of O₃ and O₃ precursors to neighboring air basins. The 2017 Plan does not include control measures that apply directly to individual development projects. Instead, the control strategy includes

stationary-source control measures to be implemented through the BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and others. The 2017 Plan also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour O₃ standard. In this, the 2017 Plan replaces the 2010 Plan. Under BAAQMD's methodology, a determination of consistency with CEQA Guidelines thresholds should demonstrate that a project:

- Supports the primary goals of the 2017 Plan;
- Includes applicable control measures from the 2017 Plan; and
- Does not disrupt or hinder implementation of any 2017 Plan control measures.

The following includes a discussion of consistency with these criteria.

Support the Primary Goals of the 2017 Clean Air Plan

The primary goals of the 2017 Plan are to:

- Protect air quality and health at the regional and local scale; and
- Protect the climate.

Some policies contained in the 2040 General Plan Resource Conservation Element are aimed at reducing vehicle emissions and energy use, which are the two major drivers of criteria air pollutant emissions. For example, Policy RC-6.1, listed below, would increase energy efficiency and conservation in residential, commercial, industrial, and public buildings. In addition, Policies RC-6.2, RC-6.3, and RC-6.4, also listed below, would support solar energy generation capacity in the City on both public and private buildings to reduce community energy demand.

Policy RC-6.1: Reduced Energy Consumption. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy RC-6.2: Renewable Energy. The City shall promote efforts to increase the use of renewable energy resources, including but not limited to, wind, solar, hydropower, and biomass and the use of battery storage within the community and City operations, where feasible.

Policy RC-6.3: Solar Technology on Private Buildings. The City shall encourage the incorporation of solar panels and other solar technology on parking structures and residential, industrial, and commercial buildings.

Policy RC-6.4: Solar Panels on City Facilities. The City shall install solar panels on City facilities, as appropriate and feasible.

The 2040 General Plan goals, policies, and implementation programs in the Resource Conservation Element would limit air quality impacts through reduction in vehicle trips and thus emissions by providing alternate modes of transportation. Development projected by the 2040 General Plan would be designed to promote active transportation in the community, further reducing vehicle emissions through Policies RC-7.2, RC-7.4, and RC-7.5, listed below.

Policy RC-7.2: Climate Action Plan Implementation. The City shall continue implementing CAP measures and prioritize implementation actions that result in the greatest reduction in GHG emissions with the least amount of implementation costs, as financially feasible.

Policy RC-7.3: Environmentally Sustainable Practices. The City shall implement environmentally sustainable practices within government buildings and operations.

Policy RC-7.4: Greening the City Fleet. The City shall reduce consumption of carbon-intensive fuels through the purchase of more efficient or alternative-fuel vehicles (e.g., hybrid, electric, natural gas) when buying new or replacement vehicles for the City fleet.

Policy RC-7.5: Greenhouse Gas Reduction in New Development. The City shall reduce greenhouse gas emissions from new development by encouraging development that lowers vehicle miles traveled (VMT); discouraging auto-dependent development patterns; promoting development that is compact, mixed-use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the jobs/housing ratio; and other methods of reducing emissions.

Implementation of the 2040 General Plan would not result in significant criteria pollutant emissions or other significant air quality impacts because it would be consistent with the goals of the 2017 Plan.

Include Applicable 2017 Clean Air Plan Control Measures

The 2017 Plan contains 85 control strategies aimed at reducing air pollution and protecting the climate in the Bay Area. For consistency with climate planning efforts at the State level, the control strategies in the 2017 Plan are based on the same economic sector framework used by CARB, which encompass stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Table 4.2-3 identifies applicable control measures and correlates the measures to specific elements and policies of the 2040 General Plan.

Table 4.2-3 2017 Clean Air Plan Control Measures

Control Measures	Consistency
Transportation	
<p>TR2: Trip Reduction Programs. Implement the regional Commuter Benefits Program (Rule 14-1) that requires employers with 50 or more Bay Area employees to provide commuter benefits. Encourage trip reduction policies and programs in local plans, e.g., general and specific plans, while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips. Fund various employer-based trip reduction programs.</p>	<p>Consistent: The 2040 General Plan would promote compatible land uses resulting in City residents living and working in closer proximity to each other. For example, the buildout of approximately 2.9 million square feet of mixed-use development, as illustrated in the 2040 General Plan Land Use Element, would result in the colocation of employment and housing and would avoid vehicle trips associated with people traveling to and from work. The colocation of these land uses would facilitate active transportation modes for commuting, such as walking and bicycling, which would result in fewer criteria pollutants than vehicle trips. The Special Areas Element of the 2040 General Plan identifies the Union City Boulevard District (UCB District) as an opportunity for creating a pedestrian-friendly employment district, which reduces dependence on vehicles. The UCB District runs adjacent to the Mulford Line, a currently unused rail line which is being considered for future development as a commuter rail route. In addition, the Greater Station District would locate a mix of high-density residential and commercial uses within a half-mile</p>

Control Measures	Consistency
	<p>distance to the existing Union City BART station.</p> <p>In addition, 2040 General Plan goals and policies would reduce vehicle trips in the City. Specifically, Goals M-2 and M-3 of the Mobility Element and related policies would promote alternative modes of transportation and the use of public transit systems. Additionally, Policy M-5.1 supports the City’s efforts in working with landowners and employers in existing and emerging employment centers to promote transportation demand management through the strategies listed below.</p> <ul style="list-style-type: none"> ▪ Transit vouchers; ▪ Van and carpool programs; ▪ Car-sharing and bike-sharing programs; ▪ Shuttles to BART; ▪ Secure bike lockers/parking and showers; ▪ Convenient and weather protected transit stops and shelters; and ▪ Flexible work hours that start and end outside of the traditional work schedule.
<p>TR9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.</p>	<p>Consistent: Policies in the 2040 General Plan support an efficient and safe bicycle and pedestrian system that would improve the connectivity and accessibility throughout the City. This would further incentivize the use of active transportation modes and thus avoid vehicle trips and emissions associated with those trips. Mobility Element Goal M-2 would provide a safe and convenient bicycle and pedestrian network that accommodates all ages and abilities. Policies listed below would encourage bicycle and pedestrian facilities.</p> <ul style="list-style-type: none"> ▪ M-2.1 Close Network Gaps. The City shall implement planned bicycle and pedestrian improvements to close gaps in the bicycle and pedestrian networks and create an interconnected system that links all facility types, including hiking trails, park trails, creek trails, and on-street bikeways. ▪ M-2.4 Bicycle Connections to Transit. The City shall work with BART, AC Transit, and Union City Transit to ensure that the bicycle route network provides direct and convenient access to local and regional transit lines and that bicycles are provided access to transit vehicles whenever feasible. ▪ M-2.8 Secure Bicycle Parking. The City shall require secure, safe, and convenient bicycle parking for all new or modified public and private developments; and support secure, low-cost bike parking at the BART station. ▪ M-2.17 Bicycle and Pedestrian Projects in the Capital Investment Plan. The City shall consider bicycle and pedestrian projects during development of the City’s Capital Investment Plan. ▪ M-2.18 Increase Funding for Bicycle and Pedestrian Improvements. The City shall continue to strive to increase funding, including seeking grant funding, for new bicycle and pedestrian facilities or improvements to existing facilities.

Control Measures	Consistency
<p>TR13: Parking Policies. Encourage parking policies and programs in local plans, e.g., reduce minimum parking requirements; limit the supply of off-street parking in transit-oriented areas; unbundle the price of parking spaces; support implementation of demand-based pricing (such as “SF Park”) in high-traffic areas.</p>	<p>Consistent: Goal M-6 encourages the use of alternative transportation modes while providing for an efficient and effective parking system that serves the needs of residents and businesses. Additionally, Policy M-2.8 listed above would provide additional bicycle parking to reduce the need for vehicle use and thus parking.</p>
Energy	
<p>EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy-efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.</p>	<p>Consistent: Goals and policies contained in the Resource Conservation and Public Facilities Elements of the 2040 General Plan support the City’s efforts to conserve various resources which would translate to energy conservation, such as improving water and power conservation. Overarching sustainability strategies to decrease energy demand include encouraging incorporation of green building features contained in the CALGreen Tier 1 checklist, encouraging zero net energy building design for new development, and encouraging the use of high-efficiency water-heaters. The following Public Facilities and Resource Conservation Element policies would reduce energy demand in the City:</p> <ul style="list-style-type: none"> ▪ PF-2.14 Sustainable Practices. The City shall consider the following as part of everyday operations: <ul style="list-style-type: none"> ▫ Energy efficiency and conservation practices that reduce water, electricity, and natural gas use. ▪ PF-2.15 Energy Efficient Buildings and Infrastructure. The City shall continue to improve energy efficiency of City buildings and infrastructure through efficiency improvements, equipment upgrades, and installation of clean, renewable energy systems to achieve climate action goals and reduce operating costs. ▪ PF-3.5 Water Efficient Landscape Ordinance. The City shall promote efficient water use and reduced water demand by ensuring compliance with the City’s Water Efficient Landscape Ordinance. The City shall review and update the Water Efficiency Landscape Ordinance, as needed, to ensure that it is consistent with State law. ▪ PF-3.6 Require Water Conservation Features. The City shall require new development and City facilities to incorporate water conservation features to reduce overall water usage. ▪ RC-6.1 Reduced Energy Consumption. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings. ▪ RC-6.6 Energy-Efficient Lighting. The City shall employ energy-efficient lighting technology to reduce the energy required to light parks, streets, and public facilities. ▪ RC-6.7 Green Building. The City shall encourage new development to adopt and incorporate green building features included in the CALGreen Tier 1 checklist in project designs, and shall consider future amendments to the Municipal Code to adopt CALGreen Tier 1 requirements consistent with the State building code. ▪ RC-6.8 Zero Net Energy. The City shall encourage Zero Net Energy (ZNE) building design for new residential and non-residential construction projects, and consider future amendments to the

Control Measures	Consistency
	<p>Municipal Code to adopt ZNE requirements consistent with the State building code.</p> <ul style="list-style-type: none"> ▪ RC-6.9 Water Heater Replacement. The City shall encourage the use of high-efficiency or alternatively-powered water heater replacements at time of replacement of existing residential development. <p>Development projected by the 2040 General Plan would be required to comply with all energy standards of Title 24 that are in effect at that time. The 2016 Title 24 standards are approximately 28 percent more efficient than the 2013 standards. The 2013 Title 24 standards were approximately 30 percent more efficient than the 2008 standards, which in turn were approximately 15 percent more efficient than the 2005 standards.</p>

Buildings	
<p>BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG’s BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.</p>	<p>Consistent: Implementation of Public Facilities and Resource Conservation Element policies listed above would promote green building standards. In addition, future development envisioned under the 2040 General Plan would be required to comply with all energy standards of Title 24 that are in effect at the time of development, as well as being encouraged to incorporate CALGreen Tier 1 green building features as part of Policy RC-6.7.</p>

Water Control Measures	
<p>WR2: Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.</p>	<p>Consistent: Part of the Resource Conservation Element of the 2040 General Plan is to conserve energy and water resources. Policies PF-2.14, PF-3.5, and PF-3.6, listed above, in the Resource Conservation Element of the 2040 General Plan would support water conservation in the City.</p>

The 2040 General Plan would be consistent with applicable 2017 Plan control measures because the 2040 General Plan would implement similar measures through specific goals and policies that would reduce criteria pollutant emissions. Therefore, the 2040 General Plan would be consistent with the applicable control measures contained in the 2017 Plan for the SFBAAB.

Hinder Implementation of 2017 Plan Control Measures

Table 4.2-3 demonstrates that the 2040 General Plan would not disrupt or hinder implementation of 2017 Plan control measures. Buildout of the 2040 General Plan would not preclude planned transit or bike pathways, and would not otherwise disrupt regional planning efforts to reduce VMT and meet federal and State air quality standards. Therefore, the 2040 General Plan would not hinder implementation of any 2017 Plan control measures.

General Plan VMT and Population

According to the BAAQMD 2017 *CEQA Air Quality Guidelines*, the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT and population; however, as stated under Significance Thresholds, due to the geographic and socioeconomic context of the City, the rate of increase of service population is a more appropriate indicator of whether the increase in VMT would be considered significant. The 2040 General Plan would result in an increase in daily VMT in the year 2040 by 291,252 miles, which is an approximately 25 percent increase compared to existing conditions of 1,158,983 daily VMT. The 2040 General Plan is projected to accommodate a service population increase of 29,191 residents and jobs through the year 2040, as discussed in Section 4.12, *Population and Housing*. Compared to the existing service population in the City of 92,519, the 2040 General Plan would accommodate an increase in service population by approximately 32 percent. Because the VMT associated with buildout of the 2040 General Plan would increase by approximately 25 percent, it would not exceed the rate of increase from the forecast service population of approximately 32 percent. Therefore, impacts concerning criteria pollutants would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

Impact AQ-2 BUILDOUT OF THE 2040 GENERAL PLAN WOULD RESULT IN THE TEMPORARY GENERATION OF AIR POLLUTANTS DURING CONSTRUCTION, WHICH WOULD AFFECT LOCAL AIR QUALITY. THE 2040 GENERAL PLAN POLICIES INCORPORATE THE BAAQMD BASIC CONSTRUCTION MITIGATION MEASURES, WHICH WOULD REDUCE CONSTRUCTION EMISSIONS. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Buildout under the 2040 General Plan may involve activities that result in air pollutant emissions. Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROGs and NO_x emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of PM_{2.5} and PM₁₀ emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts such as reduced lung function, aggravation of respirator and cardiovascular diseases, increases in mortality rate, and reduce lung function growth in children (BAAQMD 2017c). According to the 2017 BAAQMD *CEQA Air Quality Guidelines*, PM₁₀ is the greatest pollutant of concern during construction (BAAQMD 2017c).

As discussed above, BAAQMD's 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutant emissions that would apply to the 2040 General Plan. However, the guidelines include project-level thresholds for construction emissions. If a project's construction emissions fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. The BAAQMD has also identified feasible fugitive dust control measures for construction activities. These Basic Construction Mitigation measures are recommended for all projects (BAAQMD 2017c). In addition, the BAAQMD and CARB have regulations that address the handling of hazardous air pollutants such as lead and asbestos, which could be aurally dispersed during demolition activities. BAAQMD rules and regulations address both the handling and transport of these contaminants. Construction of development envisioned under the 2040 General Plan would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution concentrations or air quality nuisances. To prevent the deterioration of and to improve air quality within Union City, the 2040 General Plan includes policies RC-5.1 and RC-5.2, listed below, which support implementation of feasible measures to reduce construction emissions associated with buildout of the 2040 General Plan.

Policy RC-5.1: Air Quality Plan Implementation. The City shall cooperate with the Bay Area Air Quality Management District to implement the Air Quality Plan and enforce air quality standards.

Policy RC-5.2: Air Quality During Construction and Operations. The City shall require that development projects incorporate the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures to reduce construction and operational emissions for reactive organic gases, nitrogen oxides, and particulate matter (PM10 and PM2.5).

As introduced by Policy RC-5.2, the BAAQMD has Basic Construction Mitigation Measures intended to reduce construction and operational emissions for ROG, NO_x, and particulate matter. The BAAQMD recommends that proposed projects implement the following Basic Construction Mitigation Measures:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times a day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacture's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper conditions prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's number shall also be visible to ensure compliance with applicable regulations.

2040 General Plan Policies RC-5.1 and RC-5.2 encourage cooperation with the BAAQMD to meet air quality standards and require incorporation of the above BAAQMD Basic Construction Mitigation Measures into development projects in the City. With adherence to these 2040 General Plan policies, impacts related to construction emissions would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 3: Would the General Plan expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-3 BUILDOUT OF THE 2040 GENERAL PLAN MAY EXPOSE SENSITIVE RECEPTORS TO ADDITIONAL SOURCES OF TOXIC AIR CONTAMINANTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Pursuant to the recent ruling in the *California Building Industry Association (CBIA) v BAAQMD* (2015), impacts of the environment on the project is not an impact under CEQA. Nonetheless, BAAQMD's *CEQA Air Quality Guidelines* include methodology for jurisdictions wanting to evaluate the potential impacts from placing sensitive receptors proximate to major air pollutant sources. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways with 10,000 vehicles or more per day, and permitted sources (BAAQMD 2017c).

Development projected by the 2040 General Plan includes a net increase of approximately 289,869 square feet of commercial development and approximately 2.2 million square feet of manufacturing/industrial development, which could result in additional sources of TACs including new auto service/sales uses, dry cleaners, or gas stations. Therefore, the 2040 General Plan could increase the number of stationary or permitted sources that emit TACs in Union City. Additionally, according to the Traffic Impact Analysis (TIA) conducted for the 2040 General Plan (Hexagon 2018), there are several high-volume roadways and freeways in and around Union City, including Interstate 880, State Route 238, Decoto Road, Alvarado-Niles Road, Whipple Road, Union City Boulevard, Dyer Street, Central Avenue, Smith Street, and Alvarado Boulevard.

Furthermore, BAAQMD has established preliminary screening criteria in determining whether a proposed project would have a significant impact related to localized CO concentrations. According to BAAQMD's *CEQA Air Quality Guidelines*, the 2040 General Plan would result in a significant impact relating to localized CO concentrations if it were to:

- Be inconsistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or

- Increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- Increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.

As discussed in Section 4.14, *Traffic and Transportation*, the 2040 General Plan would conflict with the Alameda County Transportation Commission's (ACTC) Congestion Management Program (CMP) due to the forecast exceedance in LOS standards for a number of ACTC roadways. The intersection in Union City with the highest traffic levels is Alvarado-Niles Road at I-880, which has under 20,000 daily trips during the AM and PM peak hour under existing conditions plus the 2040 General Plan (Hegaxon 2018). Therefore, the highest traveled intersection in the City does not exceed traffic volumes for intersections affected by CO, as designed by BAAQMD screening criteria. Screening criteria are not thresholds of significance but are designed to provide lead agencies and project applicants with a conservative indication of whether a project would result in potentially significant air quality impacts. In addition, ambient concentrations of CO have decreased substantially in the SFBAAB since the introduction of the catalytic converter in 1975, and no exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991 (BAAQMD 2017c). Therefore, the 2040 General Plan would not substantially contribute to or result in the creation of CO hotspots.

The 2040 General Plan may facilitate development with sensitive receptors in proximity to these high-volume roadways and freeways. The 2040 General Plan does not include any goals or policies to minimize health risks to sensitive receptors near stationary sources and/or freeways and high-volume roadways. Therefore, impacts would be potentially significant but mitigable.

Mitigation Measures

AQ-1 Health Risk Assessments

While BAAQMD recommends that a Lead Agency quantify the existing and added health risks to new sensitive receptors or for new sources, the 2040 General Plan does not include a policy that would reduce potential health risks for new sensitive receptors from exposure to TACs and PM_{2.5}. Therefore, the following mitigation measure is required:

Health Risk Assessments. Implement Bay Area Air Quality Management District (BAAQMD) CEQA *Air Quality Guidelines* and State Office of Environmental Health Hazard Assessment policies and procedures requiring health risk assessments (HRAs) for new residential development and other sensitive receptors, as defined in the BAAQMD CEQA *Air Quality Guidelines*, within 1,000 feet of sources of toxic air contaminants, including freeways and roadways with over 10,000 vehicle trips per day. Based on the results of the HRA, identify and implement measures, such as air filtration systems, to reduce potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards in accordance with the receptor thresholds contained in BAAQMD's CEQA *Air Quality Guidelines*, Table 2-6. Measures identified in HRAs shall be incorporated into project scope and included in approved project development plans.

Significance After Mitigation

Impacts would be less than significant with implementation of Mitigation Measure AQ-1 to require HRAs and mitigation measures for projects that may expose sensitive receptors to substantial pollutant concentrations.

Threshold 4: Would the General Plan result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Impact AQ-4 BUILDOUT OF THE 2040 GENERAL PLAN WOULD NOT INTRODUCE NEW ODOR-GENERATING LAND USES INTERMIXED WITH RESIDENTIAL OR MIXED-USE LAND USES. COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD ENSURE THAT NEW ODOR-GENERATING LAND USES DO NOT GENERATE OBJECTIONABLE ODORS OFF-SITE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.

As stated in the BAAQMD *CEQA Air Quality Guidelines*, land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food manufacturing plants, chemical plants, composting, refineries, landfills, and confined animal facilities. Projected development under the 2040 General Plan would include commercial, residential, and mixed-use development. These land uses typically do not produce objectionable odors. Buildout of the 2040 General Plan would also increase industrial development in the City's existing industrial areas including Station East, Union City Boulevard District, and Horner/Veasby Areas and the City's remaining business / industrial parks. However, industrial development in these areas is not anticipated to result in objectionable odors which may affect a substantial number of people because these areas are currently predominantly industrial areas in the City and not located in proximity to sensitive land uses. The 2040 General Plan would not add new industrial land uses intermixed with residential or mixed-use areas, which could have the potential to expose sensitive receptors, such as residents, to odors. In addition, Policy RC-5.4 in the Resource Conservation Element of the 2040 General Plan, listed below, requires the City to ensure that all businesses, in particular fast food and manufacturing, minimize odors generated by that business so that the odors are not detectable off-site. Therefore, odors resulting from buildout of the 2040 General Plan would be limited to those associated with vehicle and engine exhaust and idling. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Implementation of the land use scenario envisioned by the 2040 General Plan in addition to compliance with General Plan Policy RC-5.4 would ensure that impacts associated with odors are reduced to a less than significant level.

Policy RC-5.4: Minimize Odors. The City shall require all businesses, in particular fast food and manufacturing, to minimize odors generated by the business so that the odors are not detectable off-site.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.3 Biological Resources

This section addresses direct and indirect impacts to the following special-status biological resources: regulated waterways and wetlands, sensitive habitats and mature native trees, sensitive plants and animals, and wildlife movement corridors.

4.3.1 Setting

a. Plan Area Vegetation Community and Land Cover Types

Vegetation communities provide wildlife habitat components including food, shelter, movement corridors, and breeding opportunities for wildlife species. They are classified in general terms with an emphasis on vegetation structure, vegetation species composition, soil structure, and water availability. Some wildlife species are generalists that use a variety of habitats, while other species are adapted to very specific habitats. Species that are limited to a single habitat type are more vulnerable to habitat loss and disturbance than are generalists and, therefore, may be more at risk to experience population declines.

Table 4.3-1 and Figure 4.3-1 display the major vegetation communities and other land cover types present in Union City. This information is based on data from the United States Department of Agriculture (USDA) Forest Service Landfire GIS database (USDA 2014). The Landfire GIS database identifies vegetation communities based on Terrestrial Ecological Systems of the United States (NatureServe 2009). Vegetation communities range from grasslands, to areas of scrub, to areas with forest cover. However, as shown in Table 4.3-1, the majority of the City, approximately 51 percent, is developed and does not contain vegetation communities. Descriptions of each vegetation community in the City are provided below.

Table 4.3-1 Vegetation Communities and Land Cover Types in Union City

Type	Acres	Percent
California Mixed Evergreen Forest and Woodland	1,868	15%
Chaparral	750	6%
Grassland	11	<1%
Introduced Annual and Perennial	2,609	21%
Pacific Coast Scrub	169	1%
Redwood Forest and Woodland	1	<1%
Western Oak Woodland and Savanna	252	2%
Western Riparian Woodland and Shrubland	131	1%
Pacific Coast Marsh	148	1%
Open Water	28	<1%
Sparse Vegetation	1	<1%
Barren	3	<1%
Agricultural	120	1%
Developed	6,326	51%

Source: Landfire USDA Forest Service GIS Data 2014

California Mixed Evergreen Forest and Woodland

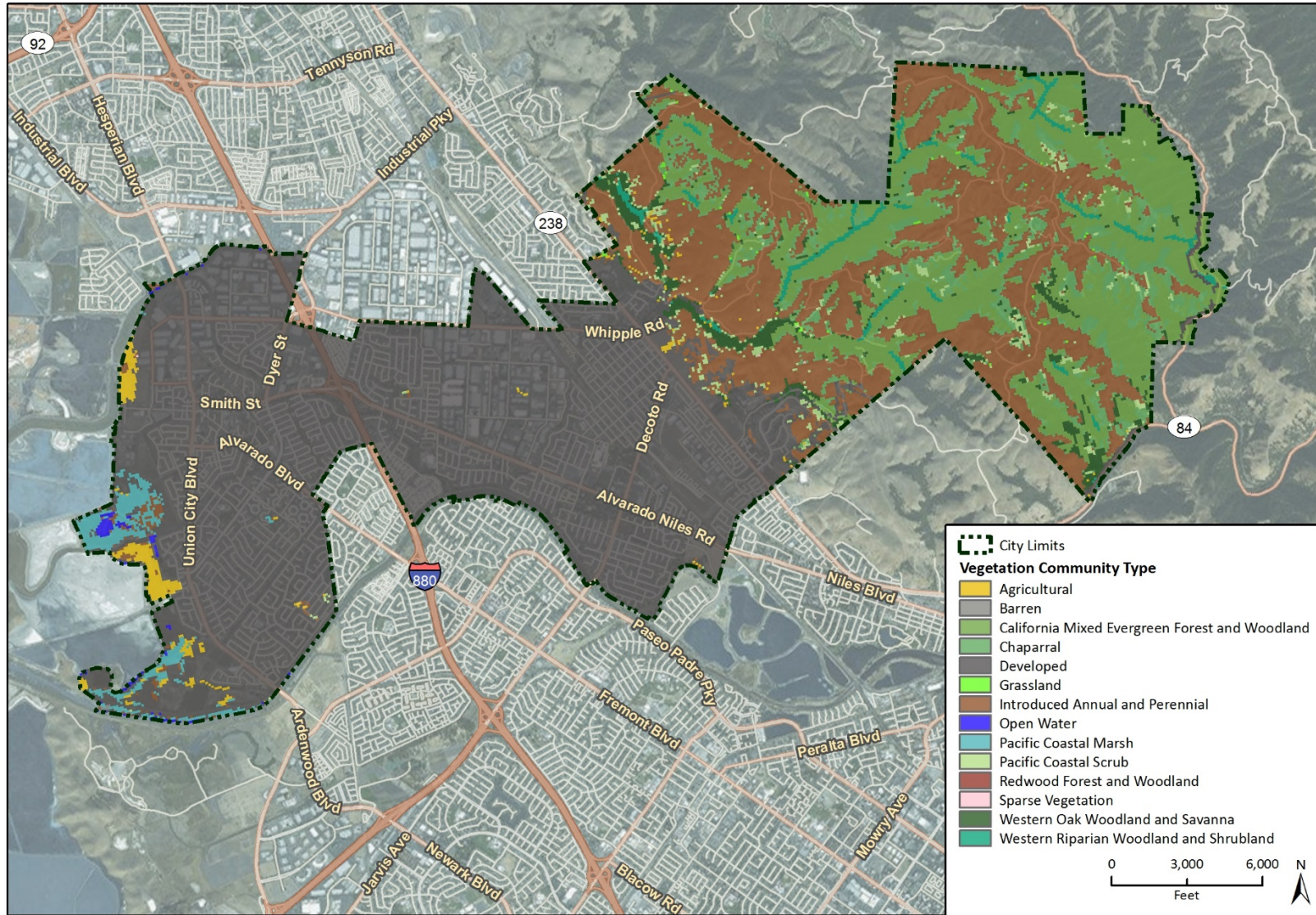
California Mixed Evergreen Forests and Woodland are dominated by tree species that retain their leaves throughout the year. They generally occur inland in areas that are warmer in summer and that receive less fog and precipitation. Further inland they grade into oak and foothill woodlands (Holland and Keil 1995). California Mixed Evergreen Forest and Woodland covers approximately 15 percent of the City and occurs in the foothills in the hillside area east of State Route 238. Coulter pine trees (*Pinus coulteri*) occur in scattered stands. Characteristic tree species of this vegetation community include three species of oak trees (canyon oak (*Quercus chrysolepis*), coast live oak (*Quercus agrifolia*), and black oak (*Quercus kelloggii*)), as well as California bay laurel (*Umbellularia californica*), big leaf maple (*Acer macrophyllum*), and madrone (*Arbutus menziesii*).

Chaparral

Chaparral vegetation is characterized by hard-leaved shrubs and dwarf trees, the branches of which are often very stiff and woody. Chaparral often occupies hot, dry slopes but can occur on a variety of substrates including valleys and sand dunes. Most dominant chaparral species have adaptations to fire that allow them to survive fires and/or enhance their seeds' germination rates (Holland and Keil 1995). Chaparral vegetation communities include California mesic chaparral, California xeric serpentine chaparral, Mediterranean California mesic serpentine woodland and chaparral, northern and central California dry-mesic chaparral, and southern California dry-mesic chaparral.

California mesic chaparral tends to be dominated by a variety of mixed or single-species of shrubs with thick, evergreen leaves that resprout from buds in the remaining root mass following fire. Common species include scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni* var.

Figure 4.3-1 Vegetation Communities and Land Cover Types in Union City



Imagery provided by Esri and its licensors © 2018.
Additional data provided by U.S. Department of the Interior | U.S. Geological Survey (<http://landfire.cr.usgs.gov>), 2014.

Fig 4.3-1 VegComm

frutescens), mountain mahogany (*Cercocarpus betuloides*), flowering ash (*Fraxinus dipetala*), ashy silk tassel (*Garrya flavescens*), coast silk tassel (*Garrya elliptica*), toyon (*Heteromeles arbutifolia*), honeysuckle (*Lonicera spp.*), holly leaf cherry (*Prunus ilicifolia*), redberry (*Rhamnus crocea*), holly leaf redberry (*Rhamnus ilicifolia*), poison oak (*Toxicodendron diversilobum*), gooseberry/currant (*Ribes spp.*), and elderberry (*Sambucus spp.*).

California xeric serpentine chaparral and Mediterranean California mesic serpentine woodland and chaparral occur on thin, rocky, ultramafic (gabbro, peridotite, serpentinite) soils. Characteristic plant species of California xeric serpentine chaparral include MacNab's cypress (*Cupressus macnabiana*), leather oak (*Quercus durata*), whiteleaf manzanita (*Arctostaphylos viscida*), pointleaf manzanita (*Arctostaphylos pungens*), and big berry manzanita (*Arctostaphylos glauca*). Characteristic plant species of Mediterranean California mesic serpentine woodland and chaparral include sargent cypress (*Cupressus sargentii*), foothill pine (*Pinus sabiniana*), Congdon's silk tassel (*Garrya congdonii*), leather oak (*Quercus durata*), California bay laurel, and hoary coffeeberry (*Frangula californica ssp. tomentella*).

Northern and central California dry-mesic chaparral, and southern California dry-mesic chaparral occur on coarse-grained soils with annual precipitation up to approximately 30 inches. Characteristic species of Northern and central California dry-mesic chaparral include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus cuneatus*), whiteleaf manzanita, common manzanita (*Arctostaphylos manzanita*), big berry manzanita, Eastwood's manzanita (*Arctostaphylos glandulosa*), Stanford's manzanita (*Arctostaphylos stanfordiana*), flannel bush (*Fremontodendron californicum*), bush mallow (*Malacothamnus fasciculatus*), bush poppy (*Dendromecon rigida*), and chaparral pea (*Pickeringia montana*).

Characteristic species of Southern central California dry-mesic chaparral include big pod Ceanothus (*Ceanothus megacarpus*), hoary leaved Ceanothus (*Ceanothus crassifolius*), chaparral whitethorn (*Ceanothus leucodermis*), desert Ceanothus (*Ceanothus greggii*), chamise, red shanks (*Adenostoma sparsifolium*), big berry manzanita, mountain mahogany (*Cercocarpus betuloides*), smooth mountain mahogany (*Cercocarpus minutiflorus*), sugar sumac (*Rhus ovata*), and mission manzanita (*Xylococcus bicolor*).

Chaparral covers communities cover six percent of the City and occur alongside California Mixed Evergreen Forest and Woodland in the eastern portion of the City.

Grassland

Grassland vegetation communities cover less than one percent of the City and is scattered throughout the foothills in the hillside area east of State Route 238. This community is found within fine-textured soils, moist or even waterlogged in the winter, but very dry in the summer.

Characteristic plant species include purple needlegrass (*Stipa pulchra*), threeawn (*Aristida spp.*), common yarrow (*Achillea millefolium*), blow wives (*Achyrachaena mollis*), mountain dandelion (*Agoseris heterophylla*), golden stars (*Bloomeria crocea*), golden Brodiaea (*Triteleia ixioides*), soap plant (*Chlorogalum pomeridianum*), purple clarkia (*Clarkia purpurea*), Jeffrey's shooting star (*Dodecatheon jeffreyi*), blue wildrye (*Elymus glaucus*), valley wild rye (*Leymus triticoides*), California fescue (*Festuca californica*), California melic grass (*Melica californica*), narrow leaved owl's clover (*Castilleja attenuata*), and pine bluegrass (*Poa secunda*).

Introduced Annual and Perennial

Introduced annual and perennial vegetation communities are comprised of grasses and forbs introduced during and since the Spanish colonial period (Holland and Keil 1995). Introduced annual and perennial vegetation communities include introduced upland vegetation-annual and biennial forbland, introduced upland vegetation-perennial grassland and forbland, and California annual grassland. Characteristic species of introduced forb and grassland communities include ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), foxtail barley (*Hordeum murinum*), broad leaf filaree (*Erodium botrys*), redstem filaree (*Erodium cicutarium*), slender wild oats (*Avena barbata*), wild oats (*Avena fatua*), California goldfields (*Lasthenia californica*), bicolored lupine (*Lupinus bicolor*), and Italian rye grass (*Lolium multiflorum*). Introduced communities cover approximately 21 percent of the City and are widely spread throughout the eastern portion of the City.

Pacific Coast Scrub

Pacific Coast Scrub vegetation communities include northern California coastal scrub and southern California coastal scrub communities. Pacific coast scrub covers less than one percent of the City and is scattered throughout the foothills in the hillside area east of State Route 238. Northern California coastal scrub is restricted to coastal plateaus and lower slopes of the Coast Ranges where precipitation range from approximately 20 to 80 inches annually. These communities are dominated by evergreen shrubs; drought-deciduous species are unimportant or absent in this system. Dense shrublands typically include a well-developed woody and herbaceous understory. Characteristic species of northern California coastal scrub include coyote brush (*Baccharis pilularis*), yellow bush lupine (*Lupinus arboreus*), blueblossom (*Ceanothus thyrsiflorus*), seaside golden yarrow (*Eriophyllum staechadifolium*), sticky monkeyflower (*Mimulus aurantiacus*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), salmon berry (*Rubus spectabilis*), California coffeeberry (*Frangula californica*), ocean spray (*Holodiscus discolor*), salal (*Gaultheria shallon*), common cowparsnip (*Heracleum maximum*), and sword fern (*Polystichum munitum*).

Southern California coastal scrub is dominated by drought-deciduous shrubs but at times can have characteristic resprouting, deep-rooted shrubs with thick and leathery evergreen leaves. Soils vary from coarse gravels to clays, but typically only support plant-available moisture with winter and spring rain. Most predominant shrubs include California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), purple sage (*Salvia leucophylla*), California brittlebush (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), ashleaf buckwheat (*Eriogonum cinereum*), prickly pear (*Opuntia littoralis*), sticky monkeyflower, deerweed (*Acmispon glaber*) in early seral stages that follow a fire, and coyote brush in moister, disturbed sites.

Redwood Forest and Woodland

Redwood forest and woodland covers less than one percent of the City and is located in the far eastern portion of the hillside area of the City. This vegetation community is commonly found on moderately well-drained marine sediments. This community forms the tallest forests in North America, with individuals reaching heights of approximately 330 feet. Typically, mature stands of coast redwood (*Sequoia sempervirens*) produce a deep shade, so understories can be limited, but coarse woody debris from past disturbance can be quite large. Douglas fir (*Pseudotsuga menziesii*) is the common associate among the large trees. Western hemlock (*Tsuga heterophylla*) is found in old-

growth stands, and tanoak (*Notholithocarpus densiflorus*) occurs in the understory in almost all stands.

Western Oak Woodland and Savanna

Western oak woodlands are dominated by trees, mostly oaks, 15 to 70 feet tall. These woodlands vary from open savannas to dense, closed-canopy communities. The most common woodland type consists of scattered trees and shrubs with an understory of grasses and forbs. However, in savanna woodlands shrubs are often entirely absent, and the ground is essentially the same as that of grasslands (Holland and Keil 1995). Western oak woodland and savanna includes California central valley mixed oak savanna, California coastal live oak woodland and savanna, and southern California oak woodland and savanna. California central valley mixed oak savanna occurs on alluvial terraces and flat plains, often with deep, fertile soils. Valley oak (*Quercus lobata*) is the characteristic oak species of these savannas, though other characteristic species include interior live oak (*Quercus wislizeni*), coast live oak, blue oak (*Quercus douglasii*), California buckeye (*Aesculus californica*), western redbud (*Cercis occidentalis*), California juniper (*Juniperus californica*), and purple needlegrass (*Stipa pulchra*). California coastal live oak woodland and savanna are dominated by coast live oak and vary in canopy cover from dense conditions that support sparse understory vegetation of California blackberry, snowberry (*Symphoricarpos mollis*), toyon, and poison oak, to more open conditions with perennial bunchgrass understory. Southern California oak woodlands and savannas are dominated by a mixed closed or open canopy of coast live oak, interior live oak, Engelmann oak (*Quercus engelmannii*), black oak, and/or Southern California black walnut (*Juglans californica*). Southern chaparral species such as chamise, California sagebrush, lemonade berry (*Rhus integrifolia*), sugar sumac (*Rhus ovata*), fragrant sumac (*Rhus aromatica*), ceanothus, gooseberry/currant, and manzanita (*Arctostaphylos spp.*) are also characteristic. These vegetation communities cover approximately two percent of the City and are located near High Ridge Loop Trail and Tolman Peak Trail in the eastern portion of the City.

Western Riparian Woodland and Shrubland

Western Riparian Woodland and Shrubland communities occur along drainages in high mountain areas. These communities are typically dominated by deciduous trees or large shrubs; however, evergreen species may be common or dominant depending on local temperature effects (Holland and Keil 1995). Western Riparian Woodland and Shrubland, consisting of California montane riparian systems, covers approximately one percent of the City and is located in the depressions between hillsides in the foothills of the hillside area of the City. This community often occurs as a mosaic of multiple communities that are tree dominated with a diverse shrub component.

The variety of plant associations connected to this community reflects elevation, stream gradient, floodplain width, and flooding events. Dominant trees may include white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), red alder (*Alnus rubra*), Fremont cottonwood (*Populus fremontii*), red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), Douglas fir, California sycamore (*Platanus racemosa*), and coast live oak. Dominant shrubs include narrowleaf willow (*Salix exigua*) and arroyo willow (*Salix lasiolepis*).

Pacific Coastal Marsh

Pacific coastal marsh communities develop where there is a mixing of fresh water flowing from streams and springs with salt water from the ocean. Vegetation of coastal marsh communities are mostly low-growing herbaceous perennials that consists of halophytic species, which are species

that prefer growing in water with high salinity. Most species have reduced leaves, and several are succulents (Holland and Keil 1995). Pacific coastal marsh covers approximately one percent of the City and is located on the western most edge of the City adjacent to the San Francisco Bay. This community is often permanently or seasonally flooded and dominated by herbaceous plants including cattails, bulrush, and ditch-grass.

b. Wetlands

The USFWS National Wetlands Inventory (NWI) is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of wetlands. It should be noted that some wetland and stream features, such as freshwater seeps and springs, are generally not identified as part of the NWI because of the general scale of the mapping effort. Therefore, the extent of the major wetland and waterways in Union City, based on NWI mapping, is shown below in Figure 4.3-2. Wetland features that have been mapped either within or near Union City include estuarine and marine wetlands, freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds. As shown in Figure 4.3-2 below, NWI mapping has also identified lake and riverine features. The lake features correspond to the marshland areas adjacent to the San Francisco Bay, which are typically inundated, similar to shallow lakes. Riverine features correspond with streams and creeks, including Alameda Creek adjacent to the southern edge of City limits, and Dry Creek, which roughly parallels Industrial Parkway in the City.

As shown in Figure 4.3-2, estuarine and marine wetlands are located in the western part of the City, close to the San Francisco Bay. In the northwestern part of the City, there are salt-influenced seasonal wetlands, with vegetation such as pickleweed (*Salicornia spp.*). Other salt-influenced wetlands are found along Alameda Creek west of the railroad, and along a small creek running along Industrial Parkway. Both creeks flow into the San Francisco Bay.

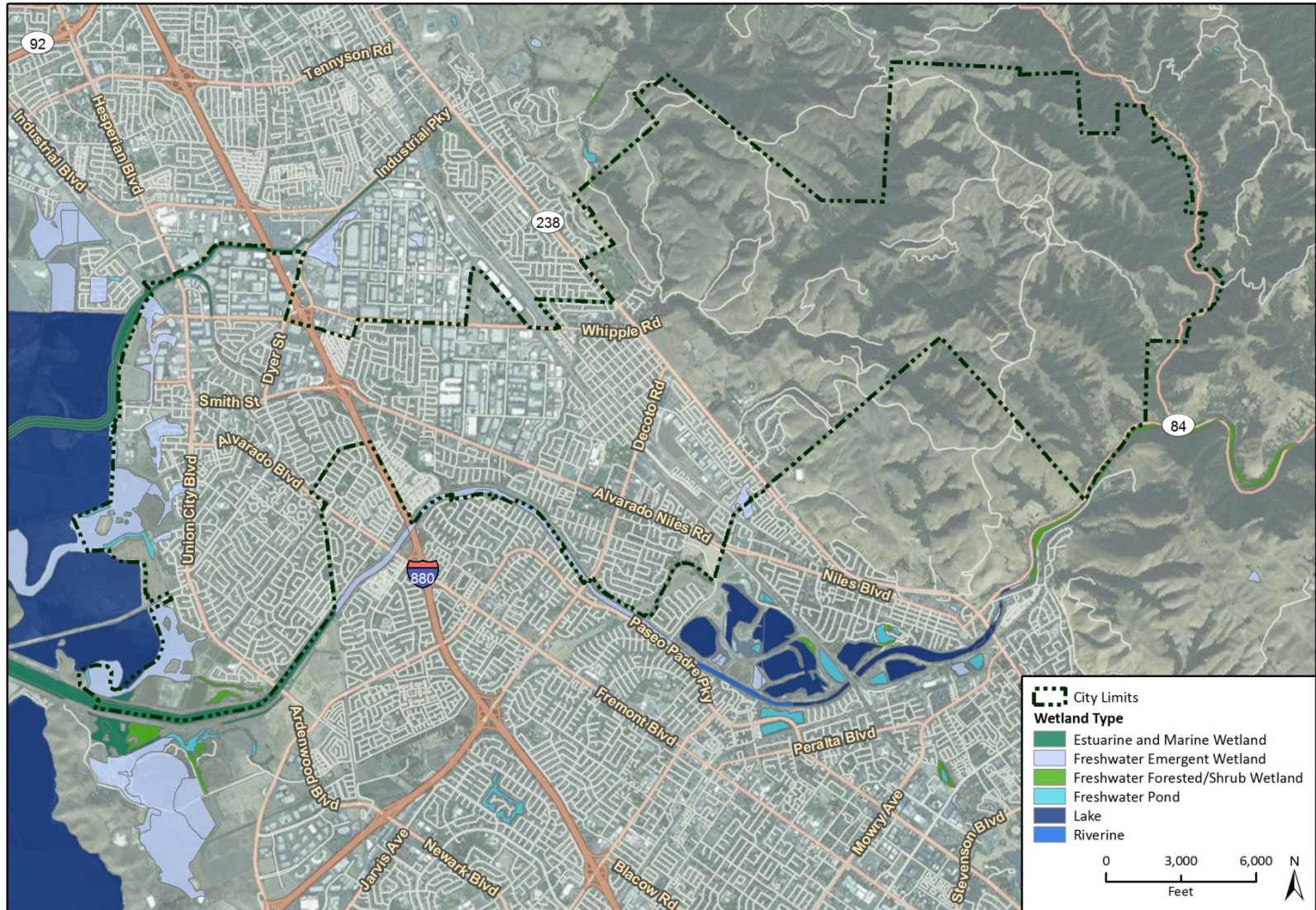
Freshwater emergent wetlands occur along Dry Creek, south of Industrial Parkway, and west of Union City Boulevard. Small freshwater forested/shrub wetlands and freshwater ponds are scattered throughout the eastern portion of the City in the hillside area east of State Route 238, as well as south of the City. Freshwater marshes and wetlands have water at or near the surface, have soils differing from those of adjacent uplands, and vegetation adapted to wet conditions. Often, freshwater wetlands can be important waterfowl habitat.

Based on aerial photography, NWI mapping, and proximity to the San Francisco Bay, the streams and the majority of the wetlands in Union City are likely subject to U.S. Army Corps of Engineers (USACE) jurisdiction under section 404 of the Clean Water Act. In addition, these wetlands and streams are subject to CDFW and SWRCB jurisdiction.

c. Special-Status Species

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act; those considered “species of concern” by the USFWS; those listed or candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act; animals designated as “Species of Special Concern” by CDFW; and CDFW Special Plants, specifically those with a California Rare Plant Rank of 1A, 1B and 2 as assigned by the California Native Plant Society’s (CNPS) *Inventory of Rare and Endangered Vascular Plants of California, Eighth Edition* (2018). During the USFWS listing process for federal species, “critical habitat” may also be designated. A number of special-status wildlife species may also be considered to be of “local concern.” Animals in this category are of concern because they have limited

Figure 4.3-2 Wetlands in Union City



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 Additional data provided by U.S. Fish and Wildlife Service, 2014.

Fig 4.3-2 Wetlands

distributions, are experiencing local or regional population declines, are vulnerable to current or future threats to their preferred habitat, and/or are of unusual scientific, recreational, or educational value.

Information regarding the occurrences of special-status species in the vicinity of the City limits was obtained from a query of the California Department of Fish and Wildlife’s California Natural Diversity Database (CNDDDB) (CDFW 2018a), the USFWS Information for Planning and Conservation (IPaC) (USFWS 2018b), and the CNPS *Inventory of Rare and Endangered Vascular Plants of California, Eighth Edition* (CNPS 2018). The query of these data sources was for the U.S. Geological Survey (USGS) Newark and eight surrounding 7.5-minute series quadrangles, and it was conducted in November 2018. This query range encompasses the City limits and a five-mile buffer of the City limits. This is a sufficient distance to accommodate for regional habitat diversity and to overcome the limitations of the CNDDDB, because the CNDDDB is based on reports of actual occurrences and does not constitute an exhaustive inventory of every resource.

Table 4.3-2 shows special status species with potential to occur in Union City. This list is comprehensive and includes all species from existing federal and State lists based on the query above, although some species may be of very low distribution or abundance or may no longer exist within the Alameda County region including within Union City.

Table 4.3-2 Special-Status Species Within Five Miles of the City Limits

Common Name	Scientific Name	Status ¹	Habitat
Reptiles			
Western pond turtle	<i>Emys marmorata</i>	SSC	Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater.
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>	FT, ST	Open areas in canyons, rocky hillsides, chaparral scrublands, open woodlands, pond edges, stream courses.
Amphibians			
California tiger salamander	<i>Ambystoma californiense</i>	FT, ST, SSC	Frequents grassland, oak savanna, and edges of mixed woodland and lower elevation coniferous forest
Foothill yellow-legged frog	<i>Rana boylei</i>	SCT, SSC	Occurs in the Coast Ranges and along the west slopes of the Sierra/Cascade mountain ranges in most of central and northern California. Found at elevations ranging from sea level to 6,700 feet. They are found following streams and rivers with either rocky substrate or sunny banks.
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	Ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. From sea level to 5,000 feet.

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Common Name	Scientific Name	Status ¹	Habitat
Birds			
Cooper's hawk	<i>Accipiter cooperi</i>	CDFW's Special Animals List	Wooded habitats from deep forests to leafy subdivisions and backyards.
Sharp-shinned hawk	<i>Accipiter striatus</i>	CDFW's Special Animals List	Breed in deep forests. Migrate in open habitats and along ridgelines. Hunt along forest edges and sometimes at backyard bird feeders.
Tricolored blackbird	<i>Agelaius tricolor</i>	SSC	Associated with freshwater emergent marshes and wetlands.
Golden eagle	<i>Aquila chrysaetos</i>	CDFW's Special Animals List	Favor partially or completely open country, especially around mountains, hills, and cliffs. Use a variety of habitats ranging from arctic to desert, including tundra, shrublands, grasslands, coniferous forests, farmland, and areas along rivers and streams.
Great blue heron	<i>Ardea herodias</i>	CDFW's Special Animals List	Saltwater and freshwater habitats, from open coasts, marshes, sloughs, riverbanks, and lakes to backyard goldfish ponds. Forage in grasslands and agricultural fields.
Burrowing owl	<i>Athene cunicularia</i>	CDFW's Special Animals List	Grasslands, shrub steppes, and savannas. Other open areas such as agricultural lands, old fields, extensive forest clearings, airports, golf courses and spacious residential zones.
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT, SSC	Sandy dune-backed beaches, sand spits, bayshore sandflats, drier portions of tidal estuaries, salt evaporating ponds, alkaline flats, and the shores of alkaline sink lakes.
Yellow rail	<i>Coturnicops noveboracensis</i>	SSC	Shallow marshes, and wet meadows; in winter, drier freshwater and brackish marshes, as well as dense, deep grass, and rice fields.
Northern harrier	<i>Circus cyaneus</i>	SSC	Breed and forage in a variety of habitats including freshwater marshes brackish and saltwater marshes; wet meadows; weedy borders of lakes; rivers and streams; annual and perennial grasslands, including those with vernal pools; weed fields; ungrazed or lightly grazed pastures; some croplands especially alfalfa, grain, sugar beets, tomatoes, and melons; sagebrush flats; and desert sinks.
White-tailed kite	<i>Elanus leucurus</i>	CDFW's Special Animals List	Occurs in lowlands and middle elevations, frequenting open savannas, pastures, grassland, marshes, and agricultural areas with scattered trees.
Saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	CDFW's Special Animals List	Breeds in woody swamp, brackish marsh, and freshwater marsh. Use small and relatively isolated patches of habitat, including swales and seeps, where groundwater is close to the surface, but also occasionally nest in drier environments.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	ST	Tidal salt marshes associated with large rivers and sloughs
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	SSC	Tidal salt marshes. Require some upper marsh vegetation for nesting.
Black-crowned night heron	<i>Nycticorax nycticorax</i>	CDFW's Special Animals List	Wetland habitats including estuaries, marshes, streams, lakes, and reservoirs.

Common Name	Scientific Name	Status ¹	Habitat
Double-crested cormorant	<i>Phalacrocorax auritus</i>	CDFW's Special Animals List	Breed on the coast as well as on large inland lakes. Form colonies of stick nests built high in trees on islands or in patches of flooded timber.
California Ridgeway's rail	<i>Rallus longirostris obsoletus</i>	CDFW's Special Animals List	Tidal salt and brackish marshes with unrestricted daily tidal flows.
Bank swallow	<i>Riparia riparia</i>	ST	Feeds predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland. Uses holes dug in cliffs and river banks for cover. Will also roost on logs, shoreline vegetation, and telephone wires.
Black skimmer	<i>Rynchops niger</i>	SSC	Requires large areas of bare earth sufficiently isolated from terrestrial predators and other disturbances. Colonies most often form on small constructed islands or on isolated sections of eroded impoundment levees.
California least tern	<i>Sternula antillarum browni</i>	FE, SE, SFP	Seacoast, estuaries, lagoons, diked ponds, bays, harbors, and occasional freshwater lakes and ponds close to coast.
Mammals			
Pallid Bat	<i>Antrozous pallidus</i>	SSC	Rock crevices, tree hollow, mines, caves, structures. Open, lowland areas at elevations below 6,600 feet.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC	All subalpine and alpine habitats. Roosts in caves, mines, tunnels, buildings or other man-made structures.
Santa Cruz kangaroo rat	<i>Dipodomys venustus</i>	SSC	Maritime slopes covered with chaparral or a mixture of chaparral and oaks. Burrows in sandy, well-drained, deep soils.
Western mastiff bat	<i>Eumops perotis californicus</i>	SSC	Rugged, rocky areas where suitable crevices are available for day-roosts. Day-roosts are located in large cracks in exfoliating slabs of granite or sandstone. Roost in cracks in rocks, hollow trees, and buildings.
Hoary bat	<i>Lasiurus cinereus</i>	Western Working Bat Group Medium Priority, CDFW's Special Animals List	Trees at the edge of clearings, and in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.
Yuma myotis	<i>Myotis yumanensis</i>	SSC	Found in a variety of habitats, ranging from juniper and riparian woodlands to desert regions near open water. Roost in caves, attics, buildings, mines, underneath bridges, and other structures.
San Francisco dusky-footed woodrat	<i>Neotoma fuscipes annectens</i>	SSC	Found only in areas supporting brush. Occur in areas with a mixture of trees and brush. Require cavities in trees, snags, or logs, spaces in talus, or lodges built of downed woody material for nesting.
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE	Native salt marsh vegetation. Typically associated with tall, dense, continuous stands of <i>Sarcocornia pacifica</i> in saline soil.
Salt-marsh wandering shrew	<i>Sorex vagrans halicoetes</i>	CDFW's Special Animals List	Confined to small remnant stands of salt marsh found around the southern arm of the San Francisco Bay in San Mateo, Santa Clara, Alameda and Contra Costa counties

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Common Name	Scientific Name	Status ¹	Habitat
Invertebrates			
Crotch bumble bee	<i>Bombus crotchii</i>	CDFW's Special Animals List	Found in grassland and scrub habitat types. Nests underground and is associated with food plants including milkweeds, dustymaidens, lupens, medics, phacelias, and sages.
Western bumble bee	<i>Bombus occidentalis</i>	CDFW's Special Animals List	Found from the Pacific coast to the Colorado Rocky Mountains with severe population decline west of the Sierra Cascade Crest. Food plants include <i>Melilotus</i> , <i>Cirsium</i> , <i>Trifolium</i> , <i>Centaurea</i> , <i>Chysanthamus</i> , <i>Eriogonum</i> species.
Monarch butterfly	<i>Danaus plexippus</i>	CDFW's Special Animals List	Many open habitats including fields, meadows, weedy areas, marshes, and roadsides. Greatly dependent upon the presence of milkweeds.
Fish			
Steelhead – central California coast DPS	<i>Oncorhynchus mykiss irideus</i>	FT, SSC	Headwaters-coastal streams without barriers.
Longfin smelt	<i>Spirinchus thaleichthys</i>	FC, ST	California's bay, estuary, and nearshore coastal environments from San Francisco Bay north to near the Oregon border.
Plant Species			
Alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	1B.2	Playas, valley and foothill grassland with adobe clay, vernal pools. Alkaline soils. 0-200 feet.
San Joaquin spearscale	<i>Atriplex joaquinana</i>	1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. Alkaline soils. 1-2700 feet.
Chaparral harebell	<i>Campanula exigua</i>	1B.2	Chaparral, rocky, usually serpentine. 900-4000 feet.
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	1B.1	Valley and foothill grassland with alkaline soils. 0-750 feet.
Santa Clara red ribbons	<i>Clarkia concinna</i> ssp. <i>automixa</i>	4.3	Chaparral, cismontane woodland. 300-4900 feet.
Hoover's button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	1B.1	Vernal pools. 10-150 feet.
Diablo helianthella	<i>Helianthella castanea</i>	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. 200-4260 feet.
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	FT, SE, 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Often clay, sandy soils. 30-720 meters.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE, 1B.1	Cismontante woodland, playas with alkaline soils, valley and foothill grassland, vernal pools. 0-1540 feet.
Hairless popcornflower	<i>Plagiobothrys glaber</i>	1A	Meadows and seeps with alkaline soils, marshes and swamps with coastal salt influence. 50-590 feet.
Oregon polemonium	<i>Polemonium carneum</i>	2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0-6000 feet.
Chaparral ragwort	<i>Senecio aphanactis</i>	2B.2	Chaparral, cismontane woodland, coastal scrub. Sometime alkaline. 50-2600 feet.

Common Name	Scientific Name	Status ¹	Habitat
Long-styled sand-spurrey	<i>Spergularia macrotheca</i> var. <i>longistyla</i>	1B.2	Meadows and seeps, marshes and swamps with alkaline soils. 0-840 feet.
Most beautiful jewelflower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	1B.2	Chaparral, Cismontane woodland, valley and foothill grassland. Serpentine soils. 310-3280 feet.
Slender-leaved pondweed	<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	2B.2	Marshes and swamps and assorted shallow freshwater habitat. 980-7050 feet.
Saline clover	<i>Trifolium hydrophilum</i>	1B.2	Marshes and swamps, valley and foothill grassland with mesic or alkaline soils, vernal pools. 0-980 feet.

¹ Status Codes:

FE Federally Endangered, SE State Endangered

FT Federally Threatened, SCE State Candidate Endangered, SCT State Candidate Threatened

SSC California Species of Special Concern, SFP State (California) Fully Protected

CNPS California Rare Plant Rank

1A Plants Presumed Extinct in California

1B Plants Rare, Threatened, or Endangered in California and elsewhere

2 Plants Rare, Threatened, or Endangered in California, but more common elsewhere

3 Plants about which more information is needed

4 Plants of limited distribution

Threat Rank

0.1 Seriously Threatened in California

0.2 Fairly Threatened in California

0.3 Not very Threatened in California

Source: CDFW 2018a

d. Critical Habitat

Critical habitat is a designation made by USFWS or by the National Marine Fisheries Service (NMFS) pursuant to the Federal Endangered Species Act. Critical habitat areas are specific geographic areas that may or may not be occupied by listed species or that are determined to be essential for the conservation, management, and ultimate recovery and delisting of listed species, and that have been formally described and designated in the Federal Register. Critical habitat is defined as:

- Specific areas within the geographical area occupied by the species at the time of listing, on which are found those physical or biological features that are essential to the conservation of the listed species and that may require special management considerations or protection; and
- Specific areas outside the geographical area occupied by the species at the time of listing that are essential for the conservation of a listed species.

A critical habitat designation applies only when Federal funding, permits, or projects are involved. Critical habitat requirements do not apply to individuals engaged in activities on private land that do not involve a Federal agency. The critical habitat designation is used by the Federal government as a tool for species recovery. Any Federal agency issuing a permit for a project in critical habitat must consult with USFWS.

The designated critical habitat within or immediately adjacent to Union City includes areas suitable for California red-legged frog, Alameda whipsnake, and Western snowy plover. Critical habitat for

the California red-legged frog and Alameda whipsnake is located within the hillside area in the eastern edge of the City. Critical habitat for Western snowy plover is located in the Eden Landing Ecological Reserve, immediately adjacent to the western edge of the city next to the San Francisco Bay.

e. Regulatory Setting

Federal

Federal Endangered Species Act

USFWS and the National Marine Fisheries Service administer the Federal Endangered Species Act. The Federal Endangered Species Act requires each agency to maintain lists of imperiled native species and affords substantial protections to these “listed” species. NMFS’ jurisdiction under the Federal Endangered Species Act is limited to the protection of marine mammals, marine fishes, and anadromous fishes; all other species are subject to USFWS jurisdiction.

USFWS and NMFS may “list” a species if it is endangered (at risk of extinction throughout all or a significant portion of its range) or threatened (likely to become endangered within the foreseeable future). Section 9 of the Federal Endangered Species Act prohibits the “take” of any wildlife species listed as endangered and most species listed as threatened. Take, as defined by the Federal Endangered Species Act, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Harm is defined as “any act that kills or injures the species, including significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering” (50 CFR 17.3).

The Federal Endangered Species Act includes exceptions to this general take prohibition that allow an action to be carried out, despite the fact that the action may result in the take of listed species, where conservation measures are included for the species. Section 7 of the Federal Endangered Species Act provides an exception for actions authorized (e.g., under a Section 404 permit), funded, or carried out by a Federal agency and Section 10 provides an exception for actions that do not involve a Federal agency.

Federal Clean Water Act, Section 404

The Clean Water Act is the primary Federal law that protects the quality of the nation’s waters, including wetlands, lakes, rivers, and coastal areas. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into the waters of the United States, including wetlands. The Clean Water Act holds that all discharges into the nation’s waters are unlawful unless specifically authorized by a permit; issuance of such permits constitutes its principal regulatory tool.

The USACE is authorized to issue Section 404 permits, which allow the placement of dredged or fill materials into jurisdictional waters of the United States under certain circumstances. The USACE issues two types of permits under Section 404: general permits, which are either nationwide permits or regional permits, and standard permits, which are either letters of permission or individual permits. General permits are issued by the USACE to streamline the Section 404 permitting process for nationwide, statewide, or regional activities that have minimal direct or cumulative environmental impacts on the aquatic environment. Standard permits are issued for activities that do not qualify for a general permit because they may have more than a minimal adverse environmental impact.

Federal Clean Water Act, Section 401

Under the Clean Water Act Section 401, applicants for a Federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate. Therefore, all projects that have a Federal component and may affect state water quality, including projects that require Federal agency approval, such as issuance of a Section 404 permit, must also comply with Clean Water Act Section 401 and the State's Porter-Cologne Water Quality Control Act. In California Section 401 certification is handled by the nine Regional Water Quality Control Boards (RWQCBs) and SWRCB. Union City falls under the jurisdiction of the San Francisco Bay RWQCB. The San Francisco Bay RWQCB must certify that the discharge will comply with State water quality standards and other requirements of the Clean Water Act.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918, as amended (MBTA), implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the MBTA taking, killing, or possessing migratory birds is unlawful, as is taking of any parts, nests, or eggs of such birds (16 U.S. Government Code [USC] 703). Take is defined more narrowly under the MBTA than under Federal Endangered Species Act and includes only the death or injury of individuals of a migratory bird species or their eggs. As such, take under the MBTA does not include the concepts of harm and harassment as defined under the Federal Endangered Species Act.

State

California Endangered Species Act

Administered by CDFW, the California Endangered Species Act prohibits the take of listed species and also species formally under consideration for listing in California, referred to as candidate species. Under the California Endangered Species Act, "take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (Fish and Game Code § 86.) Under this definition, and in contrast to the Federal Endangered Species Act, the California Endangered Species Act does not prohibit "harm" to a listed species. Furthermore, take under the California Endangered Species Act does not include "the taking of habitat alone or the impacts of the taking." However, the killing of a listed species that is incidental to an otherwise lawful activity and not the primary purpose of the activity constitutes a take under the California Endangered Species Act. The California Endangered Species Act does not protect insects, but with certain exceptions prohibits the take of plants on private land.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act was enacted to implement broad-based planning to provide for effective protection and conservation of California's wildlife heritage while continuing to allow appropriate development and growth. The Natural Community Conservation Planning Act does not focus only on listed species and is broader in its orientation and objectives than are the Federal Endangered Species Act or California Endangered Species Act. The Natural Community Conservation Planning Act encourages local, State, and Federal agencies to prepare comprehensive conservation plans that maintain the continued viability of species and biological communities impacted by human changes to the landscape. The Natural Community Conservation Planning Act

provides for incidental take authorization, such that covered activities resulting in incidental take of listed species may be carried out without violating the California Endangered Species Act. Permits issued under the Natural Community Conservation Planning Act can also be broad and may include both listed species and non-listed species.

State Fish and Game Code, Section 1600-1616

The CDFW has jurisdictional authority over streams and lakes, and wetland resources associated with these aquatic systems, under California Fish and Game Code Section 1600 *et seq.* The CDFW has the authority to regulate work that will “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake” (Fish and Game Code § 1602.). An entity that proposes to carry out such an activity must first inform CDFW. Where CDFW concludes that the activity will “substantially adversely affect an existing (2014) fish or wildlife resource,” the entity proposing the activity must negotiate an agreement with CDFW that specifies terms under which the activity may be carried out in a way that protects the affected wildlife resource.

Local

Union City Municipal Code

Chapter 12.60.170 of the Union City Municipal Code, the Tree Conservation Ordinance, regulates the preservation of trees for the health and welfare of the citizens of the City in order to preserve the scenic beauty, prevent erosion of topsoil, protect against flood hazards and risk of landslides, counteract the pollutants in the air, maintain the climatic balance and decrease wind velocities, contributing greatly to the value of land in the City. The Ordinance is intended to limit the removal of significant trees within the City in order to retain as many trees as possible consistent with the reasonable economic enjoyment of private property. Protected trees under the Ordinance include all trees located on residential property with a 35-inch or greater circumference trunk, or in the case of multi-trunk trees, a total of 70 inches or more of the circumference of all trunks. The Ordinance also includes protection for trees with a 12-inch or greater circumference of any trunk, when removal relates to any transaction that requires zoning or subdivision approval, are located on a vacant or undeveloped property, are located on commercial, office or industrial developed property. Section 12.60.170(C) prohibits the trimming or removal of any tree covered by the Ordinance without a permit issued by the City and approved by the Director of Public Works.

4.3.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

The impact analysis is based on available literature regarding the existing biological resources within the City limits. Impacts on biological resources were assessed using significance criteria from federal, State, and local regulations. Impacts to flora and fauna may be determined to be significant even if they do not directly affect rare, threatened, or endangered species because development facilitated by the 2040 General Plan may result in indirect impacts to species.

CEQA Section 21001(c) states that it is the policy of the State of California to “prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Impacts on biological resources may be assessed using impact significance criteria encompassing CEQA guidelines and federal, State and local plans, regulations, and ordinances.

Significance Thresholds

Appendix G of the *State CEQA Guidelines* provides the following general statements to determine that significant impacts to biological resources could occur if the 2040 General Plan would:

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

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan 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 CDFW or USFWS?
Threshold 2: Would the General Plan 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?

Impact BIO-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN ISOLATED IMPACTS TO HABITAT FOR SPECIAL-STATUS SPECIES AND IMPACTS TO MIGRATORY BIRD NEST SITES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

As indicated above in Table 4.3-1, 51 percent of the City is developed and does not provide habitat for the special-status species reported or known to occur in or near to Union City. Areas that may provide habitat for special-status species are primarily located in the open space and undeveloped hillside area of the City and the marshes and wetlands adjacent to the Bay in the western part of the City.

As shown in Table 4.3-2, special-status species with the potential to occur in the City include California black rail, California red-legged frog, foothill yellow-legged frog, salt-marsh harvest mouse, steelhead- central California coast DPS, and yellow rail. Generally, these species are associated with waterways and wetlands and thus would most likely be found at the southern limit of the City along Alameda Creek and to the western extent of the City reaching to the San Francisco Bay. Critical habitat is designated within the hillside area of the City for Alameda whipsnake, California red-legged frog, and Western snowy plover. Special-status plant species with the potential to occur in the City include chaparral ragwort, hairless popcornflower, most beautiful jewelflower, and slender-leaved pondweed. These species would be expected to occur within hillside areas and on the fringes of the City within vegetative habitat. No special-status plant communities are located within the City, but these communities do occur along creeks and streams next to the City limits.

The 2040 General Plan facilitates infill development and redevelopment within the City limits. These areas are currently developed with residential and non-residential uses and do not provide habitat suitable for the aforementioned special-status species. The 2040 General Plan designates the existing marshlands and wetlands in the western half of the City, next to the San Francisco Bay, as Open Space. This land use designation would prevent substantial development of the habitat that these marshes and wetlands provide.

The 2040 General Plan designates the hillside area east of State Route 238 the same land use designations as the current 2002 General Plan. Development of the hillside area is governed by the Hillside Area Plan, adopted in 1995. The Hillside Area Plan was the result of Measure B, passed by Union City voters in 1989. This was followed by Measure II in 1996, which requires that a Specific Plan be prepared prior to development of areas designated as Agriculture in the hillside area. The 2040 General Plan incorporates the Hillside Area Plan goals and policies as Appendix B, but a Specific Plan has not been developed nor incorporated into the 2040 General Plan. Therefore, the 2040 General Plan does not facilitate new areas of development within the Hillside Area. The Specific Plan will facilitate development when it is prepared and adopted. Adoption of the Specific Plan would be a discretionary action and subject to CEQA review, at which time potential biological impacts would be evaluated and mitigated, as applicable. Habitat for special-status species in the Hillside Area would not be impacted by development facilitated by the 2040 General Plan because no changes to the current land use designations for this area are proposed, and because the 2040 General Plan does not include the Specific Plan necessary for development in this area.

The 2040 General Plan does not include changes to existing Open Space land use designations, including along creeks and waterways in the City. Therefore, the 2040 General Plan would not facilitate permanent development in riparian vegetation along these creeks. Because the development facilitated by the 2040 General Plan would occur as redevelopment and infill within developed areas of the City, existing roads, water, and sewer are already in place and would minimize the need for construction of new utilities and infrastructure. However, the 2040 General Plan increases the allowable density that could be constructed on some infill and redevelopment sites within the City, which could require upgraded utilities. The construction of these upgraded facilities could require work within riparian vegetation along creeks and waterways in the City, resulting in potential temporary riparian and aquatic habitat impacts. These habitats could support several special-status species, such as California red-legged frog. Additionally, development facilitated by the 2040 General Plan could impact isolated trees and pockets of vegetation in the urbanized areas of Union City. These trees and isolated pockets could provide habitat for special-status species, including migratory nesting birds.

The development facilitated under the 2040 General Plan would be subject to the provisions of the various federal and State natural resources regulations and their respective permitting processes. Additionally, the 2040 General Plan contains goals and policies that call for the preservation and protection of natural resources and the managed production of natural resources. These goals and policies, listed below, would reduce impacts to special-status species and their habitats.

Land Use Element

Goal LU-9: To provide for the orderly development of the Hillside Area that protects and enhances the area's natural resources.

Policy LU-9.1: Hillside Area Plan. The City shall allow development of the Hillside Area consistent with the Hillside Area Plan policies listed in Appendix B.

Resource Conservation Element Goals and Policies

Goal RC-1: To provide for a continuous system of open spaces for the preservation, enhancement and protection of open space land.

Policy RC-1.1: Provide for a Variety of Open Spaces. The City shall provide a variety of open spaces including open space for public use and enjoyment and for the protection of agricultural uses including grazing, wildlife habitats, and scenic vistas.

Policy RC-1.2: Protect Scenic Views. The City shall strive to protect areas of outstanding natural scenic qualities and outstanding views of natural or man-made significance, such as ridgelines and valley sides in the eastern hillsides and the critical wetland areas at the western end of the city through regulation, public acquisition, or dedication of development rights or scenic easements.

Policy RC-1.6: Require Easements Where Appropriate. Where appropriate, conservation or open space easements shall be required of new development in order to provide trail connections and /or protect unique natural features or other environmentally significant resources identified during CEQA review, such as steep hillsides, natural stream courses, or unique plant or animal communities or habitats.

Policy RC-1.7: Explore Methods for Protecting Open Space. The City shall explore various methods for protecting open space resources including, but not limited to, regulation, full acquisition, transfer of development rights, and dedication of open space or conservation easements.

Policy RC-1.8: Protection of Significant Open Space Resources. All significant open space resources (i.e. identified habitat for wildlife and rare, threatened, or endangered plant species, etc.) shall, to the extent feasible be protected or avoided through project design and appropriate mitigation. Removal of vegetation should be minimized, and replanting required to maintain soil stability, prevent erosion, and maximize regeneration. Existing wildlife habitats should be protected in a natural and undeveloped state as part of open space areas and as a means of preserving and attracting wildlife. Depleted habitats adaptable to restoration should also be included as open space where appropriate.

Policy RC-1.9: Limit Development in Open Space Areas. Development within a designated open space area will be permitted only in select areas and will be limited to facilities needed in conjunction with low density recreational areas or select public facilities. Man-made structures shall be subordinate to and not conflict with the quality of the open space. The City shall

prohibit inappropriate uses of open space, such as off-road motorized vehicles, to prevent environmental damage and preserve the quality of the open space. Grading, tree removal, or other disturbance within designated open space areas shall only be permitted when plans for such activities have been approved by the City and found necessary for protection or enhancement of the open space, or to provide for safe and enjoyable public use of the open space resource.

Goal RC-2: To protect, restore, and enhance important biological habitats and their associated plant, wildlife, and fish species throughout Union City and to educate people as to this need.

Policy RC-2.1: Preserve Significant Natural Resources. The City shall commit to preservation of significant natural resources including: wetlands; bay shores; hillside areas; and significant plant, animal, and fish habitats.

Policy RC-2.2: Require Biological Surveys. On sites that have the potential to contain critical or sensitive habitats, or special-species, or are within 100 feet of such areas, the City shall require a site survey by a qualified biologist. Appropriate mitigation measures shall be incorporated into the project as necessary to protect the resources.

Policy RC-2.4: Ensure Subdivisions Provide for Adequate Buildable Space Outside Critical Biological Areas. The City shall require any project that would create new parcels or lots to demonstrate that the resulting parcels/lots provide for adequate building space outside of critical biological areas and areas inhabited by special-status species.

Policy RC-2.5: Participate in Wetland and River Restoration Efforts. The City shall support regional efforts to restore wetlands ecology and stream and river resources.

Policy RC-2.6: Support Acquisition of Conservation Easements. The City shall cooperate with other public agencies and organizations to acquire conservation easements on privately-owned lands in order to preserve important wildlife corridors and to provide protection of State or Federal special-status species and the habitats they occupy and use.

Policy RC-2.9: Protect Wetlands. The City shall provide signage and strategically locate fences to prevent humans and dogs from adversely affecting wetlands.

Goal RC-3: To protect and enhance the natural qualities of Union City's groundwater, surface water, and streams, and to ensure sufficient water supplies of good quality for all beneficial uses.

Policy RC-3.1 Work with ACFCWCD to Protect Streams and Creeks. The City shall work with the Alameda County Flood Control and Water Conservation District (ACFCWCD) in an effort to restore and protect the natural conditions along stream and creek corridors to improve water quality; provide for enhanced animal, plant, and fish habitats; and provide for additional recreation amenities. Specific actions include:

- a. In areas already disturbed, efforts should be made to restore the natural character including planting of native vegetation to the extent possible.
- b. The development of trails along the corridors should be encouraged, and streamside rest areas should be provided that include indigenous streamside vegetation.
- c. The City shall work with ACFCWCD to establish a schedule for trash and debris removal from their facilities.
- d. New projects for flood and erosion control should be designed to preserve the natural creekside condition where possible. Alteration of streambeds and adjacent vegetation is to

be permitted only as a means of erosion or flood control as permitted by the City and in such a manner as to enhance the area within the city.

2040 General Plan Appendix B: Hillside Area Plan

Goal 4: To preserve the critical natural ecological systems so that plants and animals, including endangered species, can continue to exist in abundance.

Goal 8: To provide for a continuous flow of open space which will provide vast open areas, places for wildlife and an attendant public trail system.

Policy 2: Open Space Preservation. Open space shall be preserved in the hillside area by requiring developers to dedicate undeveloped open space areas to a public entity as a condition for project approval, and by encouraging expansion of East Bay Regional Park District lands.

The policies listed above would prevent loss of special status wildlife habitat in the open space areas of the hillside area and the marshlands next to the Bay. Policy RC-2.2, listed above, would require a biological survey for development on sites that have the potential to contain critical or sensitive habitats, and incorporation of mitigation if species are determined to occur on the sites. Policy RC-2.4 would ensure subdivisions provide for adequate buildable space outside critical biological areas and areas inhabited by special-status species. The requirement of biological surveys and plans for adequate building space outside of sensitive biological areas prior to development would ensure that potential special-status species that could be impacted by future development would be identified and potential impacts would be reduced or avoided. Therefore, implementation of these policies would avoid potential direct impacts to sensitive species identified in Table 4.3-1.

While the policies above would prevent impacts to large tracts of open space that provides habitat for special status species, as with most urbanized environments, landscape features within the urbanized areas of the City, such as trees, shrubs, herbaceous plants, and parklands, could serve as temporary habitats for nesting migratory birds. Migratory bird species may use areas of the City for nesting during the breeding season and are protected under the MBTA. Construction-related activities such as building demolition and/or relocation, grading, materials laydown, access and infrastructure improvements, and building construction, could result in the disturbance of nesting migratory birds. The most identifiable potential direct impact to migratory species would involve the removal of vegetation, particularly trees and landscaping shrubs that may serve as perching or nesting sites for migratory birds.

Chapter 12.60.170, Tree Conservation Ordinance was developed to limit the removal of significant trees within the City in order to retain as many trees as possible. The Ordinance requires a tree removal application review and approval of a tree removal permit by the Director of Public Works. Impacts related to the removal of vegetation not covered under the ordinance could have adverse effects on nesting migratory species. However, 2040 General Plan goals and policies listed below, as well as Policies RC-1.8, -1.9, -2.1, -3.1 and Goal RC-2 listed above, would help to offset the potential impacts to trees by preserving and enhancing natural areas and promoting tree protection and replacement. The 2040 General Plan includes policies such as LU-4.4 and LU-5.3, which encourage maintaining street tree canopies in developed neighborhoods and require planting street trees in new residential development. These policies would provide potential nesting sites in the urbanized areas of the City, but would not protect active nest sites from disruption during construction of development facilitated by the 2040 General Plan. Therefore, impacts would be potentially significant but mitigable.

Mitigation Measures

BIO-1 Nesting Bird Protection Policy

The following policy shall be added to the 2040 General Plan Resource Conservation Element as Policy RC-2.10:

The City shall require project applicants to retain the services of a qualified biologist(s) to conduct a pre-construction nesting bird survey during the nesting season (February 1 through August 31) prior to all new development that may remove any trees or vegetation that may provide suitable nesting habitat for migratory birds or other special-status bird species. If nests are found the qualified biologist(s) shall identify appropriate avoidance measures, and these measures shall be incorporated into the project and implemented accordingly.

Significance After Mitigation

Impacts would be less than significant with implementation of Mitigation Measure BIO-1 to add a policy to the General Plan to conduct pre-construction nesting bird surveys and implement avoidance measures if appropriate.

Threshold 2: Would the General Plan 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?

Threshold 3: Would the General Plan have a substantial adverse effect on State or federally protected wetlands (including but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling, or hydrological interruption, or other means?

Impact BIO-2 THE 2040 GENERAL PLAN WOULD FACILITATE DEVELOPMENT THAT COULD RESULT IN CONSTRUCTION WITHIN RIPARIAN HABITAT, AND DIRECT PLACEMENT OF FILL IN WETLANDS. HOWEVER, COMPLIANCE WITH EXISTING REGULATIONS, AND IMPLEMENTATION OF 2040 GENERAL PLAN POLICIES WOULD REDUCE POTENTIAL IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.

The 2040 General Plan would facilitate infill development and redevelopment within existing urbanized areas of the City. Because these areas are urbanized and currently developed, they are unlikely to contain jurisdictional wetlands or other surface waters and associated riparian vegetation zones. However, it is possible that wetlands or streams occur in areas that could be developed based on the land use designations in the 2040 General Plan. Additionally, the infill development facilitated by the 2040 General Plan would increase density in some areas, which could require upgraded utilities or stormwater drainage. The construction of these upgraded facilities could require work, including dredge or fill, within jurisdictional wetlands and streams and could require ground disturbance in riparian habitat associated with these wetlands and streams.

Detailed wetland delineations would be needed to determine the extent of any jurisdictional wetlands and other waters at specific locations and the USACE is responsible for making a final determination on the extent of jurisdictional waters for a particular site. The extent of jurisdictional waters, as well as project specific details and plans would be necessary to determine the acres of wetlands and stream channels that could be impacts from development facilitated by the 2040 General Plan. However, compliance with the requirements of the Clean Water Act would be required for any project proposed under the 2040 General Plan. In addition, the following goals and policies from the Resource Conservation Element of the 2040 General Plan listed below and Policies

RC-1.1, -2.1, and -3.1 listed above, would reduce impacts to wetlands and riparian habitat through preservation and enhancement of these habitats.

Resource Conservation Goals and Policies

Policy RC-1.2: Protect Scenic Views. The City shall strive to protect areas of outstanding natural scenic qualities and outstanding views of natural or man-made significance, such as ridgelines and valley sides in the eastern hillsides and the critical wetland areas at the western end of the city through regulation, public acquisition, or dedication of development rights or scenic easements.

Goal RC-2: To protect, restore, and enhance important biological habitats and their associated plant, wildlife, and fish species throughout Union City and to educate people as to this need.

Policy RC-2.2: Require Wetland Delineation. On sites with the potential to contain wetland resources, a wetland delineation shall be prepared using the protocol defined by the U.S. Army Corps of Engineers. Appropriate mitigation measures shall be incorporated into the project as necessary to protect the resources.

Policy RC-2.5: Participate in Wetland and River Restoration Efforts. The City shall support regional efforts to restore wetlands ecology and stream and river resources.

Policy RC-2.8: Increase Access and Appreciation of Hills and Wetlands. The City shall work with other public agencies to improve public access to and public appreciation of the hills and wetlands.

Policy RC-2.9: Protect Wetlands. The City shall provide signage and strategically locate fences to prevent humans and dogs from adversely affecting wetlands.

Goal RC-3: To protect and enhance the natural qualities of Union City's groundwater, surface water, and streams, and to ensure sufficient water supplies of good quality for all beneficial uses.

The 2040 General Plan goals and policies listed above would require wetland delineations prior to new development on sites with potential wetlands. Additionally, 2040 General Plan goals and policies would require preservation of wetland and riparian habitat, compliance with State and federal regulations, and prohibition of specific development near riparian corridors. Therefore, impacts to wetlands would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4: Would the General Plan 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?

Impact BIO-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN CONSTRUCTION WITHIN STREAMS AND ASSOCIATED RIPARIAN ZONES THAT SERVE AS WILDLIFE MOVEMENT CORRIDORS. HOWEVER, IMPLEMENTATION OF 2040 GENERAL PLAN POLICIES PRESERVING STREAMS AND WILDLIFE MOVEMENT CORRIDORS, AS WELL AS OPEN SPACE WOULD REDUCE IMPACTS TO LESS THAN SIGNIFICANT.

The majority of Union City is developed and urbanized and does not provide for wildlife movement corridors. Wildlife movement corridors in Union City are generally limited to the creeks that connect the hillside area east of State Route 238 and the marshlands are adjacent to the San Francisco Bay. These creeks may also be used by migratory fish. The 2040 General Plan does not include changes to existing Open Space land use designations, including along creeks and waterways in the City. Therefore, the 2040 General Plan would not facilitate permanent development within these wildlife movement corridors. Wildlife movement within the hillside area would not be affected by the 2040 General Plan because the 2040 General Plan facilitates development in the urbanized areas of the City. Development would not be facilitated in the hillside area or in the marshland habitat next to the San Francisco Bay. These predominantly open space areas would remain undeveloped.

As described above, infill development could require construction of upgraded utilities and infrastructure, which could require temporary work in stream corridors. However, the 2040 General Plan contains Policy RC-1.6, listed above, which requires conservation easements along natural stream corridors in new development. General Plan Policy RC-2.4 and Policy RC-3.1, listed above, supports restoration of wetlands and streams, which would restore wildlife movement corridors provided by streams following construction activities within these areas. Policy RC-2.6 of the 2040 General Plan, also listed above, directs the City to cooperate with public agencies and organizations to acquire conservation easements on private land in order to preserve important wildlife corridors. Additionally, Goal RC-1 and associated Policy RC-1.4 in the 2040 General Plan Resource Conservation Element, listed below, would provide for a connected open space network, which could facilitate wildlife movement.

Goal RC-1: To provide for a continuous system of open spaces for the preservation, enhancement and protection of open space land.

Policy RC-1.4: Connected Open Space Areas. The City shall integrate, wherever possible, the local open space system with the open space systems of nearby communities and the region to preserve a continuous and connected system of open space areas.

Considering that the 2040 General Plan would not facilitate development in open space areas, including stream corridors, and that it contains policies to reduce impacts to stream corridors and protect wildlife movement corridors and open space, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 5: Would the General Plan conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN REMOVAL OF TREES. HOWEVER, THE 2040 GENERAL PLAN POLICIES REQUIRE NEW DEVELOPMENT TO COMPLY WITH THE CITY'S TREE CONSERVATION ORDINANCE. WITH ADHERENCE TO THE TREE CONSERVATION ORDINANCE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The development facilitate by the 2040 General Plan would occur in already developed areas of the City, largely as either infill or redevelopment. However, there are street trees and other trees in these areas that could be removed or substantially pruned for construction of the development facilitated by the 2040 General Plan. Development would be subject to all applicable local policies and regulations related to the protection of important biological resources. Specifically, development under the 2040 General Plan would be required to comply with the Union City Municipal Code Chapter 12.60.170 – Tree Conservation Ordinance. The ordinance provides standards for the preservation, protection, and maintenance of trees of significance, groves and stands of mature trees, and mature trees in general. The ordinance requires a tree removal application review and approval of a tree removal permit by the Director of Public Works. In addition to requiring tree removal permits, the ordinance also requires measures to protect existing trees during project construction.

Policies in the 2040 General Plan would also minimize impacts to the City's trees. Policy RC-1.9 would restrict tree removal in areas designated as open space unless permitted when plans for such activities have been approved by the City and found necessary for protection or enhancement of the open space, or to provide for safe and enjoyable public use of the open space. In addition, Policy RC-4.5 and 5-3 of 2040 General Plan encourages tree plantings in existing residential neighborhoods and would require planting street trees in new residential development.

With adherence to the City's Tree Conservation Ordinance and the 2040 General Plan policies, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 6: Would the General Plan conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Impact BIO-5 THERE ARE NO HABITAT CONSERVATION PLANS OR NATURAL COMMUNITY CONSERVATION PLANS APPLICABLE TO THE 2040 GENERAL PLAN. THEREFORE, THE 2040 GENERAL PLAN WOULD HAVE NO IMPACTS.

There are no natural community conservation plans within the City limits (CDFW 2018b). One habitat conservation plan, the Pacific Gas and Electric (PG&E) Bay Area Operations and Maintenance Habitat Conservation Plan, encompasses Union City (USFWS 2018a). This plan covers the entire Bay Area, but is only applicable to PG&E. The plan allows PG&E to carry out landscape restoration during

ongoing operations and maintenance projects (PG&E 2018). Therefore, there are no habitat conservation plans or natural community conservation plans applicable to the 2040 General Plan. The proposed 2040 General Plan would have no impacts related to conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Cumulative Analysis

Biological resources impacts as described above are related to: direct and indirect impacts to sensitive/special status species or their habitat; significant impacts to riparian, wetland, or other sensitive natural communities; or interference with wildlife movement. Implementation of the 2040 General Plan could result in regional impacts on special-status species, riparian, wetland, or other sensitive natural communities, as well as wildlife movement specifically along the bay shore and the hillside area of the city. Similarly, development pursuant to other local and regional planning efforts within the greater cumulative impact area (adjoining cities such as Fremont and Alameda County) would also have impacts on these resources. Due to the potential direct and indirect impacts that may occur as a result of the 2040 General Plan, the proposed 2040 General Plan could contribute to this impact.

Union City 2040 General Plan goals and policies set requirements for surveys and actions to be taken if biological resources have potential to be impacted by development under the 2040 General Plan. These goals and policies would reduce impacts to sensitive species and habitats along the bay shore and hillside areas of Union City ensure that development would not result in reductions in local population size, habitat fragmentation, or lower reproductive success by promoting conservation and preservation of the bay lands and hillside areas. Specifically, Goals 4 and 8 of the Hillside Area Specific Plan would prevent the loss of special status species and Goal 2 of the Resource Conservation Element would protect, restore, and enhance biological habitats. In addition, Mitigation Measure BIO-1 would require pre-construction nesting bird surveys for individual projects to protect nesting birds throughout the City. Therefore, impacts to special status species and their habitat; sensitive habitats; and wildlife movement would be less than significant. The contribution of the proposed 2040 General Plan to cumulative impacts would be less than significant with implementation of 2040 General Plan goals and policies as well as Mitigation Measure BIO-1.

4.4 Cultural Resources

The analysis in this section has been prepared in accordance with CEQA Guidelines Section 15064.5 and considers potential impacts to historical and archaeological resources and human remains. This section includes a brief summary of cultural resources background information and a review of known cultural resources as well as the 2040 General Plan's potential impacts on these resources. Potential impacts to tribal resources are addressed in Section 4.15, *Tribal Cultural Resources*, and potential impacts to paleontological resources are addressed in Section 4.6, *Geology and Soils*.

4.4.1 Setting

a. Cultural Setting

Regional Pre-Colonial History

Union City lies in what is generally described as the San Francisco Bay Area archaeological region (Milliken et al. 2007; Moratto 1984). The prehistoric cultural chronology for the Bay Area can be generally divided into five periods: the Early Holocene Period from 8000 to 3500 BCE, Early Period from 3500 to 500 BCE, Lower Middle Period from 500 BCE to 1050 CE-contact, and the Late Period from 1050 CE-contact.

Early Holocene Period: 8000-3500 BCE

The Early Holocene in the Union City area is characterized by a mobile forager pattern and the presence of millingslabs, handstones, and a variety of leaf-shaped projectile points, though evidence for this period is limited. It is likely that Holocene alluvial deposits buried many prehistoric sites in the area.

Early Period: 3500-500 BCE

The Early Period saw increased sedentism as indicated by the introduction of mortar and pestle, an increase in regional trade, and the earliest cut-bead horizon. By 1500 BCE, mortars and pestles had almost completely replaced millingslabs and handstones. A shift to a sedentary or semi-sedentary lifestyle is marked by the prevalence of mortars and pestles, ornamental grave associations, and shell mounds. The earliest cut bead horizon, dating to this period, is represented by rectangular *Haliotis* and *Olivella* beads from several sites in Sunnyvale and Berkeley. The advent of the mortar and pestle indicate a greater reliance on processing nuts such as acorns. Faunal evidence from various sites indicates a diverse diet based on mussel and other shellfish, marine mammals, terrestrial mammals, and birds.

Lower Middle Period: 500 BCE-430 CE

The Lower Middle Period saw numerous changes from the previous period. Rectangular shell beads, common during the Early Period, disappear completely and are replaced by split-beveled and saucer *Olivella* beads. In addition to the changes in beads, *Haliotis* ornaments, bone tools and ornaments, and basketry awls indicating coiled basketry manufacture appeared. Mortars and pestles continued to be the dominant grinding tool.

Upper Middle Period: 430-1050 CE

Around 430 CE, *Olivella* saucer bead trade networks established during earlier periods collapsed and over half of known sites occupied during the lower Middle Period were abandoned. *Olivella* saucer beads were replaced with *Olivella* saddle beads. New items appear at sites, including elaborate, decorative blades, fishtail charmstones, new *Haliotis* ornament forms, and mica ornaments. Sea otter bones became more frequent from earlier periods. An analysis of subsistence patterns at various sites dating to this period indicate a diverse diet that included various species of fish, mammal species, bird species, shellfish, and plant resources that varied by location within the Bay Area.

Late Period: 1050 CE-contact

The Late Period saw an increase in social complexity, indicated by differences in burials, and an increased level of sedentism. Small, finely worked projectile points associated with bow and arrow technology appear around 1250 CE. *Olivella* shell beads disappeared and were replaced with clamshell disk beads. The toggle harpoon, hopper mortar, and magnesite tube beads also appeared during this period. This period saw an increase in the intensity of resource exploitation that correlates with an increase in population. Many of the well-known sites of earlier periods were abandoned, possibly due to the fluctuating climates and drought that occurred throughout the Late Period.

Regional Post-Colonization History

Post-European contact history for the state of California is generally divided into three periods: the Spanish Period from 1769 to 1822, the Mexican Period from 1822 to 1848, and the American Period from 1848 to present.

Spanish Period: 1769–1822

Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements. It was not until 1769 when Gaspar de Portolá and Franciscan Father Junípero Serra established Mission San Diego de Alcalá that settlement of Alta (upper) California began in earnest. That same year Portolá discovered the San Francisco Bay. Seven years later the presidio and Mission of San Francisco de Asís was founded by an expedition led by Juan Bautista de Anza.

Mexican Period: 1822–1848

The Mexican Period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. The Mexican Period saw major changes in the Spanish mission system and land use in California. The Secularization Act of 1833 enabled Mexican governors in California to distribute mission lands to individuals in the form of land grants. Successive Mexican governors made more than 700 land grants between 1822 and 1846, putting most of the State's lands into private ownership for the first time. About 15 land grants, referred to as ranchos, were located in Alameda County. Two of these, Rancho Arroyo de la Alameda and Rancho Potrero de las Cerritos, included portions of Union City.

American Period: 1848–Present

The Treaty of Guadalupe Hidalgo was signed in 1848, ending the Mexican-American War and officially making California a territory of the United States. U.S. jurisdiction over California had really begun two years earlier, when on July 7, 1846, Commodore John D. Sloat raised the U.S. flag following the “Battle of Monterey,” after 50 U.S. Marines and 100 Navy sailors landed unopposed and captured the city without firing a shot. Settlement of California continued to increase during the early American Period. Many ranchos were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns.

The discovery of gold in northern California in 1848 led to the California Gold Rush. In September 1850 California officially became a state. Thousands of settlers and immigrants continued to pour into the State, particularly after the completion of the transcontinental railroad in 1869 and as a result of the 1880s real estate boom.

History of Union City

In the early 1850s, John Horner created a landing at a bend in Alameda Creek and founded a settlement called Union City, named for his steamship “The Union.” Around the same time, Henry Smith founded the settlement of New Haven located in the vicinity of Smith Street and Union City Boulevard. These two settlements combined to form the town of Alvarado. Alvarado was known for its fertile lands and also benefited by being a main distribution point along the Bay for grain and produce going to San Francisco.

When Alameda County first established in 1853, Alvarado became the first County seat. At that same time, Alvarado functioned as the commerce center of Alameda County. A few years later, due to the recurring flooding within Alvarado, the County seat was relocated to San Leandro.

In the following years, agriculture continued to be an important component of the local economy in Alvarado. In addition, the area was home to the California Sugar Beet Manufacturing Company established in 1870. Sugar beets were a profitable crop for many years for local farmers.

In 1869 a rail line was built from Niles to Oakland, finishing the transcontinental railroad, within the vicinity of the Decoto area. Decoto was established through formation of a town plan in 1870. Decoto started as a farming community facilitated by the existing rail access. Canning factories subsequently developed in the Decoto area, near the existing rail lines, which processed the local produce grown in the area. The finished products were then shipped all over the United States. In the late 1930s, the Pacific State Steel factory was built on the Decoto/Niles border and was a large employer in Decoto for many years.

The greater Decoto area was also home to a widow and orphan facility that served the families of members of the Free Mason fraternal organization. This facility was referred to as the Masonic Home and is located in the hillside area east of State Route 238, also called Mission Boulevard. Over the years, the Masonic Home has expanded and is currently used as a continuing care retirement community that serves Free Masons and their wives. Masonic Home recently added Acacia Creek, a new continuing care retirement development, which serves seniors who are not affiliated with the Free Mason organization.

The nearby cities of Fremont and Newark incorporated in 1956 and 1955, respectively. With Hayward and Fremont both looking to incorporate lands within Alvarado and Decoto, the residents of these areas in addition to large industrial business owners located between the two communities

came together to form Union City in 1959 resulting in Union City’s linear shape that generally extends in an east-west direction.

b. Previously Identified Cultural Resources

According to the Office of Historic Preservation, three resources within Union City are listed as Points of Interest or as California Historical Landmarks (see Table 4.4-1). No resources were listed on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (California Register).

In the late nineties, the City hired a consulting firm to prepare a Cultural Resources Survey that included an inventory of historic properties within the City. The inventory includes information such as building age, historical significance and architectural style. The inventory identified several buildings of historical merit within the Alvarado and Decoto neighborhoods.

The Union City Municipal Code contains Chapter 18.106, “Landmark and Historic Preservation (LHP) Overlay Zone”, which can be applied to properties that have historic significance within the City. Since its inclusion in the Municipal Code in 1998, 13 properties have been added to this overlay zone that are located throughout the Decoto and Alvarado areas. Chapter 18.106 provides additional protections and requirements for the buildings located on these properties to ensure that their historic significance is preserved when these properties are redeveloped or the buildings are modified. By being located in the overlay zone, these 13 properties are considered to have a local historic designation and are considered historical resources for the purposes of CEQA.

Table 4.4-1 Known Historical Resources within Union City

Resource Name	Designation
Alvarado School	Point of Interest
Site of First County Courthouse	California State Historical Landmark
Site of Nation’s First Successful Sugar Beet Factory	California State Historical Landmark

Source: Office of Historic Preservation 2018

c. Regulatory Setting

Cultural resources, including built environment and archaeological resources, may be designated as historic by national, State or local authorities. In order for a resource to qualify for listing in the National Register of Historic Places (NRHP), the California Register of Historical Resources (California Register) or as a locally significant resource, it must meet one or more identified criteria of significance. The resource must also retain sufficient historic integrity, defined in National Register Bulletin 15 as the “ability of a property to convey its significance” (National Park Service [NPS] 1990). An explanation of these designations follows.

State

California Environmental Quality Act

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a “project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment” (California PRC Section 21084.1). Answering this question is a two-part

process: first, the determination must be made as to whether or not the proposed project involves cultural resources; second, if cultural resources are present, the proposed project must be analyzed for a potential “substantial adverse change in the significance” of the resource.

California Register of Historical Resources

The California Register of Historical Resources (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 (SHPO) that is part of the California State Parks system.

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 the 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 SHPO 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(c)(1)).

According to CEQA, all buildings constructed over 50 years ago and that possess architectural or historical significance may be considered potential historical resources. Most resources must meet the 50-year threshold for historic significance; however, resources less than 50 years in age may be eligible for listing on the California Register if it can be demonstrated that sufficient time has passed to understand their historical importance.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b], and [c]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Two other programs are administered by the State: California Historical Landmarks and California Points of Historical 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 Historical 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.

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the California Register are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration in an adverse manner of those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register... (CEQA Guidelines Section 15064.5[b][2][A]).

Codes Governing Human Remains

CEQA Guidelines Section 15064.5 also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98, and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

Local

Union City Municipal Code Chapter 18.106 establishes a landmark and historic preservation (LHP) overlay zone intended to preserve significant structures, sites, and areas that are significant in local, state, or national history. The code authorizes the City Planning Commission to recommend the designation of landmarks and historic preservation districts, to determine architecture and site approval applications for work on landmark sites and in historic districts, to encourage preservation of cultural resources, and to consider comments from citizens interested in historic preservation. Further, the code includes criteria for the designation of landmarks and permitting requirements for projects involving work on landmarks or within historic districts.

4.4.2 Impact Analysis

a. Methodology and Thresholds of Significance

Under CEQA, any project that may cause a substantial adverse change in the significance of a historical resource would also have a significant effect on the environment. According to Appendix G of the State CEQA Guidelines, the 2040 General Plan would have significant impacts related to cultural resources if it would:

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

The significance of a cultural resource and subsequently the significance of any impact is determined by consideration of whether or not that resource can increase our knowledge of the past and the importance of that resource to cultural groups, among other things. The determining factors are site content and degree of preservation. A finding of archaeological significance follows the criteria established in the State CEQA Guidelines.

CEQA Guidelines Section 15064.5, Determining the Significance of Impacts to Archaeological Resources, states:

- (3) [...] 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 (Pub. Res. Code, § 5024.1, Title 14 CCR, Section 4852).
- (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.
- (b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

Historical resources are “significantly” affected if there is demolition, destruction, relocation, or alteration of the resource or its surroundings. Generally, impacts to historical resources can be mitigated to below a level of significance by following the Secretary of the Interior’s Guidelines for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings [Guidelines § 15064.6(b)]. In some circumstances, documentation of an historical resource by way of historic narrative photographs or architectural drawings will not mitigate the impact of demolition below the level of significance [Guidelines § 15126.4(b)(2)]. Preservation in place is the preferred form of mitigation for archaeological resources as it retains the relationship between artifact and context, and may avoid conflicts with groups associated with the site [Guidelines § 15126.4 (b)(3)(A)]. If an archaeological resource does not meet either the historic resource or the more specific “unique archaeological resource” definition,

impacts do not need to be mitigated [Guidelines § 15064.5(e)]. Where the significance of a site is unknown, it is presumed to be significant for the purpose of the EIR investigation.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5?
Threshold 2: Would the General Plan cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact CR-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD HAVE THE POTENTIAL TO IMPACT HISTORICAL RESOURCES AND UNIQUE ARCHAEOLOGICAL RESOURCES. IMPACTS WOULD BE POTENTIALLY SIGNIFICANT BUT MITIGABLE.

Based on CEQA Guidelines Section 15064.5, the 2040 General Plan – and future development activities facilitated by the plan – would have a significant impact on historical resources if it would cause a substantial adverse change in the significance of a historical resource. Historical resources include properties eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or the local register of historical resources. In addition, as explained in Section 15064.5, “[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.”

Effects on cultural resources are only knowable once a specific project has been proposed because the effects are highly dependent on both the individual project site conditions, project activities that may alter the character of a built environment resource, and/or the characteristics of the proposed ground-disturbing activity. Demolition or other structure alteration associated with development facilitated by the 2040 General Plan has the potential to impair historic built-environment resources. Ground-disturbing activities associated with development facilitated by the 2040 General Plan, particularly in areas that have not previously been developed with urban uses, have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface. Consequently, damage to or destruction of cultural resources could occur as a result of development under the proposed 2040 General Plan. In order to ensure that development within Union City does not have a detrimental effect on cultural resources, each project would need to be assessed as it is proposed.

Although there are no specific development projects associated with the 2040 General Plan, implementation of the plan would guide development in Union City through the year 2040. Development under the proposed 2040 General Plan could affect known or unknown historical and/or archaeological resources.

The Goal RC-4 and its associated policies and implementation program in the Resource Conservation Element of the 2040 General Plan, listed below, would reduce potential impacts related to cultural resources.

Goal RC-4: To protect, to the extent possible, the City's significant archaeological and historical resources.

Policy RC-4.1: Preserve Public Landmarks. The City shall encourage the preservation of public landmarks.

Policy RC-4.2: Support the Preservation and Rehabilitation of Historical Resources. The City shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures and sites.

Policy RC-4.3: Use Appropriate Standards to Evaluate Historical Resources. The City shall use appropriate Federal, State, and local standards in evaluating the significance of historical resources within the city.

Policy RC-4.4; Incorporate Historical Resources into the Landmark and Historic Preservation Overlay Zone. The City shall work with property owners to apply the Landmark and Historic Preservation Overlay Zone to properties or buildings of historic significance. The properties or buildings may be those that provide significant examples of architectural styles of the past, are landmarks in the history of architecture, are unique and irreplaceable assets to the City and its neighborhoods, or provide for future generations examples of the physical surroundings in which past generations lived.

Policy RC-4.5: Support Union City Historical Museum. The City shall continue to encourage and provide support for the Union City Historical Museum.

Policy RC-4.6: Protection of Archaeological Resources. The City shall strive to ensure that significant archaeological resources are adequately identified and protected from destruction through avoidance where feasible. In the event that any previously unidentified cultural resources are uncovered during site preparation, excavation, or other construction activity, all such activity shall cease until these resources have been evaluated by a qualified archaeologist (or other qualified specialist as appropriate) and specific measures can be implemented to protect these resources in accordance with Section 21083.2 and 21084.1 of the California Public Resources Code. Where such resources are Native American, the developer shall prepare the assessment in consultation with appropriate Native American tribe(s).

Policy RC-4.7: Treatment of Remains. Consistent with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98, if human remains are encountered, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin. The remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendant(s)" to receive notification of the discovery. The most likely descendant(s) shall then make recommendations within 48 hours, and engage in consultations concerning the treatment of the remains.

Implementation Program RC-4.A: Maintain Inventory of Historical Resources. The City shall maintain an inventory of historical resources.

The goal, policies, and implementation programs listed above would reduce the potential for historical and/or archaeological resources to be adversely impacted from development facilitated by the 2040 General Plan. However, there would still be potential for development to impact cultural resources and impacts would be potentially significant.

Mitigation Measures

The following mitigation Measure is required.

CR-1 Cultural Resources Study Implementation Program

The following Implementation Program shall be added to Resource Conservation Element of the 2040 General Plan:

If a project requires activities that have the potential to impact cultural resources, the City shall require the applicant to applicant retain a qualified archaeologist meeting the Secretary of the Interior's (SOI) Professional Qualification Standards (PQS) in archaeology and/or an architectural historian meeting the SOI PQS standards in architectural history to complete a Phase 1 cultural resources inventory of the project site (NPS 1983). A Phase 1 cultural resources inventory should include a pedestrian survey of the project site and sufficient background archival research and field sampling to determine whether subsurface prehistoric or historic remains may be present. Archival research should include a records search conducted at the Northwest Information Center (NWIC) and a Sacred Lands File (SLF) search conducted with the Native American Heritage Commission (NAHC). The technical report documenting the Phase 1 cultural resources inventory shall include recommendations to avoid or reduce impacts to cultural resources. These recommendations shall be implemented and incorporated in the project.

Significance After Mitigation

The implementation of Mitigation Measure CR-1 would reduce impacts to historical and unique archeological resources to a less than significant level by including an implementation program in the 2040 General Plan requiring cultural resource studies for projects within the City and implementation of further requirements to avoid or reduce impacts to such resources on a project-by-project basis.

Threshold 3: Would the General Plan disturb any human remains, including those interred outside of dedicated cemeteries.

Impact CR-2 GROUND-DISTURBING ACTIVITIES ASSOCIATED WITH DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN DAMAGE TO OR DESTRUCTION OF HUMAN BURIALS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Human burials outside of formal cemeteries often occur in prehistoric archeological contexts. Although much of the City is built out, the potential still exists for these resources to be present. Excavation during construction activities in the City would have the potential to disturb these resources, including Native American burials.

Human burials, in addition to potentially being associated with archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with

human burial remains, and protects them from disturbance, vandalism, or destruction, and established procedures to be implemented if Native American skeletal remains are discovered. Public Resources Code §5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

The 2040 General Plan requires compliance with existing regulations relating to the treatment of human remains in Policy RC-4.7. Implementation of this policy would help ensure that development carried out under the proposed 2040 General Plan would have a less than significant impact from potential disturbance of human remains, including those interred outside of formal cemeteries.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts to human burials would be less than significant without mitigation.

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4.5 Energy

This section discusses the energy impacts of implementing the 2040 General Plan, following the guidance for evaluation of energy impacts in Appendix F and Appendix G of the State CEQA Guidelines.

4.5.1 Setting

Energy relates directly to environmental quality. Energy use, when sourced from fossil fuels, can adversely affect air quality and generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to create electricity to power residences and commercial/industrial buildings, heat and cool buildings, and power vehicles. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes such as auto, carpool, and public transit; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

a. Energy Supply

Petroleum

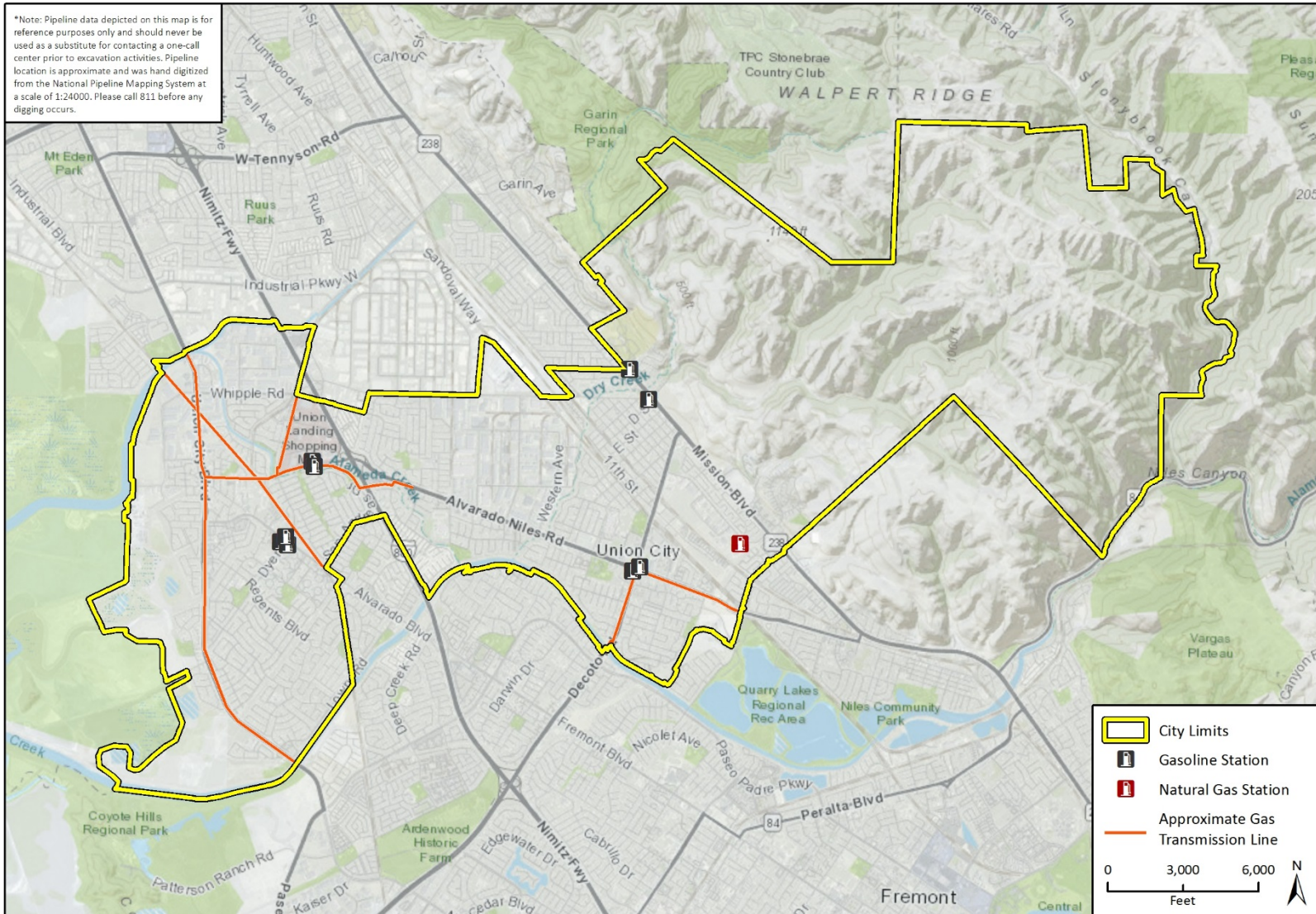
California

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the State, but primarily concentrated in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received in ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports (California Energy Commission [CEC] 2018a). Led by Saudi Arabia and Ecuador, foreign suppliers now produce more than half of the crude oil refined in California (CEC 2018b). According to the United States Energy Information Administration (EIA), California's field production of crude oil totaled 174.1 million barrels in 2017 (EIA 2018a).

Union City

Petroleum fuels are generally purchased by individual users such as residents and employees. As shown in Figure 4.5-1, while no petroleum refineries are located in the City limits, nine gasoline stations are present in the City limits (National Pipeline Mapping System [NPMS] 2018). This figure also shows transmission pipelines in Union City; however, these are natural gas transmission pipelines and not gasoline or oil pipelines. According to the Division of Oil, Gas, and Geothermal Resources (DOGGR), no abandoned, orphaned, or operating oil wells exist within City limits (DOGGR 2018a).

Figure 4.5-1 Petroleum Infrastructure in the City Limits



Imagery provided by Esri and its licensors © 2018.
 Additional data provided by NPMS, 2018.

Fig 4.5-1 Petro

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle with transportation fuels including the following:

Hydrogen

Hydrogen is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency, which is two to three times more efficient than gasoline vehicles. Currently, 35 hydrogen refueling stations are located in California; however, none are located in Union City (DOE 2018).

Biodiesel

Biodiesel is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant greases. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Biodiesel can run in any diesel engine generally without alterations, but fueling stations have been slow to make it available. There are currently 10 biodiesel refueling stations in California, none of which is located in Union City (DOE 2018).

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored as a way to use electricity generated onboard the vehicle to power electric motors. There are two electrical charging stations in Union City (DOE 2018).

Electricity

California

In 2017, California's in-state electric generation totaled 206,328 gigawatt-hours (GWh) (CEC 2018c). Primary fuel sources for the State's electricity generation in 2017 included natural gas (43.4 percent), large hydro (17.9 percent), solar polar voltaic (PV) (10.6 percent), nuclear (8.7 percent), wind (6.2 percent), geothermal (5.7 percent), small hydro (3.1 percent), biomass (2.8 percent), solar thermal (1.2 percent), coal (<1 percent), petroleum coke (<1 percent), waste heat (<1 percent), and oil (<1 percent) (CEC 2018c). In-state electricity generation capacity reached 79,644 megawatts (MW) in 2017 (CEC 2018c).

California's 2018 Integrated Energy Policy Report

Every two years, the CEC prepares the Integrated Energy Policy Report (IEPR). This year's update to the IEPR highlights the implementation of California's innovative policies and the role the State played in establishing a clean energy economy. Volume II of the 2018 IEPR, scheduled for completion in February 2019, will provide more detail on several key energy issues and will encompass new analyses, as well as opportunities for public participation. According to the 2018 IEPR, California's electric grid relies increasingly on clean sources of energy such as solar, wind,

geothermal, hydroelectricity, and biomass (CEC 2018d). As this transition advances, the grid is also expanding to serve new sectors including electric vehicles, rail, and space and water heating. California has installed more renewable energy than any other state in the United States with 22,250 MW of utility-scale systems operational (CEC 2018d). California's Renewables Portfolio Standard (RPS) establishes increasing renewable energy procurement requirements for electricity utilities and other load-serving entities. The 2018 IEPR identifies RPS targets of 33 percent renewable energy sources by 2020 and 50 percent renewable energy sources by 2030 (CEC 2018d); however, with the adoption of Senate Bill (SB) 100, discussed further under *Regulatory Setting*, the RPS targets have been amended to 33 percent renewable sources by 2020, 50 percent renewable sources by 2026, 60 percent renewable sources by 2030, and 100 percent carbon-free sources by 2045 (California Legislative Information 2018).

Union City

Pacific Gas and Electric (PG&E) is responsible for providing power supply to Union City while complying with county, State, and federal regulations. PG&E's power system is one of the nation's largest electric and gas utilities and maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2018a). In 2017, PG&E's power mix, including all PG&E-owned generation plus PG&E's power purchases, consisted of 33 percent renewable resources, including wind, geothermal, biomass, solar, and small hydro, 27 percent nuclear generation, 20 percent natural gas, 18 percent large hydroelectric facilities, and 2 percent unspecified power that is not traceable to specific sources by any auditable contract trail (PG&E 2018b). Although Union City lies within PG&E's electricity service area, Union City is a participant to the East Bay Community Energy program.

East Bay Community Energy

East Bay Community Energy (EBCE) is a local electricity supplier in Alameda County that provides cleaner energy at competitive rates to service area customers. EBCE member cities include Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Oakland, Piedmont, San Leandro, and Union City. EBCE began providing service to customers in June 2018 and plans to invest in more renewable energy over time as the business matures. EBCE currently provides three power mix options to customers with varying proportions of renewable and carbon-free electricity generation. The most ambitious of these options, Renewable 100, would provide 100 percent renewable-sourced electricity upon customer request (EBCE 2019). Union City opted in at the "Bright Choice" level, which is their standard electrical service.

PG&E's 2018 Integrated Resource Plan

PG&E's 2018 Integrated Resource Plan serves as a roadmap through 2030 that guides PG&E's efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The Integrated Resource Plan introduces new constraints and considerations into the power system planning process and is intended to help applicable parties understand how load serving entities plan to shape their future energy portfolios to meet the State's clean energy goals. In the 2018 Integrated Resource Plan, PG&E analyzes three scenarios for 2030 that differ in various aspects, including the share of electric vehicles in the statewide fleet and availability of different energy sources. According to these scenarios, PG&E anticipates meeting a 2030 energy load demand of between 36,922 gigawatt hours (GWh) and 37,370 GWh (PG&E 2018c).

Natural Gas

California

Natural gas continues to play an important and varied role in California. The State's net natural gas production for 2017 was 162.7 billion cubic feet, or approximately 168,720 billion British thermal units (Btu), representing an increase of 3.6 percent from 2016 production (DOGGR 2018b).

2018 CALIFORNIA GAS REPORT

The 2018 California Gas Report presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. The report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with California Public Utilities Commission (CPUC) Decision D.95-01-039. The projections contained in the California Gas Report are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities (California Gas and Electric Utilities [CGEU] 2018).

California natural gas demand, including volumes not served by utility systems, is expected to decrease at a rate of 0.5 percent per year from 2018 to 2035. The forecast decline is due to a combination of moderate growth in the Natural Gas Vehicle market and across-the-board declines in all other market segments: residential, commercial, electric generation, and industrial markets (CGEU 2018).

Residential gas demand is expected to decrease at an annual average rate of 1.4 percent. Demand in the commercial and industrial markets are expected to increase slightly at an annual rate of 0.2 percent. Stricter codes and standards coupled with more aggressive energy efficiency programs and new goals laid out in SB 350, discussed further under *Regulatory Setting*, are making a significant impact on the forecasted load for the residential, commercial, and industrial markets (CGEU 2018).

For the purposes of load-following as well as backstopping intermittent renewable resource generation, gas-fired generation will continue to be the primary technology to meet the ever-growing demand for electric power; however, overall gas demand for electric generation is expected to decline at 1.4 percent per year for the next 17 years due to more efficient power plants, statewide efforts to minimize greenhouse gas (GHG) emissions through aggressive programs pursuing demand-side reductions, and the acquisition of preferred power generation resources that produce little or no carbon emissions (CGEU 2018).

California's existing gas supply portfolio is regionally diverse and includes supplies from California onshore and offshore sources, Southwestern United States supply sources, the Rocky Mountains, and Canada. Natural gas supplied by PG&E to Union City is sourced primarily by reserves in the Rocky Mountains and Canada (CGEU 2018).

Rocky Mountain Gas Supplies

Natural gas obtained from the Rocky Mountain sources is considered to be a viable alternative to the traditional source of natural gas in the Southwestern United States. These natural gas supplies are delivered to the PG&E service area through the Ruby Pipeline via Malin. Access to Rocky Mountain gas is also available through pipeline interconnections with the San Juan Basin and through the Kern River Pipeline. Rocky Mountain gas has increasingly flowed to Midwestern and Pacific Northwest markets (CGEU 2018).

Canadian Gas Supplies

Natural gas obtained from Canada and delivered to California is not expected to change significantly. Access to natural gas supplies in Canada are delivered to the PG&E service area through the Gas Transmission Northwest Pipeline via Malin. Only a small share of California gas supplies come from Canada due to the high cost of transport (CGEU 2018).

Biogas

There is growing interest regarding biogas¹ production potential in California from the following activities:

- Non-hazardous-waste landfills,
- Landfill diversion of organic waste material,
- Wastewater treatment,
- Concentrated animal feeding operations, and
- Food and green waste processing.

When biogas is conditioned and upgraded to pipeline quality specifications, it can be interconnected to a gas utility's pipeline and distributed to a specific customer. Biomethane may also be consumed on-site for a variety of uses, including electrical power generation from internal combustion engines, fuel cells, and turbines, or as a fuel source for natural gas vehicles. Currently, there are instances where biogas is being vented naturally or flared to the atmosphere, rather than being utilized as a valuable renewable resource (CGEU 2018).

Union City

As no abandoned, orphaned, or active gas wells are located within Union City (DOGGR 2018a), the City does not produce any natural gas. However, Union City has one natural gas refueling station located at the City's Corporation Yard at 34650 Seventh Street. The refueling station is used by the City fleet, Dumbarton Express busses, and garbage and recycling service vehicles for Tri-City Economic Development (Tri-CED) Community Recycling and Republic Services.

b. Energy Demand

Petroleum

California

According to the EIA, transportation accounted for nearly 40 percent of California's total energy demand, amounting to approximately 3,116 trillion Btu in 2016 (EIA 2018b). California's transportation sector, including rail and aviation, consumed roughly 574 million barrels of petroleum fuels in 2016 (EIA 2018c). In 2016, petroleum-based fuels were used for approximately 98.4 percent of the State's total transportation activity (EIA 2018c). The CEC produces the California Annual Retail Fuel Outlet Report, which is a compilation of gasoline and diesel fuel sales data from across the State available at the county level. According to the CEC, California's 2017 fuel sales totaled 15,584 million gallons of gasoline and 3,798 million gallons of diesel (CEC 2018e).

¹ Biogas is a mixture of methane and carbon dioxide produced by the bacterial degradation of organic matter.

Union City

Although no information can be narrowed down to Union City specifically, Alameda County fuel sales are used herein to provide a regional context for fuel consumption in Union City and the surrounding area. State and county fuel consumption are further illustrated in Table 4.5-1. As shown therein, Alameda County consumed an estimated 583 million gallons of gasoline and 114 million gallons of diesel fuel in 2017 (CEC 2018e). As Alameda County had a 2017 population of 1,660,202 (California Department of Finance [DOF] 2018), the County’s annual per capita fuel consumption in 2017 consisted of 351.2 gallons of gasoline and 68.5 gallons of diesel fuel. As shown in Table 4.5-1, each person in Alameda County consumed approximately 47.3 million Btu in transportation fuel in 2017.

Table 4.5-1 2017 Annual Gasoline and Diesel Consumption

Fuel Type	Alameda County	California	Proportion of Statewide Consumption	County per Capita Consumption	County per Capita Consumption (MMBtu)
Gasoline	583,000,000	15,936,000,000	3.7%	351.2	38.56
Diesel	113,730,000	3,798,040,000	3.0%	68.5	8.73
Total	696,730,000	19,734,040,000	–	419.7	47.29

Notes: Diesel and gasoline volumes are expressed in gallons while Btu volumes are expressed in millions of Btu (MMBtu).
Source: CEC 2018e

Electricity

California

According to the CEC, California consumed approximately 288,613 gigawatt-hours (GWh) in 2017, or approximately 984,749 billion Btu (CEC 2017a). According to the CEC’s Energy Consumption Database, residential electricity demand accounted for approximately 32.7 percent of California’s electricity consumption in 2017 while non-residential demand account for approximately 67.3 percent (CEC 2017a).

Union City

Although the 2040 General Plan applies only to the Union City, the smallest scale to which electricity consumption information is available is at the county level. Therefore, electricity consumption in Alameda County is used herein to characterize Union City’s existing electricity consumption. According to the CEC, Alameda County consumed approximately 11,113 GWh in 2017, or approximately 37,916 billion Btu (CEC 2017a). With a population of 1,646,405 in 2017 (DOF 2018), Alameda County’s 2017 per capita electricity consumption was approximately 6.7 MWh. As shown in Table 4.5-2, Alameda County’s per capita electricity consumption was approximately 23 million Btu in 2017.

Table 4.5-2 2017 Annual Electricity Consumption

Energy Type	Alameda County (MWh)	California (MWh)	Proportion of Statewide Consumption	County per Capita Consumption (kWh)	County per Capita Consumption (MMBtu)
Electricity (MWh)	11,112,655.42	288,613,480.22	3.9%	6,749.65	23.03

Notes: Electricity consumption volumes for Alameda County and California are expressed in megawatt-hours (MWh) while County per capita consumption is expressed in kilowatt-hours (kWh) and millions of Btu (MMBtu).

Source: CEC 2017a

Natural Gas

California

In 2017, California consumed a total of 12,571 million U.S. Therms of natural gas, or approximately 1,169 trillion Btu (CEC 2017b). According to the CEC’s Energy Consumption Database, residential natural gas demand accounted for approximately 35.5 percent of California’s total natural gas demand while non-residential natural gas demand accounted for approximately 64.5 percent (CEC 2017b).

Union City

Although the 2040 General Plan applies only to Union City, the smallest scale to which natural gas consumption information is available is at the county level. Therefore, natural gas consumption in Alameda County is used herein to characterize Union City’s existing natural gas consumption. According to the CEC, Alameda County consumed approximately 379 million U.S. Therms of natural gas in 2017, or approximately 35,240 billion Btu (CEC 2017b). With a population of 1,646,405 in 2017 (DOF 2018), Alameda County’s 2017 per capita natural gas consumption was approximately 230 U.S. Therms. As shown in Table 4.5-3, Alameda County’s per capita natural gas consumption in 2017 was approximately 21.4 million Btu.

Table 4.5-3 2017 Annual Natural Gas Consumption

Energy Type	Alameda County (U.S. Therms)	California (U.S. Therms)	Proportion of Statewide Consumption	County per Capita Consumption (U.S. Therms)	County per Capita Consumption (MMBtu)
Natural Gas	379,032,277	12,571,045,754	3.0%	230.22	21.40

Notes: Natural gas consumption volumes for Alameda County and California are expressed in U.S. Therms while County per capita consumption is expressed in U.S. Therms and millions of Btu (MMBtu).

Source: CEC 2017b

c. Regulatory Setting

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce U.S. dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting global climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels
- Reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020 – an increase in fuel economy standards of 40 percent

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation, for establishing and regularly updating vehicle standards. The USEPA administers the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the Corporate Average Fuel Economy program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon for the 1975 model year to 30.7 miles per gallon for the 2014 model year and is proposed to increase to 54.5 by 2025. Light-duty vehicles include autos, pickups, vans, and sport-utility vehicles.

Energy Star Program

In 1992, USEPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for maximum energy use established under the program are certified to display the Energy Star label. In 1996, USEPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

State

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure

needs; and encouragement of urban designs that reduce vehicle miles travelled (VMT) and accommodate pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and CARB prepared and adopted in 2003 a joint agency report, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) required the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The most recent assessment, the *2018 Integrated Energy Policy Report*, contains two volumes. Volume I highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy. Volume II, scheduled for completion in February 2019, will provide more detail on several key energy issues and will encompass new analyses, as well as significant opportunities for public participation (CEC 2018d).

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002), and as expanded under SB 2, established the RPS for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. SB 2 expanded this law and required procurement from eligible renewable energy resources to 33 percent by 2020. In addition, electricity providers subject to the RPS must increase their renewable share by at least one percent each year.

Senate Bill X1-2: California Renewable Energy Portfolio Standard

In 2011, the Governor signed SB X1-2, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 33 percent of their electricity supply from renewable sources by 2020. The California Public Utilities Commission (CPUC) and CEC jointly implement the statewide RPS program through rulemakings and monitoring the activities of electric energy utilities in the State.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Senate Bill 100: California Renewable Energy Portfolio Standard Program: Emissions of Greenhouse Gases

Approved by the Governor on September 10, 2018, SB 100 amends the State's RPS program, which originally called for electricity retailers to ensure 33 percent of electricity generation was sourced from renewable sources by 2020, 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. With implementation of SB 100, electricity retailers must ensure 33 percent of electricity generation is sourced from renewable sources by 2020, 44 percent by 2024, 50 percent by 2026, 52 percent by 2027, and 60 percent by 2030. SB 100 further requires electricity retailers to provide 100 percent zero-carbon electricity generation by 2045.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley bill, amended Health and Safety Code sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the state of California apply for a waiver under the federal Clean Air Act. Although the USEPA initially denied the waiver in 2008, EPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

Energy Action Plan

In the October 2005 *Energy Action Plan (EAP) II*, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, State, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan, Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel

fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods. In 2016, the CEC updated Title 24 standards with more stringent requirements effective January 1, 2017. All buildings for which an application for a building permit is submitted on or after January 1, 2017, must follow the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC Impact Analysis for California's 2016 Building Energy Efficiency Standards estimates that the 2016 Standards are 28 percent more efficient than the previous 2013 standards for residential buildings and five percent more efficient for non-residential buildings. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided these standards exceed those provided in Title 24.

California Green Building Standards Code (2016), California Code of Regulations Title 24, Part 11

California's Green Building Code, referred to as CalGreen, was developed to provide a consistent approach to green building in the State. Having taken effect in January 2016, the most recent version of CalGreen lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved energy efficiency and process improvements. It also includes voluntary tiers to further encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design.

Local

Union City Climate Action Plan

Union City adopted a Climate Action Plan (CAP) in November 2010. The CAP included a GHG emissions inventory for the baseline year 2005. Total annual emissions in 2005 were estimated to be 342,297 MTCO₂e. The CAP projects a business-as-usual emissions scenario for 2020, which

assumes that the historical and current GHG-generating practices and trends for energy consumption, transportation, solid waste, and water consumption will continue until 2020. The 2020 business-as-usual projections do not include GHG reductions associated with the statewide GHG reduction programs or CAP measures.

The CAP sets a series of GHG emission reduction targets for communitywide emissions of 20 percent below 2005 baseline emissions levels by 2020. This equates to an annual reduction of 90,405 MTCO₂e by 2020. Because GHG emissions are largely driven by energy consumption, such as the burning of fossil fuels, a reduction in GHG emissions would also work toward a reduction in energy consumption. The CAP includes reduction strategies in six main Action Areas to assist the City in achieving the reduction target. Each Action Area is subdivided into a series of GHG reduction measures. The six GHG reduction Action Areas include:

- Land Use Action Area
- Transportation Action Area
- Energy Action Area
- Water Action Area
- Waste Action Area
- Green Infrastructure Action Area

The CAP estimates that full implementation of all GHG reduction measures with the effects of AB 1493, the State's Low Carbon Fuel Standard, and the RPS in Union City would result in a combined reduction of 100,060 MTCO₂e per year, or approximately 22.8 percent below 2005 levels, thereby meeting the 2020 GHG reduction target.

The CAP includes an implementation chapter which includes specific actions for the City to facilitate implementation of the GHG reduction measures and evaluate the plan's success. It also establishes criteria for staff to use when determining if a proposed development project is consistent with the CAP for CEQA purposes.

Union City Water Efficient Landscaping Ordinance

Chapter 18.112 of the City's Municipal Code establishes provisions for water management practices and water waste prevention for existing landscapes and establishes a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitation projects by encouraging the use of a watershed approach that requires cross-sector collaboration of industry, governments, and property owners. The ordinance also requires compliance with several Bay-Friendly Landscape practices as improved water conservation is a strategy to improve energy efficiency. Before water is used, it undergoes treatment and transport. Therefore, when less water is used, less energy is required for treatment and transport.

Union City Green Building Standards Code

The City's Green Building Standards Code (Chapter 15.84 of the City's Municipal Code) formally adopts the 2016 California Green Building Standards Code (CalGreen) and State of California amendments, published by the California Building Standards Commission, and all revisions and amendments adopted by the California Building Standards Commission as the Green Building Standards Code of Union City. The California Energy Code is a part of the California Green Building Standards Code, and therefore a part of the City's Green Building Standards Code. The California

Energy Code contains energy efficiency provisions, such as requiring energy efficient indoor light fixtures, and solar water-heating systems in certain restaurants.

4.5.2 Impact Analysis

a. Methodology and Thresholds of Significance

Significance Thresholds

The following thresholds of significance were developed in accordance with Appendix G of the CEQA Guidelines. Energy-related impacts would be significant if the 2040 General Plan would:

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

Methodology

Energy consumption is categorized herein in terms of “direct” and “indirect” energy. Direct energy accounts for energy consumed during operation of the transportation system and land use scenario envisioned under the 2040 General Plan, such as fuel consumed by vehicles, natural gas consumed for heating and/or power, and electricity consumed for power. Indirect energy is the energy needed for construction and maintenance of the transportation system and land use scenario facilitated by the 2040 General Plan. The analysis of direct energy involves the quantification of anticipated transportation fuel, natural gas, and electricity consumption under the 2040 General Plan and a qualitative discussion of the efficiency, necessity, and wastefulness of the energy consumption. Analysis of indirect energy involves a qualitative discussion of construction and maintenance energy requirements anticipated under buildout of the 2040 General Plan.

Direct Energy Consumption

The direct energy analysis for transportation fuel demand under the 2040 General Plan is based on 2017, which is the most recent information available, and 2040 VMT with the 2040 General Plan. The 2017 gasoline and diesel fuel consumption data for Alameda County was converted to annual per capita Btu consumption (refer to Table 4.5-1), converted to daily per capita Btu consumption, and divided by region-wide daily VMT of 1,158,983 to derive a regional Btu/VMT conversion factor of 0.11 Btu per capita per daily VMT.

It should be noted that the Btu/VMT factor is forecast to continue to decrease into the future as a result of improved fuel economy, particularly if the fleet-wide goal of 35 miles per gallon by year 2020 proposed under the Energy Independence and Security Act is met. Applying the 2017-based factor to 2040 VMT therefore provides a conservative evaluation of per capita energy consumption for transportation fuels as the energy efficiency of vehicles in 2040 is likely to be higher than current fuel efficiency of vehicles.

For 2040 natural gas and electricity consumption under buildout of the land use scenario envisioned by the 2040 General Plan, consumption factors were drawn from the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. The CalEEMod data is provided as Appendix B. Transportation fuel, natural gas, and electricity per capita consumption in 2040 is presented in comparison to 2017 per capita consumption for informational purposes.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact E-1 THE DEVELOPMENT AND POPULATION GROWTH FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE OF OVERALL CONSUMPTION OF ENERGY COMPARED TO EXISTING CONDITIONS. HOWEVER, THE 2040 GENERAL PLAN IS BASED ON A LAND-USE STRATEGY THAT WOULD PROMOTE GREATER OVERALL ENERGY EFFICIENCY IN COMMUNITY AND MUNICIPAL OPERATIONS. 2040 GENERAL PLAN POLICIES AND IMPLEMENTATION PROGRAMS WOULD ENSURE THAT DEVELOPMENT UNDER THE 2040 GENERAL PLAN WOULD COMPLY WITH EXISTING ENERGY EFFICIENCY REGULATIONS, AND WOULD ENCOURAGE NEW DEVELOPMENT TO TAKE ADVANTAGE OF VOLUNTARY ENERGY EFFICIENCY PROGRAMS. WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY WOULD NOT OCCUR AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the 2040 General Plan would involve the use of energy during construction and operation. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment. Long-term operation of development projects would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems. In addition, the increase in vehicle trips associated with potential development would increase fuel consumption.

Daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger vehicles, including automobiles, vans and trucks, and transit vehicles, including buses and trains. Increases in motor vehicle trips are primarily a combined function of population and employment growth

Table 4.5-4 shows daily VMT and estimated fuel consumption translated into energy use (Btu) in Union City under 2017 conditions and future 2040 conditions with implementation of the 2040 General Plan. As shown therein, direct transportation energy demand would increase from approximately 130,000 daily Btu per capita to approximately 162,000 daily Btu per capita, an increase of 25 percent over a 23-year period. However, proposed 2040 General Plan Policies M-5.2 and M-5.3 and Implementation Program M-4.C, listed below Table 4.5-4, would improve the availability of alternative transportation modes and help reduce congestion and overall demand for transportation fuels.

Table 4.5-4 Direct Transportation Energy Use in Union City

Year	Daily VMT	Per Capita Btu/ VMT Factor	Direct Energy Consumption (Daily Per Capita MBtu)
2017	1,158,983	0.11	129.56
2040	1,450,235	0.11	162.12

Notes: Daily VMT for Existing and Existing + Proposed General Plan (as provided by Hexagon) were applied to the 2017 and 2040 scenarios, respectively. Daily VMT and county-level fuel consumption information was used to derive a per capita daily Btu per VMT consumption factor. Per Capita Btu/VMT Factor is expressed in singular Btu while Daily Per Capita Direct Energy Consumption is expressed in thousands of Btu (MBtu).

Policy M-5.2: Community Car Sharing. The City shall support car-sharing in public and private development, particularly at and around the Intermodal Station and other transit facilities, as well as high-density and affordable housing development. Preferential parking for car-share vehicles should be provided in employment and entertainment areas.

Policy M-5.3: Explore Car Sharing and Bike Sharing Opportunities. The City shall explore public-private partnerships and other measures to attract car-sharing and bike-sharing companies or services to Union City.

Implementation Program M-4.C. Establish Impact Fee to Include Other Modes. The City shall conduct an AB1600 nexus study to establish a transportation impact fee to ensure fair share contributions to transportation improvements that may include, but are not limited to streets, public transit, bicycles and pedestrian improvements.

Construction and maintenance of future land use development envisioned under the 2040 General Plan would result in short-term consumption of energy resulting from the use of construction equipment and processes. CalGreen includes specific requirements related to recycling, construction materials, and energy efficiency standards that would apply to construction of future development envisioned by the 2040 General Plan and would minimize wasteful, inefficient, and unnecessary energy consumption. Construction and operation of projects facilitated by the 2040 General Plan would be required to comply with relevant provisions of CalGreen and Title 24 of the California Energy Code, as well as the City’s Water Efficiency Landscaping and Construction and Demolition Debris Recycling Ordinances, which would further avoid wasteful, inefficient, and unnecessary energy consumption.

Operation of the development facilitated by the 2040 General Plan would consume natural gas and electricity for building heating and power, lighting, and water conveyance, among other operational requirements. Table 4.5-5 displays per capita natural gas and electricity consumption under buildout of the 2040 General Plan compared to 2017 per capita consumption. As shown therein, per capita natural gas consumption for the anticipated population growth and land use scenario envisioned under the 2040 General Plan would be approximately 1.7 million Btu less than 2017 per capita natural gas consumption, representing an approximately 8.3 percent decrease. However, per capita electricity consumption for the anticipated population growth and land use scenario envisioned under the 2040 General Plan would be approximately 16.9 million Btu more than 2017 per capita electricity consumption, representing an approximately 73.4 percent increase.

Table 4.5-5 Annual Natural Gas and Electricity Consumption in Union City

Year	Per Capita Consumption	Direct Energy Consumption (Per Capita MBtu)
Natural Gas		U.S. Therms
2017	230.22	21,404.30
2040 (Net New Only)	211.00	19,617.10
Electricity		kWh
2017	6,749.65	23,029.80
2040 (Net New Only)	11,701.83	39,926.63

Notes: 2017 per capita consumption is available only on a countywide basis. Therefore, the 2017 per capita consumption is based on the population of all of Alameda County in 2017. The 2040 energy consumption shown in this table represents net new consumption only. Per capita consumption in 2040 is derived from dividing net new energy consumption by net new population anticipated by 2040 (11,486 people). Per capita energy consumption is expressed in U.S. Therms for natural gas, kilowatt-hours (kWh) for electricity, and thousands of Btu (MBtu) for both.

While 2040 natural gas and electricity per capita consumption rates in Union City would change under the implementation of the 2040 General Plan, the per capita consumption rates shown in Table 4.5-5 do not precisely represent the existing per capita consumption as they are based on county-wide information. However, the natural gas and electricity per capita consumption rates for the net new population growth and land use scenario envisioned under the 2040 General Plan are presented above to illustrate the 2040 General Plan's relative energy efficiency compared to the surrounding area. As shown above, Union City's anticipated growth in combination with the land use scenario envisioned by the 2040 General Plan would constitute a lower natural gas and higher electricity per capita consumption than that of Alameda County.

The 2040 General Plan contains goals, policies, and implementation programs that would help minimize the occurrence of inefficient, wasteful, and unnecessary energy consumption during construction and operation of development facilitated by the General Plan. The 2040 General Plan goals, policies, and implementation programs that present the greatest potential for reducing wasteful, inefficient, and unnecessary energy consumption are as follows:

Goal RC-6: The City shall continue to promote programs and initiatives that support and maximize energy conservation and the use of renewable energy in Union City.

Policy RC-6.1: Reduced Energy Consumption. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy RC-6.6: Energy-Efficient Lighting. The City shall employ energy-efficient lighting technology to reduce the energy required to light parks, streets, and public facilities.

Policy RC-6.7: Green Building. The City shall encourage new development to adopt and incorporate green building features included in the CalGreen Tier 1 checklist in project designs, and shall consider future amendments to the municipal Code to adopt CalGreen Tier 1 requirements consistent with the State building code.

Policy RC-6.8: Zero Net Energy. The City shall encourage Zero Net Energy (ZNE) building design for new residential and non-residential construction projects, and consider future amendments to the Municipal Code to adopt ZNE requirements consistent with the State building code.

Policy RC-6.9: Water Heater Replacement. The City shall encourage the use of high-efficiency or alternatively-powered water heater replacements at time of replacement in existing residential development.

Implementation Program RC-6.A: High-Efficiency or Alternatively-Powered Water Heater Replacement Program. The City shall provide educational material and information on the City website and through the Building Division on high-efficiency and alternatively-powered water heater replacement options available to current homeowners considering water heater replacement. The City shall streamline the permitting process for high-efficiency and alternatively-powered water heater replacement, and develop appropriate financial incentives by working with energy utilities or other partners. Replacement water heaters could include high-efficiency natural gas (i.e., tankless), or other alternatively-powered water heating systems that reduce or eliminate natural gas usage such as solar heating systems, tankless or storage electric water heaters, and electric heat pump systems.

Goal PF-2: To operate and function in a sustainable manner, use public revenues and resources efficiently, and provide professional, high-quality service to residents and businesses.

Policy PF-2.13: New Technology in City Facilities. As financially feasible, the City shall incorporate new technology into public buildings and operations on an ongoing basis to increase efficiency and productivity, reduce operating costs, enhance customer service, improve communication with residents, and facilitate access to City services.

Policy PF-2.14: Sustainable Practices. The City shall consider the following as part of everyday operations:

- Implementation of green infrastructure systems that reduce impacts on the environment;
- Purchasing decisions that minimize the generation of waste;
- Recycling programs that reduce waste;
- Energy efficiency and conservation practices that reduce water, electricity, and natural gas use; and
- Fleet operations that reduce gasoline consumption.

Policy PF-2.15: Energy Efficient Buildings and Infrastructure. The City shall continue to improve energy efficiency of City buildings and infrastructure through efficiency improvements, equipment upgrades, and installation of clean, renewable energy systems to achieve climate action goals and reduce operating costs.

In addition to the above policies and implementation programs that aim to reduce wasteful, inefficient, and unnecessary energy consumption, the 2040 General Plan contains policies that would increase the City's reliance on renewable energy sources and decrease the City's reliance on energy procured by fossil fuels. 2040 General Plan policies that would increase city-wide use of renewable energy sources are as follows:

Policy RC-6.2: Renewable Energy. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy RC-6.3: Solar Technology on Private Buildings. The City shall encourage the incorporation of solar panels and other solar technology on parking structures and residential, industrial, and commercial buildings.

Policy RC-6.4: Solar Panels on City Facilities. The City shall install solar panels on City facilities, as appropriate and feasible.

Policy RC-6.5: Use of Landfills for Renewable Energy. The City shall encourage the reuse of closed landfills within the City, including the Turk Island Landfill, as a site for solar or other renewable energy generation.

In addition to the above policies and implementation programs, the 2040 General Plan encourages infill and transit-oriented development and active transportation to reduce overall energy consumption and result in greater energy efficiency throughout the City. For example, the 2040 General Plan contains land-use strategies to encourage higher-density and mixed-use development adjacent to the Intermodal Station, along transit corridors, and near job centers. Mixed-use, transit-oriented, and higher-density development improve energy efficiency as it places City residents closer to places of employment, businesses those residents patronize, and public transit facilities.

The 2040 General Plan further identifies infill development and creative reuse and redevelopment of existing sites as the primary means for accommodating future growth. By placing services and amenities close to where people live and work, the land use scenario envisioned by the 2040 General Plan would minimize the need to drive and reduce per capita energy consumption and greenhouse gases.

Implementation of the 2040 General Plan policies and implementation programs listed above, as well as other policies and implementation programs contained in the 2040 General Plan that would result in indirect energy conservation, such as the promotion of alternative transportation, water conservation, and waste reduction, would promote greater energy efficiency in municipal and community operations and development. Furthermore, the 2040 General Plan contains a land-use strategy that actively promotes infill mixed-use and transit-oriented development, which would result greater energy efficiency overall for City residents, businesses, and City operations. Therefore, the 2040 General Plan would not result in potentially significant environmental effects from wasteful, inefficient, or unnecessary consumption of energy. This impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Impact E-2 THE 2040 GENERAL PLAN WOULD BE CONSISTENT WITH ENERGY EFFICIENCY GOALS CONTAINED IN THE UNION CITY CLIMATE ACTION PLAN. CONSTRUCTION AND OPERATION OF PROJECTS FACILITATED BY THE 2040 GENERAL PLAN WOULD COMPLY WITH RELEVANT PROVISIONS OF THE STATE'S CALGREEN AND TITLE 24 OF THE CALIFORNIA ENERGY CODE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As discussed in the Regulatory Setting above, Union City adopted a Climate Action Plan (CAP) in 2010. The CAP outlines strategies to achieve a GHG reduction target of 20 percent below 2005 emission levels by the year 2020, which equates to an annual reduction of 90,405 MTCO₂e by 2020. The CAP includes reduction strategies in six main Action Areas to assist the City in achieving the reduction target. Each Action Area is subdivided into a series of GHG reduction measures. As shown in Table 4.5-6, the 2040 General Plan would be consistent with the CAP's GHG reduction strategies that specifically target energy efficiency.

In addition, the 2040 General Plan contains Implementation Program RC-7.A, which requires the City to periodically update the CAP to address municipal operations, maintain compliance with CARB GHG reduction targets, and assess and modify existing CAP implementation programs. Although the CAP's primary purpose is to reduce GHG emissions, many of the GHG reduction strategies contained in the CAP target energy efficiency and renewable energy as means to achieving GHG reduction goals.

Table 4.5-6 2040 General Plan Consistency with the Union City Climate Action Plan

CAP GHG Reduction Measure	General Plan Consistency
Land Use Action Area	
<p>LU-1.1: Continue supporting transit-oriented development in the Intermodal Station District and adjacent areas.</p>	<p>Consistent. The 2040 General Plan promotes the strategic development of the remaining vacant land and redevelopment of underutilized sites throughout the City. The 2040 General Plan encourages higher-density and mixed-use development adjacent to the Intermodal Station District, along transit corridors, and near job centers. In addition, the 2040 General Plan contains Policy M-3.5, which requires the City to work with regional partners and seek grants and other transportation funding to continue the development of the Intermodal Station, and to continue exploring options for the potential expansion of services at the Intermodal Station to include intercity, regional, and commuter rail.</p>
Transportation Action Area	
<p>T-2.2: Convert bus fleet to compressed natural gas or hybrid vehicles.</p>	<p>Consistent. Policy M-3.21, <i>Greening the Bus Fleet</i>, of the 2040 General Plan requires the City to continue to increase the use of alternative fuel vehicles in the bus fleet and support opportunities for in-route charging infrastructure for electric transit vehicles. The 2040 General Plan additionally contains Implementation Program M-3.C, which requires the City to convert its bus fleet to a zero-emission fleet as vehicle replacement funds become available through MTC [Metropolitan Transportation Commission] and the Federal Transit Administration.</p>
<p>T-3.1: Increase participation of employers in transportation demand management programs.</p>	<p>Consistent. The 2040 General Plan contains several policies and implementation programs aimed at supporting programs and strategies the City and employers can implement to reduce congestion, VMT, and parking demand. For example, Policy M-5.1 requires the City to work with landowners and employers in existing and emerging employment centers to implement transportation demand management strategies, including but not limited to:</p> <ul style="list-style-type: none"> ▪ Transit vouchers; ▪ Van and car pool programs; ▪ Car-sharing and bike-sharing programs; ▪ Shuttles to BART [Bay Area Rapid Transit]; ▪ Secure bike lockers/parking and showers; ▪ Convenient and weather protected transit stops and shelters; and ▪ Flexible work hours that start and end outside of the traditional work schedule. <p>Furthermore, the 2040 General Plan contains Policies M-5.2 through M-5.6, which encourage landowners and employers to reduce peak-hour commute trips and increase the use of public transit and ride-sharing programs through a variety of strategies.</p>

CAP GHG Reduction Measure	General Plan Consistency
Buildings and Energy Action Area	
<p>E-1.1: Develop a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to homeowners.</p>	<p>Consistent. With implementation of the 2040 General Plan, the City would implement several energy efficiency programs, and implementation of the 2040 General Plan would not prevent the City from developing a comprehensive energy efficiency program for homeowners which may encompass individual existing and future energy efficiency programs. Policies and implementation programs under the 2040 General Plan that promote the use or require the incorporation of energy efficiency programs include the following:</p> <ul style="list-style-type: none"> ▪ Policy PF-3.5: Water Efficient Landscape Ordinance. ▪ Policy PF-3.7: Water Conservation Education and Incentives. ▪ Policy PF-3.8: Promote Bay Friendly Landscaping. ▪ Implementation Program PF-3.A: Update City Website to Promote Bay-Friendly Landscaping. ▪ Policy PF-6.3: Solid Waste Diversion. ▪ Policy PF-6.5: Explore Methods for Repurposing and Reusing Electronics. ▪ Implementation Policy PF-6.A: Public Education Program on Waste Reduction, Recycling, Composting, and Green Purchasing. ▪ Policy PF-7.1: Community Choice Energy. ▪ Policy RC-6.7: Green Building. ▪ Policy RC-6.8: Zero Net Energy. ▪ Policy RC-6.9: Water Heater Replacement. ▪ Implementation Program RC-6.A: High-Efficiency or Alternatively-Powered Water Heater Replacement Program. <p>Implementation of the above policies and implementation programs contained in the 2040 General Plan would collectively constitute a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to homeowners and commercial and industrial building owners.</p>
<p>E-2.1: Work with PG&E to promote existing household appliance upgrades.</p>	<p>Consistent. The 2040 General Plan contains Implementation Program RC-6.A, which requires the City to provide educational material and information on the City website and through the Building Division on high-efficiency and alternatively-powered water heater replacement, and develop appropriate financial incentives by working with energy utilities or other partners.</p>
<p>E-3.1: Develop a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to commercial and industrial building owners.</p>	<p>Consistent. See response to Buildings and Energy Action E-1.1.</p>
<p>E-3.2: Promote 'Cool Roofs'.</p>	<p>Consistent. The 2040 General Plan contains strategies for conserving resources for a variety of reasons, which may include the application of 'cool roofs'. For example, Policy RC-3.4 requires the City to require new development to comply with the most recent version of the San Francisco Bay Regional Municipal Stormwater Permit, which focuses on the incorporation of low impact development measures into development projects to improve the quality of stormwater runoff including, but not limited to, green roofs. While the 2040 General Plan does not specifically promote the application of green roofs or 'cool roofs' for the purpose of reducing energy demand and associated GHG emissions, the 2040 General Plan would not prevent the City from further promoting the application of green roofs or 'cool roofs' to meet energy efficiency goals.</p>

CAP GHG Reduction Measure	General Plan Consistency
E-4.1: Continue implementing the Green Building Ordinance.	Consistent. Through Policy RC-6.7 of the 2040 General Plan, the City would encourage new development to adopt and incorporate green building features included in the CalGreen Tier 1 checklist in project designs, and would consider future amendments to the Municipal Code to adopt CalGreen Tier 1 requirements consistent with the State building code.
E-5.1: Work to accelerate Smart Grid integration in existing and new buildings.	Consistent. Implementation of the 2040 General Plan Policy PF-7.5, which requires the City to work with utility providers to educate residents, property owners, and businesses about smart grid and smart appliance technologies, as well as energy conservation opportunities using smart meter technology, would aid in accelerating adoption and integration of smart grid technologies throughout the city.
E-6.1: Develop a program to facilitate the installation of solar hot water heaters in homes.	Consistent. See response to Buildings and Energy Action E-2.1.
E-7.1: Develop a comprehensive solar PV program that provides outreach, financing, and other forms of assistance to homeowners.	Consistent. The City promotes the use of solar PV in new development and redevelopment of existing land uses under the 2040 General Plan. For example, Policy PF-7.6 requires that the City expedite the review and permitting of solar installation. In addition, Policy RC-6.3 illustrates how the City would encourage the incorporation of solar panels and other solar technology on parking structures and residential, industrial, and commercial buildings.
E-7.2: Develop a comprehensive solar PV program that provides outreach, financing, and other forms of assistance to commercial and industrial building owners.	Consistent. See response to Buildings and Energy Action E-7.1.
E-8.1: Explore opportunities to reduce energy consumption of wastewater facilities through methane-to-energy production, as well as solar PV installation.	Consistent. The 2040 General Plan contains several policies and implementation programs that would require the City to improve energy efficiency of City buildings and infrastructure and to seek out opportunities and grant funding for the development of renewable energy sources, such as the installation of PV systems, at municipal facilities. Specifically, Policy PF-4.3 requires the City to support efforts by Union Sanitary District to supply the energy demand from the wastewater treatment facility through renewable energy generation.
Waste Reduction Action Area	
WR-1.1: Increase Waste Diversion Target to 90 percent.	Consistent. The 2040 General Plan would improve waste diversion activities in the City with Policy PF-6.3, which requires that the City meet or exceed State goals for waste diversion from landfills and Alameda County Waste Management Authority requirements for recycling and composting through enhancement of programs that reduce, reuse, and recycle waste and through ongoing and consistent public outreach and education, monitoring, and enforcement activities.
Water Conservation Action Area	
WC-1.1: Water Efficient Landscape Ordinance.	Consistent. The 2040 General Plan promotes efficient water use and reduced water demand by ensuring compliance with the City's Water Efficient Landscape Ordinance. Policy PF-3.5 requires the City to review and update the Water Efficiency Landscape Ordinance, as needed, to ensure that it is consistent with State law.

CAP GHG Reduction Measure	General Plan Consistency
<p>WC-1.2: Indoor and Outdoor Non-potable Water Systems Program.</p>	<p>Consistent. While the 2040 General Plan does not specifically identify an Indoor and Outdoor Non-potable Water Systems Program, it does contain several water conservation policies and implementation plans that target increased use of treated wastewater. For example, Policy PF-4.4 requires that the City support the Union Sanitary District in efforts to reuse treated wastewater by reclaiming it for irrigation or as a recharge to the underground storage. In addition, the 2040 General Plan does not contain any features or components that could prevent the City from creating an Indoor and Outdoor Non-potable Water Systems Program.</p>
<p>WC-2.1: Work with Alameda County Water District to expand outreach programs and incentivize water conservation throughout Union City.</p>	<p>Consistent. The 2040 General Plan contains measures to increase support for Alameda County Water District efforts to improve water conservation. For example, Policy PF-3.7 requires the City to work with Alameda County Water District to expand outreach programs and incentivize water conservation throughout Union City.</p>
Green Infrastructure Action Area	
<p>GI-1.1: Expand the urban forest to sequester carbon and reduce building energy consumption.</p>	<p>Consistent. The 2040 General Plan contains policies that would result in the expansion of the urban forest, which would reduce building energy requirements. For example, Policy CD-1.4 requires the City to encourage aesthetic improvements to its shopping centers that include measures such as constructing parking areas with tree coverage that is attractive and provides adequate shading. The 2040 General Plan does not prevent the expansion of the urban forest or reduce the City's existing urban forest.</p>

The 2040 General Plan would be consistent with Union City's CAP and the energy efficiency strategies contained therein. As described in Impact E-1, above, construction and operation of projects facilitated by the 2040 General Plan would be required to comply with relevant provisions of CalGreen and Title 24 of the California Energy Code. Therefore, this impact would be less than significant and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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4.6 Geology and Soils

This section addresses the potential physical environmental effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, and paleontology within Union City from implementation of the 2040 General Plan.

4.6.1 Setting

a. Regional Geology

Union City is within the Coast Ranges geomorphic province of California (California Geological Survey 2002). The Coast Ranges extend about 600 miles from the Oregon border south to the Santa Ynez River in Santa Barbara County (Norris and Webb 1990). The Coast Ranges are composed of a complex assemblage Mesozoic metasedimentary and metavolcanic rock of the Franciscan Assemblage, marine and nonmarine sedimentary rock of the Cretaceous Great Valley Sequence, and Cenozoic marine and nonmarine shale, sandstone, and conglomerate. In the East Bay Plain in western Union City, Quaternary alluvial and marine deposits overlie the Mesozoic Franciscan Assemblage. In the East Bay Hills in the eastern portion of Union City coinciding with the hillside area, rock units of the Mesozoic Great Valley Sequence and Cenozoic sedimentary strata are well-exposed (Graymer et al. 1997).

Union City encompasses two distinctly different geologic and geomorphic regions that are separated by the northwest trending Hayward Fault, located just east of State Route 238, also called Mission Boulevard. The western, urbanized portion of Union City west of State Route 238 is characterized by the low-lying, gently sloping, and nearly level alluvial and estuarine landforms that surround the San Francisco Bay. The less developed portions of Union City, generally composed of open space uses, lie east of the Hayward Fault and are characterized by the sloping upland landforms of the northwest-trending East Bay Hills, which separate San Francisco Bay from the Livermore Valley to the northeast (Union City 2015).

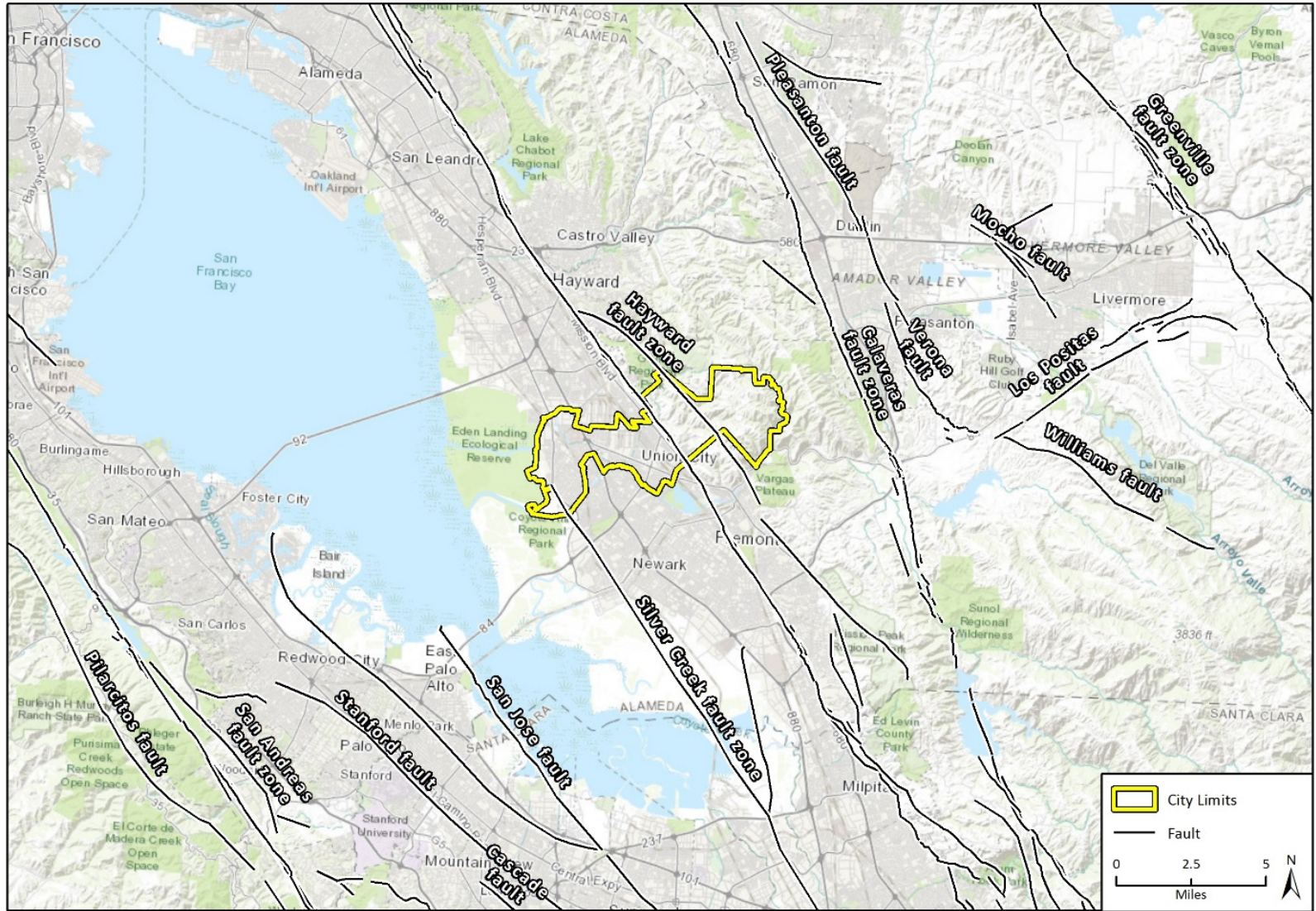
According to the 2040 General Plan, although the likelihood is greatest that the next major San Francisco Bay Area earthquake will occur on the Hayward Fault, major earthquake events on other active Bay Area faults, such as the San Andreas and the Calaveras Faults, would also likely affect Union City. These faults are shown Figure 4.6-1. The San Andreas Fault is parallel to the Hayward Fault but across the San Francisco Bay on its western side, while the Calaveras Fault is east of the Hayward Fault.

b. Local Geologic Setting

Soils

Soils in Union City differ mainly in texture, depth, and drainage, all of which are determined largely by the environments in which the soils are formed. There are two regions in Union City with distinct soil composition. These two regions are divided by the Hayward Fault, which is located generally along State Route 238. State Route 238 divides the western, populated area of Union City from the mostly undeveloped eastern area, which consists mainly of the hillside area. The soils that exist on the hills east of the Hayward Fault consist of well drained, shallow-to-moderately deep, loam, silt loam, and silty clay loam soils. In the populated area west of the Hayward fault zone, soils are very deep and are generally finer textured and less well drained. Soils on the gently sloping alluvial plains

Figure 4.6-1 Regional Faults



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Fault data provided by Bryant, W. A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: CGS.

Fig 4.6-1 Regional Faults

that extend from the base of the hills east of the Hayward Fault towards the nearly level basins and tidal flats in the westernmost portions of the city consist of very deep, well drained and somewhat poorly drained loams, silt loams, and silty clay loams formed from underlying coarse- and medium-grained alluvium.

Geologic Units

The geologic units in Union City are mapped at a scale of 1:24,000 by Dibblee and Minch (2005a-d). The mapped units include Mesozoic rocks of the Franciscan Assemblage (fs) and Great Valley Sequence (Kp, Kps, Jkk, Jkcc); the Eocene Tolman Peak Formation (Tes); the Miocene Monterey Group (Tm, Tmc), Briones Formation (Tbr), and Orinda Formation (Tor, rh); and undivided Quaternary alluvial deposits (Qa) (Figure 4.6-2).

Mesozoic Rock Units

Metasedimentary rock of the Jurassic to Cretaceous Franciscan Assemblage (fs) is mapped in a small exposure in western Union City near Alameda Creek. The Franciscan Assemblage includes over 55,000 feet of greywacke, shale, greenstone, and bluestone metasedimentary rocks as well as ophiolite sequences, which were originally deposited on an ancient seafloor during the Jurassic to Cretaceous (Graymer et al. 2007). The extreme heat and pressure during high- to medium-grade metamorphism generally destroys fossils in the parent rock, but fossil preservation is more common in lower-grade rocks such as the metasedimentary rocks in the Franciscan Assemblage. At least two unidentified invertebrate fossil localities have been recorded in metasedimentary rocks of the Franciscan Assemblage in Alameda County (University of California Museum of Paleontology [UCMP] 2018); however, vertebrate fossils have not been reported in the vicinity of Union City. Sedimentary and metasedimentary rocks of the Franciscan Assemblage have yielded several fossil localities elsewhere in California, which produced fossil specimens of dinosaur and plesiosaur (UCMP 2018).

The Jurassic to Cretaceous Knoxville Formation and Cretaceous Panoche Formation of the Great Valley Sequence are exposed in the East Bay Hills in eastern Union City, coinciding with the hillside area. The Panoche and Knoxville Formations have yielded numerous localities, which produced fossil specimens of reptile and mollusk within Alameda County, and the fine-grained marine rock of the Great Valley Sequence has yielded at least one Cretaceous locality near Eden Canyon, which yielded a fossil specimen of bony fish.

Eocene Sedimentary Rock

The Eocene Tolman Peak Formation (Tes) is fine-grained carbonate rock unit mapped in the Chabot fault zone in Union City (Dibblee and Minch 2005a). The Tolman Peak Formation is composed of gray limestone interbedded with dark gray to greenish-gray, massive lithic sandstone, medium- to coarse-grained arkose, and pebble conglomerate with calcite cement. Graymer et al. (1997) reports abundant fossil algae in the carbonate rocks of the Tolman Peak Formation and the UCMP (2018) reports at least two invertebrate localities in Alameda County that produced unidentified fossil specimens. According to the UCMP (2018), no vertebrate or other significant fossils have been recorded in the unit.

Miocene Sedimentary Rock Units

The Monterey Group, Briones Formation, and Orinda Formation are exposed in the East Bay Hills in the hillside area in eastern Union City (Graymer et al. 2005a-d; Graymer et al. 1997). Numerous

vertebrate fossil localities have been documented from the Monterey Formation, which yielded specimens of large sea turtles, whale, dolphins, sea lions, shark bones and teeth, sea cows, fish, birds, and many other fauna (Bramlette 1946; UCMP 2018). In addition, the deposit has yielded fossils of numerous species of scientifically significant invertebrates, foraminifera, and plants, such as kelps and other large soft-bodied seaweeds.

The Briones and Orinda Formations have yielded numerous fossil localities throughout the East Bay Hills and Diablo Range, including specimens of large land mammals, reptiles, fish, birds, sharks, mollusks, crustacean, echinoid, and brittle stars (UCMP 2018). Within Alameda County, at least six vertebrate localities have been recorded within the Briones and Orinda Formations, which produced several fossils of extinct horse, rabbit, and desmostylus.

Quaternary Alluvium

Quaternary alluvium is mapped throughout the western portion of Union City. Dibblee and Minch (2005a-c) map the Quaternary alluvium as undifferentiated Holocene to Pleistocene alluvial gravel, sand, and clay of valleys and stream channels. Helley and Graymer (1997) differentiate the Quaternary deposits in Union City and map them separately as Pleistocene alluvial fans and fluvial deposits (Qpaf); and Holocene alluvial fan (Qhaf), basin (Qhb), levee (Qhl), flood-plain (Qhfp), and flood-basin (Qhbs) deposits. The differentiated Quaternary alluvium units are not indicated in Figure 4.6-2, but were included in the analysis for the paleontological sensitivity of the geologic units within Union City, as shown in Figure 4.6-3. Numerous terrestrial vertebrate localities have been identified in Pleistocene alluvial deposits in the Bay Area. According to records from the UCMP (2018) recovered fossils include specimens of ground sloth, mammoth, horse, bison, and mastodon. Holocene deposits are generally considered too young to contain fossilized remains.

c. Seismic Hazards

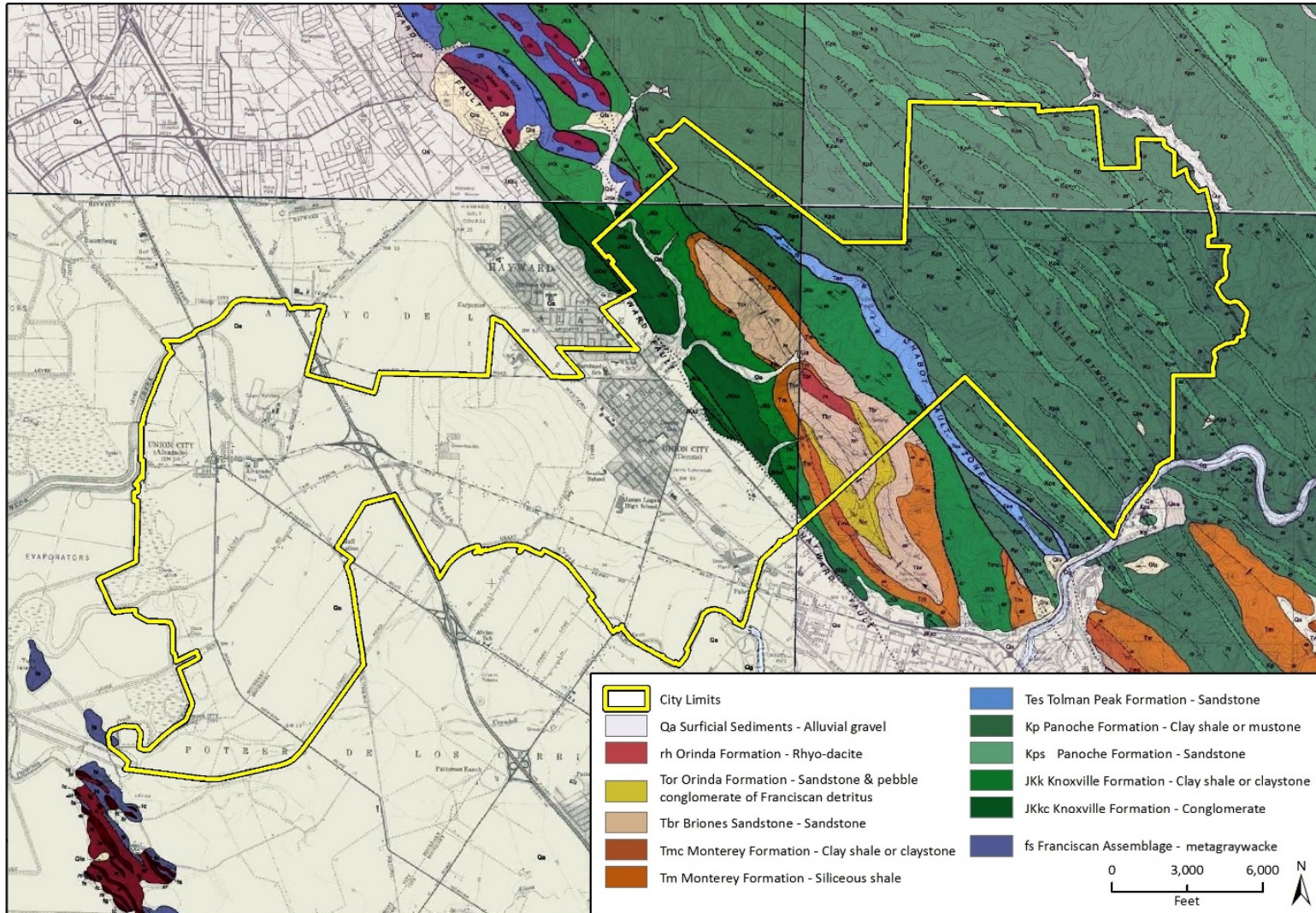
Northern California is a region of high seismic activity. Similar to most cities in the region, Union City is subject to risks associated with potentially destructive earthquakes. Union City lies in a seismically active region of Northern California, and is bisected by the Hayward Fault, as shown on Figure 4.6-2. The San Andreas and Calaveras Faults, among others, are also nearby. The type and magnitude of seismic hazards with the potential to affect Union City are dependent on the distance to the epicenter of the earthquake, the nature of the fault on which the earthquake is located, and the intensity and magnitude of the seismic event.

Surface Rupture

Surface rupture represents the breakage of ground along the surface trace of a fault, which is caused by the intersection of the fault surface area ruptured in an earthquake with the earth's surface. Fault displacement occurs when material on one side of a fault moves relative to the material on the other side of the fault. This can have particularly adverse consequences when buildings are located within the rupture zone. It is not feasible, from a structural or economic perspective, to design and build structures that can accommodate rapid displacement involved with surface rupture. Amounts of surface displacement can range from a few inches to tens of feet during a rupture event.

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) regulates development near active faults to mitigate the hazard of surface fault rupture. Essentially, this Act contains two requirements: (1) it prohibits the location of most structures for human occupancy across the trace of active faults; and (2) it establishes Earthquake Fault Zones and requires geologic/seismic studies of all proposed

Figure 4.6-2 Geologic Units Mapped in Union City



Geological basemaps provided by Dibblee, T.W., and Minch, J.A., 2005, Geologic maps of the Dublin, Hayward, Niles, and Newark quadrangles, Contra Costa and Alameda Counties, California; Dibblee Geological Foundation.

Fig X Geologic Units in the General Plan Area v2

developments within 1,000 feet of the zone. The Earthquake Fault Zones are delineated and defined by the State Geologist and identify areas where potential surface rupture along a fault could occur. State Route 238 is immediately adjacent to and west of the Hayward Fault, which is a designated earthquake fault zone pursuant to the A-P Act (Union City 2015).

Groundshaking

The major cause of structural damage from earthquakes is groundshaking. The intensity of ground motion expected at a particular site depends upon the magnitude of the earthquake, the distance to the epicenter, and the geology of the area between the epicenter and the property. Greater movement can be expected at sites located on poorly consolidated material, such as alluvium, within close proximity to the ruptured fault, or in response to a seismic event of great magnitude. Union City is susceptible to very strong levels of earthquake shaking severity. The potential shaking severity is violent in the area east of Decoto Road along State Route 238, which runs through Union City in a northwesterly direction and divides Union City's developed western portion and mostly undeveloped and sloping eastern portion (Union City 2015).

The most extreme groundshaking in Union City would occur as a result of earthquakes along the Hayward Fault. Groundshaking intensity would be greatest on the alluvial landforms that lie west of the Hayward Fault due to their fine textured sediments and soils. These conditions tend to amplify seismic waves to a greater extent than the hard bedrock that underlies the upland landforms east of the Hayward Fault (Union City 2015).

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated granular and non-plastic fine-grained soils lose their structure/strength when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: 1) shallow groundwater within the top 50 feet of the ground surface; 2) low-density non-plastic soils; and 3) high-intensity ground motion. Liquefaction hazard maps indicate that portions of central and southeast Union City are susceptible to high and very high levels of liquefaction, while the remainder of the developed area in the city is susceptible to moderate levels of liquefaction. East of State Route 238, the liquefaction hazard is generally very low (Union City 2015).

Landslides and Slope Stability

Seismic ground shaking can also result in landslides and other slope instability issues. Landslides occur when slopes become unstable and masses of earth material move downslope. Landslides are usually rapid events, often triggered during periods of rainfall or by earthquakes. Mudslides and slumps are a more shallow type of slope failure. They typically affect the upper surficial soils horizons rather than bedrock features. Usually mudslides and slumps occur during or soon after periods of rainfall, but they can be triggered by seismic shaking. Pockets in the hillside area of Union City are subject to high landslide likelihood (Union City 2015).

Faults

Faults are categorized as active, potentially active, and inactive. A fault is classified as active if it has moved during the Holocene time, which consists of approximately the last 11,000 years. A fault is classified as potentially active if it has experienced movement within Quaternary time, which is

during the last 1.8 million years. Faults that have not moved in the last 1.8 million years are generally considered inactive.

Segments of three major, northwest-trending fault zones fall within the boundaries of Union City: the Hayward fault zone, the Mission fault zone, and the Silver Creek fault zone. However, of these three fault zones, only the Hayward fault zone contains fault traces that exhibit physical evidence of displacement since historic recordkeeping began. Although the likelihood is greatest that the next major San Francisco Bay Area earthquake will occur on the Hayward fault, major earthquake events on other active Bay Area faults, such as the San Andreas and the Calaveras faults, would also likely affect Union City (Union City 2015).

d. Recent Seismic Activity

Alameda County has been subject to numerous seismic events, originating both on faults within the county and in other parts of the region. Six major Bay Area earthquakes have occurred since 1800 that have affected the county, and at least two of the faults that produced them run through or into the county. These earthquakes and the originating faults include the 1836 and 1868 earthquakes on the Hayward-Rogers Creek Fault, and the 1861 earthquake on the Calaveras Fault. Three earthquakes, in 1838, 1906, and 1989 originated on the San Andreas fault, west of the county near San Francisco or to the south.

The 1868 earthquake that struck the Hayward Fault caused surface rupture to occur. Surface rupture of the ground in 1868 was traced for 20 miles along the Hayward Fault, from Warm Springs in Fremont north to San Leandro. Union City is in the center of this distance and would have been affected dramatically, although at the time the area was sparsely populated. Historical land-survey data suggests that the fault broke as far north as Berkeley, approximately 25 miles north of Union City, with an average horizontal movement of about six feet. Given the geology of California and its susceptibility to earthquakes, as well as a recorded history of surface rupture along the Hayward Fault, the next significant impending earthquake along the Hayward Fault is likely to cause surface rupture within Union City as well.

e. Other Geologic Hazards

Some of the seismic hazards discussed above, such as subsidence, landslides and slope instability, can be triggered by or occur independently of seismic events. Others, such as subsidence, expansive soils, and soil erosion occur independently of seismic events, and are discussed here.

Subsidence

Subsidence refers to the sinking of a large area of ground surface in which material is displaced vertically with little or no horizontal movement. Subsidence originates at great depths below the surface when subsurface pressure is reduced by the natural loss or human withdrawal of fluids, such as groundwater, natural gas, or oil, or can occur due to soil compression. Alluvial soils west of the Hayward fault zone in Union City are susceptible to subsidence (Union City 2015).

Expansive Soils

Expansive soils swell with increases in moisture content and shrink with decreases in moisture content. These soils usually contain high clay content. Foundations for structures constructed on expansive soils require special design considerations. Because expansive soils can expand when wet and shrink when dry, they can cause foundations, basement walls and floors to crack, causing

substantial structural damage. As such, structural failure due to expansive soils near the ground surface is a potential hazard. Soils with high shrink-swell potential, which can also impose limitations on certain types of urban development, exist in some of the eastern, upland portions of Union City in the hillside area.

Soil Erosion

Erosion refers to the removal of soil by water or wind. Factors that influence erosion potential include the amount of rainfall and wind, the length and steepness of the slope, and the amount and type of vegetative cover. Depending on how well protected the soil is from these forces, the erosion process can be very slow or rapid. Properties of the soil also contribute to how likely or unlikely it is to erosion. Removal of natural or man-made protection can result in substantial soil erosion and excessive sedimentation and pollution problems in streams, lakes, and estuaries. Construction activities represent the greatest potential cause of erosion. Soils in the hillside area of Union City are located on steep slopes, which make them susceptible to water erosion. Soils on the nearly level floodplains and tidal flats that occupy the westernmost portions of Union City consist of very deep, poorly-drained clays and silty clays formed from fine-grained alluvium. These soils have slow permeability and limited erosion hazard. The majority of Union City is developed and urbanized, with little to no surface soils exposed, and thus, little to no erosion potential.

f. Regulatory Setting

Federal

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). Union City is within a watershed administered by the San Francisco RWQCB, Region 2 (SWRCB 2018).

Disaster Mitigation Act of 2000

Congress passed the Disaster Mitigation Act of 2000 to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act by invoking new and revitalized approaches to mitigation planning. Section 322 of the Act emphasized the need for state and local government entities to closely coordinate on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. Communities with an adopted and federally-approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next declared disaster.

To implement the new Stafford Act provisions, the Federal Emergency Management Agency published requirements and procedures for local hazard mitigation plans in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201.6. These regulations specify minimum standards

for developing, updating, and submitting local hazard mitigation plans for agency review and approval at least once every five years.

State

California Building Code

The California Building Code (CBC), Title 24, Part 2 provides building codes and standards for the design and construction of structures in California. The 2016 CBC is based on the 2015 International Building Code with the addition of more extensive structural seismic provisions. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures. The CBC requires addressing soil-related hazards, such as treating hazardous soil conditions involving removal, proper fill selection, and compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist the forces of expansive soils.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed into law following the destructive San Fernando earthquake on February 9, 1971. The Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the 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. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 was passed into law following the destructive Loma Prieta earthquake on October 17, 1989. The Act directs the California Geological Survey to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by the California Geological Survey in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

California Environmental Quality Act

Paleontological resources are protected under the CEQA, which states, in part, that a project will “normally” have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Appendix G of the State CEQA Guidelines the question is posed, “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered. Therefore, mitigation of adverse impacts, to the extent practicable, to paleontological resources is mandated by CEQA.

California Public Resources Code

Section 5097.5 of the California Public Resource Code (PRC) states “no person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface” any “vertebrate paleontological site” on public lands without the “permission of the public agency having jurisdiction over such lands”. Violation of this section is a misdemeanor.

As used in this PRC section, “public lands” means lands owned by or under the jurisdiction of the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions undertaken by others.

Local

Multi-Jurisdiction Hazard Mitigation Plan

The Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan was adopted in 2017 and includes risk assessment for different hazards and mitigation goals and objectives aimed at reducing the potential loss of life, property, damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters (Union City/Newark Planning Team 2017).

Union City Municipal Code

Chapter 15.84 of the Union City Municipal Code adopts by reference the 2016 California Green Building Standards Code. Chapter 15.85 establishes grading and erosion control requirements, including regulating cut and fill, grading plans, and when geotechnical reports are required. The Union City Municipal Code Section 15.85.100 requires a geotechnical report be submitted with applications for a grading permit, and Section 17.20.060 requires soil and geological investigation at the time of filing a tentative map for subdivision projects. Section 18.96.050 requires a soil and geologic investigation for development applications within the Hillside Combining District, and Section 18.92.110 requires the same for use permits within the Open Space Zoning District.

4.6.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

This section describes the potential environmental impacts of the 2040 General Plan relevant to geology and soils. The impact analysis is based on an assessment of baseline conditions for Union City, including topography, geologic and soil conditions, and seismic hazards, as described above under the Subsection 4.6.1, Setting. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to development under the 2040 General Plan. This section identifies and describes impacts and recommends mitigation measures, when necessary, to avoid or minimize impacts.

Paleontological Resources Sensitivity

Paleontological resources, or fossils, are the remains and/or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the

sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they do occur during construction.

Absent specific agency guidelines, most professional paleontologists in California adhere to guidelines set forth by SVP (2010) in "Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources." These guidelines establish detailed protocols for the assessment of the paleontological resource potential, or "sensitivity" of a project area and outline measures to follow in order to mitigate adverse impacts to known or unknown fossil resources during project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) or members thereof underlying a project area can be assigned to a high, undetermined, low, or no paleontological sensitivity category, as defined by SVP (2010). This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. While these standards were specifically written to protect vertebrate paleontological resources, all fields of paleontology have adopted these guidelines.

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and geologic processes. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiocarbon dating is possible. As such, common fossils, especially vertebrates, may be scientifically important, and therefore considered highly significant.

Significance Thresholds

The following thresholds of significance are based on Appendix G of the *CEQA Guidelines*. For the purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would do any of the following:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
 - Strong seismic ground shaking
 - Seismic-related ground failure, including liquefaction
 - Landslides
2. Result in substantial soil erosion or the loss of topsoil
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse

4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Threshold 1: Would the General Plan directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?

Threshold 3: Would the General Plan 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?

Impact GEO-1 CONSTRUCTION AND OCCUPANCY OF DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD RESULT IN EXPOSURE OF PEOPLE OR STRUCTURES TO A RISK OF LOSS, INJURY, OR DEATH FROM SEISMIC EVENTS. HOWEVER, REQUIRED ADHERENCE TO THE REQUIREMENTS OF THE CBC, UNION CITY MUNICIPAL CODE, AND IMPLEMENTATION OF THE GOALS AND POLICIES OF THE 2040 GENERAL PLAN, WOULD REDUCE THE POTENTIAL FOR LOSS, INJURY, OR DEATH FOLLOWING A SEISMIC EVENT TO A LESS THAN SIGNIFICANT LEVEL.

The 2040 General Plan would facilitate additional residential and nonresidential development within the City. As such, additional residents and employees could be potentially exposed to the effects of fault rupture and seismic groundshaking. An Alquist-Priolo zone associated with the Hayward Fault crosses Union City east of State Route 238, and in general, all buildings located in Union City are vulnerable to earthquake damage. Current building codes address seismic safety mostly to protect occupant lives during an earthquake. However, newly constructed buildings can still be significantly damaged during a major earthquake. Therefore, new structures built under the 2040 General Plan could also experience substantial damage during seismic groundshaking events.

Furthermore, development facilitated by the 2040 General Plan could expose residents and employees to seismic-related ground failure, including liquefaction, or landslides from local and regional earthquakes. Portions of central and southeast Union City are susceptible to high and very high levels of liquefaction, while the remainder of the developed area in the City is susceptible to moderate levels of liquefaction. Area of high landslide likelihood are limited to pockets in the hillside area, which is mostly undeveloped. As described in Section 2, *Project Description*, the 2040 General Plan does not facilitate development in the hillside area. A Specific Plan must be prepared in order to facilitate development of the hillside area. Such a Specific Plan has not been prepared and is not included in the 2040 General Plan.

The 2040 General Plan would encourage infill development, which would in many cases replace older buildings subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects of strong ground shaking. Potential structural damage and the exposure of people to the risk of injury or death from structural failure would be minimized by required compliance with CBC engineering design and construction measures. Foundations and other structural support features would be designed to resist or absorb damaging forces from strong ground shaking and liquefaction in accordance with CBC requirements.

The Safety Element of the 2040 General Plan contains Goal S-3 and associated policies, listed below, related to minimizing the risks associated with geologic and soils hazards in order to protect public health and safety, property, and the environment.

Goal S-3: To minimize the risks associated with geologic and soils hazards in order to protect public health and safety, property, and the environment.

Policy S-3.1: Geotechnical Studies for New Development. The City shall require investigations by a qualified geologist or soils engineer prior to issuing building permits or discretionary approvals (e.g., general plan or zoning map amendment, site development review, use permit, subdivision map) for any new construction, unless waived by the Building Official. Soils engineering reports shall specifically address secondary seismic hazards, especially potential for soil liquefaction, ground shaking, lateral spreading, and local subsidence. All such reports shall be evaluated for completeness and accuracy by either City staff or a qualified third-party consultant paid for by the applicant or property owner. The reports shall identify appropriate mitigation measures to minimize risk.

Policy S-3.2: Soils and Geologic Engineering Reports for Lands East of Mission Boulevard. The City shall require soils and geologic engineering reports for sites within the Special Seismic Studies Zone (i.e., Alquist-Priolo Zone) and lands east of Mission Boulevard that address risks related to primary effects of ground rupture along fault traces and secondary seismic effects of slope instability and erosion control consistent with Building Code requirements and the Alquist-Priolo Act (see Figure S-3.1). The reports shall identify appropriate mitigation measures to minimize risk.

Policy S-3.3: Resilience of Infrastructure to Earthquake Damage. The City shall not extend utility service lines and streets across known or suspected active fault traces or active or historic slide planes. The City may permit exceptions when special engineering practices or techniques are employed that ensure that the extension can remain operational after a disaster.

Policy S-3.4: Seismic Retrofit of Existing Structures. When feasible, the City shall require the upgrading of the structural integrity of older, unreinforced residential and commercial buildings. The City shall not permit major alterations of unreinforced masonry structures without evaluation by a registered structural engineer of the adequacy of seismic resistance of the building in relation to the proposed use.

Policy S-3.5: Structural Seismic Analysis of City Facilities. The City shall continue to conduct structural seismic analysis of City facilities, particularly those critical for response to an earthquake, such as fire stations, communication centers, and community centers, and, where needed, make structural changes so that the facility will remain functional after an earthquake.

Policy S-3.6: Education on Earthquake Safety. The City shall continue to educate homeowners and business owners on the importance of retrofitting their homes and commercial structures for earthquake safety.

Additionally, Implementation Program S-3.A in the 2040 General Plan Safety Element requires the City to maintain geologic and soil reports organized by parcel number or street address, which would ensure that seismic hazard information is readily available. Implementation Program S-3.B requires the City to work with Alameda County Water District to design and install water pipelines, which are resilient to seismic events. Implementation of these 2040 General Plan programs would result in the minimization of risk of siting critical facilities or other structures within areas susceptible to seismic hazards. Adherence to these requirements would ensure a detailed review of

design and construction plans and incorporation of additional structural safety features, as necessary, for structures that would be located in areas subject to seismic hazards such as extreme ground shaking, landslides, liquefaction, surficial debris flows, expansive soils, subsidence and settlement, and fault displacement. Implementation of the goals, policies and programs, described here and listed above, in addition to compliance with applicable laws and regulations would minimize the potential for loss, injury, or death following a seismic event and would reduce this potential impact to a less than significant level.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan result in a substantial soil erosion or the loss of topsoil?

Impact GEO-2 CONSTRUCTION OF DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCLUDE GROUND DISTURBANCE SUCH AS EXCAVATION AND GRADING THAT WOULD RESULT IN LOOSE OR EXPOSED SOIL, INCREASING THE POTENTIAL FOR EROSION AND SOIL LOSS. COMPLIANCE WITH APPLICABLE REGULATIONS, INCLUDING THE CLEAN WATER ACT, AND IMPLEMENTATION OF THE GOALS AND POLICIES OF THE 2040 GENERAL PLAN WOULD MINIMIZE THE POTENTIAL FOR EROSION AND LOSS OF TOPSOIL AND WOULD REDUCE THIS IMPACT TO A LESS THAN SIGNIFICANT LEVEL.

Development facilitated by the 2040 General Plan would involve construction activities such as stockpiling, grading, excavation, paving, and other earth-disturbing activities. Loose and disturbed soils are more prone to erosion and loss of topsoil by wind and water.

Construction activities that disturb one or more acres of land surface are subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) issued by the SWRCB. Compliance with the permit requires each qualifying development project to file a Notice of Intent with the SWRCB. Permit conditions require development of a storm water pollution prevention plan (SWPPP), which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-storm water management controls. Inspection of construction sites before and after storms is also required to identify storm water discharge from the construction activity and to identify and implement erosion controls, where necessary.

Additionally, Chapter 13.36 of the Union City Municipal Code requires construction contractors to implement best management practices (BMPs) to reduce pollutants in stormwater. The implementation of BMPs is required for construction activity, new development and redevelopment to prevent the discharge of construction wastes or contaminants from construction materials, tools and equipment from entering the storm drain system or waterways. Erosion control BMPs, such as those found in Section 15.85.230 of the Union City Municipal Code, may include scheduling and timing of grading activities, timely revegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Adherence to the requirements of the Union City Municipal Code would reduce the potential for construction under the 2040 General Plan to cause erosion or the loss of topsoil by ensuring proper management of loose and disturbed soil.

In addition to the requirements for a SWPPP and the Union City Municipal Code regulations, the 2040 General Plan includes Policy S-3.2, listed above, which requires soils and geologic engineering reports for sites within Alquist-Priolo Fault zones and lands east of State Route 238. These reports must identify appropriate mitigation measures to minimize risk of erosion. Additionally, 2040 General Plan Policy RC-3.3 requires preparation of erosion control plans for new construction, and 2040 General Plan Policy RC-3.6 requires new development to incorporate soil conservation best practices to minimize erosion and related impacts. These policies are listed below.

Policy RC-3.3: Erosion Control. The City shall require an erosion control plan for new construction, and shall ensure, through review and inspection, that erosion control is being handled correctly on construction sites.

Policy RC-3.4: Compliance with Regional Municipal Stormwater Permit. The City shall require new development to comply with the most recent version of the San Francisco Bay Regional Municipal Stormwater Permit, which focuses on the incorporation of low impact development measures into development projects to improve the quality of stormwater runoff including, but not limited to, the incorporation of permeable paving, green roofs, cisterns, and biotreatment (e.g. rain gardens, bioretention units, bioswales, and planter/tree boxes), hydro-modification management, and the preservation of undeveloped open space.

Implementation of these policies, in addition to compliance with applicable laws and regulations, would minimize the potential for erosion and loss of topsoil. Furthermore, the Chapter 15.85 of the Union City Municipal Code contains erosion control requirements that include slope protection and dust control. Additionally, growth and development facilitated by the 2040 General Plan would occur in the urbanized areas of Union City west of State Route 238, which is relatively flat with low potential for soil erosion. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4: Would the General Plan be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
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Impact GEO-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN MAY RESULT IN THE CONSTRUCTION OF STRUCTURES ON EXPANSIVE SOILS, WHICH COULD CREATE A SUBSTANTIAL RISK TO LIFE OR PROPERTY. HOWEVER, DEVELOPMENT WOULD BE REQUIRED TO COMPLY WITH THE CBC, WHICH WOULD ENSURE THAT EXPANSIVE SOILS ARE REMEDIATED OR THAT FOUNDATIONS AND STRUCTURES ARE ENGINEERED TO WITHSTAND THE FORCES OF EXPANSIVE SOIL. WITH MANDATORY COMPLIANCE WITH THE CBC, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

New development that is constructed on expansive soils could be subject to damage or could become unstable when the underlying soil shrinks or swells. Soils with high clay content have the highest potential for shrink-swell. Soil types in Union City with moderate to high clay content include: Altamont, Clearlake, Diablo, Reyes, Willows, and Xerorthents. The CBC includes requirements to address soil-related hazards. Typical measures to treat hazardous soil conditions involve removal, proper fill selection, and compaction. In cases where soil remediation is not

feasible, Section 1803.5.3 of the CBC requires structural reinforcement of foundations to resist the forces of expansive soils. Impacts would be less than significant with mandatory compliance with the requirements of the CBC.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 5: Would the General Plan have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact GEO-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD OCCUR WHERE EXISTING SEWER SYSTEMS ARE IN PLACE. THERE WOULD BE NO IMPACT.

The development and growth facilitated by the 2040 General Plan would be located in existing urbanized and developed areas of Union City, where existing sanitary sewer systems are in place. Additionally, the 2040 General Plan includes the following policy requiring new development be served by a public sewer system:

Policy PF-4.2: Require Public Sewer System. The City shall only approve new development where it will be served by a public sewer system.

Therefore, the development facilitated by the 2040 General Plan would not require septic tanks or alternative wastewater disposal systems. There would be no impact.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 6: Would the General Plan directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-5 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN HAS THE POTENTIAL TO RESULT IN IMPACTS TO PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The Mesozoic Great Valley Sequence, Miocene Monterey Group, Miocene Briones Formation, Miocene Orinda Formation, and Pleistocene alluvium have yielded numerous scientifically significant fossils and have high paleontological sensitivity. The metasedimentary rocks of the Franciscan Assemblage and the Eocene Tolman Peak Formation have yielded invertebrate fossils, but no vertebrate or other significant fossils have been recorded nearby; therefore, the geologic unit has been assigned a low paleontological sensitivity. Holocene alluvial deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material and have

been assigned a low paleontological sensitivity. The paleontological sensitivity of the geologic units underlying the Union City area are listed below in Table 4.6-1 and depicted in Figure 4.6-3.

Table 4.6-1 Geologic Units and Paleontological Sensitivity in Union City

Geologic Unit¹	Age	Paleontological Sensitivity (SVP 2010)
Franciscan Assemblage (metasedimentary rock)	Mesozoic	Low
Great Valley Sequence (Panoche and Knoxville Formations)	Mesozoic	High
Tolman Peak Formation	Eocene	Low
Monterey Group (Claremont Shale and Hambre Sandstone)	Miocene	High
Briones Formation	Miocene	High
Orinda Formation	Miocene	High
Alluvial fan and fluvial deposits	Pleistocene	High
Alluvial basin and stream channel deposits	Holocene	Low

¹ Sources: Dibblee and Minch (2005a-d); Helley and Graymer (1997)

Adverse effects to paleontological resources can only be determined once a specific project has been proposed because the effects are highly dependent on both the individual project site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by the 2040 General Plan, particularly in areas that have not previously been developed with urban uses, have the potential to damage or destroy paleontological resources that may be present on or below the ground surface in previously undisturbed areas of high paleontological sensitivity. Consequently, damage to or destruction of fossils could occur due to development under the 2040 General Plan. Impacts would be potentially significant, but mitigable.

Mitigation Measures

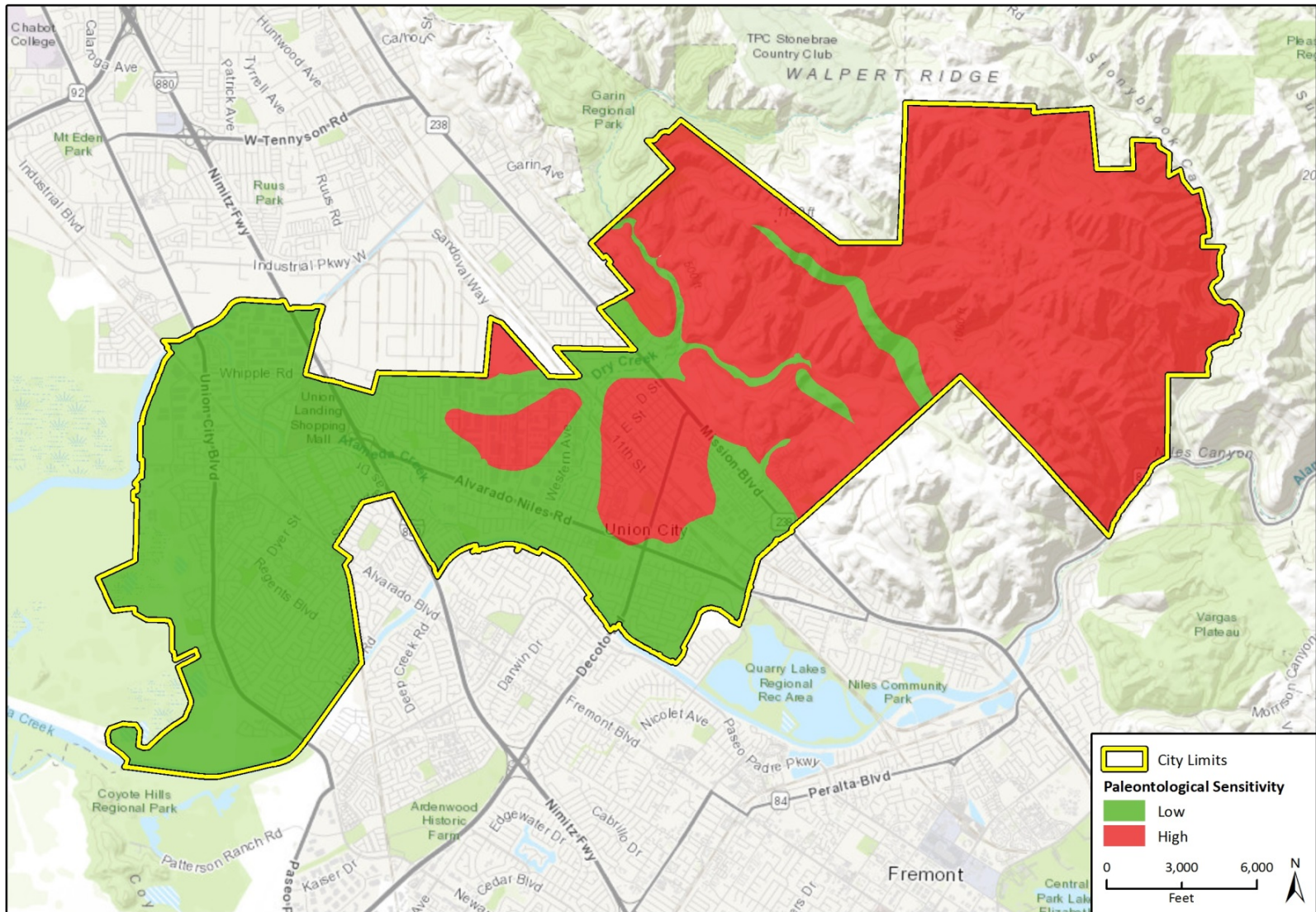
GEO-1 Protection of Paleontological Resources

The following Policy shall be added to the Resource Conservation Element of the 2040 Union City General Plan:

POLICY: PROTECTION OF PALEONTOLOGICAL RESOURCES

Require avoidance and/or mitigation for potential impacts to paleontological resources for any development in Union City that occurs within high sensitivity geologic units, whether they are mapped at the surface or occur at the subsurface. High sensitivity geology units include Great Valley Sequence (Panoche and Knoxville Formations), Monterey Group (Claremont Shale and Hambre Sandstone), Briones Formation, Orinda Formation, and Pleistocene age alluvial fan and fluvial deposits. When paleontological resources are uncovered during site excavation, grading, or

Figure 4.6-3 Paleontological Sensitivity of Geologic Units Mapped in Union City



Basemap provided by Esri 2019.
 Additional data provided by Dibblee and Minch (2005a-d); Helley and Graymer (1997); SVP (2010).

Fig X Paleontological Sensitivity in the General Plan Area

construction activities, work on the site will be suspended until the significance of the fossils can be determined by a qualified paleontologist. If significant resources are determined to exist, the paleontologist shall make recommendations for protection or recovery of the resource.

The City shall require the following specific requirements for projects that could disturb geologic units with high paleontological sensitivity:

- **Retain a Qualified Paleontologist to Prepare a PMMP.** Prior to initial ground disturbance in previously undisturbed strata of geologic units with high sensitivity, as shown on Figure 4.6-3, the project applicant shall retain a Qualified Paleontologist, as defined by the SVP (2010), to direct all mitigation measures related to paleontological resources and design a Paleontological Mitigation and Monitoring Program (PMMP) for the project. The PMMP shall include measures for a preconstruction survey, a training program for construction personnel, paleontological monitoring, fossil salvage, curation, and final reporting, as applicable.

Significance After Mitigation

The implementation of Mitigation Measure GEO-1 would reduce impacts to paleontological resources to a less than significant level by including an implementation program requiring paleontological resource studies for projects in high sensitivity geological units within Union City and implementation of further requirements to avoid or reduce impacts to such resources on a project-by-project basis.

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4.7 Greenhouse Gas Emissions/Climate Change

This section analyzes the potential impacts of the 2040 General Plan related to greenhouse gas (GHG) emissions and climate change. The analysis herein is based partially on the growth forecasts prepared by Mintier Harnish (2018), as well as traffic modeling and vehicle miles traveled (VMT) data provided by Hexagon (2018). Traffic data provided by Hexagon is provided in the Traffic Impact Analysis, which is contained in Appendix D of this EIR.

4.7.1 Setting

a. Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale, generally, 100 years. Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as “carbon dioxide equivalent” (CO₂e), and is the amount of a GHG emitted multiplied by its GWP. CO₂ has a 100-year GWP of one. By contrast, methane (CH₄) has a GWP of 25, meaning its global warming effect is 25 times greater than CO₂ on a molecule per molecule basis (IPCC 2007).

b. Greenhouse Gas Emissions Inventory

Federal Emissions Inventory

Total US GHG emissions were 6,511 million metric tons (MMT or gigatonne) CO₂e in 2016 (USEPA 2018a). Total US emissions have increased by 2.4 percent since 1990; emissions decreased by 1.9 percent from 2015 to 2016 (USEPA 2018b). The decrease from 2015 to 2016 was largely driven by a decrease in emissions from fossil fuel combustion, which was a result of multiple factors including substitution from coal to natural gas consumption in the electric power sector, and warmer winter conditions that reduce demand for heating fuel in the residential and commercial sectors (USEPA 2018b). When electricity-related emissions are distributed to economic end-use sectors, transportation activities accounted for 36 percent of US CO₂ emissions from fossil fuel combustion in 2016 (USEPA 2018c). Meanwhile, industrial, residential, and commercial activities accounted for 27 percent, 19 percent, and 17 percent of US CO₂ emission from fossil fuel combustion in 2016, respectively (USEPA 2018c).

California Emissions Inventory

Based on the California Air Resource Board's (CARB) *California Greenhouse Gas Inventory for 2000-2016*, California produced 429.4 million metric tons of carbon dioxide equivalent (MMT of CO₂e) in 2014 (CARB 2018a). The largest single source of GHG in California is transportation, contributing 41 percent of the State's total GHG emissions. Industrial sources are the second largest source of the State's GHG emissions, contributing 23 percent of the State's GHG emissions. California emissions are due in part to its large size and large population compared to other states. However, the State's mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. CARB projects that unregulated GHG emissions statewide in 2020 will be 509 MMT of CO₂e (CARB 2018b). These projections represent the emissions expected to occur in the absence of any GHG reduction actions.

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The global combined land and ocean temperature data show an increase of about 0.89 degrees Celsius (°C) (0.69°C–1.08°C) over the period 1901–2012 and about 0.72°C (0.49°C–0.89°C) over the period 1951–2012 when described by a linear trend. Several independently analyzed data records of global and regional land-surface air temperature obtained from station observations are in agreement that land-surface air temperature and sea surface temperatures have increased. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014).

Potential impacts of climate change in California may include loss in snow pack and water supply, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CalEPA 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (California Climate Change Center 2009).

Water Supply

Analysis of paleoclimatic data, such as tree-ring reconstructions of stream flow and precipitation, indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future water supplies in California, but the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1 degree Fahrenheit (°F), mostly at night and during the winter, with higher elevations experiencing the highest increase. Although projections about future annual precipitation patterns in the Bay Area are highly uncertain, climate change modeling for the Bay Area projects that an increase in the magnitude and frequency of large precipitation events will occur. In addition, the increase in temperature caused by climate change increases the likelihood that future droughts will be larger in magnitude and longer in duration (State of California 2018).

This uncertainty complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The Sierra snowpack provides most of California's water supply by accumulating snow during the State's wet winters and releasing it slowly during dry springs and summers. Based on historical data and modeling, the Department of Water Resources (DWR) projects that the Sierra snowpack will experience a reduction of 25 to 40 percent from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2008).

Hydrology and Sea Level Rise

Climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; sea level rise and coastal flooding; coastal erosion; the potential for salt water intrusion; and flood hydrographs, including flash floods, rain or snow events, coincidental high tide and high runoff events. According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center, climate change has the potential to induce substantial sea level rise in the coming century (California Climate Change Center 2009). The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 millimeters (mm) per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about 20 centimeters (cm) higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report, *Global Warming of 1.5°C* (2018), predicts a mean sea-level rise (relative to 1986-2005) of about 26 to 77 cm by 2100 with 1.5°C global warming. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California's water supply due to salt water intrusion. In addition, increased CO₂ emissions can cause oceans to acidify due to the carbonic acid it forms upon sequestration. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 0.6 to 2.5°C in the next 50 years, and 1.4 to 5.8°C in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events, (2) geographic range, (3) species' composition within communities, and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

d. Local Effects of Climate Change

While the above discussion identifies the possible effects of climate change at a global and potentially statewide level, regional and local predictions are often based on downscaling statewide models (CalEPA 2010). Observable effects of climate change have already been witnessed on the environment. Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted, and flora are flowering sooner (National Aeronautics and Space Administration 2018). For Alameda County, sea level rise is one of the main concerns. Rising sea levels may accelerate coastal erosion, increase the extent of coastal inundation, increase localized elevated groundwater levels, and magnify the impacts of extreme storm and wave events. For Alameda County, which includes Union City, potential impacts may include (Union City 2010):

- Temperature rises of between 1.8 and 5.4 °F by mid century
- Reduced water supply due to reduced snow pack and impact on summer water supplies
- Increased flooding from extreme weather events and sea level rise
- More wildfires due to increased temperatures, dry conditions, and wind
- Habitat loss, species migration, endangerment, and extinction
- Longer growing season but more insect infestations
- Reduced threat from low winter temperatures, but increased irrigation demand due to progressively hot summers

e. Regulatory Setting

Federal

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The USEPA and the National Highway Traffic Safety Administration (NHTSA) issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source is

a major source required to obtain a Prevention of Significant Deterioration or Title V permit. The Court also held that Prevention of Significant Deterioration permits that are otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

Vehicle Standards

Other regulations have been adopted to address vehicle standards, including the USEPA and the National Highway Traffic Safety Administration (NHTSA) joint rulemaking for vehicle standards. These are as follows:

- On March 30, 2009, the NHTSA issued a final rule for model year 2011 for standards to reduce GHG emissions.
- On May 7, 2010, the USEPA and the NHTSA issued a final rule regulating fuel efficiency and GHG emissions pollution from motor vehicles for cars and light-duty trucks for model years 2012–2016.
- On August 9, 2011, USEPA and NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal GHG emissions and fuel economy standards for model year 2017-2025 light-duty vehicles.
- NHTSA intends to set standards for model years 2022-2025 in a future rulemaking.
- In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the USEPA and the NHTSA announced fuel economy and GHG emissions standards for medium and heavy-duty trucks that applies to vehicles from model year 2014–2018.
- In 2007, the Energy Independence and Security Act was signed into law.
- Among other key measures, the Energy Independence and Security Act would do the following to aid in the reduction of national GHG emissions, both mobile and non-mobile:
 - Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022
 - Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances

While superseded by NHTSA and USEPA actions above, the Energy Independence and Security Act also set miles per gallon targets for cars and light trucks and directed the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

Additional provisions of the Energy Independence and Security Act address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

State

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the State’s GHG emissions. These initiatives are summarized below.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California’s Advanced Clean Cars program, referred to as “Pavley,” requires CARB to develop and adopt regulations to achieve “the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.” On June 30, 2009, the USEPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as “LEV (Low Emission Vehicle) III GHG” regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

Executive Order S-3-05

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels (CalEPA 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the “2006 CAT Report”) (CalEPA 2006). The 2006 CAT Report identified a recommended list of strategies that the state could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the State agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

Assembly Bill 32

California’s major initiative for reducing GHG emissions is outlined in AB 32, the “California Global Warming Solutions Act of 2006,” signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. It is important to note that, according to the Bay Area Air Quality Management District (BAAQMD) local jurisdictions may reduce GHG emissions by 15 percent below an identified baseline of 2008 or earlier by 2020 to remain compliant with AB 32 (BAAQMD 2017).

In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of CO₂e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan; the most recent update was in 2017. The 2017 Scoping Plan update defines CARB’s climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals. The update highlights California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in

the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2018c).

Executive Order B-30-15

EO B-30-15 established a statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. Targets set beyond 2020 provide market certainty to foster investment and growth in industries like clean energy.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Metropolitan Transportation Plan (MTP) or Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) were assigned targets of a seven percent reduction in GHGs from transportation sources by 2020 and a 15 percent reduction by 2035. In 2017, ABAG and MTC adopted an MTP/SCS, called *Plan Bay Area 2040*, which, when implemented, would meet the assigned targets by achieving a 15 percent per capita CO₂ emissions reduction from cars and light-duty trucks and a 16 percent per capita GHG emissions reduction by 2035 (ABAG and MTC 2017).

Senate Bill 32

On September 8, 2016, the governor signed SB 32 into law, extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030. The other provisions of AB 32 remain unchanged. On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383, described below. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons (MT) CO₂e by 2030 and two MT of CO₂e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level).

Senate Bill 350

Adopted on October 7, 2015, SB 350 supports the reduction of GHG emissions from the electricity sector through a number of measures, including requiring electricity providers to achieve a 50 percent renewables portfolio standard (RPS) by 2030, a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030.

Senate Bill 100

With the adoption of SB 100 on September 10, 2018, the RPS targets have been amended to 33 percent renewable sources by 2020, 50 percent renewable sources by 2026, 60 percent renewable sources by 2030, and 100 percent carbon-free sources by 2045 (California Legislative Information 2018).

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 1368

Senate Bill 1368 requires the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) to establish GHG emissions performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State.

Assembly Bill 197

On September 8, 2016, AB 197 was signed into law. This bill requires CARB to make available the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, this bill requires that CARB make available the emissions of GHGs, criteria pollutants, and toxic air contaminants throughout the State, at the local and sub-county level for stationary sources and to at least a county level for mobile sources, as specified.

Executive Order B-55-18

Signed on September 10, 2018, Executive Order B-55-18 established a new statewide goal to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emission thereafter. The statewide 2045 carbon neutrality goal is in addition to existing statewide targets of reducing GHG emissions, such as AB 32 and SB 32.

California Cap-and-Trade Program

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. It is designed to reduce GHG emissions from major sources, deemed “covered entities,” by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32’s emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors, such as electricity generation, petroleum refining, and cement production, commenced in 2013 and declines over time, achieving GHG emission reductions throughout the program’s duration.

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California’s GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects’ electricity usage are covered by the Cap-and-Trade Program.

On July 25, 2017, AB 398 was signed into law, extending the Cap-and-Trade Program to 2030. AB 398 calls for half of emissions offsets to be generated in California and prohibits CARB and air districts from regulating CO₂ from sources under the Cap-and-Trade program.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs.

Title 24 Efficiency Standards

California’s Energy Efficiency Standards for Residential and Non-residential Buildings, located at Title 24, Part 6 of the California Code of Regulations (CCR) and commonly referred to as “Title 24,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

California Green Building Standards

The California Green Building Standards Code, which is Part 11 of the CCR, is commonly referred to as the CALGreen Code. CALGreen was added to Title 24 to represent base standards for reducing water use, recycling construction waste, and reducing polluting materials in new buildings. In contrast, Title 24 focuses on promoting more energy-efficient buildings and considers the building envelope, heating and cooling, water heating, and lighting restrictions. The current 2016 CALGreen Code became effective January 1, 2017.

Regional and Local

Bay Area Air Quality Management District

Union City is located in the San Francisco Bay Air Attainment Basic (SFBAAB), which is under the jurisdiction of BAAQMD. BAAQMD is responsible for enforcing standards and regulating stationary sources in their jurisdiction. BAAQMD regulates GHG emissions through specific rules and regulations as well as project and plan level emissions thresholds for GHGs to ensure that the Bay Area contributes to its fair share of emissions reductions. In 2017, BAAQMD published the 2017 Clean Air Plan, which includes policy approaches, control measures, and technical programs that will help the region make progress toward the 2050 GHG emissions goal of reducing GHG emissions by 2050 to 80 percent below 1990 levels (BAAQMD 2017). BAAQMD's 2017 Clean Air Plan also contains guidance regarding compliance with AB 32, stating that AB 32 requires the reduction of statewide GHG emissions to 1990 levels by 2020, which may be satisfied by local jurisdictions through a 15-percent reduction from an emissions baseline established in 2008 or earlier (BAAQMD 2017).

Union City Climate Action Plan

Union City adopted a Climate Action Plan (CAP) in November 2010, which includes a GHG emissions inventory for the baseline year 2005. Total annual emissions in 2005 were estimated to be 342,297 MT of CO₂e. The CAP uses the City's 2005 baseline as a proximate 1990 GHG emissions level as appropriate for establishing future GHG reduction targets (Union City 2010).

In addition, the CAP sets a series of GHG emission reduction targets for a community-wide emissions reduction of 20 percent below 2005 baseline emissions levels by 2020. This equates to a reduction of 90,405 MT of CO₂e by the year 2020. The CAP includes reduction strategies in six main Action Areas to assist the City in achieving the 2020 reduction target. Each Action Area is subdivided into a series of GHG reduction measures. The six GHG reduction Action Areas include:

- Land Use Action Area
- Transportation Action Area
- Energy Action Area
- Water Action Area
- Waste Action Area
- Green Infrastructure Action Area

The CAP estimates that implementation of all GHG reduction measures in combination with AB 1493, the State's Low Carbon Fuel Standard, and PG&E's 2020 RPS goal in Union City would result in a combined total reduction of 100,060 MT of CO₂e per year, or approximately 22.8 percent below 2005 levels, thereby meeting the 2020 GHG reduction target.

The CAP includes an implementation chapter with specific actions for the City to facilitate the GHG reduction measures and evaluate the plan's success. It also establishes criteria for staff to use when determining if a proposed development project is consistent with the CAP for CEQA purposes.

4.7.2 Impact Analysis

a. Methodology and Thresholds of Significance

Significance Thresholds

Based on Appendix G of the *CEQA Guidelines*, impacts related to GHG emissions from the 2040 General Plan would be significant if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence on climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]). The 2017 BAAQMD *CEQA Air Quality Guidelines* provides two plan level thresholds for determining the significance of GHGs. The two approaches are as follows:

1. Consistency with a qualified GHG reduction plan
2. Meets the efficiency plan threshold of 6.6 MT of CO₂e per service population (SP) per year

According to the BAAQMD *CEQA Air Quality Guidelines*, a qualified GHG reduction strategy is one that includes the following elements:

1. Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area
2. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable
3. Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area
4. Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level
5. Monitor the plan's progress
6. Adopt the GHG Reduction Strategy in a public process following environmental review

As discussed above under *Regulatory Setting*, Union City adopted a CAP in November 2010. The CAP establishes various GHG reduction measures and includes mandatory and enforceable measures that affect new development projects. While the implementation of AB 1493, the State's Low Carbon Fuel Standard, and PG&E's compliance with statewide RPS goals in combination with the CAP's GHG reduction measures would achieve a 2020 GHG reduction from 2005 levels of 22.8

percent, the CAP's GHG reduction measures alone are projected to result in a reduction of 22.5 percent by 2020 (Union City 2010). Although the City's CAP meets the six required elements of a qualified GHG reduction strategy, as explained in further detail in Appendix F of the CAP, the CAP's horizon year is 2020 while the horizon year of the 2040 General Plan is 2040. Therefore, the first BAAQMD *CEQA Air Quality Guidelines* significance threshold cannot be applied in this EIR when analyzing the 2040 General Plan.

The second threshold of 6.6 MT of CO₂e per SP per year is relevant for use. However, given the recent legislative attention and judicial action regarding post-2020 goals and the scientific evidence that additional GHG reductions are needed beyond the year 2020, the Association of Environmental Professionals' (AEP) Climate Change Committee published a white paper in 2016 recommending that CEQA analyses for most land use development projects can continue to rely on current thresholds for the immediate future, but that the significance determination should be based on demonstrating substantial progress along a post-2020 trajectory (AEP 2016). The BAAQMD plan-level threshold of 6.6 MT of CO₂e per SP per year is intended to achieve the State's 2020 goal of reducing emissions to 1990 levels. Therefore, the second BAAQMD *CEQA Air Quality Guidelines* significance threshold also cannot be applied to the 2040 General Plan.

Accordingly, a 2040 GHG efficiency threshold can be calculated to represent the rate of emissions reduction necessary for the 2040 General Plan to achieve a fair share of statewide GHG reductions necessary to meet post-2020 SB 32 targets. With the release of the 2017 Scoping Plan, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new local plan level methodology for target setting that provides consistency with State GHG reduction goals using per capita efficiency targets. These statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 and 2050 statewide target under SB 32. To determine whether the 2040 General Plan would impede substantial progress toward achieving the emissions reduction targets established by AB 32 and SB 32 this EIR establishes a 2040 GHG emissions target to meet GHG reductions consistent with SB 32 and on a trajectory to achieve the goals in Executive Order S-3-05. The 2040 GHG emission target represents the emissions reductions necessary for the City to achieve a fair share of statewide GHG reductions necessary to meet the State's long-term targets.

The 2040 GHG emissions target is an efficiency threshold generated by dividing the Union City GHG emissions target for 2040 by the citywide service population projections (residents plus employees) for that year. The following equations detail how the 2040 GHG emissions target and efficiency threshold were calculated:

Equation 4.7-1

$$\text{Per Capita Threshold} = \frac{\text{2040 Emissions Goal}}{\text{2040 Population} + \text{2040 Employment}}$$

Where:

Per Capita Threshold = Average emissions efficiency: 1.12 MT of CO₂e per service population per year.

2040 Emissions Goal = 136,919 MT of CO₂e per year.

2040 Population = Union City population in 2040: 84,477 (Mintier Harnish 2018).

2040 Employment = Union City jobs in 2040: 37,333 (Mintier Harnish 2018).

Equation 4.7-2

$$2040 \text{ Emissions Goal} = 2030 \text{ Goal} + \left((2050 \text{ Goal} - 2030 \text{ Goal}) * \frac{(2040 - 2030)}{(2050 - 2030)} \right)$$

Where:

2040 Emissions Goal = 136,919 MT of CO₂e per year.

2050 Goal = 80 percent below 1990 emissions by 2050: 68,459 MT CO₂e per year.¹

2030 Goal = 40 percent below 1990 emissions by 2030: 205,378 MT CO₂e per year.¹

The target identified by remaining on the trajectory to meet Executive Order S-3-05, adjusted to be specific for Union City, is appropriate for the City to use as the basis for determining an applicable significance threshold for the 2040 General Plan. Based on the above, the 2040 General Plan must meet the target of net GHG emissions of approximately 1.12 MT of CO₂e per service population per year at full buildout in the year 2040. Emissions greater than 1.12 MT of CO₂e per service population per year may conflict with substantial progress toward the long-term reduction targets identified by SB 32 and Executive Order S-3-05, and the project's cumulative contribution of long-term emissions would be considered significant.

Methodology

The focus of this analysis and the estimate of GHG emissions are limited to only those potential emissions that would result from buildout of the 2040 General Plan, which includes traffic modeling based on regional trips and vehicle trips that pass through the City. While emissions generated in the City and the region, such as those emissions generated by businesses or individual operations, may contribute to GHG emissions globally, only those emissions that may change compared to existing conditions under implementation of the 2040 General Plan are included in this EIR as a reasonable approach to estimate GHG impacts of the 2040 General Plan. Emissions not directly resulting from buildout of the 2040 General Plan are considered outside the scope of this CEQA analysis because it would be speculative to analyze impacts not directly related to the 2040 General Plan.

Buildout associated with the 2040 General Plan would include 11,486 new residents and 17,705 jobs, as described in Section 2, *Project Description*. Commercial, residential, and industrial development associated with buildout of the 2040 General Plan would accommodate the estimated number of new residents and jobs in Union City. The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to estimate GHG emissions associated with the 2040 General Plan. The analysis focuses on CO₂, CH₄, and N₂O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the 2040 General Plan would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF₆, were also considered for the analysis. Emissions of all GHGs are converted into their equivalent weight in CO₂ (CO₂e). Minimal amounts of other main GHGs, such as chlorofluorocarbons (CFCs) would be emitted; however, these other GHG emissions would not substantially add to the calculated CO₂e amounts. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (January 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (January 2009).

¹ Based on the Union City 2005 inventory of 342,297 MT CO₂e per year used as a proxy for 1990 emissions levels.

Construction Emissions

Construction inputs in CalEEMod included buildout of the 2040 General Plan. Average annual emissions from construction under the 2040 General Plan were calculated, including both on-site and off-site activities. On-site activities would consist of the operation of off-road construction equipment, as well as on-site truck travel, such as haul trucks, water trucks, dump trucks, and concrete trucks, whereas off-site sources would be emissions from construction vehicle trips. Pollutant emissions associated with buildout of the 2040 General Plan were estimated to begin in July 2019 and end with buildout of the 2040 General Plan in 2040.

Operational Emissions

CalEEMod calculates operational emissions from energy use, including electricity and natural gas use, based on the CEC-sponsored California Commercial End Use Survey (CEUS) for residential and non-residential land uses. Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating are calculated based on standard emission rates from CARB, USEPA, and district-supplied emission factor values. Emissions from waste generation are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste. Waste disposal rates by land use and overall composition of municipal solid waste in California are primarily based on data provided by CalRecycle. Emissions from water and wastewater usage calculated in CalEEMod are based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern California (CAPCOA 2016).

Modelling of operational emissions accounted for the following two measures from the Union City CAP that would reduce GHG emissions from 2040 General Plan (Union City 2010):

- **Measure WC-1.1 Water Efficient Landscape Ordinance:** The City will amend the existing Union City Water Efficient Landscape Ordinance (Municipal Code Chapter 18.112) to add a specific water efficiency reduction target of 50 percent beyond the initial requirements for plant installation and establishment. This provision will be applicable to all of the new landscape construction within the city (the same as currently indicated).
- **Measure WR-1.1 Increase Waste Diversion Target:** The City will amend its Waste Diversion Resolution to raise the goal for waste reduction and diversion to 90 percent by 2020, building on Resolution 3367.07, which establishes a goal of 75 percent reduction of waste going to landfills by 2010, which is in accordance with the County-wide waste reduction goal, also of 75 percent.

The Union City CAP contains several other measures related to energy and water conservation, solid waste reduction, and green building design that would reduce GHG emissions from development facilitated by General Plan 2040. However, due to a lack of data, these measures were not included in emissions modelling. Therefore, this analysis presents a conservative estimate of GHG emissions from General Plan 2040.

Transportation Emissions

Emissions of CO₂ and CH₄ from transportation sources for the 2040 General Plan were quantified using CalEEMod. Because CalEEMod does not calculate N₂O emissions from mobile sources, N₂O emissions were quantified using guidance from CARB, which states the following (CARB 2013):

- For gasoline vehicles, use 4.16 percent of mobile source NO_x emissions (from CalEEMod) to calculate N₂O for all gasoline vehicles; and

- For diesel vehicles, use 0.3316 grams of NOx per gallon fuel used

The estimate of total daily VMT associated with the 2040 General Plan is based on vehicle trip data provided in Section 4.14, *Transportation and Traffic*. The vehicle fleet mix was obtained from the EMFAC2014 Emissions Inventory for Alameda County region for 2040 using the most recent EMFAC2011 categories (CARB 2019). See Appendix C for calculations of N2O emissions.

A limitation of the quantitative analysis of emissions from mobile combustion is that emission models, such as CalEEMod, evaluate aggregate emissions, meaning that all vehicle trips and related emissions assigned to a project are assumed to be new trips and emissions generated by the project itself. Such models do not demonstrate, with respect to a regional air quality impact, what proportion of these emissions are actually “new” emissions, specifically attributable to the project in question. For most projects, the main contributor to regional emissions is from motor vehicles; however, the quantity of vehicle trips appropriately characterized as “new” is usually uncertain as traffic associated with a project may be relocated trips from other locales. In other words, vehicle trips associated with the 2040 General Plan may include trips relocated from other existing locations, as people begin to use a proposed project instead of similar existing land uses. Therefore, because the proportion of “new” versus relocated trips is unknown, the vehicle trips estimate generated by CalEEMod is used as a conservative, “worst-case” estimate.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD GENERATE GHG EMISSIONS THAT WOULD EXCEED THE 2040 EFFICIENCY THRESHOLD OF 1.12 MT OF CO₂E PER SERVICE POPULATION PER YEAR. IMPLEMENTATION OF POLICIES CONTAINED IN THE 2040 GENERAL PLAN AND MITIGATION MEASURE GHG-1 WOULD MINIMIZE GHG EMISSIONS UNDER BUILDOUT OF THE 2040 GENERAL PLAN; HOWEVER, THIS IMPACT WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction Emissions

Construction activities associated with buildout of the 2040 General Plan would generate temporary short-term GHG emissions primarily due to the operation of construction equipment and worker and hauling trips. GHG emissions would be emitted from travel to and from the worksite and the operation of construction equipment such as graders, backhoes, and generators. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Construction activity under the 2040 General Plan is assumed to occur until General Plan buildout in 2040. As shown in Table 4.7-1, construction activity for the 2040 General Plan would generate approximately 162,990 MT of CO₂e for buildout of the entire plan. Amortized over a 30-year period, which is the assumed lifetime of individual projects that would be developed under 2040 General Plan, construction would generate an estimated 5,433 MT of CO₂e per year.

Table 4.7-1 Estimated Greenhouse Gas Construction Emissions

Emission Source (Phase)	Estimated Annual Emissions (MT of CO₂e)
Total Construction Emissions	162,990.40
Amortized over 30 years	5,433.01

Note: See Appendix C for calculations and for GHG emission factor assumptions.
MT of CO₂e = metric tons of carbon dioxide equivalent

Operational Emissions

Estimated operational emissions from buildout of the 2040 General Plan through 2040 are shown in Table 4.7-2. As discussed in Section 4.5, *Energy*, California’s RPS requires retail sales of electricity to be generated by 100 percent carbon-free sources by 2045. Therefore, linear RPS goals were identified leading up to 2045 so that an appropriate carbon neutral power generation mix could be applied to the annual electricity-related GHG emissions in 2040 under the 2040 General Plan. CalEEMod generates GHG emission estimates from mobile sources using default VMT. However, the mobile emissions estimates shown in Table 4.7-2 are adjusted to reflect projected additional VMT under the 2040 General Plan.

Table 4.7-2 Estimated 2040 General Plan Emissions

Emission Source	Annual Emissions (MT of CO₂e)
Construction (amortized)	5,433.01
Stationary	
Area ¹	388.35
Energy	16,883.36 ²
Solid Waste	1,567.54
Water	5,262.08
Mobile	
CO ₂ and CH ₄	44,082.55 ³
N ₂ O	424.4
Total	74,043.59
Net New Service Population	29,291 persons ⁴
Total / Net New Population	2.53 MT CO₂e per service population per year
Threshold	1.12 MT CO ₂ e per service population per year
Threshold Exceeded?	Yes

¹ Area sources include emissions from consumer product use, architectural coatings, and landscape maintenance equipment.

² GHG emissions from energy sources was adjusted to reflect California’s RPS linear goal of 86.67 percent carbon-free generation in 2040.

³ Mobile GHG emissions were adjusted in CalEEMod to reflect the net increase in annual VMT in 2040 contained in the Hexagon (2018) TIA (see Appendix D).

⁴ See Section 4.12, *Population and Housing*, for estimated 2040 population growth projections under the 2040 General Plan.

Sources: See Appendix C for calculations and for GHG emission factor assumptions.

As shown in Table 4.7-2, buildout of the 2040 General Plan would generate an estimated total of approximately 74,044 MT of CO₂e per year above existing emissions. The net new service population for Union City in 2040 would be 29,291 persons. Therefore, the net new GHG emissions generated under the 2040 General Plan would be 2.53 MT of CO₂e per service population per year in 2040, which is above the 1.12 MT of CO₂e per service population per year threshold identified for Union City to contribute its fair share of GHG emission reductions necessary to achieve GHG reduction targets consistent with SB 32 and Executive Order S-3-05.

The 2040 General Plan Resource Conservation Element contains policies and an implementation programs which aim to reduce GHG emissions through 2040. Most notably, Implementation Program RC-7.A would require the City to periodically update the City's CAP to address municipal operations, maintain compliance with GHG reduction targets set forth by CARB, and assess and modify existing CAP implementation programs. This implementation program would be implemented in 2020 and periodic updates of the CAP would also occur.

Goals, policies, and implementation programs included in the 2040 General Plan would further reduce long- and short-term GHG emissions associated with buildout of the 2040 General Plan. For instance, several policies and implementation programs contained in the 2040 General Plan, such as Policy M-5.2, *Community Car-Sharing*, Policy M-5.3, *Explore Car Sharing and Bike Sharing Opportunities*, and Implementation Program M-4.C, *Establish Impact Fee to Include Other Modes*, would improve the availability of alternative transportation modes and help reduce resulting GHG emissions from vehicle use. Goals, policies, and implementation programs included in the Resource Conservation Element, Public Facilities Element, and Mobility Element with the direct purpose of reducing GHG emissions are listed below.

Goal M-3: Provide an accessible, sustainable, efficient, and convenient public transit system for residents, workers, and visitors in Union City.

Policy M-3.21: Greening the Bus Fleet. The City shall continue to increase the use of alternative fuel vehicles in the bus fleet and shall support opportunities for in-route charging infrastructure for electric transit vehicles.

Implementation Program M-3.C: Convert Bus Fleet. The City shall convert the bus fleet to a zero-emission fleet as vehicle replacement funds become available through the Metropolitan Transportation Commission and the Federal Transit Administration.

Goal M-4: Establish a safe, convenient, and efficient street network that facilitates vehicle travel throughout Union City.

Policy M-4.19: Electric Vehicle Charging Stations. The City shall support electric vehicles and other low-emissions/zero-emissions vehicles by working with third-party vendors to provide easily accessible charging stations within the city.

Goal RC-6: The City shall continue to promote programs and initiatives that support and maximize energy conservation and the use of renewable energy in Union City.

Policy RC-6.1: Reduced Energy Consumption. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy RC-6.2: Renewable Energy. The City shall support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy RC-6.3: Solar Technology on Private Buildings. The City shall encourage the incorporation of solar panels and other solar technology on parking structures and residential, industrial, and commercial buildings.

Policy RC-6.4: Solar Panels on City Facilities. The City shall install solar panels on City facilities, as appropriate and feasible.

Policy RC-6.5: Use of Landfills for Renewable Energy. The City shall encourage the reuse of closed landfills within the City, including the Turk Island Landfill, as a site for solar or other renewable energy generation.

Policy RC-6.6: Energy-Efficient Lighting. The City shall employ energy-efficient lighting technology to reduce the energy required to light parks, streets, and public facilities.

Policy RC-6.7: Green Building. The City shall encourage new development to adopt and incorporate green building features included in the CalGreen Tier 1 checklist in project designs, and shall consider future amendments to the municipal Code to adopt CalGreen Tier 1 requirements consistent with the State building code.

Policy RC-6.8: Zero Net Energy. The City shall encourage Zero Net Energy (ZNE) building design for new residential and non-residential construction projects, and consider future amendments to the Municipal Code to adopt ZNE requirements consistent with the State building code.

Policy RC-6.9: Water Heater Replacement. The City shall encourage the use of high-efficiency or alternatively-powered water heater replacements at time of replacement in existing residential development.

Implementation Program RC-6.A: High-Efficiency or Alternatively-Powered Water Heater Replacement Program. The City shall provide educational material and information on the City website and through the Building Division on high-efficiency and alternatively-powered water heater replacement options available to current homeowners considering water heater replacement. The City shall streamline the permitting process for high-efficiency and alternatively-powered water heater replacement, and develop appropriate financial incentives by working with energy utilities or other partners. Replacement water heaters could include high-efficiency natural gas (i.e., tankless), or other alternatively-powered water heating systems that reduce or eliminate natural gas usage such as solar heating systems, tankless or storage electric water heaters, and electric heat pump systems.

Goal PF-2: To operate and function in a sustainable manner, use public revenues and resources efficiently, and provide professional, high-quality service to residents and businesses.

Policy PF-2.13: New Technology in City Facilities. As financially feasible, the City shall incorporate new technology into public buildings and operations on an ongoing basis to increase efficiency and productivity, reduce operating costs, enhance customer service, improve communication with residents, and facilitate access to City services.

Policy PF-2.14: Sustainable Practices. The City shall consider the following as part of everyday operations:

- Implementation of green infrastructure systems that reduce impacts on the environment;
- Purchasing decisions that minimize the generation of waste;
- Recycling programs that reduce waste;
- Energy efficiency and conservation practices that reduce water, electricity, and natural gas use; and
- Fleet operations that reduce gasoline consumption.

Policy PF-2.15: Energy Efficient Buildings and Infrastructure. The City shall continue to improve energy efficiency of City buildings and infrastructure through efficiency improvements, equipment upgrades, and installation of clean, renewable energy systems to achieve climate action goals and reduce operating costs.

Policy PF-4.3: Renewable Energy Generation at Wastewater Treatment Facility. The City shall support efforts by Union Sanitary District to supply the energy demand from the wastewater treatment facility through renewable energy generation.

Goal PF-7: Ensure the provision of a reliable, efficient, cost-effective, and environmentally-sound gas and electric service within Union City.

Policy PF-7.1: Community Choice Energy. The City shall participate in regional efforts to provide competitive electricity rates and cleaner energy that reduces GHG emissions to Union City residents and businesses.

Policy PF-7.6: Expedite Solar Energy Installation. The City shall expedite the review and permitting of solar installations.

In addition to the above policies and implementation programs, the 2040 General Plan encourages infill and transit-oriented development and active transportation to reduce overall GHG emissions throughout the City. For example, the 2040 General Plan contains land-use strategies to encourage high-density and mixed-use development adjacent to the Intermodal Station, along transit corridors, and near job centers. Mixed-use, transit-oriented, and high-density development places residents closer to places of employment, businesses those residents patronize, and public transit facilities, which potentially reduces their dependency on and use of single-occupancy vehicles. The 2040 General Plan further identifies infill development and creative reuse and redevelopment of existing sites as the primary means for accommodating future growth. By placing services and amenities close to where people live and work, the 2040 General Plan would minimize the need to drive and reduce associated GHG emissions.

The policies listed above would reduce GHG emissions associated with buildout of the 2040 General Plan and contribute to the City's fair share of statewide reduction targets. However, buildout of the 2040 General Plan is anticipated to result in GHG emissions above the per service population target established for the 2040 General Plan to meet the statewide 2030 and 2050 goal trajectories. Therefore, this impact would be potentially significant.

Mitigation Measures

GHG-1 Update to Climate Action Plan

In accordance with Implementation Program RC-7.A of the 2040 General Plan, the City of Union City shall update its Climate Action Plan (CAP). The updated CAP shall contain goals, policies and programs to achieve GHG reduction targets for Union City and future development in the City consistent with SB 32 and demonstrate a trajectory towards meeting the reduction target in Executive Order S-3-05. Implementation measures in the updated CAP may include but are not limited to the following:

- Develop and adopt Zero Net Energy requirements for new residential and non-residential development
- Develop and adopt a building electrification ordinance
- Implement VMT reduction measures such as improvements to public transit, full buildout of the Pedestrian and Bicycle Master Plan, and incentivization of transit-oriented development
- Expand charging infrastructure for electric vehicles
- Implement carbon sequestration by expanding the urban forest, participating in soil-based or compost application sequestration initiatives, supporting regional open space protection, and/or incentivizing rooftop gardens
- Purchase carbon offsets from a validated source²
- Policies and measures included in the California's 2017 Climate Change Scoping Plan such as mobile source strategies for increasing clean transit options and zero emissions vehicles by providing vehicle charging stations.

Significance After Mitigation

Mitigation Measure GHG-1 would update the City's CAP to reflect the most recent GHG reduction regulations and establish a Citywide GHG reduction target. In the absence of the updated CAP this EIR establishes per service population GHG emission thresholds for the year 2040, specific to the 2040 General Plan that is used for this CEQA document only. A revised target will be included in the updated CAP that incorporates more detailed and City specific inventory information than is provided within this EIR analysis of the 2040 General Plan. Buildout of the 2040 General Plan exceeds the established EIR threshold established for this EIR and impacts would be significant and unavoidable until the City's CAP is updated per Mitigation Measure GHG-1 to reflect the per service population targets in line with the reduction trajectory that meets statewide targets for emissions reductions. If and when the City's CAP is updated in accordance with statewide emissions targets, this impact may be reduced to less than significant. Therefore, until the City updates the CAP in accordance with Mitigation Measure GHG-1, impacts from GHG emissions would remain significant and unavoidable.

² Validated sources are carbon offset sources that follow approved protocols and use third-party verification. At this time, appropriate offset providers include only those that have been validated using the protocols of the Climate Action Registry, the Gold Standard, or the Clean Development Mechanism (CDM) of the Kyoto Protocol. Credits from other sources will not be allowed unless they are shown to be validated by protocols and methods equivalent to or more stringent than the CDM standards.

Threshold 2: Would the General Plan conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact GHG-2 THE 2040 GENERAL PLAN WOULD BE CONSISTENT WITH LOCAL ADOPTED GHG REDUCTION MEASURES CONTAINED IN THE CITY’S CLIMATE ACTION PLAN AND ABAG/MTC’S PLAN BAY AREA 2040. HOWEVER, THE 2040 GENERAL PLAN WOULD NOT BE CONSISTENT WITH STATE EMISSIONS REDUCTION MEASURES. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As discussed under Impact GHG-1, the City adopted a qualified CAP in 2010 that outlines strategies to achieve a GHG reduction target of 20 percent below 2005 emission levels by the year 2020, which equates to a reduction of 90,405 MT of CO₂e by 2020. The CAP includes reduction strategies in six main Action Areas to assist the City in achieving the reduction target. Each Action Area is subdivided into a series of GHG reduction measures. As shown in Table 4.7-3, the 2040 General Plan would be consistent with all the CAP’s applicable GHG reduction measures. Furthermore, as discussed under Impact LU-2 in Section 4.10, *Land Use and Planning*, the proposed 2040 General Plan would be consistent with the GHG reduction goals contained in ABAG and MTC’s *Plan Bay Area 2040*.

Table 4.7-3 2040 General Plan Consistency with the Union City Climate Action Plan

CAP GHG Reduction Measure	General Plan Consistency
Land Use Action Area	
LU-1.1: Continue supporting transit-oriented development in the Intermodal Station District and adjacent areas.	Consistent. The 2040 General Plan promotes the strategic development of the remaining vacant land and redevelopment of underutilized sites throughout the City. The land-use strategy of the 2040 General Plan encourages higher-density and mixed-use development adjacent to the Intermodal Station District, along transit corridors, and near job centers. In addition, the 2040 General Plan contains Policy M-3.5, which would require the City to work with regional partners and seek grants and other transportation funding to continue the development of the Intermodal Station, and to continue exploring options for the potential expansion of services at the Intermodal Station to include intercity, regional, and commuter rail.
LU-2.1: Enhance existing neighborhood-serving commercial centers in the city.	Consistent. The 2040 General Plan envisions a land use scenario that enhances the application of mixed-use development, which would introduce new residences where existing commercial and retail development is located, as well as introduce new commercial and retail development where existing residences are located. In particular, the introduction of mixed-use development in locations where retail and commercial development exists, such as near the intersection of Alvarado-Niles Road and Union City Boulevard, would enhance existing neighborhood-serving commercial centers in the City. In addition, because the City is confined to the west and east by the San Francisco Bay and the Hillside Area, respectively, and to the north and south by developed land, the 2040 General Plan identifies redevelopment of underutilized spaces and infill development as the major land use strategy through 2040. This strategy would further encourage the enhancement of existing neighborhood-serving commercial centers in the City over development of new commercial centers.
Transportation Action Area	
T-1.1: Continue build-out goal (goal of 25% build-out), to the extent feasible, of the Pedestrian and Bicycle Master Plan by 2020.	Consistent. The 2040 General Plan contains several goals, policies, and implementation programs that would support the continued buildout of the City’s Pedestrian and Bicycle Master Plan. For example, the 2040 General Plan Mobility Element includes Policy M-2.2, which prioritizes bicycle and pedestrian improvements connecting neighborhoods and job centers in the

CAP GHG Reduction Measure	General Plan Consistency
	<p>Greater Station District. Furthermore, development facilitated by the 2040 General Plan would be subject to providing their fair share contribution to a build-out of the pedestrian and bicycle system citywide. Policy M-2.10 contained in the 2040 General Plan Mobility Element would require the City to require new development projects, projects that involve substantial redevelopment, or major expansions to install sidewalks along the project frontage to improve pedestrian connectivity if none exists at the time, add pedestrian connections between new and existing development, and add walkways that link to adjacent transit services.</p>
<p>T-2.1: Provide transit priority and express routes on the Alvarado-Niles and Whipple corridors.</p>	<p>Consistent. While the 2040 General Plan does not specifically reference transit and express routes on the Alvarado-Niles and Whipple corridors, the General Plan does include policies supporting transit improvements within the City including designated transit lanes (Policy M-3.2). In addition, the General Plan includes a ‘complete streets’ strategy that would be employed in future roadway projects throughout the City. Complete streets refers to a roadway concept which may include sidewalks, bike lanes, transit lanes, frequent crossings, narrow automobile lanes, median islands, curb extensions, and other transportation facilities. Implementation of a complete streets strategy throughout the City including the Alvarado-Niles and Whipple corridors, and implementation of the 2040 General Plan could result in new transit or express routes on some of the City’s major arterials including the Alvarado-Niles and Whipple corridors. In addition, the 2040 General Plan contains several goals, policies, and implementation programs that enhance transit services as well as actively and passively encourage greater use of the existing and planned public transit system throughout the City.</p>
<p>T-2.2: Convert bus fleet to compressed natural gas or hybrid vehicles.</p>	<p>Consistent. Policy M-3.22, <i>Greening the Bus Fleet</i>, of the 2040 General Plan would require the City to continue to increase the use of alternative fuel vehicles in the bus fleet and support opportunities for in-route charging infrastructure for electric transit vehicles. The 2040 General Plan additionally contains Implementation Program M-3.C, which would require the City to convert its bus fleet to a zero-emission fleet as vehicle replacement funds become available through Metropolitan Transportation Commission and the Federal Transit Administration.</p>
<p>T-3.1: Increase participation of employers in transportation demand management programs.</p>	<p>Consistent. The 2040 General Plan contains several policies and implementation programs aimed at supporting programs and strategies the City and employers can implement to reduce congestion, VMT, and parking demand. For example, Policy M-5.1 would require the City to work with landowners and employers in existing and emerging employment centers to implement transportation demand management strategies, including but not limited to:</p> <ul style="list-style-type: none"> ▪ Transit vouchers; ▪ Van and car pool programs; ▪ Car-sharing and bike-sharing programs; ▪ Shuttles to BART [Bay Area Rapid Transit]; ▪ Secure bike lockers/parking and showers; ▪ Convenient and weather protected transit stops and shelters; and ▪ Flexible work hours that start and end outside of the traditional work schedule. <p>Furthermore, the 2040 General Plan contains Policies M-5.2 through M-5.6, which encourage landowners and employers to reduce peak-hour commute trips and increase the use of public transit and ride-sharing programs through a variety of strategies.</p>

CAP GHG Reduction Measure	General Plan Consistency
Buildings and Energy Action Area	
<p>E-1.1: Develop a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to homeowners.</p>	<p>Consistent. With implementation of the 2040 General Plan, the City would implement several energy efficiency programs. Implementation of the 2040 General Plan would enable the City to develop a comprehensive energy efficiency program for homeowners which may encompass individual existing and future energy efficiency programs. Policies and implementation programs under the 2040 General Plan that promote the use or require the incorporation of energy efficiency programs include the following:</p> <ul style="list-style-type: none"> ▪ Policy PF-3.5: Water Efficient Landscape Ordinance. ▪ Policy PF-3.7: Water Conservation Education and Incentives. ▪ Policy PF-3.8: Promote Bay Friendly Landscaping. ▪ Implementation Program PF-3.A: Update City Website to Promote Bay-Friendly Landscaping. ▪ Policy PF-6.5: Explore Methods for Repurposing and Reusing Electronics. ▪ Implementation Policy PF-6.A: Public Education Program on Waste Reduction, Recycling, Composting, and Green Purchasing. ▪ Policy PF-7.1: Community Choice Energy. ▪ Policy RC-6.7: Green Building. ▪ Policy RC-6.8: Zero Net Energy. ▪ Policy RC-6.9: Water Heater Replacement. ▪ Implementation Program RC-6.A: High-Efficiency or Alternatively-Powered Water Heater Replacement Program. <p>Implementation of the above policies and implementation programs contained in the 2040 General Plan would collectively constitute a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to homeowners and commercial and industrial building owners.</p>
<p>E-2.1: Work with PG&E to promote existing household appliance upgrades.</p>	<p>Consistent. The 2040 General Plan contains Implementation Program RC-6.A, which would require the City to provide educational material and information on the City website and through the Building Division on high-efficiency and alternatively-powered water heater replacement and to develop appropriate financial incentives by working with energy utilities or other partners.</p>
<p>E-3.1: Develop a comprehensive energy efficiency program that provides outreach, financing, and other forms of assistance to commercial and industrial building owners.</p>	<p>Consistent. See response to Buildings and Energy Action E-1.1.</p>
<p>E-3.2: Promote 'Cool Roofs'.</p>	<p>Consistent. The 2040 General Plan contains strategies for conserving resources, which may include the application of 'cool roofs.' For example, Policy RC-6.7 would encourage new development to adopt and incorporate green building features included in the CALGreen Tier 12 checklist in project designs. Cool roofs are a mandatory design measure for new construction to comply with Tier 1 and Tier 2 energy standards under CALGreen (Section A4.304.4 for residential and A5.204.4 for non-residential). Although the 2040 General Plan does not specifically promote the application of cool roofs, the 2040 General Plan would implement other strategies which promote the application of technologies that would reduce urban heating.</p>

CAP GHG Reduction Measure	General Plan Consistency
<p>E-4.1: Continue implementing the Green Building Ordinance.</p>	<p>Consistent. Through Policy RC-6.7 of the 2040 General Plan, the City would encourage new development to adopt and incorporate green building features included in the CALGreen Tier 1 checklist in project designs and would consider future amendments to the Municipal Code to adopt CALGreen Tier 1 requirements consistent with the State building code.</p>
<p>E-5.1: Work to accelerate Smart Grid integration in existing and new buildings.</p>	<p>Consistent. Implementation of the 2040 General Plan Policy PF-7.5, which would require the City to work with utility providers to educate residents, property owners, and businesses about smart grid and smart appliance technologies, as well as energy conservation opportunities using smart meter technology, would aid in accelerating adoption and integration of smart grid technologies throughout the City.</p>
<p>E-6.1: Develop a program to facilitate the installation of solar hot water heaters in homes.</p>	<p>Consistent. See response to Buildings and Energy Action E-2.1.</p>
<p>E-7.1: Develop a comprehensive solar PV program that provides outreach, financing, and other forms of assistance to homeowners.</p>	<p>Consistent. The 2040 General Plan promotes solar PV for new development and redevelopment. Specifically, Policy PF-7.6 would require that the City expedite the review and permitting of solar installation. In addition, Policy RC-6.3 illustrates how the City would encourage the incorporation of solar panels and other solar technology on parking structures and residential, industrial, and commercial buildings.</p>
<p>E-7.2: Develop a comprehensive solar PV program that provides outreach, financing, and other forms of assistance to commercial and industrial building owners.</p>	<p>Consistent. See response to Buildings and Energy Action E-7.1.</p>
<p>E-8.1: Explore opportunities to reduce energy consumption of wastewater facilities through methane-to-energy production, as well as solar PV installation.</p>	<p>Consistent. The 2040 General Plan contains several policies and implementation programs that would require the City to improve energy efficiency of City buildings and infrastructure and to seek out opportunities and grant funding for the development of renewable energy sources, such as the installation of PV systems, at municipal facilities. Specifically, Policy PF-4.3 would require the City to support efforts by Union Sanitary District to supply the energy demand from the wastewater treatment facility through renewable energy generation.</p>
<p>Waste Reduction Action Area</p>	
<p>WR-1.1: Increase Waste Diversion Target to 90 percent.</p>	<p>Consistent. The 2040 General Plan would improve waste diversion activities in the City with Policy PF-6.3, which would require that the City meet or exceed State goals for waste diversion from landfills and Alameda County Waste Management Authority requirements. Alameda County Waste Management Authority requirements for recycling and composting include enhancement of programs that reduce, reuse, and recycle waste and ongoing and consistent public outreach and education, monitoring, and enforcement activities.</p>
<p>Water Conservation Action Area</p>	
<p>WC-1.1: Water Efficient Landscape Ordinance.</p>	<p>Consistent. The 2040 General Plan promotes efficient water use and reduced water demand by ensuring compliance with the City's Water Efficient Landscape Ordinance. In addition, Policy PF-3.5 would require the City to review and update the Water Efficiency Landscape Ordinance, as needed, to ensure that it is consistent with State law.</p>

CAP GHG Reduction Measure	General Plan Consistency
<p>WC-1.2: Indoor and Outdoor Non-potable Water Systems Program.</p>	<p>Consistent. While the 2040 General Plan does not specifically identify an Indoor and Outdoor Non-potable Water Systems Program, it does contain several water conservation policies and implementation plans that target increased use of treated wastewater. For example, Policy PF-4.4 would require that the City support Union Sanitary District in efforts to reuse treated wastewater by reclaiming it for irrigation or as a recharge to underground storage.</p>
<p>WC-2.1: Work with Alameda County Water District to expand outreach programs and incentivize water conservation throughout Union City.</p>	<p>Consistent. The 2040 General Plan contains measures to increase support for Alameda County Water District efforts to improve water conservation. For example, Policy PF-3.7 would require the City to work with Alameda County Water District to expand outreach programs and incentivize water conservation throughout Union City.</p>
Green Infrastructure Action Area	
<p>GI-1.1: Expand the urban forest to sequester carbon and reduce building energy consumption.</p>	<p>Consistent. The 2040 General Plan contains measures that would result in the expansion of the urban forest, which would reduce building energy requirements. For example, Policy CD-1.4 would require the City to encourage aesthetic improvements to its shopping centers that include measures such as constructing parking areas with tree coverage that is attractive and provides adequate shading.</p>

As illustrated above, the 2040 General Plan would not conflict with the City’s CAP, which was designed to reduce GHG emissions. However, as discussed under Impact-1 the 2040 General Plan would not be consistent with state regulations, including SB 32. Therefore, the 2040 General Plan would conflict with a state policy intended to reduce GHG emissions. This impact would be potentially significant.

Mitigation Measure

Mitigation Measure GHG-1 would apply to this impact.

Significance After Mitigation

As discussed under Impact-1, Mitigation Measure GHG-1 would update the City’s CAP to reflect the most recent GHG reduction regulations and establish a Citywide GHG reduction target. If and when the City’s CAP is updated in accordance with statewide emissions targets, this impact may be reduced to less than significant. Therefore, until the City updates the CAP in accordance with Mitigation Measure GHG-1, impacts from GHG emissions would remain significant and unavoidable.

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4.8 Hazards/Hazardous Materials

This section addresses impacts associated with exposure to hazards and hazardous materials from implementation of the 2040 General Plan. Specifically, this analysis addresses impacts related to hazardous materials use and transportation, the accidental release of hazardous materials, new development or re-development on contaminated sites, air traffic hazards, and interference with emergency response and evacuation plans. An analysis of the risk of exposure to wildland fires resulting from implementation of the 2040 General Plan is contained in Section 4.17, *Wildfire*.

4.8.1 Setting

a. Definition of Hazardous Materials and Hazardous Waste

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous waste is defined in Title 22, Section 66261.10 of the California Code of Regulations (CCR) as one that has a characteristic that may:

Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed.

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosiveness, and reactivity. Sections 66261.20 through 66261.24 of Title 22 of the CCR defines the aforementioned properties for hazardous waste, and may be used to define such characteristics of a hazardous material. The release of hazardous materials or hazardous wastes into the environment can contaminate soils, surface water, and groundwater supplies.

b. Land Use Patterns

Small quantities of hazardous materials in Union City are routinely used, stored, and transported by commercial and retail businesses as well as by educational facilities, hospitals, and households. Hazardous materials users and waste generators in the City include businesses, public and private institutions, and households. Federal, State, and local agency databases maintain comprehensive information on the locations of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require accidental release scenario modeling and risk management plans to protect surrounding land uses.

Past and present land use patterns are good predictors of the potential for past contamination by hazardous materials and the current use and storage of hazardous materials. Industrial sites and certain commercial land uses, such as gas stations, are more likely to use and store large quantities of hazardous materials than residential land uses. Land use patterns are also useful for identifying the location of sensitive receptors, such as schools, day-care facilities, hospitals, and nursing homes. In Union City, industrial and commercial land uses are concentrated along major transportation corridors, such as Interstate 880, Union City Boulevard, Alvarado Boulevard, Alvarado-Niles Road, Mission Boulevard (Highway 238), and Whipple Road (Union City n.d.-a).

Public educational services within Union City are provided by the New Haven Unified School District (NHUSD). NHUSD oversees 14 schools in Union City and Hayward, with 11 of these schools located in Union City (Union City n.d.-b). In addition, Union City hosts three private schools (California Department of Education 2019). Figure 4.8-1 shows the locations of public and private school facilities in Union City as well as a 0.25-mile radius surrounding each school.

c. Existing Hazardous Material Contamination

Several existing contaminants, including asbestos; lead, in sources such as lead-based paint in buildings or in soil; and contaminated soil and groundwater, may be present in Union City. As many buildings in Union City were constructed prior to 1973 when asbestos was banned, it is reasonable to assume that asbestos could be present in some structures. Similarly, lead may be present in paint that was sold prior to 1978 when it was banned or in soil that was contaminated by leaded gasoline or improperly discarded batteries. Contamination of soils may also be present at past and existing industrial uses, gas stations and automotive service uses, and dry cleaners within Union City. Soil contamination may also be present at residential development due to contamination from household hazardous wastes (HHW). The USEPA describes HHW as leftover household products that can catch fire, react, or explode under certain circumstances, or that are corrosive or toxic. HHW includes products such as paints, cleaners, oils, batteries, and pesticides (USEPA 2018b).

The State Water Resources Control Board (SWRCB) GeoTracker website identifies Leaking Underground Storage Tanks (LUST) cleanup sites; Cleanup Program Sites, formerly known as Spills, Leaks, Investigations, and Cleanups (SLIC) sites; military sites; land disposal sites, or landfills; permitted underground storage tank sites; Waste Discharge Requirement sites; Irrigated Lands Regulatory Program sites; and Department of Toxic Substances Control (DTSC) cleanup and hazardous waste permit sites. A search of the GeoTracker database was conducted on November 28, 2018 (SWRCB 2018). In addition, the DTSC's EnviroStor database was searched on November 28, 2018 for cleanup sites in the City (DTSC 2018). According to the database search, there are a total of 30 contaminated sites in the City limits: one is an active hazardous waste site, four are open but eligible for closure, one is open but inactive, five are in the remediation phase, 14 are in the site assessment phase, and five are in the verification monitoring phase. These 30 sites include 13 LUST sites, 16 DTSC Cleanup Program sites, and one voluntary cleanup site. These sites are shown in Figure 4.8-2 and listed in Table 4.8-1. In addition, four closed hazardous waste sites, 118 closed cleanup sites, and three inactive cleanup sites are in the City limits.

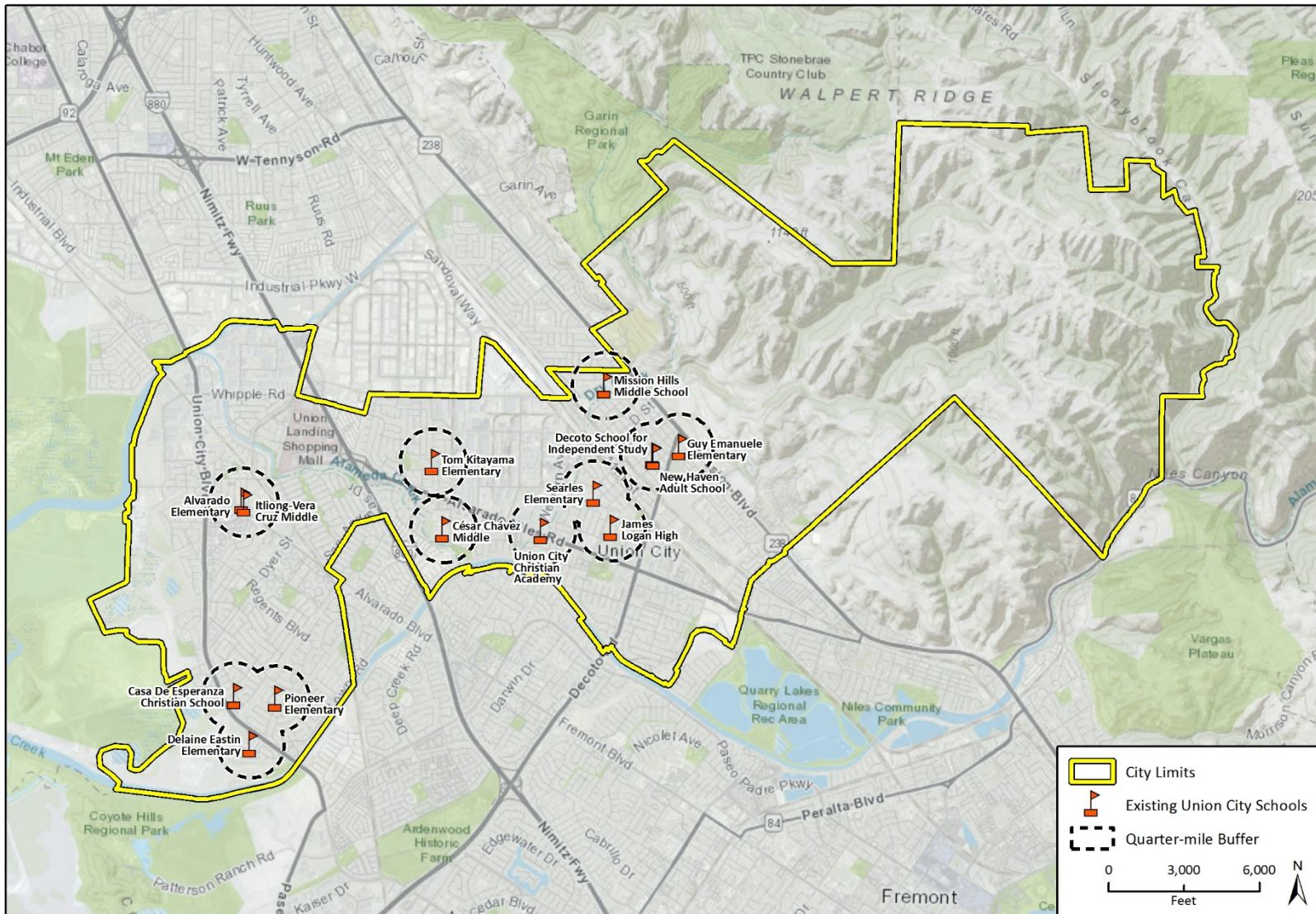
The Alameda County Water District (ACWD) is the agency granted authorization from the Regional Water Quality Control Board (RWQCB) to manage cleanup of contaminated sites. ACWD classifies known contaminated sites as open, closed, or conditionally closed, based on the property owner's progress in investigating, sampling, delineating the extent of the contamination, remediating and monitoring subsurface site conditions. ACWD issues cleanup orders to the property owner and oversees ongoing monitoring of the contamination, then recommends to RWQCB when formal closure is warranted. After its own review of the data, RWQCB, which has the ultimate authority for cleanup of contaminated properties, may formally grant case closure.

Open sites are those where ACWD has communicated the requirements for investigation or cleanup to the property owner and where such work has not been completed to the satisfaction of ACWD. Closed sites are those for which all cleanup orders have been satisfied, and where recommendation for site closure has been issued by ACWD and accepted by RWQCB. Conditionally closed sites are those for which all substantive corrective action have been completed some additional administrative or other actions are required before recommendation for full closure can be issued.

Some open sites are further designated as inactive, where no communications or cleanup actions have been undertaken for a significant period of time.

For most contaminated sites it is a combination of natural attenuation, the natural process of chemicals breaking down into the environment into less hazardous compounds, and active remediation efforts such as pumping and treating groundwater, that ultimately leads to a site being granted case closure.

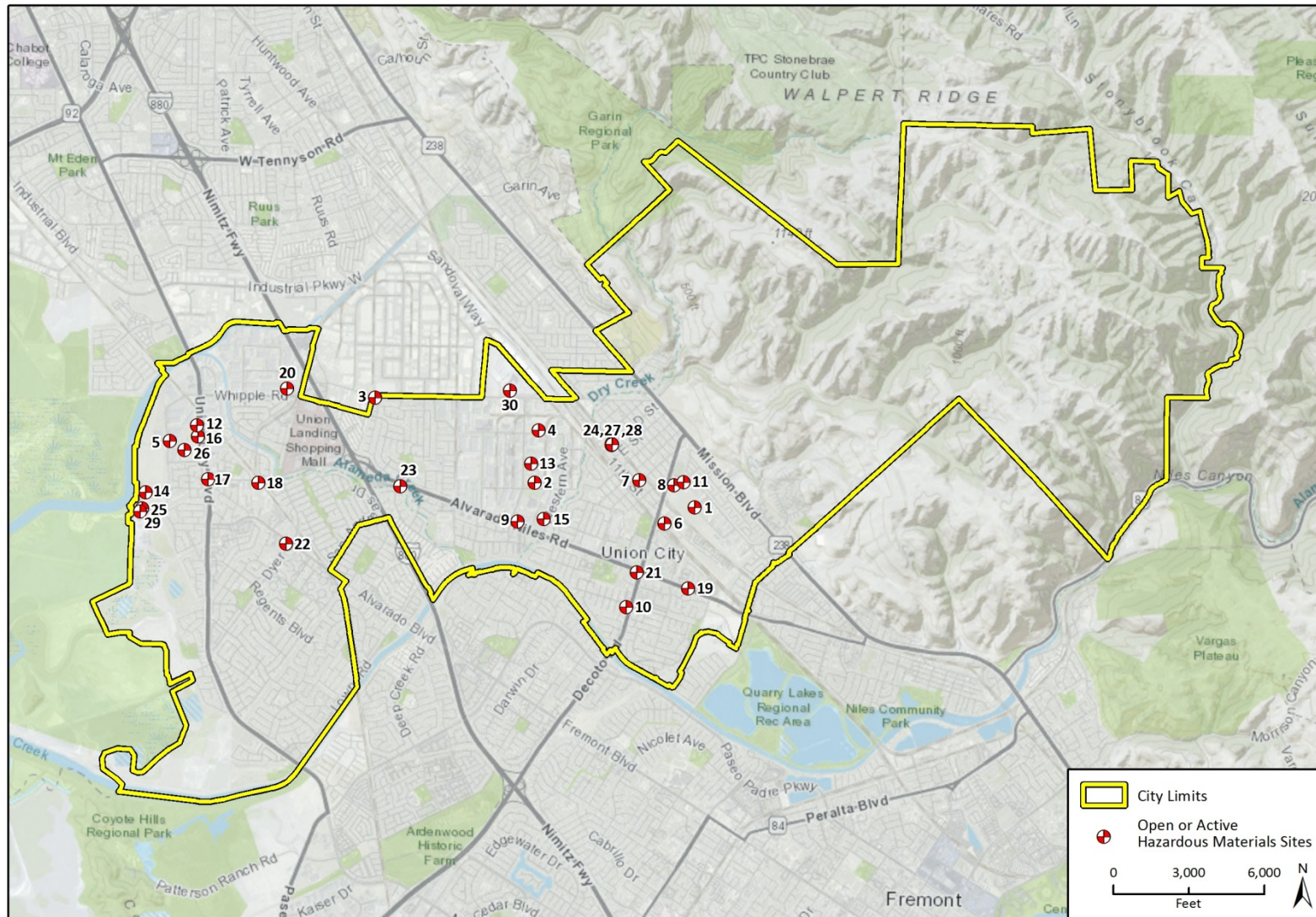
Figure 4.8-1 Existing Union City Schools with 1/4-Mile Buffer



Imagery provided by Esri and its licensors © 2019.
 Additional data provided by Union City, 2018.

Fig 4.8-1 Schools Qrt Mile

Figure 4.8-2 Open or Active Hazardous Materials Contamination Sites in Union City



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Additional data provided by SWRCB, 2018; DTSC, 2018.

Fig 4.7-2 Hazards

Table 4.8-1 Open or Active Hazardous Materials Contamination Sites in Union City

Site Map Number	Site Name	Address	Site ID	Site Type	Status
1	Union City Property	Bradford Way and Zwissig Way, Portion of 33955 7 th Street and RR Parcel	60002290	Voluntary Cleanup	Active Cleanup
2	Blommer Chocolate Company	1515 Pacific Street	T0600100197	LUST	Open – Eligible for Closure
3	Texaco Station No. 21-1345 (Texaco Downstream Properties Inc.)	1998 Whipple Road	T0600100556	LUST	Open – Eligible for Closure
4	Western Traction	1333 Atlantic Street	T0600101540	LUST	Open – Eligible for Closure
5	Bohanna & Pearce	30460 Whipple Road	SL18335755	Cleanup Program Site	Open – Eligible for Closure – Land Use Restrictions
6	PG&E Pipeyard	1100 Decoto Road	T10000009147	Cleanup Program Site	Open – Inactive
7	Former Liberty Station	967 H Street	T0600100831	LUST	Open – Remediation
8	Liquid Air Corporation	700 Decoto Road	T0600191503	Cleanup Program Site	Open – Remediation
9	Rose Cleaners	33366 Alvarado-Niles Road	T10000002336	Cleanup Program Site	Open – Remediation
10	Texaco Station/Exxon 7-0287/Zippy Lube	2601 Decoto Road	T0600101346	LUST	Open – Remediation
11	McKesson Chemical Facility	33950 7 th Street	SL18290711	Cleanup Program Site	Open – Remediation – Land Use Restrictions
12	A & H Truck Repair	30319 Union City Boulevard	T0600100571	LUST	Open – Site Assessment
13	Crown Cork & Seal Company, Inc.	33280 Central Avenue	T0600100409	Cleanup Program Site	Open – Site Assessment
14	Florestone Products Company, Inc.	4700 Horner Street	SL0600165055	Cleanup Program Site	Open – Site Assessment
15	LATCO Uniform and Linen Rental	33483 Western Avenue	SL0600102223	Cleanup Program Site	Open – Site Assessment
16	Mission Uniform & Linen Service	30305 Union City Boulevard	T0600100905	Cleanup Program Site	Open – Site Assessment
17	Mobil Bulk Plant	30995 Union City Boulevard	T0600100918	LUST	Open – Site Assessment
18	New Haven USD Corporation Yard	3636 Smith Street	T0600100960	LUST	Open – Site Assessment

Site Map Number	Site Name	Address	Site ID	Site Type	Status
19	Ryland Homes (Former U.C. Corp. Yard)	34900 Alvarado-Niles Road	T0600100382	LUST	Open – Site Assessment
20	Sammis PCA	2801 Whipple Road	SL0600140518	Cleanup Program Site	Open – Site Assessment
21	Shell Station-2001 Decoto Road	2001 Decoto Road	T0600101233	LUST	Open – Site Assessment
22	Shell Station-31889 Alvarado Blvd	31889 Alvarado Boulevard	T0600101250	LUST	Open – Site Assessment
23	Shell Station-32187 Alvarado Niles Rd	32187 Alvarado-Niles Road	T0600101251	LUST	Open – Site Assessment
24	STM Inc.	33395 Railroad Avenue	T0600191472	Cleanup Program Site	Open – Site Assessment
25	USD-Alvarado-Waste Oil Tank Area	5072 Benson Road	T0600100063	LUST	Open – Site Assessment
26	Chemseco	1 Tara Court	SL0600135858	Cleanup Program Site	Open – Verification Monitoring
27	Johnson Property/Octagon Spa	981 D Street	SL0600111003	Cleanup Program Site	Open – Verification Monitoring
28	Trestle Glen	33201 – 33399 Railroad Avenue	SL0600108266	Cleanup Program Site	Open – Verification Monitoring
29	Union Sanitary District-Veasy St. Expansion	# Veasy Street & Benson Road	SL0600100493	Cleanup Program Site	Open – Verification Monitoring
30	US Pipe & Foundry Co., Inc.	1295 Whipple Road	L10005679640	Cleanup Program Site	Open – Verification Monitoring

Note: Open cases are those where work has not been completed to the satisfaction of ACWD and are listed with the stage they are in (e.g., site assessment, verification monitoring). Active cases are though currently under review.

Sources: SWRCB 2018; DTSC 2018

d. Airports and Aircraft Hazards

There are no public or private airports in Union City; however, the Hayward Executive Airport is located approximately 3.3 miles north of the City limits. The Hayward Executive Airport’s influence area does not extend into Union City (Alameda County 2012).

e. Emergency Response Plans

California Government Code Section 8568, the “California Emergency Services Act,” states that “the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof.” The Act provides the basic authorities for conducting emergency operations following the proclamations of emergencies by the Governor or appropriate local authority, such as a City Manager. The provisions of the Act are reflected and expanded on by appropriate local

emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the State of California Emergency Plan. The State Emergency Plan conforms to the requirements of California's Standardized Emergency Management System (SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies (California Emergency Management Agency [CalEMA] 2009a). The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination (CalEMA 2009b). Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs (CalEMA 2009b). The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and State (CalEMA 2009b). The California Office of Emergency Services (CalOES) divides the State into six mutual aid regions. Union City is located in Mutual Aid Region II, which includes Del Norte, Humboldt, Mendocino, Sonoma, Lake, Napa, Alameda, Solano, Contra Costa, San Francisco, San Mateo, Alameda, Santa Clara, Santa Cruz, San Benito, and Monterey counties (CalOES 2018).

The Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan (HMP) focuses on mitigating hazards to reduce the impacts of disasters by identifying effective and feasible actions to reduce the risks of potential hazards (Union City/Newark Planning Team 2016).

f. Regulatory Setting

The management of hazardous materials and hazardous wastes is regulated at federal, State, and local levels, including through programs administered by the USEPA; agencies within the California Environmental Protection Agency, such as the DTSC; federal and State occupational safety agencies; and the Certified Unified Program Agency, which for Union City is the Environmental Programs Division of the City's Economic and Community Development Department.

Federal

The USEPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. The management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (42 U.S. Code [USC] 6901 et seq.);
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA); also called the Superfund Act (42 USC 9601 et seq.);
- Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 et. Seq.); and
- Superfund Amendments and Reauthorization Act of 1986 (SARA, Public Law 99 499).

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. The USEPA provides oversight and supervision for Federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards. Each of the aforementioned federal regulations is described below, along with applicable lead-based paint regulations.

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976

These acts established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. The Resource Conservation and Recovery Act was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

The Comprehensive Environmental Response, Compensation and Liability Act (enacted 1980), Amended by the Superfund Amendments and Reauthorization Act (1986)

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List.

The Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 *et seq.*) provides federal control of pesticide distribution, sale, and use. The USEPA was given authority under the Federal Insecticide, Fungicide, and Rodenticide Act to study the consequences of pesticide usage and require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered/licensed by the USEPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations

Regulations for lead-based paint are contained in the Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR) 33, governed by the U.S. Housing and Urban Development (HUD), which requires sellers and lessors to disclose known lead-based paint and lead-based paint hazards to prospective purchasers and lessees. Additionally, all lead-based paint abatement activities must be in compliance with California and Federal Occupational Safety and Health Administrations and with the State of California Department of Health Services requirements. Only lead-based paint trained and certified abatement personnel are allowed to perform abatement activities. All lead-based paint removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material at a landfill or receiving facility licensed to accept the waste.

State

Department of Toxic Substances Control

As a department of the California Environmental Protection Agency, the DTSC is the primary agency in California that regulates hazardous waste, assumes authority for clean-up of the most serious existing contamination sites, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the Resource Conservation and Recovery Act and the California Health and Safety Code.

The DTSC also administers the California Hazardous Waste Control Law to regulate hazardous wastes. While the Hazardous Waste Control Law is generally more stringent than the Resource Conservation and Recovery Act, both State and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 65962.5 requires the DTSC, the State Department of Health Services, the SWRCB, and the California Department of Resources Recycling and Recovery (CalRecycle) to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the State. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for any development project as complete, the applicant must consult these lists to determine if the site at issue is included.

If soil is excavated from a site containing hazardous materials, it is considered a hazardous waste if it exceeds specific criteria in Title 22 of the CCR. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority, such as the San Francisco Bay Regional Water Quality Control Board or the Alameda County Water District. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

Hazardous Waste Control Act

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 *et seq.*), which is implemented by regulations described in the CCR Title 22. The State program is similar to, but more stringent than, the federal program under the Resource Conservation and Recovery Act. The regulations list materials that may be hazardous, and establish criteria for their identification, packaging, and disposal. Environmental health standards for management of hazardous waste are contained in CCR Title 22, Division 4.5. In addition, as required by California Government Code Section 65962.5, DTSC maintains a Hazardous Waste and Substances Site List for the State called the Cortese List.

California Department of Pesticide Regulation, Department of Food and Agriculture, and the Department of Public Health

The California Department of Pesticide Regulations, a division of the California Environmental Protection Agency, in coordination with the California Department of Food and Agriculture, and the

California Department of Public Health have the primary responsibility to regulate pesticide use, vector control, food, and drinking water safety. The Department of Pesticide Regulations registers pesticides, and pesticide use is tracked by the County. Title 22 is used to regulate both small and large California Department of Public Health water systems.

California Fire Code (2016)

The 2016 Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy classification, location, maintenance, removal, and demolition of every building or structure throughout the State of California.

Local

County of Alameda Agricultural Commissioner

The regulation of pesticide storage, application, and waste disposal is under the jurisdiction of the County Agricultural Commissioner; the Commissioner implements the Department of Pesticide Regulations program. Since 1990 the Commissioner's office has compiled reports required of farmers and other users of agricultural pesticides which provide complete, site specific documentation of every instance of regulated pesticide application. These requirements include pesticides used on parks, golf courses, cemeteries, rangeland and pastures, and along roadside and railroad rights-of-way, among other locations. The reports are transferred to the Department of Pesticide Regulations and entered into a State database.

Union City Environmental Programs Division

The Environmental Programs Division of the City's Economic and Community Development Department has been certified by the California Environmental Protection Agency as the Certified Unified Program Agency. As the Certified Unified Program Agency, the Environmental Programs Division is responsible for administering California safety and environmental compliance laws and regulations related to hazardous materials and hazardous wastes in Union City. The purpose of the Environmental Programs Division is to protect public health and the environment from risks or adverse effects associated with the storage of hazardous materials. Environmental Programs Division performs compliance inspections for hazardous materials storage, use or handling, hazardous waste generation and waste treatment, underground storage tanks, aboveground petroleum storage, and accidental release prevention/Risk Management Plans for facilities in Union City. The division also implements the Commercial/Industrial Discharge Control element of the City's Clean Water Program.

4.8.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

This section describes the potential environmental impacts of the 2040 General Plan relevant to hazards and hazardous materials. The impact analysis is based on an assessment of baseline conditions, including locations of hazardous materials use and storage, existing contaminated sites, and emergency response and evacuation plan requirements. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to the development that would be facilitated by the 2040 General Plan. However, the precise increase in hazardous materials transported within Union City as a result of implementation of the 2040 General Plan cannot be predicted because specific development projects are not identified in the General Plan at a level of detail allowing such analysis. This analysis focuses on the potential nature and magnitude of risks associated with the accidental release, storage, transportation, and use of hazardous materials during operations of typical residential, industrial, and retail-commercial development projects. This analysis identifies and describes impacts of the 2040 General Plan and provides mitigation, as applicable.

Significance Thresholds

The following thresholds of significance are based on Appendix G of the *CEQA Guidelines*. For the purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would do any of the following:

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

As described at the beginning of this section, an analysis of the risk of exposure to wildland fires resulting from implementation of the 2040 General Plan is contained in Section 4.17, *Wildfire*. Therefore, threshold 7 is addressed in Section 4.17, *Wildfire*.

Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Threshold 2: Would the General Plan 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?

Impact HAZ-1 IMPLEMENTATION OF THE 2040 GENERAL PLAN COULD RESULT IN AN INCREMENTAL INCREASE IN THE OVERALL ROUTINE TRANSPORT, USE, AND DISPOSAL OF HAZARDOUS MATERIALS IN UNION CITY AND INCREASE THE RISK OF HAZARDOUS MATERIALS RELEASES. COMPLIANCE WITH APPLICABLE REGULATIONS RELATED TO HAZARDOUS MATERIALS AND COMPLIANCE WITH GENERAL PLAN POLICIES WOULD MINIMIZE THE RISK OF RELEASES AND EXPOSURE TO THESE MATERIALS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the 2040 General Plan would accommodate 11,486 new residents in Union City, and also increase the number of people that work within Union City. Thus, implementation of the 2040 General Plan would increase the number of people in Union City that could be exposed to a potential accidental release of hazardous materials. Development facilitated by the General Plan would increase residential density near major arterial streets, such as Decoto Road. Industrial and commercial uses on or nearby these arterials may require the routine transport of hazardous materials for their business operations. Therefore, development facilitated by the 2040 General Plan would increase the number of people, including residents, near transportation corridors where hazardous materials may be routinely transported.

As shown in Table 2-4 in Section 2, *Project Description*, buildout of the 2040 General Plan would facilitate approximately 2,163,851 square feet of manufacturing development in Union City. This industrial development, as well as commercial and mixed-use development facilitated by the 2040 General Plan would incrementally increase the number of business storing, using, transporting, and/or disposing of hazardous material within Union City. Commercial and industrial land uses could use and store hazardous materials in proximity to residential uses. Specifically, mixed-use development facilitated by the 2040 General Plan would result in new residential units adjacent to commercial and industrial land uses, which could use hazardous materials. Therefore, buildout of the 2040 General Plan could potentially increase hazardous materials exposure for residents. The risk of exposure would also increase for workers, because the 2040 General Plan increases the number of jobs in Union City through 2040, including industrial and commercial jobs that may require the use of hazardous materials.

Hazardous Materials Transport

Hazardous materials may be transported into and throughout Union City on Interstate 880; Mission Boulevard; arterial roadways such as Union City Boulevard, Alvarado-Niles Road, and Decoto Road; and collector and local streets. Accidents on these roadways could result in the release of hazardous materials. Additionally, hazardous materials may be transported via rail in the City, resulting in potential for hazardous materials release from accidents involving train derailments.

The U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, regulates the transportation of hazardous materials, as described in Title 49 of the CFR. Title 13 of the CCR additionally regulates the transportation of hazardous materials by designating appropriate hazard labels shipping preparation, vehicle loading, and hazardous materials registration, among

other requirements. Documentation of compliance with hazardous materials regulations codified in Titles 8, 22, and 26 of the CCR is required for all hazardous materials and hazardous waste transport. In addition, individual contractors and property owners are required to comply with all applicable federal and State laws and regulations pertaining to the transport, use, disposal, handling, and storage of hazardous waste, including but not limited to, Title 49 of the CFR. Adherence to applicable regulations and laws would reduce the potential hazards associated with the transport of hazardous materials, including accidental release of hazardous materials during transport.

In addition to mandatory adherence to laws and regulations, Goal M-7 and associated policies in the Mobility Element of the 2040 General Plan, listed below would reduce the potential hazard associated with the transport of hazardous materials in Union City. This goal and these policies designate truck routes within the City, and discourage truck traffic through residential neighborhoods, reducing the risk of accidental release of hazardous materials in transport.

Goal M-7: Encourage the safe and efficient movement of goods to support the local economy while minimizing impacts on residential neighborhoods and local traffic patterns.

Policy M-7.1: Designated Truck Routes. The City shall protect residential neighborhoods from intrusion by truck traffic by establishing, maintaining, and enforcing an efficient system of designated truck routes.

Policy M-7.2: Whipple Road as Truck Route. The City shall require all new development projects in the Central Bay Business Park to use Whipple Road from Central Avenue to Union City Boulevard as a truck route.

Hazardous Materials Use and Disposal

Although the overall quantity of hazardous materials used and requiring disposal in Union City could incrementally increase as a result of implementation of the 2040 General Plan, all new development that uses hazardous materials would be required to comply with the regulations, standards, and guidelines established by the USEPA, the State of California, and Union City related to storage, use, and disposal of hazardous materials.

As described above in the *Regulatory Setting* discussion, the Environmental Programs Division of the City's Economic and Community Development Department has been certified by the California Environmental Protection Agency as the Certified Unified Program Agency (CUPA). As the CUPA agency, the Environmental Programs Division performs inspections to prevent exposure to environmental health hazards for businesses and residents in Union City.

The Environmental Programs Division regulates approximately 330 businesses in Union City that store, use or handle hazardous materials or generate hazardous waste.

Businesses that handle certain chemicals over threshold quantities are required to develop a Risk Management Program, prepare and implement a Risk Management Plan (RMP), and submit the RMP to the Union City Environmental Programs Division. An RMP is a detailed engineering analysis of a facility's potential to cause an accident, and the mitigation measures that can be implemented to reduce this potential for an unplanned release. The RMP must consider the proximity to sensitive populations located in schools, residential areas, hospitals, long-term health care facilities and child day care facilities. The RMP must also consider external events such as seismic activity. Mandatory implementation of RMPs would reduce the potential hazard to residents and the general public in mixed-use development from reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Similarly, the RMP would prevent or

significantly reduce risks to residential and other uses located within proximity to industrial development facilitated by the 2040 General Plan.

For those employees that would work with hazardous materials, the amounts of hazardous materials that are handled at any one time are generally small, reducing the potential consequences of an accident during handling. Business-specific practices would be required to comply with federal and State laws to eliminate or minimize the potential consequence of hazardous materials accidents. For example, employees who would work around hazardous materials are required to wear appropriate protective equipment, and safety equipment is routinely available in all areas where hazardous materials are used. California Building and Fire Code requirements detail standards for the safe management of materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards. Compliance with all applicable federal, State and local requirements related to the storage of hazardous materials would maximize containment through safe handling and storage practices described above and provide for prompt and effective cleanup if an accidental release occurs.

In addition to mandatory adherence to laws and regulations, and compliance with programs, the Safety Element of the 2040 General Plan includes Policy S-1.4 and Goal S-7 and associated policies, listed below, that would reduce the potential for accidental exposure and hazards associated with the use and disposal of hazardous materials.

Policy S-1.4: Public Awareness of Common Household Hazards. The City shall update the website to add information related to common household hazards and best practices to reduce risk.

Goal S-7: To protect public health and safety, property, and the environment by promoting the safe management of hazardous substances and controlling the use, storage, handling and disposal of the most toxic and hazardous substances.

Policy S-7.1: Control Hazardous Materials. The City shall strictly control the use, storage, and handling of toxic, explosive, or other hazardous materials and wastes at facilities within Union City.

Policy S-7.2: Limit Locations of Hazardous Materials. The City shall limit locations of hazardous materials storage and use, through the City's development review or building permit review processes, to those areas where potential accidents will not cause undue risk to people and property, and where effective emergency response can be provided. Actions, as found appropriate, shall include the prohibition of certain hazardous materials, combinations of materials, or quantities of materials in particular land use areas and/or facilities.

Demolition and Redevelopment Activities

The 2040 General Plan facilitates and encourages infill development and redevelopment within urbanized areas of the City. Demolition activities related to future development and re-development projects in Union City would potentially result in emission of lead and asbestos. Lead-based materials and asbestos exposure are regulated by the California Department of Public Health, the Bay Area Air Quality Management District (BAAQMD) and the California Occupational Safety and Health Administration (Cal OSHA). The CCR §1532.1 requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed Cal OSHA standards. Under this rule, construction workers may not be exposed to lead at concentrations greater than fifty micrograms per cubic meter of air averaged over an eight-hour period and exposure must be

reduced to lower concentrations if the work day exceeds eight hours. Similarly, CCR §1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with requirements related to exposure, personal protective equipment, communication of hazards, and medical examination of workers.

The control of asbestos during demolition or renovation of buildings is regulated under the Federal Clean Air Act. The Federal Clean Air Act requires a thorough inspection for asbestos where demolition will occur and specifies work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expeditiously as practicable (USEPA 2018a). Compliance with the CCR and Federal Clean Air Act, which is mandatory, would reduce the potential hazards and risks associated with release of lead and asbestos.

Summary

Compliance with existing applicable regulations, programs, standards such as the Fire Code and Building Code, and implementation of 2040 General Plan goals and policies would minimize risks from routine transport, use, and disposal of hazardous materials, including potential hazards from the accidental release of hazardous materials. Oversight by the appropriate federal, State, and local agencies and compliance by new development with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these materials. Therefore, impacts from a hazard to the public or the environmental through routine transport, use or disposal of hazardous materials, or from accidental release or exposure to these materials would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 3: Would the General Plan emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact HAZ-2 IMPLEMENTATION OF THE 2040 GENERAL PLAN COULD RESULT IN HAZARDOUS EMISSIONS OR HANDLING OF HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE WITHIN 0.25 MILE OF AN EXISTING OR PROPOSED SCHOOL; HOWEVER, COMPLIANCE WITH EXISTING REGULATORY REQUIREMENTS WOULD MINIMIZE RISKS TO SCHOOLS AND STUDENTS, RESULTING IN A LESS THAN SIGNIFICANT IMPACT.

The 2040 General Plan would facilitate residential, office, commercial, and industrial development in Union City. Residential and office uses typically do not emit hazardous materials or substances. Since the 2040 General Plan does not include specific development projects, the quantity of hazardous materials proposed for use by future commercial and industrial developments within the City is currently unknown. However, the commercial and industrial development facilitated by the 2040 General Plan could include uses that generate and emit hazardous materials, substances, or water, such as gas stations, dry cleaners, and auto-body shops. Accidental release or combustion of

hazardous materials at new commercial and industrial developments could endanger residents or students in the surrounding community. This future commercial and industrial development could occur within a 0.25-mile radius of existing public and private schools in Union City, which are shown on Figure 4.8-1.

Hazardous materials and waste generated from future development would not pose a health risk to nearby schools because businesses that handle or have on-site storage of hazardous materials would be required to comply with the provisions of the California Fire Code adopted by the City (Union City Municipal Code Chapter 15.20) and the Environmental Programs Division CUPA requirements set forth in the California Health and Safety Code, Division 20, Chapter 6.95, Articles 1 and 2. As described in the Regulatory Setting above, all businesses that handle more than a specified amount of hazardous materials are required to submit a hazardous materials business plan to a regulating agency, in this case, the Environmental Programs Division.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4: Would development facilitated by the 2040 General Plan 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 create a significant hazard to the public or the environment?

Impact HAZ-3 IMPLEMENTATION OF THE 2040 GENERAL PLAN COULD FACILITATE DEVELOPMENT ON HAZARDOUS MATERIALS SITES. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS RELATING TO SITE CLEANUP AND THE 2040 GENERAL PLAN POLICIES WOULD MINIMIZE HAZARDS FROM DEVELOPMENT ON CONTAMINATED SITES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Existing sites that may potentially contain hazardous land uses in the City include large and small-quantity generators of hazardous waste, such as gas stations, dry cleaners, and industrial uses. As noted previously in Table 4.8-1, there are 30 active or open sites containing or potentially containing hazardous materials contamination located within the City limits. In addition, the 2040 General Plan identifies a 16-acre site, referred to as the Restoration Site, that consists of a mound rising approximately 22 feet above ground level that contains hazardous materials (mostly slag, a byproduct of steel production) from the former Pacific States Steel Corporation site. The Restoration Site is covered with an engineered cap to prevent the infiltration of water into the slag and exposure of the hazardous materials to the public or environment. The Restoration Site is identified by the City for future development of a variety of land uses and is designated as Station Mixed Use Commercial. Development facilitated by the 2040 General Plan on these sites could expose construction workforce and as well as future occupants to hazardous materials. New development occurring on documented hazardous materials sites listed in Table 4.8-1.

Development in Union City in areas identified in Table 4.8-1 would be preceded by investigation, remediation and cleanup under the supervision of the Regional Water Quality Control Board, the Alameda County Water District, or DTSC, likely before construction activities could begin. In addition, the 2040 General Plan Safety Element contains Goal S-7 and Policy S-7.3, listed below, which are related to reducing the potential risk from contaminated sites.

Goal S-7: To protect public health and safety, property, and the environment by promoting the safe management of hazardous substances and controlling the use, storage, handling and disposal of the most toxic and hazardous substances.

Policy S-7.3: Environmental Site Assessment. The City shall require applications subject to Site Development Review or applications for development on sites where there is potential for contamination to exist to include submittal of a Phase 1 Environmental Site Assessment and Phase 2 Environmental Site Assessment (if required). Any recommendations contained in these documents, including the need for remediation activities or additional study, shall be completed consistent with applicable federal, State, and local regulations.

Policy S-7.3 would reduce the potential for release of hazardous substances when development is proposed on hazardous sites because it would require a Phase 1 Environmental Site Assessment to first determine if there are known or potential hazards onsite. If so, the Phase 2 Environmental Site Assessment would include measures and parameters which must be undertaken for cleanup and remediation prior to construction.

It is also possible that underground storage tanks (USTs) in use prior to permitting and record keeping requirements may be present in the City. If an unidentified UST were uncovered or disturbed during construction activities, it would be removed under permit by the Environmental Programs Division; if such removal would potentially undermine the structural stability of existing structures, foundations, or impact existing utilities, the tank might be closed in place without removal. Tank removal activities could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Potential risks, if any, posed by USTs would be minimized by managing the tank according to existing standards contained in Division 20, Chapters 6.7 and 6.75 (Underground Storage Tank Program) of the California Health and Safety Code as enforced and monitored by the Environmental Programs Division.

The extent to which groundwater may be affected from an underground tank, if at all, depends on the type of contaminant, the amount released, the duration of the release, and depth to groundwater. If groundwater contamination is identified, characterization of the vertical and lateral extent of the contamination and remediation activities would be required by the RWQCB or the Alameda County Water District (ACWD) prior to the commencement of any new construction activities that would disturb the subsurface. If contamination exceeds regulatory action levels, the developer would be required to undertake remediation procedures prior to grading and development under the supervision of the RWQCB, depending upon the nature of any identified contamination. Compliance with existing State and local regulations as well as implementation of the 2040 General Plan policies would reduce impacts to less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the General Plan result in a safety hazard or excessive noise for people residing or working in the project area?

IMPACT HAZ-4 THERE ARE NO AIRPORTS WITHIN TWO MILES OF UNION CITY, AND THE CITY IS NOT WITHIN THE INFLUENCE AREA OF AN AIRPORT. THERE WOULD BE NO IMPACT.

There are no public or private airports within the Plan Area. The nearest airport is the Hayward Executive Airport located approximately 3.3 miles north of City limits. As described above, Union City is located entirely outside of the area of influence for the Hayward Executive Airport. Therefore, the project would have no impact related to excessive noise hazards within airport land use plan areas or in proximity to airports.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 6: Would the General Plan impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact HAZ-5 THE 2040 GENERAL PLAN POLICIES ADDRESS MAINTAINING A LOCAL HAZARD MITIGATION PLAN AND EMERGENCY ACCESS IMPLEMENTATION. THEREFORE, THE 2040 GENERAL PLAN WOULD NOT RESULT IN INTERFERENCE WITH THESE TYPES OF ADOPTED PLANS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the 2040 General Plan would accommodate future population growth and would increase vehicle miles travelled in the City. This could lead to increased congestion during emergency evacuations. However, Goal S-2 and associated policies of the 2040 General Plan Safety Element, listed below, is intended to ensure effective and coordinated response to disasters, which would include events warranting evacuation.

Goal S-2: Ensure efficient, effective, and coordinated response to natural and man-made disasters.

Policy S-2.2: Comprehensive Emergency Management Plan. The City shall maintain an up-to-date Comprehensive Emergency Management Plan that is consistent with the State and Federal disaster preparedness requirements.

Policy S-2.3: Hazard Mitigation Plan. The City shall maintain a FEMA- [Federal Emergency Management Agency] and State-approved Local Hazard Mitigation Plan and shall make it available for review on the City's website.

Policy S-2.4: Emergency Operations Center. The City shall maintain an Emergency Operations Center, either in an existing facility or a newly construction facility.

Policy S-2.5: Emergency Preparedness Staffing. The City shall seek funding for a staff person dedicated to managing emergency preparedness activities, including coordinating training activities for City staff and community members and coordination with outside agencies.

Policy S-2.6: Emergency Response Training. The City shall participate in disaster response exercises and provide for emergency response training of personnel and elected officials.

Policy S-2.8: Public Awareness of Disaster Preparedness. The City shall provide public education and awareness of natural and manmade hazards in the community and information related to disaster preparedness through the City’s website, social media channels, and other notification services

In addition to 2040 General Plan policies, the City contracts with Alameda County Fire Department (ACFD) to provide fire and emergency response services. In partnership with the City, ACFD prepared a Comprehensive Emergency Management Plan (CEMP) that describes how the City will effectively prepare for, respond to, recover from, and mitigate natural or human-caused disasters. ACFD is contracted to review and update the CEMP annually. Furthermore, ACFD has an Emergency Operations Plan and coordinates with surrounding jurisdictions in the county to ensure a coordinated and effective response. Implementation of the 2040 General Plan policies and implementation programs associated with emergency planning and response, in addition to ACFD regional emergency planning and local programs such as the Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan, would ensure that implementation of the 2040 General Plan would result in less than significant impacts relating to implementation of adopted emergency response and evacuation plans.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.9 Hydrology and Water Quality

This section evaluates the potential environmental effects related to hydrology and water quality associated with implementation of the 2040 General Plan. It discusses the regional and local watershed characteristics, including water quality, drainage and infiltration patterns, and flood hazards. The analysis includes a review of surface water, groundwater, flooding, stormwater, and water quality. Water supply and adequacy of wastewater conveyance and treatment are discussed in Section 4.16, *Utilities and Service Systems*. Impacts related to wetlands and waters of the U.S. are discussed in Section 4.3, *Biological Resources*.

4.9.1 Setting

Union City is located in the western portion of Alameda County. From 2001 to 2011, the mean annual precipitation averaged approximately 18 inches of rainfall. The precipitation in the area is highly seasonal, with over 75 percent of the rainfall occurring in the late fall and winter months between November and March (Union City 2015).

a. Surface Water

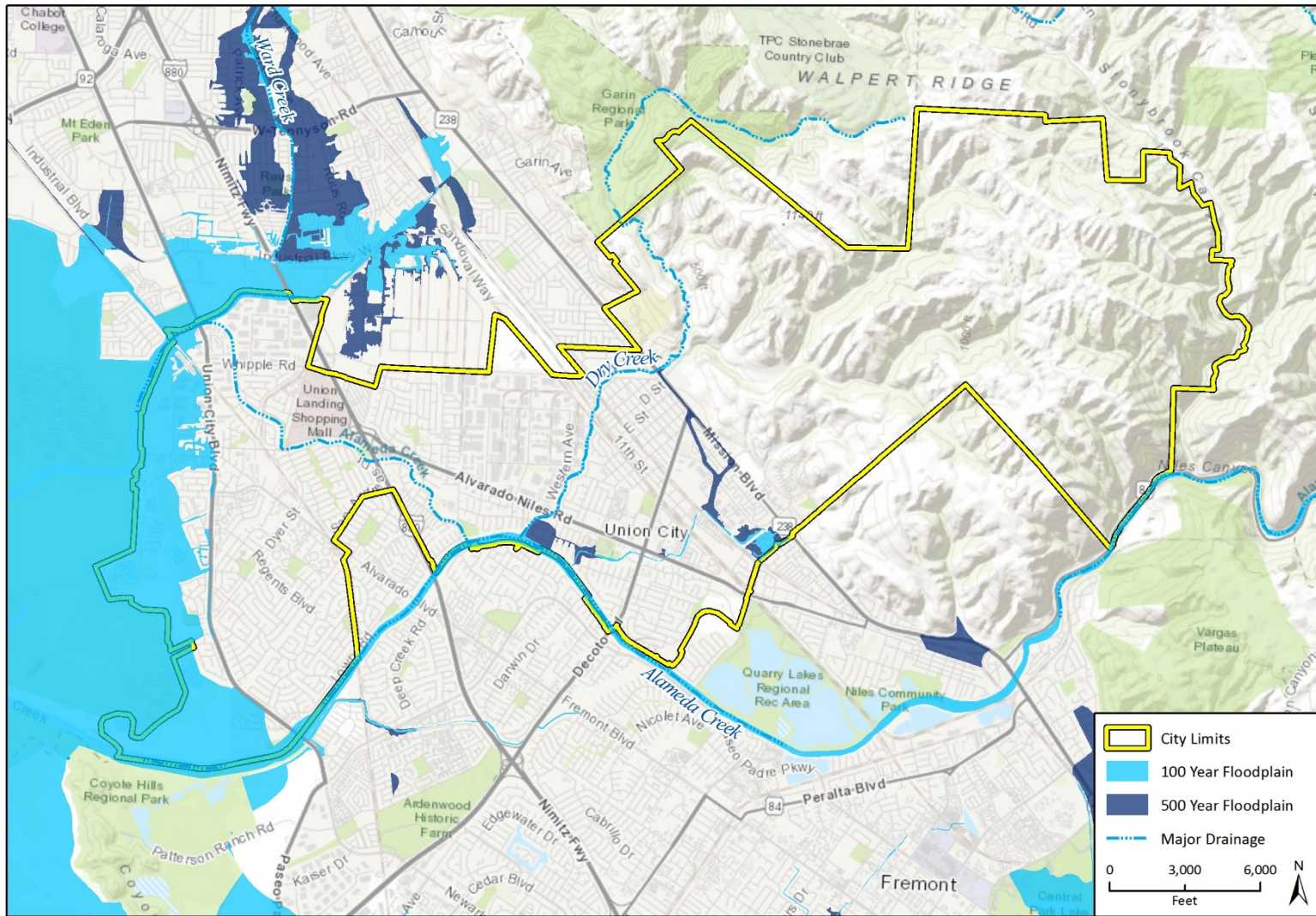
The California Department of Water Resources (DWR) divides surface watersheds in California into 10 hydrologic regions, which are further divided into Hydrologic Units (HU) and even smaller Hydrologic Areas (HA) within each HU. Union City lies within the San Francisco Bay Hydrologic Region (HR), which covers approximately 2.88 million acres, or 4,500 square miles, and includes all of San Francisco and portions of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda counties. The San Francisco Bay Regional Water Quality Control Board (RWQCB) governs basin planning and water quality within the San Francisco Bay HR (DWR 2003). Within the San Francisco Bay HR, Union City is located within the South Bay HU (DWR 2013).

Major drainages within Union City are shown on Figure 4.9-1. As shown, Alameda Creek runs along the southeastern boundary of the City. Dry Creek and Old Alameda Creek flow through the City in a north-south direction and are tributaries to Alameda Creek. Alameda Creek corresponds with segments of the southern boundary of the City limits in the hillside area east of State Route 238, and also crosses the western area of the City. Alameda Creek is largely channelized through Union City and is managed by the Alameda County Flood Control and Water Conservation District.

b. Water Supply

As described above, the water supply for Union City is provided by ACWD. Water is provided to ACWD from three sources: local supplies, the State Water Project (SWP), and San Francisco's Regional Water. Local supplies include fresh groundwater from the Niles Cone Subbasin, desalinated brackish groundwater from portions of the groundwater basin previously impacted by saltwater intrusion, and surface water from the Del Valle Reservoir. From 2006 to 2015, approximately 29 percent of ACWD's supply comes from the SWP, 17 percent from the San Francisco Regional Water System, and 54 percent comes from local supplies (ACWD 2015). The SWP and San Francisco Regional Water Supplies are imported into the ACWD service area through the South Bay Aqueduct and Hetch-Hetchy Aqueduct, respectively.

Figure 4.9-1 Major Drainages and Floodplains in Union City¹



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Additional data provided by FEMA 2018; U.S. Geological Survey, 2018, National Hydrography Geodatabase.

Fig 4.9-2 Floodplains in Union City

¹ This map does not reflect Letters of Map Amendment or Letters of Map Revision

c. Water Quality

The Niles Cone subbasin, as defined by the Department of Water Resources (DWR), exists almost exclusively within AWCD's boundaries. The groundwater basin is an aquifer system consisting of gravel, silt, and clay. The groundwater basin is divided by the Hayward Fault, an active fault with low permeability that impedes the lateral flow of groundwater. Large differences in water levels on either side of the fault demonstrate the relatively impermeable nature of the fault. ACWD manages both the Above Hayward Fault (AHF) and the Below Hayward Fault (BHF) sub-basins. The AHF sub-basin on the east side of the Hayward Fault is composed of highly permeable sediments referred to as the AHF Aquifer. The BHF sub-basin is composed of a series of relatively flat lying aquifers separated by extensive clay aquitards (Union City 2015).

Groundwater quality in the AHF Aquifer is acceptable as drinking water; however, salt water affects groundwater quality in certain areas of the BHF Aquifer. The salt water was first noticed in the 1920s and occurred due to pumping water from the basin faster than it recharged, a condition referred to as overdraft. Many years of this chronic overdraft caused the groundwater levels in the shallowest area of the BHF to drop below sea level. This relative elevation difference between the groundwater in the basin and the saline water from San Francisco Bay caused groundwater to flow further inland through the BHF, allowing saltwater to enter the groundwater basin. Several decades of salt water intrusion occurred and salt water migrated as far as the Forebay area. Since 1962 ACWD has purchased SWP water supplies to supplement local recharge and raise groundwater levels. ACWD's SWP supply was originally used solely to recharge the groundwater basin. As a result, groundwater levels rose and prevented additional saltwater intrusion. However, certain areas within the groundwater basin remain brackish due to past years of saltwater intrusion (ACWD 2015).

ACWD has implemented an Aquifer Reclamation Program to pump out brackish groundwater from the impacted areas of the aquifer system. Historically, this brackish groundwater has been discharged back to San Francisco Bay through local flood control channels. However, most of it is now treated at the Newark Desalination Facility for potable use (Union City 2015).

Storm Water and Urban Runoff

Union City's stormwater collection service is provided for and maintained by the City's Public Works Department. In general, city streets include storm drainage facilities including pipes, curb inlets, manholes, valley gutters, etc.

d. Flood Hazards

Areas that are subject to flood risk are identified by the Federal Emergency Management Agency (FEMA). Flood risk is defined by FEMA as an annual percent-chance of flooding, or the probability that flooding would occur in any given year. Although a 100-year flood will, on average, occur once every 100 years, the probability of a 100-year flood is one percent for any particular year. Two 100-year floods could occur in the same year or even in the same month, but the likelihood that two 100-year flood events would occur consecutively is very small.

FEMA maintains Flood Insurance Rate Maps (FIRM), whose primary purpose is to identify if a property is located within an area subject to flooding referred to as a Special Flood Hazard Area (SFHA), a V Zone, and/or a floodway, and to determine the Base Flood Elevation (BFE). New

development on sites within these areas are required to elevate the buildings so that the finish floor elevation is above the BFE to minimize the flooding risk.

As shown in Figure 4.9-1, most of Union City is not subject to flooding from either a 500-year storm or a 100-year storm. However, the far western edge of Union City is located in the 100-year floodplain, as well as some low-lying areas and areas along Alameda Creek.

Tsunami

Tsunami inundation zones within Union City are shown in Figure 4.9-2. As shown, only a small sliver of Union City along the southwestern City limits is located within a tsunami inundation zone.

e. Regulatory Setting

Federal

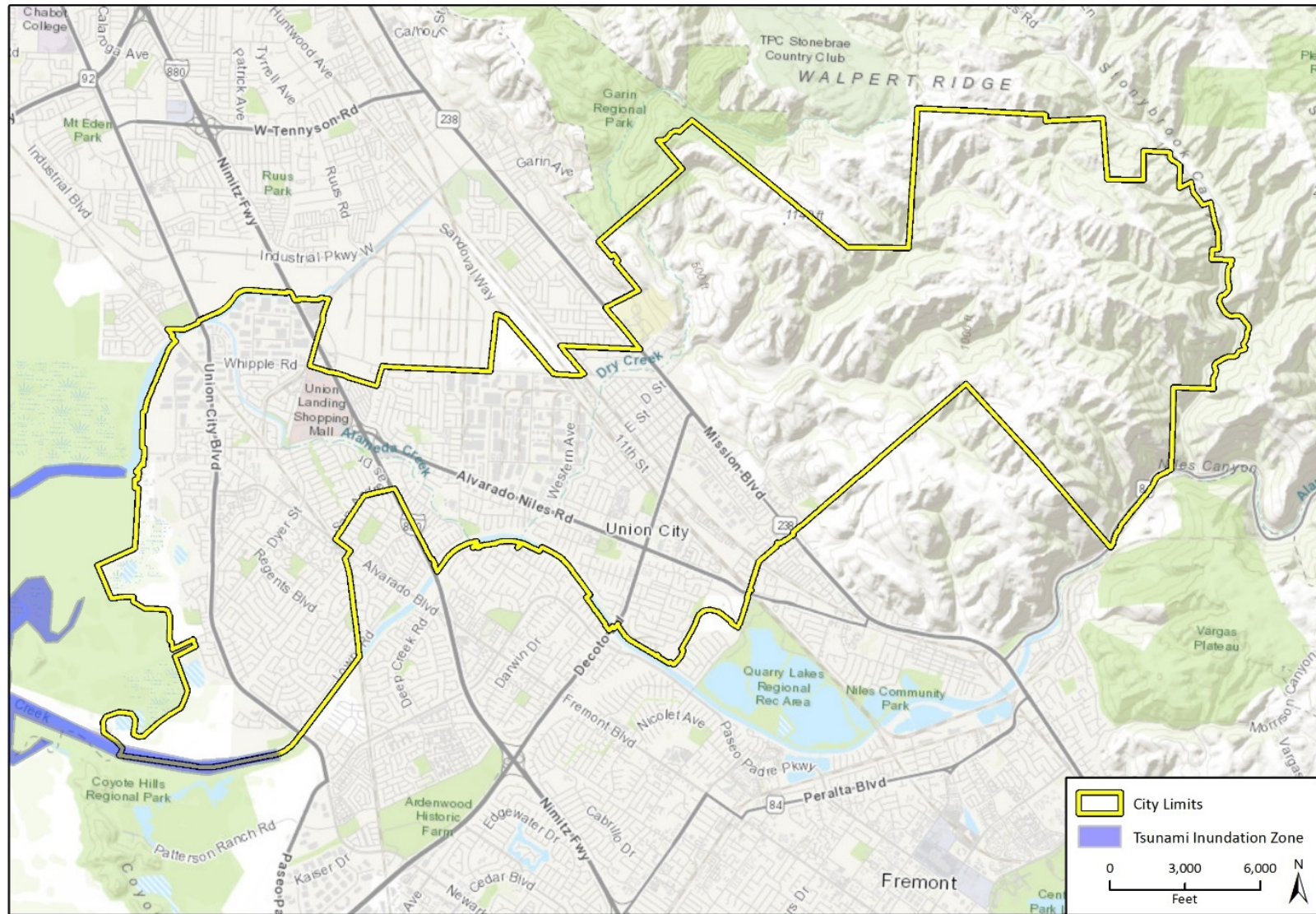
Clean Water Act

Congress enacted the Clean Water Act (CWA) with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Those discharges are regulated by the National Pollution Discharge Elimination System (NPDES) permit process (CWA Section 402). In California, NPDES permitting authority is administered by SWRCB and its nine Regional Water Quality Control Boards (RWQCB). Union City is in a watershed administered by the San Francisco Bay RWQCB.

As part of Section 402 of the CWA, the U.S. Environmental Protection Agency (USEPA) has established regulations under the NPDES program to control construction, operation and maintenance of stormwater treatment facilities. Although all projects must provide stormwater treatment during construction, larger projects in the City that disturb at least one acre of land must comply with additional requirements, under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ or 2009-0009-DWQ General Permit). These requirements include hydro-modification management (HM) and filing a notice of intent (NOI) with the RWQCB which includes the Stormwater Pollution Prevention Plan (SWPPP) for erosion control Best Management Practices (BMP). Other requirements may include a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Section 401 of the CWA requires that any activity that would result in a discharge into waters of the U.S. be certified by the RWQCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible, and minimized and mitigated where avoidance is not possible. Section 303(d) of the CWA requires states to establish Total Maximum Daily Load programs for streams, lakes and coastal waters that do not meet certain water quality standards.

Figure 4.9-2 Tsunami Inundation Zone



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Additional data provided by State of California, 2009, Tsunami Inundation Map for Emergency Planning.

Fig 4.9-4 Tsunami Inundation Zone

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws are relevant because they led to mapping of regulatory floodplains and to local management of floodplain areas according to guidelines that include prohibiting or restricting development in flood hazard zones.

State

California Porter Cologne Water Quality Control Act

The State of California is authorized to administer federal or State laws regulating water pollution within the State. The Porter-Cologne Water Quality Control Act (Water Code §§ 13000, *et seq.*) includes provisions to address requirements of the CWA. These provisions include NPDES permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Additionally, the Porter-Cologne Act states that the quality of all the waters of the State, including groundwater and surface water, must be protected for the use and enjoyment by the people of the State.

In California, the NPDES program is administered by the SWRCB through the RWQCBs and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The federal CWA prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California, which adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise known as the Construction General Permit (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Construction General Permit requires that the landowner and/or contractor file permit registration documents prior to commencing construction. These documents include a notice of intent, risk assessment, site map, stormwater pollution prevention plan (SWPPP), and signed certification statement. The SWPPP must include measures to ensure that: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs installed to reduce or eliminate pollutants after construction are completed and maintained. The Construction General Permit specifies minimum BMP requirements for stormwater control based on the risk level of the site. The Permit also specifies minimum qualifications for a qualified SWPPP developer and qualified SWPPP practitioner.

California Streambed Alteration Agreement

Sections 1600–1616 of the California Fish and Game Code require that any entity that proposes an activity that would substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or, deposit or dispose of debris, waste, or other material containing crumbled, flaked, or

ground pavement where it may pass into any river, stream, or lake, must notify the California Department of Fish and Wildlife (CDFW). The CDFW would require a Lake or Streambed Alteration Agreement if the Department determines that the alteration may adversely affect fish and wildlife resources. The Agreement includes conditions necessary to protect those resources. The Agreement applies to any stream, including ephemeral streams and desert washes.

Sustainable Groundwater Management Act

In September 2014, Governor Brown signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act gives local agencies the power to sustainably manage groundwater and requires Groundwater Sustainability Plans to be developed for medium- and high-priority groundwater basins. The Niles Cone Subbasin of the Santa Clara Valley Groundwater Basin is a medium priority groundwater basin.

The developed area of Union City, generally coinciding with the area west of State Route 238, is within the Santa Clara Valley-Niles Cone Subbasin. The ACWD is designated as the exclusive groundwater sustainability agency for this Subbasin. As an exclusive local agency, ACWD is required to submit an Alternative to a Groundwater Sustainability Plan or a Groundwater Sustainability Plan for the management of the Niles Cone Subbasin. The ACWD is preparing an Alternative to a Groundwater Sustainability Plan, but it has not been adopted to date (ACWD 2018).

Assembly Bill 70

Assembly Bill 70 requires cities and counties that have "unreasonably approved" development in an area with known flood risks to share liability for flood control damage with State entities.

Assembly Bill 162

Assembly Bill 162 requires cities and counties to address flood-related matters in the land use, conservation, safety, and housing elements of their general plans. The general plan must contain a statement of development policies and include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The land use element must identify and annually review those areas covered by the plan that are subject to flooding identified by flood plain mapping prepared by FEMA or DWR. The conservation element must identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for the purposes of groundwater recharge and stormwater management. The safety element is required to identify information regarding:

- Flood hazards, including flood hazard zones
- National Flood Insurance Program maps published by FEMA
- Information about flood hazards that is available from the United States Army Corps of Engineers
- Dam failure inundation maps
- Awareness Floodplain Mapping Program maps
- Levee protection zone maps
- Historical data on flooding

- Existing and planned development in flood hazard zones, including structures, roads, utilities, and essential public facilities
- Local, State, and federal agencies with responsibility for flood protection.

The safety element must establish a set of comprehensive goals, policies, objectives, and feasible implementation measures based on the information identified above for the protection of the community from unreasonable risks of flooding, including but not limited to:

- Avoiding or minimizing the risks of flooding to new development
- Evaluating whether new development should be located in flood hazard zones, and identifying construction methods or other methods to minimize damage if new development is located in a flood hazard zone
- Maintaining the structural and operational integrity of essential public facilities during flooding
- Locating, when feasible, new essential public facilities outside of flood hazard zones
- Establishing cooperative working relationships among public agencies with responsibility for flood protection.

Regional and Local

Alameda County Water District Urban Water Management Plan

As the water supplier for Union City, ACWD adopted the Alameda County Water District Urban Water Management Plan (UWMP) 2015-2020 in response to the State of California's Urban Water Management Planning Act, Water Code Sections 10610 and 10656. The Act requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an urban water management plan, and to update the plan every five years. The UWMP discusses the status of projects, programs, and studies in water supply planning, water conservation, and recycled water. The ACWD manages several programs and projects in the county focusing on water quality, pollution prevention, water conservation, stream and creek protection, and others.

Municipal Stormwater Permitting Program

The San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049 (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of over 70 municipalities, including Union City, and local agencies in five Bay Area counties. Under the MRP, permittees are prohibited from non-stormwater discharges into storm drain systems and watercourses. Permitted discharges must not cause or contribute to a violation of any applicable water quality standard for receiving waters. Upon a determination by either the MRP permittee(s) or the RWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standard, the permittee(s) must notify, within no more than 30 days, and thereafter submit a report to the RWQCB. The report must describe controls or BMPs that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The MRP also sets forth requirements for monitoring water quality.

Provision C.3 of the MRP establishes discharge requirements for new development and redevelopment projects. The goal of Provision C.3 is for the MRP permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. According to the MRP, this goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

4.9.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

This section describes the potential environmental impacts of the 2040 General Plan relevant to hydrology and water quality. The impact analysis is based on an assessment of baseline conditions for Union City, including climate, topography, watersheds and surface waters, groundwater, and floodplains, as described above under Subsection 4.9.1, *Setting*. This analysis identifies potential impacts based on the predicated interaction between the affected environment and construction and operation activities related to the development that would be facilitated by the 2040 General Plan, and recommends mitigation measures, when necessary, to avoid or minimize impacts.

Significance Thresholds

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this EIR, implementation of the 2040 General Plan may have a significant impact if it would:

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

Threshold 1: Would the General Plan violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface of ground water quality?

IMPACT HWQ-1 DEVELOPMENT PROJECTED BY THE 2040 GENERAL PLAN COULD RESULT IN VIOLATION OF WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS OR DEGRADATION OF GROUNDWATER QUALITY. COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND IMPLEMENTATION OF THE GOALS AND POLICIES OF THE 2040 GENERAL PLAN WOULD REDUCE THIS IMPACT TO LESS THAN SIGNIFICANT.

Construction

Construction activities facilitated by the 2040 General Plan could include road improvements and realignments, installation and realignment of utilities, demolition of existing structures for replacement, new development, and the potential replacement and/or improvement of drainage facilities. Water quality degradation from construction would be specific to each construction site. The topography of the site, the amount of soil disturbance, the duration that disturbed soil would be exposed, the amount of rainfall and wind that would occur during construction, and the proximity of the nearest waterbody all affect the potential for water quality degradation during construction. Since infill development would be prioritized in the focus areas the amount of new infrastructure construction required would be minimized.

Construction of future developments could result in soil disturbance due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. If not managed properly, disturbed soils would be susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the construction sites. The types of pollutants contained in runoff from construction sites would be typical of urban areas, and may include sediments and contaminants such as oils, fuels, paints, and solvents. Additionally, other pollutants, such as fertilizers, trace metals, PCBs, and hydrocarbons, can attach to sediment and be transported to downstream drainages and ultimately into collecting waterways, contributing to degradation of water quality.

Individual construction activities that disturb one or more acres of land surface would be subject to the NPDES Construction General Permit adopted by the SWRCB. Permit conditions require development of a SWPPP, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-storm water management controls. Inspection of construction sites before and after storms would be required to identify storm water discharge from the construction activity and to identify and implement erosion controls, where necessary. Compliance with the Construction General Permit is reinforced through the Union City Municipal Code, which requires the development of an erosion control plan during construction, pursuant to Section 15.85, which states that as required by the MRP, projects exceeding certain size thresholds will require a project-specific SWPPP.

Adherence to the requirements of the Union City Municipal Code would reduce the potential for new construction under the 2040 General Plan to cause pollutants water quality standards to be exceeded.

Construction activities, including excavation and trenching related to development, may encounter shallow groundwater. In the event that shallow groundwater is encountered, dewatering of the excavation or trenching site may be required. If improperly managed, these dewatering activities could result in discharge of contaminated groundwater. Contaminated groundwater would be treated prior to discharge or disposed of at an appropriate disposal facility or wastewater treatment

plant pursuant to the Groundwater General Permit (Regional Board Order No. R2-2012-0060). Union City Municipal Code Section 13.36 prohibits illicit discharges to the municipal storm water system, including discharges of contaminated groundwater. Also, discharges of dewatered groundwater to a water of the State would require authorization under a NPDES permit from the San Francisco Bay RWQCB. Compliance with existing regulations would ensure that impacts related to water quality degradation through the discharge of dewatered groundwater would be less than significant.

Compliance with the regulations and policies discussed above would reduce the risk of water degradation within Union City from soil erosion and other pollutants related to construction activities. Because violations of water quality standards would be minimized, impacts to water quality from construction activities facilitated by the 2040 General Plan would be less than significant.

Operation

Operation of development facilitated by the 2040 General Plan could potentially result in the addition of contaminants into both the stormwater runoff entering the municipal storm water drainage system and the wastewater entering the local wastewater collection and treatment system. If stormwater controls are not designed or managed properly, runoff from urban development could contain contaminants such as oil, grease, metals, and landscaping chemicals, such as pesticides, herbicides, and fertilizers that could enter the municipal stormwater drainage system and ultimately degrade surface water and groundwater quality. Illicit discharges to the municipal stormwater system are prohibited by Section 13.36 of the Union City Municipal Code. Despite the Union City Municipal Code prohibition related to illicit discharges, the possibility of illicit discharges to the municipal storm water system cannot be eliminated completely. The Union City Municipal Code also contains requirements for new development and redevelopment projects to minimize pollutants in stormwater runoff, as codified in Section 13.36.025. The Union City Municipal Code storm water discharge requirements are designed to achieve compliance with the San Francisco Bay RWQCB's NPDES permit and Waste Discharge Requirements for MS4 discharges (Order No. R2-2015-0049; NPDES No. CAS612008). Discharges to the municipal storm water conveyance system that would not be covered by the general NPDES permit would be required to obtain coverage under an individual NPDES permit or comply with individual Waste Discharge Requirements, as approved by the San Francisco Bay RWQCB.

The 2040 General Plan would facilitate industrial development. These industrial activities generate wastewater that could contain industrial and toxic pollutants. This wastewater could be conveyed to the sanitary sewer system that is managed and operated by the Union Sanitary District (USD). Wastewater collected in the sewer system is conveyed to the Alvarado Treatment Plant, where it undergoes treatment, clarification, and disinfection before being discharged to the San Francisco Bay. Industrial pollutants with certain physical or chemical characteristics in significant quantities or concentrations can block or damage the collection system, interfere with treatment processes, and pass through the wastewater treatment plant to the Bay, untreated. USD operates the Alvarado Treatment Plant under a NPDES permit from the SWRCB in compliance with the CWA. The permit requires that discharges from the plant meet applicable water quality standards before release into the Bay. The USD implements a mandatory industrial pretreatment program, which is subject to regulation and oversight by the USEPA and the San Francisco Bay RWQCB. The industrial pretreatment program requires that industrial uses in Union City obtain coverage under the USD's Industrial Wastewater Discharge Permit. The permit requires removing or diluting pollutants in industrial wastewater before conveyance to the Alvarado Treatment Plant. Mandatory compliance

with USD's industrial pretreatment program and Industrial Wastewater Discharge Permit, as well as continued compliance with the USD's NPDES permit for discharges from the plant to the Bay would reduce impacts.

In addition to compliance with mandatory CWA and Union City Municipal Code requirements, implementation of the following 2040 General Plan goals and policies would further reduce the potential for water quality degradation.

Goal PF-5: Provide a stormwater collection system that reduces excess runoff and minimizes flood potential from existing and future development, reduces impacts to water quality, and improves environmental quality.

Policy PF-5.3: Encourage Natural Vegetation and Filtration within Flood Control Facilities to ensure that impervious areas are minimized and there are opportunities for ground water infiltration, treatment and on-site detention to meet hydromodification management (HM) are maximized prior to releasing the drainage to the public stormwater system, to the extent feasible.

Goal RC-3: To protect and enhance the natural qualities of Union City's groundwater, surface water, and streams, and to ensure sufficient water supplies of good quality for all beneficial uses.

Policy RC-3.3: Erosion Control. The City shall require an erosion control plan for new construction, and shall ensure, through review and inspection, that erosion control is being implemented correctly on construction sites.

Policy RC-3.4: Compliance with Regional Municipal Stormwater Permit. The City shall require new development to comply with the most recent version of the San Francisco Bay Regional Municipal Stormwater Permit, which focuses on the incorporation of low impact development measures into development projects to improve the quality of stormwater runoff including, but not limited to, the incorporation of permeable paving, green roofs, cisterns, and biotreatment (e.g. rain gardens, bioretention units, bioswales, and planter/tree boxes) and the preservation of undeveloped open space.

Policy RC-3.5: Incorporate LID measures into City Projects and Existing Roadways. The City shall incorporate low-impact development measures, such as rain gardens, to improve the quality of stormwater runoff within City projects and within existing roadways to the extent feasible.

Policy RC-3.6: Soil Conservation Practices. The City shall require new development to incorporate soil conservation best practices to minimize erosion and related impacts on water quality and effects on drainage courses.

Policy RC-3.7: Public Education to Protect Stormwater Quality. The City shall continue to support and coordinate with the Alameda Countywide Clean Water Program on their public outreach and education campaign.

Compliance with NPDES permits requirements, the Union City Municipal Code, USD wastewater requirements, and 2040 General Plan goals and policies would reduce the risk of water contamination within Union City associated with construction and operation of new development to the maximum extent practicable. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

IMPACT HWQ-2 DEVELOPMENT PROJECTED BY THE 2040 GENERAL PLAN COULD RESULT IN THE DEPLETION OF GROUNDWATER SUPPLIES OR THE INTERFERENCE WITH GROUNDWATER RECHARGE. IMPLEMENTATION OF THE GOALS AND POLICIES OF THE 2040 GENERAL PLAN WOULD REDUCE THIS IMPACT TO A LESS THAN SIGNIFICANT LEVEL.

Development facilitated by the 2040 General Plan could potentially interfere with groundwater recharge through the creation of new impervious surfaces. As described in Section 2, *Project Description*, the 2040 General Plan is focused on infill development, especially in the focus areas, which would minimize the conversion of open space and permeable surfaces to impervious surfaces. Although impervious surfaces may increase incrementally on specific sites with infill development, implementation of the 2040 General Plan would not result in a substantial increase of impervious surfaces citywide. Thus, the minimal increase in impervious surface would be a negligible percent of the total recharge area for the Niles Cone Subbasin, which underlies Union City. For new developments and redevelopment projects, the amount of new impervious surfaces would be reduced through Low Impact Development (LID) goals and policies in the 2040 General Plan, including Policy RC-3.5, and the requirements of Provision C.3 of the MRP. Provision C.3.c lists some LID principles, including green roofs, permeable pavement, preserving undeveloped open space, biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes, that could be implemented. LID techniques would reduce impervious surfaces and would allow for more infiltration of precipitation and stormwater, which would support groundwater recharge.

Construction of projects facilitated by the 2040 General Plan could lower the local groundwater level during dewatering activities if it is necessary to remove water from the aquifer table. This potential impact would be temporary, local, and minor. Water use during construction, such as for dust suppression or concrete mixing, would be temporary and minimal and would not substantially lower the groundwater level in the Niles Cone groundwater basin. Operational increases in groundwater usage due to increased municipal water demand is addressed in Section 4.16, *Utilities and Service Systems*.

In addition, the 2040 General Plan contains several goals and policies that would encourage groundwater infiltration and water conservation. Goal RC-3, described under Impact HWQ-1, aims to ensure sufficient water supplies of good quality, and includes policies such as Policy RC-3.2, which would support efforts to protect and recharge the Niles Cone water-bearing aquifers. Additionally, Policy PF-5.3 would maintain natural infiltration to the greatest extent possible.

Compliance with Sustainable Groundwater Management Act requirements, implementation of the Alameda County Water District UWMP (refer to Section 4.16, *Utilities and Service Systems*), and adherence to the General Plan 2040 goals and policies would maximize groundwater infiltration and increase water use efficiency within Union City associated with construction and operation of new

developments to the maximum extent practicable. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

<p>Threshold 3: Would the General Plan substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:</p> <ul style="list-style-type: none">(i) result in substantial erosion or siltation on- or off-site;(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or(iv) impede or redirect flood flows?
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IMPACT HWQ-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD NOT ALTER THE COURSE OF A STREAM OR RIVER BUT HAS THE POTENTIAL TO ADD IMPERVIOUS SURFACES THAT MAY ALTER DRAINAGE PATTERNS AND INCREASE RUNOFF. HOWEVER, THIS INCREASE WOULD BE MINIMAL. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As discussed under Impact HWQ-2 and in Section 2, *Project Description*, the 2040 General Plan is focused on infill development, especially in the focus areas, which would minimize the conversion of open space and permeable surfaces to impervious surfaces. Implementation of the 2040 General Plan would not result in a substantial increase of impervious surfaces that would result in substantial erosion or siltation, substantially increase the rate or amount of runoff, or exceed the capacity of existing or planned drainage systems or provide substantial additional sources of polluted runoff. No substantial changes to drainage patterns in Union City would occur. Additionally, the Union City Municipal Code contains provisions that would minimize erosion and siltation, including Section 18.96.065 of the Municipal Code, which states that grading on slopes greater than 10 percent is to be minimized by properly contouring.

Additionally, the 2040 General Plan would not alter a stream or river. The 2040 General Plan facilitates development within urbanized areas of the City, primarily as infill and redevelopment. Wetlands, streams and rivers do not occur on parcels that have previously or are currently developed and that may be redeveloped. Additionally, any development facilitated by the 2040 General Plan within streams or rivers, as well as wetlands, would be required to obtain the necessary permits from regulatory agencies, which would avoid impacts to streams or rivers.

Furthermore, the 2040 General Plan contains goals and policies that would further reduce the potential for impacts to occur. Policy PF-5.8, described under Impact HWQ-1, would protect Union City hillsides from erosion and siltation through coordination with property owners. Policy RC-3.3, also described under Impact HWQ-1, would require an erosion control plan for new construction that would ensure erosion control is properly conducted on construction sites. Policy RC-3.6 would require new development to incorporate soil conservation best practices to minimize erosion and

related impacts to water quality. As discussed under Impact HWQ-2, Policy RC-3.5 and Policy PF-5.12 compliance with Provision C.3 of the MRP would reduce impervious surfaces and would allow for more infiltration of precipitation and stormwater, which would reduce the amount and rate of runoff entering the municipal storm drain system. Policy SA-8.14 would require coordination with Alameda County Flood Control and Water Conservation District to require that runoff is adequately addressed within the Horner/Veasby Area and is included below.

Policy SA-8.14: Address Site Run-off. The City shall coordinate with the Alameda County Flood Control and Water Conservation District and require new development and major modifications to existing development to adequately address site run-off within the Horner/Veasby Area.

Compliance with provisions of the Union City Municipal Code and policies in the 2040 General Plan would ensure that impervious surfaces would not result in substantial alteration of the existing drainage pattern. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4: In flood hazard, tsunami, or seiche zones, would the General Plan risk release of pollutants due to project inundation?

IMPACT HWQ-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN COULD INCREASE THE RISK OF POLLUTANT RELEASE DUE TO THE POTENTIAL FOR INUNDATION OF PROJECTS WITHIN FLOOD HAZARD ZONES. COMPLIANCE WITH APPLICABLE REGULATIONS AND IMPLEMENTATION OF THE GOALS AND POLICIES OF THE 2040 GENERAL PLAN WOULD MINIMIZE THE POTENTIAL FOR ADVERSE EFFECTS AND WOULD REDUCE THIS POTENTIAL IMPACT TO A LESS THAN SIGNIFICANT LEVEL.

A sliver of the southeastern border of Union City along Alameda Creek is within a tsunami inundation area, as shown in Figure 4.9-2 above. Although an earthquake on a nearby fault could create a tsunami, there is a low potential for a tsunami to affect Union City. Additionally, the 2040 General Plan designates the area along Alameda Creek as open space and does not facilitate development of the area. Union City is not near any confined waterbodies that could be vulnerable to seiche. As shown in Figure 4.9-1, there are areas of both 100-year and 500-year floodplains within Union City, and according to the 2040 General Plan an estimated 10 percent of urban land within Union City is located within the 100-year floodplain. These areas could experience development or redevelopment under the 2040 General Plan.

Facilities that use or store hazardous materials could harm the environment if inundated by a flood. The potential for this to occur can be minimized through compliance with mandatory California Building Code requirements as well as Chapter 18.98 of the Union City Municipal Code, which contains guidelines for development within the floodplain combining district. Section 18.98.050 specifically contains provisions for flood hazard reduction, including standards for construction, utilities, subdivisions, manufactured homes, floodways, and recreational vehicles.

Additionally, policies and implementation policies within the 2040 General Plan would also reduce the risk of pollutant release in areas of flood hazard. Policy S-1.1 would ensure all projects are reviewed for compliance with relevant building codes, including those related to flooding, and Policy

S-1.2 would ensure development mitigates potential risks from natural hazards (including flooding) to acceptable levels. Implementation Program S-1.A would require the City to review and revise building codes and regulations to incorporate the latest information and technology related to natural hazards, such as flooding. In addition, Policy SA-8.16 would require that structures built in the Horner/Veasby Area be protected from flood hazards. Implementation Program SA-8.A encourages City cooperation with Alameda County Flood Control and Water Conservation District on infrastructure improvements to remove the Horner/Veasby Area from the floodplain, which would reduce the risk of accidental pollutant release in the event of inundation.

Adherence to these goals and policies and compliance with applicable laws and regulations would minimize the potential impact of pollutant release in the event of inundation of structures in flood hazard zone. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 5: Would the General Plan conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

IMPACT HWQ-5 DEVELOPMENT FACILITATED BY THE 2040 UNION CITY GENERAL PLAN WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development under the 2040 General Plan would be required to adhere to NPDES drainage control requirements as well as municipal requirements, as discussed under Impact HWQ-1. As mentioned above in Section 4.9.1, the ACWD has not yet prepared a groundwater sustainability plan or an alternative to a groundwater sustainability plan. However, as discussed under Impact HWQ-2, implementation of the 2040 General Plan would not result in substantial groundwater depletion. Therefore, the 2040 General Plan would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.10 Land Use and Planning

This section summarizes the City’s land use characteristics, including the overall land use pattern as well as a more detailed analysis by major land use type, and analyzes existing plans and focus areas with development potential in order to determine the potential environmental effects of the proposed 2040 General Plan related to Land Use and Planning.

4.10.1 Setting

a. Current Land Use Pattern

Union City can be characterized as a community dominated by low-density, single family housing with some multifamily housing, low-intensity commercial uses, and several large industrial parks. Most the city’s urban development lies west of State Route 238, also known as Mission Boulevard. The parts of the City east of State Route 238, referred to as the hillside area is comprised primarily of open space and agricultural land.

Figure 2-3 in Section 2, *Project Description*, shows the Land Use Map from the City’s current 2002 General Plan. The general distribution of land uses within the City is shown in Table 4.10-1.

Table 4.10-1 Distribution of Existing Land Uses

Existing Land Use	Acres	Percentage of Total Area
Single Family Residential	2,035.8	16.4
Low-Density Multifamily Residential	202.1	1.6
Multifamily Residential	110.0	0.9
Commercial	238.7	1.9
Mixed Use	5.0	<0.1
Industrial	901.1	7.3
Public/Quasi-Public	429.0	3.5
Public Utilities	143.8	1.2
Parks and Recreation	122.4	1.0
Open Space/Agriculture	7,147.3	57.6
Vacant	188.8	1.5
Other ¹	889.0	7.2
Total	12,413.0	100.0

¹ Other land includes some roads, right-of-ways, rivers, and all other unclassified land

Source: Union City 2015

As shown in Table 4.10-1, open space and agricultural land use designation make up the largest share of existing land use within Union City. Approximately 7,147.3 acres, or 58 percent, of the City is designated as either open space or agriculture. Approximately 83 percent of the area designated as either open space or agriculture is located in the hillside area east of State Route 238 (Union City 2015).

As described above, urbanized areas of Union City are located primarily west of State Route 238. Single family residential is the most common land use in the urbanized areas, covering about

2,035.8 acres, or approximately 16 percent of the City, as shown in Table 4.10-1. Low-density multifamily residential makes up about 202.1 acres of the City, which is approximately 2 percent of the total area of the City. Multifamily residential makes up about 110 acres of the City, which is approximately 1 percent of the total area in Union City. Both Low-density multi-family residential and multi-family residential land uses apply to land with attached dwelling units. These land use types are differentiated because low-density multifamily residential is consistent with duplexes, triplexes and townhomes, while multifamily residential applies to apartment buildings and condominiums that allow for greater density.

Single family residential, multifamily residential, mixed-use residential land uses provide all of the land for housing in Union City.¹ Both multifamily residential and low-density multifamily residential uses are located in and around the Station District area, Market Place Shopping Center area, along Alvarado-Niles Road and Decoto neighborhood. Low-density multifamily residential uses are also found on the west side of Interstate 880, east of Union City Boulevard, and south of Alvarado Boulevard.

Covering approximately 901 acres, industrial land uses comprise about 7.3 percent of the total area of the City, as shown in Table 4.10-1. Industrial uses include warehouse and distribution facilities, manufacturing facilities, office uses, and flex-industrial uses. There are clusters of industrial areas on both the east and west sides of Union City.

Public/quasi-public land uses comprise 429 acres of the land in Union City, which is approximately 3.5 percent of the total land area. Schools, churches, hospitals, and government offices are all examples of public/quasi-public land uses. These uses are spread throughout the City.

Commercial areas comprise approximately 238.7 acres and make up about 1.9 percent of the total area in Union City. In addition to a variety of smaller neighborhood commercial shopping centers, the City has five major commercial areas including: Union Landing, Calaveras Landing, Marketplace Shopping Center, Four Corners Shopping Area, and Smith Street Commercial Area in the Historic Alvarado District.

Mixed use is the least common land use type in Union City, covering approximately 5 acres or 0.05 percent of the area within the City. Mixed land uses include parcels on which various uses such as residential, office, and commercial, are combined in a single building or on a single site in an integrated development project. Alvarado Square on Union City Boulevard and the Station Center along 11th Street in the Station District are both examples of mixed-use development within the City.

Approximately 188.8 acres, or 1.6 percent, of land is vacant in Union City. Parcels of vacant land are spread throughout the City. However, the two largest vacant land parcels are located near the Union City BART Station.

¹ The single family residential land use also includes mobile home parks.

b. Existing Plans and Studies

2002 Union City General Plan

The City's current 2002 General Plan was adopted in February 2002 and guides how land in the City may be developed and used by designating each parcel of land for a particular use or combination of uses and by establishing broad development policies. Land use designations identify both the types of development, such as residential, commercial, and industrial, that are permitted and the density or intensity of allowed development, such as the minimum or maximum number of housing units permitted on an acre of land or the amount of building square footage allowed. Some of the key goals related to land use are summarized below.

Land Use Element Goals

- **Goal LU-A.1:** To grow in an orderly pattern consistent with the economic, social, and environmental needs of Union City.
- **Goal LU-A.2:** To create land use patterns that promote the residential character of the community including quality housing development, and balanced, harmonious land use types.
- **Goal LU-A.3:** To promote the character of the Old Alvarado and Decoto neighborhoods and preserve and protect these neighborhoods as distinct areas of the community.
- **Goal LU-A.4:** To empower neighborhoods to identify problems and develop solutions to address local needs.
- **Goal LU-A.5:** To encourage attractive, well-located commercial development to serve the needs of Union City residents, workers, and visitors.
- **Goal LU-A.6:** To designate adequate land for and promote development of industrial uses to meet the present and future needs of Union City residents for jobs and to maintain the revenue stream for municipal services.
- **Goal LU-A.7:** To achieve maximum jurisdictional and agency coordination in all aspects of physical and social planning.
- **Goal LU-B.1:** To create an environment surrounding the intermodal facility that is mixed use and transit-oriented and which has good connectivity with the rest of the city while integrating well with the surrounding neighborhoods.
- **Goal LU-B.2:** To establish landscape and other buffer zones between potentially incompatible uses.
- **Goal LU-B.3:** To attract local-serving businesses to the area to support and balance residential uses in the Station District.
- **Goal LU-B.4:** To encourage and support the timely redevelopment of the Station District as an area of high quality commercial, office, research and development (R&D), light industrial, residential and service commercial industries and uses, with appropriate associated uses, such as transportation links, parks, schools, etc.
- **Goal LU-B.5:** To encourage a variety of densities and types of residential uses in the area to help achieve City housing goals, ensure proper relationships to adjoining lands, and to support existing and future commercial uses within and nearby the Station District.
- **Goal LU-B.6:** To provide, or ensure the provision of, affordable housing in concert with the goals, policies, and standards of the adopted Union City Housing Element and Redevelopment Area requirements.

- **Goal LU-B.7:** To guide all new development in the Station District in such a way as to ensure harmony with existing and potential uses both within the Station District and in adjacent neighborhoods.
- **Goal LU-B.8:** To balance residential, commercial and light industrial land uses so as to achieve a high quality of life for the Station District and minimize adverse impacts on the greater community.
- **Goal LU-B.9:** To increase and diversify local employment opportunities and retain existing and accommodate new light industrial uses that are compatible with City objectives for safety, environmental quality, visual quality, and revenue enhancement.
- **Goal LU-B.10:** To encourage timely removal of any existing industrial operations that cause significant risk to existing or planned land uses, and when necessary financially support timely clean-up of sites contaminated by wastes from previous hazardous materials users.
- **Goal LU-C.1:** To actively pursue an incentive approach that will encourage the conversion of existing warehouses to light industrial and research and development uses that will ultimately create new Silicon Valley addresses in Union City.
- **Goal LU-D.1:** To continue to encourage and support the development of Union Landing as the major retail center of the city and a retail center of regional and subregional significance.
- **Goal LU-D.2:** To encourage the development of uses, features and conditions in Union Landing that will allow the area to become the major commercial and entertainment center of Union City, including opportunities for daytime and evening uses.
- **Goal LU-D.3:** To discourage uses and avoid actions that would be detrimental to the achievement of Goals LU-D.1 and LU-D.2.
- **Goal LU-D.4:** To ensure, to the extent practical, that all new development in Union Landing will be economically viable, that it will generate revenues to the City in excess of City costs to service development, and that it will create new jobs within the city.
- **Goal LU-D.5:** To encourage unified development of Union Landing to achieve coordinated improvements and interconnections between development types.
- **Goal LU-D.6:** To identify and, to the greatest extent possible, minimize the potential adverse effects of development in Union Landing on surrounding areas.
- **Goal LU-D.7:** To allow the development of various forms of commercial activities recognizing changing market conditions while organizing these activities into distinctive areas within Union Landing.
- **Goal LU-E.1:** To redevelop the Four Corners commercial center as the new International Market Place with new commercial services and an emphasis on ethnic specialty foods.
- **Goal LU-F.1:** To redevelop the area along Mission Boulevard from Decoto Road to the Hayward city limits to intensify the land use and provide opportunities for new commercial and residential development.
- **Goal LU-G.1:** To make a more deliberate connection to Union City Boulevard as a business address by emphasizing infill development and conversion to uses with high job density (i.e., flex space).
- **Goal LU-G.2:** To create stronger linkages to Old Alvarado as a commercial service amenity/center.

- **Goal LU-H.1:** To encourage light industrial/manufacturing uses that are compatible with City objectives for safety, environmental quality, visual quality, employment generation, and successful infill development to locate in the Horner/Veasy Area.
- **Goal LU-H.2:** To encourage the unified development of the Horner/Veasy Area to overcome infrastructure challenges, achieve coordinated improvements and, to the greatest extent possible, minimize the potential adverse effects of development on surrounding areas.
- **Goal LU-I.1:** To create a community park site that serves as a gateway to Union City along Route 84.
- **Goal LU-J.1:** To provide for the orderly development of the Hillside Area that protects and enhances the area's natural resources.

Decoto Industrial Park Study Area Specific Plan

The Decoto Industrial Park Study Area (DIPSA) Specific Plan provides for the coordinated development and reuse of approximately 440 acres of land generally located between State Route 238, Decoto Road, Alvarado-Niles Road and the Fremont-Union City limits. The plan area boundaries also incorporate the Gateway Site located just southwest of Alvarado-Niles Road, the BART station, and the planned Quarry Lakes Parkway roadway.

In August 1994, the City Council adopted the DIPSA Specific Plan. The purpose of the Specific Plan is to promote the redevelopment of an area of Union City that historically has been occupied by aging industrial uses with a mix of office, light industrial, retail and residential uses. The DIPSA Specific Plan was updated in 2006 to reflect the progress to date on implementation of the plan. In addition, the Specific Plan's vision was incorporated into the City's planning framework including the current 2002 General Plan and Zoning Ordinance. This plan formed the basis of future planning efforts in the greater Station District area.

Intermodal Station District and Transit Facility Plan

In September 2001 the City adopted the Intermodal Station District and Transit Facility Plan which created a vision of a compact, pedestrian- and transit-oriented, mixed-use downtown area centered on a new intermodal transit facility (Union City 2002). The City, BART, and AC Transit jointly sponsored the preparation of the plan, which was a large-scale effort to provide a comprehensive transit-oriented development around the BART station. The plan encompasses the Union City BART station and the surrounding parcels. In addition to the Union City BART Station and parking lot, the plan includes the parcel that currently accommodates Avalon Bay, formerly referred to as the Litke property, which measures approximately 6 acres, and the former PG&E pipe yard property, which measures approximately 31 acres.

The plan outlined land use and transit facility goals; a development program for the district including expected capacity, parking, and infrastructure improvements; design recommendations for public spaces; and the framework needed to guide the development of the district. The plan established a new development pattern that incorporated more intensive land uses and reduced dependence on automobile access. The plan focused on providing easy pedestrian access to the station. The plan also envisioned changes to the existing BART station to include a passenger rail station.

The plan envisioned the build-out of office and research and development uses and residential housing on the PG&E site at the BART station; office and research and development uses within the BART parking lot; and residential housing on the former Litke property at the site. The plan also

identified area for parks / open space areas as well as space for community uses. To date, 838 high density residential units have been constructed in the Station District including a 157-unit affordable housing development.

Station District Strategic Action Plan

The Station District Strategic Action Plan was prepared in June 2004 as an implementation tool for coordinating and monitoring the development of the Station District (Union City 2004). The Plan was intended to assist the City in managing multiple development, transportation, and public improvements projects. The Plan focuses on three aspects of development: land use development, transportation, and community facilities. In addition, the Plan outlines the policy framework of development in the District, the roles and responsibilities of the implementation partners, the implementation schedule, and descriptions of projects.

Union City 511 Area Specific Plan

Approved by the City Council on September 14, 1987, the Union City 511 Area Specific Plan covers a 905.9-acre area in the City (Union City 1987). The project area lies immediately west of the Union City Boulevard, with the exception of one 12-acre portion. Benson Road and Marsten Avenue form the area's northern boundary and Alameda Creek forms its southern boundary. The plan provides broad goals and objectives as well as specific implementation strategies to create high-quality residential development with efficient circulation.

The majority of the 511 area is constructed except for a small, six-acre infill site, which was part of the former Turk Island landfill, located on Carmel Way adjacent to Seabreeze Park. The property is identified in the plan for single-family residential development. The clean-up of this property and the development of 33 single-family homes was recently approved by the City for this site.

Hillside Area Plan

Through a voter initiative in 1989 known as Measure B, the City prepared a plan to regulate development in the hillside area to the east of State Route 238, also called Mission Boulevard. The resulting plan, the Hillside Area Plan, was adopted by the City Council in 1995. The overall goal of the Hillside Area Plan is to recognize the unique character of the study area and to guide and regulate development in a manner which protects and enhances the area's natural resources, while also allowing for an appropriate level of development in the area. In 1996, the voters adopted another voter initiative, Measure II, which mandated that the plan could only be amended through a vote of people in a regularly scheduled election. Measure B and Measure II also stipulated that a Specific Plan be prepared prior to development of areas designated as Agriculture in the hillside area. Since the adoption of Measure B and Measure II, limited development projects within the boundaries of the Hillside Area Plan have occurred on already-developed parcels, including Chapel of the Chimes cemetery, Masonic Homes campus expansions, and minor single-family home projects in the Seven Hills and Tamarack neighborhoods, which is consistent with the Hillside Area Plan.

Proposed 2040 General Plan

The 2040 General Plan, the proposed project under analysis in this EIR, would update and supersede the current 2002 General Plan. It contains a description of 19 different land use designations proposed for Union City. The descriptions include allowed maximum density or intensity of development; and specific guidance on the intended physical character of future development,

including building placement on a lot, lot coverage, building frontage, streetscape character, and parking location and access. Table 2-1 in Section 2, *Project Description*, describes the 19 land use designations.

Proposed 2040 General Plan Land Use Goals

- **Goal LU-1:** Strategically support infill development and redevelopment to transform Union City into a distinctive community with a dynamic, transit-oriented city center, attractive shopping and entertainment areas, and thriving and innovative work places.
- **Goal LU-2:** Provide a land use framework that promotes transit-oriented development and walkable communities and reduces reliance on cars.
- **Goal LU-3:** Encourage development that integrates a mix of commercial, office, and/or residential uses in appropriate areas, enabling residents to live close to businesses and services.
- **Goal LU-4:** To preserve and enhance residential neighborhoods so they remain desirable places to live, maintain a variety of housing types, and contribute to the quality of life for Union City residents.
- **Goal LU-5:** Foster development of residential neighborhoods that are attractive and safe.
- **Goal LU-6:** To encourage Union City’s shopping districts to redevelop, intensify, and adapt to changing retail trends.
- **Goal LU-7:** Protect the supply of land in Union City’s business parks and ensure development and design standards encourage business parks to adapt and transition into vibrant employment centers.
- **Goal LU-8:** Provide for governmental, utility, institutional, educational, cultural, faith-based, and social facilities and services that are located and designed to complement and minimize incompatibility with Union City’s neighborhoods, commercial and employment districts, and nearby sensitive uses.
- **Goal LU-9:** To provide for the orderly development of the Hillside Area that protects and enhances the area’s natural resources.
- **Goal LU-10:** To coordinate with other agencies to achieve regional objectives for sustainability, promote the interests of the city in regional efforts, and further the goals of the Union City General Plan.

c. Regulatory Setting

State

General Plan Law (California Government Code Section 65300)

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning.” The California Supreme Court has called the general plan the “constitution for future development.” The general plan expresses the community’s development goals and embodies public policy relative to the distribution of future land uses, both public and private.

California Government Code Section 65301

Section 65301 of the California Government Code requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise their own judgment in determining what areas outside of its boundaries to include in the Planning Area. The State of California General Plan Guidelines state that the Planning Area for a city should include (at minimum) all land within the city limits and all land within the city's Sphere of Influence.

California Government Code Section 65860

In counties, general law cities, and charter cities with a population of more than two million, zoning provisions must be consistent with the general plan. Charter cities with a population of under two million are exempt from the zoning consistency requirement unless their charters provide otherwise. Union City is a general law city and is, therefore, required to have zoning consistency with its General Plan.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act)

The Cortese Knox Hertzberg Local Government Reorganization Act (CKH Act) is the most significant reform to local government reorganization law since the 1963 statute that created a LAFCo in each county. The law established procedures for local government changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.). LAFCos have numerous powers under the CKH Act, but those of prime concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. The law also states that in order to update a Sphere of Influence, LAFCos are required to first conduct a review of the municipal services provided in the county.

While LAFCo does not have any direct land use authority, the CKH Act assigns LAFCos a significant role in planning issues by requiring them to consider a wide range of land use and growth factors when they consider proposals. California Government Code Section 56001 specifically states that "the logical formation and determination of local agency boundaries is an important factor in promoting orderly development and in balancing that development with sometimes competing State interests of discouraging urban sprawl, preserving open space and prime agricultural lands, [and] efficiently extending government services."

The CKH Act also requires LAFCos to update spheres of influence for every city and special district every five years. The original deadline was January 2006, five years following the CKH Act becoming State law. That deadline was extended two years to January 2008. Every SOI update must be accompanied by an update of the municipal services review. Pursuant to Government Code Section 56430, Alameda LAFCo is conducting municipal service reviews (MSRs) for each agency under LAFCo jurisdiction. The MSRs provide an in-depth look at provider service needs, use of resources, and possibilities for partnership with other agencies; and contain determinations that serve as guidelines to inform and support the Commission's decisions about Spheres of Influence.

Regional

ABAG/MTC Plan Bay Area 2040

ABAG/MTC Plan Bay Area 2040, adopted in July 2017, is a long-range, integrated transportation and land-use plan for the nine-county San Francisco Bay Area, including Alameda County. The Plan's

combined Sustainable Communities Strategy and Regional Transportation Plan, also referred to as the RTP/SCS, was jointly adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in July 2017. The Plan describes where and how the region can accommodate the 820,000 new households and 1.3 million new jobs projected in the Bay Area between 2017 and 2040 and details the regional transportation investment strategy over this period. Growth in the plan area is promoted in Priority Development Areas (PDAs) and limited in Priority Conservation Areas (PCAs) to promote preservation of key resources. The Plan contains seven goals to address major challenges in the region and has established 13 performance targets to assess the Plan's effectiveness in meeting its goals. ABAG and MTC developed land use and transportation scenarios in the Plan that distribute the total amount of anticipated growth across the region and measure how well each scenario measures against the Plan goals. Based upon performance, the preferred scenario provides a regional pattern of household and employment growth and a corresponding transportation investment strategy (ABAG/MTC 2017).

Local

Zoning

Zoning is the primary tool used to implement a community's general plan. A major difference between a general plan and zoning ordinance is that the general plan provides general guidance on the location, type, and density of new growth and development over the long term, while the zoning ordinance provides detailed development and use standards for each parcel of land. The zoning ordinance divides the community into zoning districts and specifies the uses that are permitted, conditionally permitted, and in some instances, which uses are specifically prohibited within each district.

Typically, a zoning ordinance consists of text and a map delineating districts for such basic land uses as residential, commercial, and industrial, and establishing special regulations for historic preservation, floodplains, hillside development and other specific concerns. For each of the basic land uses, the zoning ordinance text typically includes an explanation of the purpose of the zoning district; a list of principals permitted and conditionally permitted uses; and standards for minimum lot size, density, height, lot coverage, setback, and parking. The zoning ordinance also typically describes procedures for processing discretionary approvals.

Union City Zoning Districts

The Union City Zoning Ordinance includes 18 zoning districts. Each zoning district has developed standards that are designed to protect and promote the health, safety, and general welfare of the community and to implement the policies of the General Plan. The zoning districts only apply to land within the City limits and the standards serve to preserve the character and integrity of existing neighborhoods. Within a typical district there are regulations related to land use, lot size, coverage, building heights, parking, and landscaping.

The 26 zoning districts established by the Union City Zoning Ordinance are:

- **Residential Districts**

- RS and R – Single Family Residential (RS 6000, RS 6000-D, RS 6000-H, RS 5000, RS 4500, RS (s) 3000)
- RM – Multifamily Residential (RM 3500, RM 2500, RM 1500)

- **Commercial Districts**
 - CPA – Professional and Administrative Commercial
 - CN – Neighborhood Commercial
 - CC – Community Commercial
 - CVR – Visitor and Recreation Commercial
 - CSMU – Station Mixed Use Commercial
 - CS – Specialty Commercial
 - CUL – Union Landing Commercial
- **Industrial Districts**
 - MG – General Industrial
 - ML – Light Industrial
 - MS – Special Industrial
 - RDC – Research and Development Campus
- **Other**
 - A – Agriculture
 - CF – Civic Facilities
 - PI – Private Institutional
 - OS – Open Space
 - 511 – 511 Area District

4.10.2 Impact Analysis

a. Methodology and Thresholds of Significance

The analysis in this section focuses on the compatibility of land uses identified in the General Plan with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental impacts. This section also analyzes whether development facilitated by the 2040 General Plan or its policies would physically divide communities.

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed 2040 General Plan may have a significant adverse impact if it would do any of the following:

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

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan physically divide an established community?

Impact LU-1 IMPLEMENTATION OF THE PROPOSED 2040 GENERAL PLAN WOULD PROVIDE FOR ORDERLY DEVELOPMENT IN UNION CITY AND WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

A majority of the land that comprises the Union City Plan Area is currently built out. The 2040 General Plan does not include substantial land use or circulation changes that would physically divide an established community, residential, or otherwise. For example, no major roads or other facilities would be constructed that would physically divide an established community. Development proposed under the 2040 General Plan would intensify some of the existing employment generating land uses. Based on the full buildout anticipated under the 2040 General Plan, an estimated 11,486 new residents and 4,330 new dwelling units would be added to Union City through 2040. The residential growth is anticipated to result in up to 444 new single-family residences and 3,886 new multi-family housing units. The increased land uses are anticipated to generate 18,758 new jobs in the City by the year 2040 in the retail, service, office, manufacturing, and wholesale trade sectors. This is roughly equivalent to 8.1 million square feet of non-residential uses.

The potential growth associated with the 2040 General Plan is based on development assumptions/projections for residential and non-residential development for all land within the City limits through the year 2040. Vacant and underutilized parcels were identified using existing land use data from the Assessor's Office. Collectively, the existing uses, development capacity on the vacant and underutilized sites, planned and approved projects, and intensified development for shopping areas and business parks sum up to be Union City's total buildout capacity in 2040.

The 2040 General Plan seeks to ensure that infill development is done in a way that boosts the local economy, provides housing opportunities, brings jobs and services to the City, and creates quality places that enhance the experience for residents, workers, and visitors. Union City has several physical constraints that present unique challenges in planning for future growth within the community. These constraints include sensitive wetland habitat and flood plains along the western City limits; steep, hillside topography on the eastern side of the City that is restricted by the voter-approved Hillside Area Plan; and a limited amount of vacant land. Infill development and the creative reuse and redevelopment of existing sites have emerged as the primary means for accommodating future growth in Union City.

The City also recognizes the importance of linking land use and transportation planning. The 2040 General Plan emphasizes the integration of land use and transportation as a major focus in the Land Use Element. Strategies include encouraging the efficient use of land by placing more intensive development near transit stations and major bus lines, encouraging a mix of land uses within new projects, and ensuring that the urban environment is designed first and foremost for people rather than cars. Policies in the Land Use Element, as well as the Mobility Element, support the City in embracing these changes by planning for the future and maintaining flexible land use regulations that embrace new transportation technologies. Providing this link between land use and transportation planning reduces the necessity for new high volume arterial roads that could otherwise physically divide communities.

The Land Use Element of the 2040 General Plan contains goals and policies, listed below, that would maintain existing communities within Union City and would ensure that established communities would not be divided by development facilitated by the 2040 General Plan.

Land Use Element Goals and Policies

Goal LU-1: Strategically support infill development and redevelopment to transform Union City into a distinctive community with a dynamic, transit-oriented city center, attractive shopping and entertainment areas, and thriving and innovative work places.

Policy LU 1.1: Healthy Balance of Land Uses. The City shall promote and support the development of a healthy balance of residential, commercial, open space, institutional, and industrial businesses within the city.

Policy LU 1.2: Promote Infill and Enhance Neighborhoods. The City shall promote infill development and redevelopment of underutilized parcels while maintaining or enhancing the positive qualities of the surrounding neighborhoods.

Policy LU-1.3: Strategic Infill Areas. The City shall encourage redevelopment and infill in strategic areas, including the Historic Alvarado District and along Union City Boulevard, Union Landing, the Greater Station District, and Mission Boulevard.

Policy LU-1.4: Public-Private Partnerships. The City shall use public investment and partnerships with the private sector, as appropriate, to incentivize infill development.

Policy LU-1.5: Land Banking. Consistent with State law, the City shall strive to take advantage of opportunities to acquire key vacant or underutilized infill properties for future development that would serve as a catalyst for private investment in the surrounding area or meet other long-term City goals.

Policy LU-1.6: Integrate New Development into the Community. The City shall require new large-scale development projects to be integrated into the fabric of the existing community rather than allowing projects to be self-contained, walled off, or physically separated/segregated from surrounding uses. To the extent feasible, circulation networks and open spaces in such developments should be linked to existing streets and open spaces to improve connectivity between neighborhoods.

Goal LU-2: Provide a land use framework that promotes transit-oriented development and walkable communities and reduces reliance on cars.

Policy LU-2.1: Becoming a More Transit-Oriented City. The City shall plan for Union City's transition to a community that includes a mix of established lower-density residential neighborhoods and new higher-density mixed-use neighborhoods with access to high-quality transit.

Policy LU-2.2: Transportation and Development Balance. The City shall ensure that future land use and development decisions are in balance with the capacity of the City's transportation system and consistent with the City's goal of reducing greenhouse gas emissions.

Policy LU-2.3: Planning that Reduces VMT. The City shall strive to reduce vehicle miles travelled (VMT) by providing a mix of land uses, through site planning and design practices, and with circulation improvements that reduce or shorten vehicle trips and maximize transit ridership.

Policy LU-2.4: Land Use That Maximizes Transit Use. The City shall encourage new land uses and project designs to minimize automobile dependence and maximize transit usage, walking, and bicycling.

Policy LU-2.5: Mixed-use and Higher-Density Development Around Transportation Nodes. The City shall support mixed-use development, pedestrian-friendly environments, and higher density around the major transportation nodes and corridors.

Policy LU-2.6: Land Use Regulations that Embrace New Transportation Technologies. The City shall maintain flexible land use regulations that accommodate new transportation technologies (e.g., autonomous vehicles, electric vehicles, car sharing).

2040 General Plan policies would maintain existing communities in Union City and would ensure that with implementation of the 2040 General Plan, established communities would not be divided. Specifically, Goal LU-1 would support infill development and redevelopment to ensure orderly growth within the City that would not divide communities. Additionally, policies LU-1.1 through 1.3 encourage strategic infill and development sites to enhance neighborhoods and place development on underutilized parcels.

Adoption of the 2040 General Plan would require revisions to the Zoning Ordinance and Zoning Map to ensure consistency with the 2040 General Plan. Specifically, revisions to the Zoning Map would need to be consistent with the 2040 General Plan, incorporating revisions to the land use categories and other recommended design and development standards.

Overall, the 2040 General Plan would promote orderly development in Union City by encouraging growth in designated focused areas and at infill sites near transit and other amenities and promote the enhancement of the City's multimodal circulation system, maximizes connections, and minimizes barriers to connectivity. Therefore, the 2040 General Plan would not physically divide Union City. Impacts would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

<p>Threshold 2: Would the General Plan cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</p>

Impact LU-2 IMPLEMENTATION OF THE 2040 GENERAL PLAN WOULD BE GENERALLY CONSISTENT WITH APPLICABLE LAND USE PLANS, POLICIES, OR REGULATIONS ADOPTED TO AVOID OR MITIGATE ENVIRONMENTAL EFFECTS, SUCH AS ABAG/MTC'S *PLAN BAY AREA 2040*. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Several regionally and locally adopted land use plans, policies, and regulations apply to development under the 2040 General Plan. These include *Plan Bay Area 2040* (ABAG and MTC 2017), BAAQMD's 2017 Clean Air Plan (BAAQMD 2017), and the City's Climate Action Plan. Consistency of the 2040 General Plan with the 2017 Clean Air Plan is discussed under Impact AQ-2 of Section 4.2, *Air Quality*. Consistency with the Climate Action Plan is discussed under Impact GHG-

2 in Section 4.7, *Greenhouse Gas Emissions/Climate Change*. Union City is not near any private or public airports and is not located within Airport Land Use Plan.

Plan Bay Area 2040 is a long-range land use and transportation plan for the San Francisco Bay Area region. The plan contains ten goals with performance targets to meet these goals that seek to promote healthy and safe communities by reducing impacts from air pollution, protecting open space and agriculture, and increasing active transportation. Table 4.10-2 includes the seven Plan Bay Area goals and their related performance targets as well as whether the 2040 General Plan would be consistent with the goal.

Table 4.10-2 General Plan Consistency with Plan Bay Area 2040 Goals

Plan Bay Area Goals	2040 General Plan Consistency
Goal 1: Climate Protection	
<p>Target. Reduce per-capita CO₂ emissions from cars and light-duty trucks by 15 percent.</p>	<p>Consistent. The GHG goals and policies within the 2040 General Plan support climate protection. Goal RC-7 of the Resource Conservation Element is to reduce community and municipal greenhouse gas emissions that contribute to climate change. Policy RC-7.2 ensures that the City continue to implement CAP measures and prioritize actions that result in the greatest reduction in GHG emissions. Additionally, Policy RC-7.5 requires that the city reduces GHG emissions from new development by encouraging development that lowers vehicle miles traveled (VMT); discouraging auto-dependent development patterns; promoting development that is compact, mixed-use, pedestrian friendly, and transit oriented; promoting energy-efficient building design and site planning; improving the jobs/housing ratio; and other methods of reducing emissions. Other GHG policies include reduced emissions for City operations and City fleet vehicles, energy conservation through land use patterns that reduce operational energy requirements, and requirement for new construction and development to meet the City’s energy performance standards. Therefore, the City’s 2040 General Plan would be consistent with this goal.</p>
Goal 2: Adequate Housing	
<p>Target. House 100 percent of the region’s projected growth by income level without displacing current low-income residents and with no increase in commuters over the Plan baseline year.</p>	<p>Consistent. The Land Use Element of the 2040 General Plan includes provisions for providing adequate housing. The Housing Element, adopted by the City in 2015, provides further guidance for new residential development, including housing for lower-income households and residents with special housing needs, and the Community Design Element contains policies guiding the design of new residential development. Policy LU-5.1, Adequate and Affordable Housing, states that the City shall continue to provide opportunities for a variety of housing types at varying densities and affordability levels. The City’s Housing Element expands on this with Policy HE-A.3, which encourages home builders to use multifamily designated land for the highest allowable density housing to make use of land and facilities more efficient and provide more affordable housing opportunities. The Housing Element also includes Goal B, to encourage construction and maintenance of affordable housing. Specifically, policies HE-B.1 through HE-B.9 ensure that the City gives priority and expedited approval to affordable housing projects and provides financial and regulatory incentives through State and Federal assistance for the production of affordable housing. Further, Policy HE-C.2 supports the continued use of Section 8 rent certificates and vouchers and Policy HE-C.4 ensures that information on affordable housing programs is readily available for residents. Much of the residential development and employment growth that would be facilitated by the 2040 General Plan would occur near the BART station, reducing the need for commuting by vehicle. Therefore, the City’s 2040 General Plan would be consistent with this goal.</p>

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Goal 3: Healthy and Safe Communities

Target. Reduce adverse health impacts associated with air quality, road safety, and physical inactivity by 10%.

Consistent. Air Quality goals and policies within the 2040 General Plan promote the reduction of particulate matter thereby supporting health and safe communities. Goal RC-5 and accompanying policy RC-5.1 of the Resource Conservation Element would require the City to cooperate with BAAQMD to implement the Air Quality Plan and enforce ambient air quality standards in order to prevent deterioration of and to improve air quality in Union City. Policy RC-5.2 requires development projects incorporate the BAAQMDs Basic Construction Mitigation Measures to reduce construction and operational emissions for reactive organic gases, nitrogen oxides, and particulate matter (PM₁₀ and PM_{2.5}). Further, Policy RC-5.3 promotes the replacement of non-EPA certified fireplaces and woodstoves and encourage residents to participate in BAAQMD programs, such as the Wood Smoke Reduction Incentive Program. Therefore, the 2040 General Plan would be consistent with this goal of reducing adverse health impacts associated with air quality.

The Mobility Element of the 2040 General Plan contains policies that address safety and promote active transportation. Policy M-1.1 requires the City to design a comprehensive, integrated network of roadways, including streets, roads, highways, bridges, and other portions of the transportation system, that provide safe, comfortable, and convenient travel for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, emergency responders, seniors, children, youth, and families. Policy M-4.15, addresses traffic operations and appropriate technology-driven measures to solve issues, including congestion, intersection delays, and travel speeds, to improve traffic flow at congested intersections and to create a more efficient transportation system. Several additional policies in the Mobility Element promote traffic “calming” and improvement techniques, such as additional traffic signal technology, pavement management programs and emergency vehicle access, without compromising safety.

Policy M-2.1, Pedestrian and Bicycle Facilities, ensures that the City implement planned bicycle and pedestrian improvements to close gaps in the bicycle and pedestrian networks. Policies M-2.9 and M-2.12 provide for improvements to create a safe pedestrian environment in Union City and to prioritize safety in sidewalk and bicycle lane design, including separating sidewalks from vehicle travel lanes where possible. The Mobility Element of the U 2040 General Plan contains goals and policies that promote the expansion of the bicycle network, integrated with recreational trails, paths, and sidewalks, to create an interconnected network for both bicyclists and pedestrians. Policy M-1.4, Safe Travel for All Users, addresses the need for reasonably safe travel along and across the right of way for each category of users. Therefore the City’s 2040 General Plan would be consistent with this goal.

Goal 4: Open Space and Agricultural Preservation

Target. Direct all non-agricultural development within the urban footprint (existing urban development and UGBs).

Consistent. A principal philosophy of the 2040 General Plan is the prioritization of infill development on underutilized parcels, which would minimize the loss of open space and support rural and agricultural uses in the eastern hillside area. The goals and policies of the Resource Conservation Element of the 2040 General Plan places high value on environmental resources and is committed to the preservation of open space and agricultural lands identified for such uses. Policies RC-1.8 and 1.9 ensure the protection of significant open space resources for the protection of agricultural uses including grazing, through avoidance of development in these areas. Policies ER-1.5 and 1.6 support efforts to seek funds for the acquisition of open space from federal, State, and other governmental entities, as well as private sources, and to require new developments to form open space easements where appropriate. Therefore, the 2040 General Plan would be consistent with this goal.

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Goal 5: Equitable Access

Target. Increase the share of affordable housing in PDAs, Transit Priority Areas (TPA), or high-opportunity areas by 15%.

Target. Decrease the share of low-income residents' household income consumed by transportation and housing by 10%

Target. Do not increase the share of low- and moderate-income renter households in PDAs, TPAs, or high-opportunity areas that are at risk of displacement.

Consistent. The Land Use Element of the 2040 General Plan includes provisions for providing adequate affordable housing. The Housing Element specifically addresses the issues facing affordable and accessible housing through various policies and programs. Policy HE-B.2 ensures that the City provides financial and regulatory incentives and uses State and Federal funding assistance for the production of affordable housing. Policies HE-B.1 and B.5 give priority to multi-family housing project applications that provide affordable housing and grants density bonuses to qualifying projects as an additional incentive for the development of lower-income and senior citizen housing. The Land Use Element, Policy LU-2.1, states that the City shall plan a community that includes a mix of established lower-density residential neighborhoods and new higher-density mixed-use neighborhoods with access to high-quality transit. Policy LU-2.5 supports mixed-use development, pedestrian-friendly environments, and higher density around the major transportation nodes and corridors. Policy M-3.20 of the Mobility Element, requires that the City increase access to transit for youth, seniors, the disabled, and the economically disadvantaged. The City's Housing Element was designed to ensure that the City is meeting its State Regional Housing Need Allocation and serves as a guide for residential development in the City. The Housing Element identifies and analyzes existing and projected housing needs to preserve, improve, and develop housing for all economic segments in the community. Therefore, the City's 2040 General Plan would be consistent with this goal.

Goal 6: Economic Vitality

Target. Increase by 38% the number of jobs in predominantly middle-wage industries.

Target. Reduce per-capita delay on the Regional Freight Network by 20%.

Target. Increase by 20% the share of jobs available within 30 minutes by auto or within 45 minutes by transit in congested conditions.

Consistent. The goals and policies in the Economic Development Element of the 2040 General Plan supports the development support the continued growth of the local economy, increased fiscal solvency of Union City, and overall improvement in the quality of life for Union City residents. Economic Development Goal ED-1 ensures Union City's fiscal solvency by encouraging economic development activities that generate sales tax, property tax, and other revenues that help sustain municipal service. Economic Development Goal ED-2 promotes attracting business that diversify the local economy, provide high-paying jobs for Union City residents, and increase City revenues. Supportive business policies include attracting a range of business types, attracting innovative business and exploring business incentives. Economic Development Goal ED-3 would support the retention and expansion of Union City's businesses to ensure they remain a vital part of the City's economic base. Economic Development Goal ED-4 provides desirable amenities and creates places that attract business to locate in Union City. Therefore, the 2040 General Plan would be consistent with this goal.

Goal 7: Transportation System Effectiveness

Target. Increase non-auto mode share by 10%.

Target. Reduce per-rider transit delay due to aged infrastructure by 100%.

Target. Reduce vehicle operating and maintenance costs due to pavement conditions by 100%.

Consistent. The Mobility Element of the 2040 General Plan promotes an efficient circulation system for all modes of travel by providing ample connections locally and regionally. Union City is well-situated to capitalize on its existing infrastructure and proximity to regional transportation infrastructure that connect Union City to the Peninsula and Silicon Valley. The goals and policies of this Element address a balanced transportation network that will support and encourage walking, bicycling, and transit ridership while continuing to improve automobile travel. Policy M-3.3 requires the City to partner with the different transportation agencies to facilitate the transfer of passengers between multiple modes of travel through infrastructure improvements and enhanced education. Policy M-3.4 encourages the City to work with the Metropolitan Transportation Commission (MTC), Alameda County Transportation Commission (ACTC), AC Transit, Dumbarton Bridge Regional Operations Consortium (Dumbarton Express Bus), SamTrans, Santa Clara Valley Transportation Authority, CalTrain, BART, and other regional transportation agencies

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to provide a connected regional transportation system. Policy M-2.4 encourages the City to work with BART, AC Transit, and Union City Transit to ensure the bicycle route network provides direct and convenient access to local and regional transit lines and that bicycles are provided access to transit vehicles whenever feasible. Policy M-3.13 requires all new development to consider transit and paratransit access in the project design. Complete streets goals and policies would provide “complete streets” with facilities and amenities that meet the needs of all users, regardless of their age or ability, or whether they are walking, bicycling, taking transit or driving. The Complete Streets goals and policies support providing an interconnected street network while retrofitting and maintaining streets, and bridge maintenance. Therefore, the 2040 General Plan would be consistent with this goal.

Source: ABAG/MTC 2017

As shown in Table 4.10-2, the 2040 General Plan would be generally consistent with the goals contained in the Plan Bay Area 2040. As concluded within this impact discussion, as well as discussion in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions/Climate Change*, implementation of the proposed project would be generally consistent with applicable adopted plans, regulations, or policies. Impacts would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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4.11 Noise

This section analyzes noise impacts from buildout of the 2040 General Plan. Impacts related to noise from construction, building operations, traffic, and flight operations are addressed.

4.11.1 Setting

a. Overview of Noise and Vibration Measurement

Noise

Noise is defined as unwanted sound that disturbs human activity. Noise level, or volume, is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with human hearing response, which is most sensitive to frequencies around 4,000 Hertz, similar to the highest note on a piano, and less sensitive to frequencies below 100 Hertz, similar to a transformer hum.

Sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive. Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate, or drop off, at a rate of 6 dB per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dB per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dB per doubling of distance.

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Essentially Leq is the average noise level. Typically, Leq is summed over a one-hour period.

The time period in which noise occurs is also important since nighttime noise tends to disturb people more than daytime noise. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime noise levels to account for the greater sensitivity to noise during that time period. Nighttime is considered 10:00 p.m. to 7:00 a.m. The CNEL is identical to the Ldn, except it also adds a 5 dB penalty for noise occurring during the evening hours of 7:00 p.m. to 10:00 p.m. Noise levels described by Ldn and CNEL typically do not differ by more than 1 dBA. In practice, CNEL and Ldn are often used interchangeably.

Vibration

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Groundborne vibration related to human annoyance is generally related to root mean square velocity levels expressed in vibration decibels (VdB). However, construction-related groundborne vibration in relation to its potential for building damage can also be measured in inches per second (in/sec) peak particle velocity (PPV) (Federal Transit Administration [FTA] 2018). Vibration levels decrease by 6 VdB with every doubling of distance.

The typical background vibration velocity level is usually around 50 VdB (FTA 2018). Although the threshold of perception for humans is approximately 65 VdB, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

b. Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The existing 2002 General Plan defines noise sensitive receptors as single and multi-family residential; group homes, hospital and extended medical facilities; schools and other learning institutions; libraries; and similar uses as may be determined by the City. Sensitive land uses generally should not be subjected to noise levels that would be considered intrusive in character. Noise sensitive residential areas are located throughout Union City, specifically in quiet areas lacking major noise sources and located away from arterial roadways, such as southwest Union City, areas west of Union City Boulevard, and other areas shown in Figure 10-7 of the Background Report prepared for the 2040 General Plan (Union City 2015). However, residences and hotels located in the urban core or near freeways and other arterials may experience elevated noise levels.

c. Regulatory Setting

Federal

There are no federal noise requirements or regulations that apply directly to the implementation of the 2040 General Plan. However, there are federal regulations that influence the audible landscape, especially for projects where federal funding is involved. For example, the Federal Highway Administration requires abatement of highway traffic noise for highway projects through rules in the Code of Federal Regulations (23 CFR Part 772) Each agency recommends thorough noise and vibration assessments through comprehensive guidelines for any highway, mass transit, or high-speed railroad projects that would pass by residential areas.

State

Title 24 of the California Code of Regulations codifies Sound Transmission Control requirements establishing uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than single-family dwellings. Specifically, Section 1207.4 in Title 24 states that interior noise levels attributable to exterior noise sources shall not exceed 45 dBA CNEL/Ldn in any habitable room of a new building.

While there are no State standards for vibration, Caltrans establishes vibration risk for structures. For continuous, frequent, and intermittent vibration, Caltrans considers the architectural damage risk level to be somewhere between 0.08 and 0.6 inches per second (in/sec) PPV depending on the type of building that is affected (Caltrans 2013).

Local

Union City Zoning Ordinance

Chapter 9.40 of the Union City Municipal Code establishes exterior noise limits for residential, commercial, industrial, and public properties. These requirements limit sound generated from the source to a certain level above local ambient noise for specific land uses, such as 10 dBA for residential, 12 dBA for commercial and industrial, and 15 dBA for public property. Section 9.40.053 also includes standards related to construction noise. Construction activity is restricted to the hours of 8:00 a.m. to 8:00 p.m. on Monday through Friday, 9:00 a.m. and 8:00 p.m. on Saturdays, and 10:00 a.m. and 6:00 p.m. on Sundays and holidays, provided that either no individual piece of equipment produces a noise level over 83 dBA at a distance of 25 feet, or that the noise level outside the property plane exceeds 86 dBA.

City of Union City 2002 General Plan

The 2002 Union City General Plan Health and Safety Element contains policies related to community noise. 2002 General Plan Policy HS-C.1.1 identifies noise sensitive land uses. The 2002 General Plan Table HS-2 defines acceptable limits of noise for various land uses throughout the community, as shown in Table 4.11-1. These standards specify the maximum exterior noise levels allowable for developments. Noise sensitive land uses are required to reduce interior noise levels to a maximum of 45 dBA CNEL. 2002 General Plan policy HS-C.1.3 requires submittal of a noise impact analysis for development of new noise sensitive land uses in areas where current or future exterior noise levels from roadway, highway/freeway, rail uses, and aircraft noise sources, or stationary sources exceed the noise standards listed in Table 4.11-1. The study must include recommendations and evidence to establish mitigation that will reduce noise exposure to an acceptable level.

Table 4.11-1 Maximum Allowable Noise Exposure By Land Use

Land Use Category	Noise Level (CNEL)			
	Normally Acceptable ¹	Conditionally Acceptable ²	Normally Unacceptable ³	Unacceptable ⁴
Residential – Low Density Single Family, Duplex, Mobile Homes	0-60	61-70	71-75	>75
Residential – Multi-Family, Group Homes	0-60	61-70	71-75	>75
Motels/Hotels	0-60	61-70	71-80	>81
Schools, Libraries, Churches, Hospitals, Extended Care	0-60	61-70	71-80	>81
Auditorium, Concert Halls, Amphitheaters	0-65	N/A	66-70	>71
Sports Arenas, Outdoor Spectator Sports	0-70	N/A	71-75	>75
Playgrounds, Neighborhood Parks	0-70	N/A	N/A	>71
Golf Courses, Riding Stables, Water Recreation	0-70	N/A	71-80	>81
Office Buildings, Business Commercial and Professional	0-66	66-75	>75	N/A
Industrial, Manufacturing, Utilities, Agriculture	0-70	71-80	>81	N/A

Land Use Acceptability Interpretation/Conditions:

¹ 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.

² Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design.

³ Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

⁴ Unacceptable: New construction or development should not be undertaken.

Source: Table HS-2 of 2002 General Plan Health and Safety Chapter

d. Existing Noise Conditions and Sources

The predominant source of noise in Union City, as in most communities, is motor vehicles on roadways within the City. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to noise-sensitive uses. Roadways with the highest traffic volumes and speeds produce the highest noise levels. BART and Southern Pacific Railroad are additional noise sources in Union City. The roadways in the city with the highest traffic volumes, such as Interstate 880 and State Route 238, also called Mission Boulevard, and major arterial roadways such as Whipple Road, Alvarado-Niles Road, Decoto Road, Dyer Street, Central Avenue, and Alvarado Boulevard produce the loudest noise.

The BART system runs parallel to State Route 238 through Union City, and Southern Pacific Railroad runs through Union City in two separate north-south paths, one parallel to Interstate 880 and one parallel to State Route 238, near the BART alignment. While these sources contribute to the overall noise environment within the City, they are not major noise sources when compared to noise generated by roadways because train trips occur at a lower frequency than traffic on roadways.

Union City does not have major stationary sources of noise, such as large factories. While there are no industrial plants or factories that significantly affect noise levels in the City, construction, heating and cooling equipment, truck loading, and recreational activities contribute to Union City's overall noise environment.

4.11.2 Impact Analysis

a. Methodology and Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a significant noise impact would occur if new development facilitated by the 2040 General Plan would:

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

Threshold 3 is addressed in Section 4.8, *Hazards and Hazardous Materials*. As described therein, there are no airports or private airstrips within Union City.

Construction Noise

This section estimates construction noise from development facilitated by the 2040 General Plan based on reference noise levels for various pieces of construction equipment reported by the FTA's *Noise and Vibration Impact Assessment* (2018). It is conservatively assumed that construction equipment typically operates as close as 25 feet from the nearest noise-sensitive receptors. Construction noise level estimates do not account for the presence of intervening structures or topography, which could reduce noise levels at receptor locations. New development facilitated by the 2040 General Plan would have a significant impact if temporary construction noise during permitted daytime hours could expose noise-sensitive receptors to significantly adverse noise levels, or if construction would not meet one of the standards in Section 9.40.053 of the Union City Municipal Code.

Groundborne Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction. The general human response to different levels of groundborne vibration velocity levels is described in Table 4.11-2.

Table 4.11-2 Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Source: FTA 2018

To determine vibration impacts during project construction, vibration levels were calculated at vibration-sensitive receptors using VdB and compared to the FTA guidelines set forth in the FTA Transit Noise and Vibration Assessment (2018). The following vibration thresholds are established by the FTA for the disturbance of people:

- 65 VdB for buildings where low ambient vibration is essential for interior operations, such as hospitals and recording studios
- 72 VdB for residences and buildings where people normally sleep, including hotels
- 75 VdB for institutional land uses with primary daytime use, such as churches and schools

These thresholds apply to “frequent events,” which the FTA defines as vibration events occurring more than 70 times per day. The thresholds for frequent events are considered appropriate because of the scale and duration of the construction activity facilitated by the 2040 General Plan. In addition, this analysis applies the following FTA thresholds in Table 4.11-3 for potential structural damage to buildings from construction vibration:

Table 4.11-3 Vibration-Related Building Damage Thresholds

Building Category	Approximately L_v (VdB)
I. Reinforced-concrete, steel or timber with no plaster	102
II. Engineered concrete and masonry with no plaster	98
III. Non-engineered timber and masonry buildings	94
IV. Buildings extremely susceptible to vibration damage	90

Notes: L_v = root mean square velocity in decibels (VdB) re 1 micro-inch/second
 Source: FTA 2018

On-site Operational Noise

On-site activities at new development facilitated by the 2040 General Plan would have a significant impact if it would expose neighboring noise-sensitive land uses to noise levels exceeding the City’s standards in Chapter 9.40.041, 9.40.042, and 9.40.043 of the Union City Municipal Code, as described above in Regulatory Setting.

Increase in Traffic Noise

Projected traffic volumes in the year 2040, provided by Hexagon Transportation Consultants (Hexagon), were used to qualitatively describe future noise levels resulting from project traffic. The traffic impact analysis prepared by Hexagon is provided as Appendix C.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance?

IMPACT N-1 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE 2040 GENERAL PLAN WOULD TEMPORARILY GENERATE INCREASED NOISE LEVELS, POTENTIALLY AFFECTING NEARBY NOISE-SENSITIVE LAND USES. PROVISIONS IN THE UNION CITY MUNICIPAL CODE AND 2040 GENERAL PLAN POLICIES WOULD LIMIT NOISE DISTURBANCE TO THE EXTENT FEASIBLE. HOWEVER, CONSTRUCTION NOISE MAY STILL EXCEED NOISE STANDARDS AND IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Noise from individual construction projects carried out under the 2040 General Plan would temporarily increase ambient noise levels at 25 feet and at adjacent property lines. Since there are no specific plans or time scales for individual development projects that would be carried out under the 2040 General Plan, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. Section 9.40.053 of the Union City Municipal Code, which addresses construction noise, exempts construction noise that either is limited to 83 dBA at a distance of 25 feet from construction equipment or does not exceed 86 dBA outside the property plane of the project. Sensitive noise receptors in areas where more future development/redevelopment is anticipated to occur would be exposed to the highest levels of construction noise for the longest duration. These areas include the Greater Station District, the Union City Boulevard Corridor, and the Horner-Veasby Area. Infill development in these areas corridor could include construction of mixed-use, high-density development.

Construction activities, including traffic, demolition, and reconstruction, would generate noise. Table 4.11-4 illustrates typical noise levels associated with construction equipment at a distance of 25 feet. At a distance of 25 feet from the construction site, noise levels similar to those shown in Table 4.11-4 would be expected to occur with individual development projects. Noise would typically drop off at a rate of about 6 dBA per doubling of distance. Therefore, noise levels would be about 6 dBA lower than shown in the table at 50 feet from the noise source and 12 dBA lower at a distance of 100 feet from the noise source. Construction in Union City may involve the operation of pile drivers. Pile foundations are generally used under two situations: 1) when there is a layer of weak soil at the ground surface that cannot support the weight of a building; or 2) when a building has very heavy, concentrated loads, such as in a high-rise structure, bridge, or water tank (Understand Building Construction n.d.). The 2040 General Plan does not envision new infrastructure such as bridges and water tanks, but it may facilitate the construction of high-rise buildings up to 160 feet tall in the core Station District area.

Table 4.11-4 Typical Noise Levels for Construction Equipment

Equipment	Estimated Noise Levels at Nearest Sensitive Receptors (dBA Leq)		
	25 feet	50 feet	100 feet
Air Compressor	86	80	74
Backhoe	86	80	74
Concrete Mixer	91	85	79
Dozer	91	85	79
Grader	91	85	79
Jack Hammer	94	88	82
Loader	86	80	74
Paver	91	85	79
Pile-drive (Impact)	107	101	95
Pile-driver (Sonic)	101	95	89
Roller	91	85	79
Saw	82	76	70
Scarified	89	83	77
Scraper	91	85	79
Truck	90	84	78

Source: FTA 2018

As shown in Table 4.11-4, noise levels from construction activity could approach 107 dBA Leq 25 feet from construction equipment. This would exceed the threshold of 83 dBA from construction equipment and could also exceed the threshold of 86 dBA at the property line. Construction noise would exceed ambient noise levels and may temporarily disturb people at neighboring properties. However, implementation of policies contained in the 2040 General Plan would reduce construction noise and associated impacts.

Policy S-8.8 of the 2040 General Plan, listed below, imposes limits on construction hours to minimize the potential noise impacts of construction activities on surrounding land uses.

Policy S-8.8: Limit Construction Hours. To minimize the potential noise impacts of construction activities on surrounding land uses, the City shall limit construction activities between the hours of 8:00 a.m. and 8:00 p.m. on Monday through Friday, 9:00 a.m. and 8:00 p.m. on Saturdays, and 10:00 a.m. and 6:00 p.m. on Sundays and holidays. The City Manager may make specific exceptions to the construction hours when utility work in the streets would have a severely negative impact on traffic flow and public safety.

Implementation of Policy S-8.8 would ensure that noise disturbance from construction equipment would be limited to daytime hours, thereby reducing impacts by avoiding noise when people are

typically sleeping. Additionally, construction during the hours specified above are exempt from the noise standards contained in Article 4 of Chapter 9.40 of the Union City Municipal Code, provided they meet the conditions of either 9.40.053A or 9.40.053B. Policy S-8.9 of the 2040 General Plan also contains construction noise control measures that are to be included as a standard condition of approval of new projects, as follows.

Policy S-8.9: Construction Noise Control Measures. The City shall include the following noise control measures as standard conditions of approval for projects involving construction:

1. Properly muffle and maintain all construction equipment powered by internal combustion engines.
2. Prohibit unnecessary idling of combustion engines.
3. Locate all stationary noise-generating construction equipment such as air compressors as far as practical from existing nearby residences and other noise-sensitive land uses. Such equipment shall also be acoustically shielded.
4. Select quiet construction equipment particularly air compressors, whenever possible. Fit motorized equipment with proper mufflers in good working order.
5. Residences adjacent to project sites shall be notified in advance in writing of the proposed construction schedule before construction activities commence. The construction schedule shall comply with Policy S-8.8.
6. The project applicant shall designate a “noise disturbance coordinator” responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of any noise complaint (e.g., starting too early, bad muffler, etc.) and shall require that reasonable measures be implemented to correct the problem. A telephone number for the disturbance coordinator shall be posted at the construction site.

The temporary nature of construction noise and the 2040 General Plan policies would reduce construction noise impacts below the dBA standards in Section 9.40.053 of the Union City Municipal Code because shielding, included in Policy S-8.9(3), can provide a noise reduction ranging from 5 to 15 dBA depending on the type of equipment (Nett Technologies n.d; Acoustical Surfaces, Inc n.d.). This could reduce the noise experienced by receptors 25 feet away to 83 dBA (94 dBA – 15 dBA = 83 dBA). However, it is not guaranteed that implementation of Policies S-8.8 and S-8.9 would reduce construction noise impacts; therefore, analysis on a project-by-project basis and implementation of Mitigation Measure N-1 would be required.

Mitigation Measures

N-1 Construction Noise Reduction

For projects involving impact pile-drivers that are located within 400 feet of noise-sensitive receptors, projects involving sonic pile-drivers that are located within 200 feet of construction, and projects without pile-driving that are located within 175 feet from noise-sensitive receptors, the following mitigation would be required:

- **Equipment Staging Areas.** Equipment staging shall be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors.

- **Electrically-Powered Tools and Facilities.** Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.
- **Smart Back-up Alarms.** Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms shall be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction.
- **Additional Noise Attenuation Techniques.** During the clearing, earth moving, grading, and foundation/conditioning phases of construction, temporary sound barriers shall be installed and maintained between the construction site and the sensitive receptors. Temporary sound barriers shall consist of sound blankets affixed to construction fencing or temporary solid walls along all sides of the construction site boundary facing potentially sensitive receptors.

Significance After Mitigation

Implementation of 2040 General Plan policies, Union City Municipal Code requirements, and Mitigation Measure N-1, would reduce potential impacts but not to a less than significant level, as they may not result in the 24-dBA decrease in noise levels necessary to reduce construction noise to 83 dBA at 25 feet as specified by Union City Municipal Code. Impacts would be significant and unavoidable.

<p>Threshold 1: Would the General Plan generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance?</p>
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IMPACT N-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INTRODUCE NEW ON-SITE NOISE SOURCES ASSOCIATED WITH RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL LAND USES AND WOULD CONTRIBUTE TO INCREASES IN TRAFFIC NOISE. THE CONTINUED REGULATION OF ON-SITE NOISE, CONSISTENT WITH THE UNION CITY MUNICIPAL CODE, AND IMPLEMENTATION OF GOALS AND POLICIES IN THE 2040 GENERAL PLAN WOULD MINIMIZE DISTURBANCE TO ADJACENT LAND USES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

On-Site Operational Noise

Noise generated by on-site activities for new development would be subject to the City’s maximum allowable exterior noise levels, contained in Article 4 of Title 9 of the Union City Municipal Code. Stationary noise sources at new residential and mixed-use development would include ground-level and rooftop ventilation and heating (HVAC) systems. New development in commercial and industrial areas could introduce noise associated with loading activity and industrial equipment.

Existing noise sensitive receptors could be affected by the buildout of focus areas and operational noise occurring on-site at properties developed or redeveloped under the 2040 General Plan.

The Safety Element of 2040 General Plan includes goals and policies that seek to reduce excess noise generated by new development, as detailed below.

Goal S-8: To protect public health and welfare by minimizing excessive noise and vibration.

Policy S-8.2: Noise Standards Applied to New Development. The City shall review new development to determine whether noise levels on site are consistent with the noise exposure standards in Table S-8.1. Development in areas with “conditionally acceptable” or “normally

unacceptable” noise exposure levels may be permitted at the discretion of the City Council. A detailed noise analysis and implementation of appropriate measures shall be required for all developments that have noise exposure levels greater than “normally acceptable.”

Policy S-8.3. Interior Noise Standards. The City shall require new residential development to achieve an interior noise level of 45 dBA Ldn (with windows closed). Building features such as forced-air ventilation systems (air conditioning), installation of noise attenuating windows, and use of wall/ceiling insulation may be required to ensure consistency with required interior noise standards.

Policy S-8.4. Noise Impact Analysis for New Noise Sensitive Land Uses. For proposed development of new noise sensitive land uses as identified in Policy S-8.1, the City shall require a noise impact analysis in areas where current or future exterior noise levels from transportation sources (i.e., roadway, highway/freeway, rail uses, and aircraft noise), or stationary sources exceed the “normally acceptable” noise standards contained in Table S-8.1. This study shall be prepared by a qualified acoustical engineer. The study shall include recommendations to reduce noise exposure to an acceptable level, or conditionally acceptable level at the discretion of the City Council.

Policy S-8.5. Disclosure of Potential Noise Sources. The City shall require that future occupants of new noise sensitive land uses receive full disclosure, through property conveyance or lease documents, of nearby potential noise sources, which may include, but not be limited to, industrial business operations, entertainment uses, roadway, highway/freeway, and rail uses.

Policy S-8.6. Encourage Non-Structural Methods to Mitigate Noise Impacts. The City shall encourage the use of site design, setbacks, earth berms, and other non-structural methods to reduce and mitigate the effects of traffic noise, rail noise, and other sources. Building placement should also be used to mitigate noise impacts on outdoor areas. In general, the use of sound walls is discouraged unless no other alternative exists.

Policy S-8.7. Reduce Impacts from New Noise Generating Uses. The city may require operational limitations and implementation of noise buffering measures for new uses with the potential to generate significant noise (including, but not limited to, industrial uses, auditoriums, concert halls, amphitheaters, sports arenas, outdoor spectator sports fields, and outdoor spectator sports) near existing noise sensitive land uses as identified in Policy S-8.1. A noise impact analysis may be required to evaluate potential noise impacts and identify appropriate buffering measures.

Policy S-8.13. Enforce Community Noise Ordinance. The City shall strive to reduce the negative effects of noise sources through the enforcement of the Community Noise Ordinance.

Implementation of the 2040 General Plan’s policies, as well as requirements codified in Article 4 of Title 9 of the Union City Municipal Code, would reduce potential on-site noise impacts to a less than significant level.

Off-Site Operational Noise

The 2040 General Plan allows for higher density /intensity land uses than currently permitted leading to additional vehicle trips on area roadways. Based on the buildout of vacant and under-utilized parcels within Union City, under full buildout of the 2040 General Plan, an estimated 4,330 new dwelling units would be added to Union City, and a total of 8,069,113 square feet of non-residential space could be constructed. By generating new vehicle trips, new development would

incrementally increase the exposure of land uses along roadways to traffic noise. Implementation of the 2040 General Plan does not include policies or actions that would increase the frequency of BART or Southern Pacific Railroad service.

Buildout of the 2040 General Plan would result in over 14,000 new AM and PM vehicle trips on area roadways¹ (Appendix C), as well as increased VMT (refer to Section 4.14, *Transportation*). The total existing AM and PM hour trips occurring on area roadways are 39,188 trips. Therefore, implementation of the 2040 General Plan would result in less than a 40 percent increase in vehicle trips on area roadways as a whole. A 40 percent increase in trips equates to a noise increase of less than 1.5 decibels. As discussed in Section 4.11.1, a 3-dBA increase is considered noticeable. Therefore, 1.5-dBA increase in noise would not be perceptible. Although the increase could be more than 40 percent on some streets, depending on the specific uses and locations of development that would be allowed under the 2040 General Plan, a doubling of traffic volumes would be required to reach the threshold of noticeability (a 3-dba increase in noise levels). A doubling of traffic volumes (i.e., a 100 percent increase) is not anticipated under the 2040 General Plan. Additionally, the market share of electric vehicles, which are quieter than traditional gasoline vehicles, is anticipated to increase over time, especially in response to Executive Order B-48-18, which promotes the use of zero-emission vehicles, electric vehicle charging stations, and hydrogen refueling infrastructure. The increased use of electric vehicles would decrease traffic noise compared to anticipated levels assuming only gasoline-powered vehicles.

Additionally, the following 2040 General Plan goals, policies, and implementation programs would encourage active transportation modes, such as walking and bicycling, and would encourage the use of public transit, thereby reducing traffic noise in Union City.

Goal M-2: To provide a robust and interconnected bicycle and pedestrian circulation system throughout the city.

Goal M-3: Provide an accessible, sustainable, efficient, and convenient public transit system for residents, workers, and visitors in Union City.

Goal M-5: To reduce vehicle miles traveled through strategies that reduce automobile dependency.

Policy M-5.1: Transportation Demand Management. The City shall work with landowners and employers in existing and emerging employment centers to implement transportation demand management (TDM) strategies that may include, but are not limited to:

- Transit vouchers;
- Van and car pool programs;
- Car-sharing and bike-sharing programs;
- Shuttles to BART;
- Secure bike lockers/parking and showers;
- Convenient and weather protected transit stops and shelters; and
- Flexible work hours that start and end outside of the traditional work schedule.

¹ AM and PM peak hours represent the time that the most traffic would be traveling on area roadways, and therefore the time that traffic noise would be loudest.

Policy M-5.3: Explore Car Sharing and Bike Sharing Opportunities. The City shall explore public-private partnerships and other measure to attract car-sharing and bike-sharing companies or services to Union City.

Policy M-5.4: Shuttle Service. The City shall work with property owners within the city's business parks and determine the need for and feasibility of establishing shuttle service to and from the Intermodal Station.

Policy M-5.5: Encourage Employers to Incentivize Ride Sharing and Public Transit. The City shall encourage employers to provide incentives for employees to carpool, vanpool, or use transit when traveling to work.

Policy M-5.3: Encourage Telecommuting and Flextime. The City shall encourage employers to reduce peak-hour commute trips by offering flexible work schedules and telecommute options.

Implementation Program M-5.A. Greater Station District Transportation Demand Management Strategies. The City shall incorporate transportation demand management (TDM) strategies into the Decoto Industrial Park Study Area (DIPSA) Specific Plan Update to discourage the use of single-occupancy vehicles over time and encourage the use of public transit, bicycling and walking within the Greater Station District.

Implementation of the above policies would reduce vehicle trips and associated traffic noise to the extent feasible. Traffic volumes on streets would not increase by 100 percent, and therefore increases in traffic noise would be less than perceptible. Increases in roadway noise would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan Generate excessive groundborne vibration or groundborne noise levels?
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IMPACT N-3 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE 2040 GENERAL PLAN COULD TEMPORARILY GENERATE GROUND BORNE VIBRATION, POTENTIALLY AFFECTING NEARBY LAND USES. POLICIES IN THE 2040 GENERAL PLAN WOULD LIMIT VIBRATION DISTURBANCE AND ENSURE THAT HIGH VIBRATION LEVELS DURING WORKING CONSTRUCTION HOURS TO THE EXTENT FEASIBLE. HOWEVER, CONSTRUCTION VIBRATION FROM PILE-DRIVERS MAY DISTURB PEOPLE OR DAMAGE BUILDINGS. IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction of individual projects facilitated by the 2040 General Plan could intermittently generate groundborne vibration on and adjacent to construction sites. Buildings in the vicinity of a construction site respond to vibration with varying degrees ranging from imperceptible effects at the lowest levels, to low rumbling sounds and perceptible vibrations at minor levels, and up to minor damage at the highest vibration levels. Table 4.11-5 lists groundborne vibration levels from various types of construction equipment at various distances.

Table 4.11-5 Vibration Source Levels for Construction Equipment

Equipment	Approximate Vibration Level (VdB)			
	25 feet from Source	50 feet from Source	100 feet from Source	200 feet from Source
Caisson Drilling	87	78	69	60
Jackhammer	79	70	61	52
Large Bulldozer	87	78	69	60
Loaded Truck	86	77	68	58
Pile Driver (impact)	Upper range	112	103	94
	Typical	104	95	86
Pile Driver (sonic)	Upper range	105	96	87
	Typical	93	84	75
Small Bulldozer	58	48	39	30
Vibratory Roller	94	85	76	67

Source: FTA 2018

As shown in Table 4.11-5, sensitive receptors could experience the strongest vibration during the use of pile-drivers and vibratory rollers. Vibration levels from pile-drivers could approach 112 VdB at a distance of 25 feet from the source and 103 VdB at 50 feet, and vibration levels from vibratory rollers could approach 94 VdB at a distance of 25 feet and 87 VdB at 50 feet.

Policy S-8.8 of the 2040 General Plan imposes limits on construction hours to minimize the potential noise impacts of construction activities on surrounding land uses, as described above under Impact N-1. Construction during exempt hours as stated in the Chapter 9.40 of the Union City Municipal Code would ensure that residents would not be exposed to excess vibration during normal sleeping hours. Therefore, vibration would not exceed the threshold of 72 VdB for residences and buildings when people normally sleep.

Vibration levels during daytime construction activity could potentially exceed the threshold of 75 VdB for institutional land uses like schools, churches, or offices with primary daytime use. In addition, the use of pile-drivers and vibratory rollers could generate vibration levels that equal or exceed the thresholds of 90 VdB for buildings extremely susceptible to vibration damage and 94 VdB for non-engineered timber and masonry buildings. However, Policy S-8.10 of the 2040 General Plan contains construction vibration control measures as standard conditions of approval, as shown below.

Policy S-8.10: Construction Vibration Control Measures. The City shall include the following measures as standard conditions of approval for applicable projects involving construction to minimize exposure to construction vibration:

1. Avoid the use of vibratory rollers (i.e., compactors) within 50 feet of buildings that are susceptible to damage from vibration.
2. Schedule construction activities with the highest potential to produce vibration to hours with the least potential to affect nearby institutional, educational, and office uses that the Federal Transit Administration identifies as sensitive to daytime vibration (FTA 2006).
3. Notify neighbors of scheduled construction activities that would generate vibration.

Even with implementation of and the 2040 General Plan Policy S-8.10, as well as existing regulatory requirements, such as construction hour restrictions codified in the Union City Municipal Code, construction vibration may still exceed applicable thresholds. Therefore, site-specific mitigation would be required.

Mitigation Measures

Mitigation Measure N-1, listed under Impact N-2.

Significance After Mitigation

Implementation of 2040 General Plan policies, Union City Municipal Code requirements, and Mitigation Measure N-1, would reduce potential impacts but not to a less than significant level, as vibration may still exceed the 75 VdB standard for institutional land uses. Impacts would be significant and unavoidable.

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4.12 Population and Housing

This section addresses the potential population growth and housing displacement impacts associated with implementation of General Plan 2040. Data used to prepare this section were taken from the United States Bureau of the Census (US Census), the California Department of Finance (DOF), and the Association of Bay Area Governments (ABAG).

4.12.1 Setting

a. Population

Union City's population has grown rapidly since incorporation of the Alvarado and Decoto neighborhoods in 1959. From 1960 to 2010, the population of the city grew 950 percent, from 6,618 residents in 1960 to 69,516 in 2010. The city experienced the largest population growth between the 1970 and 1980 decade, with a growth of 168 percent, from 14,724 people to 39,406. Since 1990, Union City's population has increased 36 percent from 53,762 to 72,991 in 2018 (U.S. Census Bureau 2017; California Department of Finance [DOF] 2018).

Population growth since 2000 has continued but at a slower rate than previous decades. Union City's average annual growth rate (AAGR) from 2000 to 2010 was 0.39 percent, which was lower than the 0.46 percent AAGR for Alameda County. Population growth in Union City was also lower than the 0.52 percent AAGR in the neighboring city of Fremont, but higher than the 0.02 percent AAGR in Newark and the 0.30 percent AAGR in Hayward during this period (Union City 2015).

b. Households and Dwelling Units

A household is defined by the DOF and the U.S. Census as a group of people who occupy a housing unit. A household differs from a dwelling unit because the number of dwelling units includes both occupied and vacant dwelling units. Not all of the population lives in households. A portion lives in group quarters, such as board and care facilities; others are homeless.

Small households, consisting of one to two persons per household, traditionally reside in units with zero to two bedrooms; family households of three to four persons per household normally reside in units with three to four bedrooms. Large households of five or more persons per household typically reside in units with four or more bedrooms. However, the number of units in relation to the household size may also reflect preference and economics. Many small households obtain larger units and some large households live in small units for economic reasons.

In 2010 Union City had a household size of 3.38, higher than the countywide household size of 2.70 but similar to other nearby jurisdictions. As of 2018, household size in Union City is 3.51, which is higher the countywide household size of 2.81 and also higher than the household size of all other incorporated cities in Alameda County (DOF 2018).

As shown in Table 2-2, in Section 2, *Project Description*, there are an estimated 20,498 dwelling units in Union City. These consist of 14,918 single family units and 5,580 multifamily units (Mintier Harnish 2018). The majority of the dwelling units in Union City are located to the west of State Route 238.

c. Jobs Housing Ratio

Information on the jobs-housing ratio is provided for informational purposes only. The jobs-household ratio in a jurisdiction is an overall indicator of jobs availability within the area. A balance of jobs and housing can give residents an opportunity to work locally and avoid employment commutes to other places in the region. As shown in Table 4.12-1, Union City has a ratio of 0.95 jobs per dwelling unit. That is, there is less than one job per household, which means that workers must travel to other communities to find employment. Most households have more than one worker; therefore, a ratio of jobs to housing should be well above 1 in order to have a balance of jobs to households.

d. Projections

Table 4.12-1 presents population, dwelling units, and employment projections through 2040 for Union City. The projections suggest that the City’s population will grow approximately 15 percent between 2018 and 2040. This translates into an estimated 11,486 new residents by 2040. New dwelling units are expected to increase 21 percent between 2018 and 2040, for a total of increase of 4,330 units. Employment is projected to increase approximately 91 percent from 2018 levels, for a total of approximately 17,805 new jobs by 2040. This would increase the City’s jobs-housing ratio by 0.55.

Table 4.12-1 Union City Population, Dwelling Units, and Employment

Union City	2018	2040	Change 2018 to 2040	Percent Change 2018 to 2040
Population	72,991	84,477	11,486	15%
Dwelling Units	20,498	24,813	4,330	21%
Jobs	19,528	37,333	17,805	91%
Jobs-Housing Ratio	0.95	1.50	0.55	57%

Source: Mintier Harnish 2018

e. Regulatory Setting

There are no federal regulations applicable to population and housing in Union City. State, regional, and local regulations are discussed below.

State

State Housing Element

State housing element statutes (Government Code Sections 65580-65589.9) mandate that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, State housing policy rests largely upon the effective implementation of local general plans

and in particular, housing elements. Additionally, Government Code Section 65588 dictates that housing elements must be updated at least once every five years.

Regional

Regional Housing Needs Assessment

California’s Housing Element law requires that each county and city develop local housing programs to meet their “fair share” of future housing growth needs for all income groups, as determined by the DOF. The regional councils of government (COGs), including ABAG, are then tasked with distributing the State-projected housing growth need for their region among their city and county jurisdictions by income category. This fair share allocation is referred to as the Regional Housing Needs Assessment (RHNA) process. The RHNA represents the minimum number of housing units each community is required to plan for through a combination of: 1) zoning “adequate sites” at suitable densities to provide affordability; and 2) housing programs to support production of below-market rate units. Table 4.12-2 shows Union City’s allocation from the 2014-2022 RHNA distributed among the five income categories.

Table 4.12-2 Regional Housing Needs Assessment 2014-2022

Income Group	RHNA Allocation (units)
Extremely Low-Income: 50% of the very low allocation	158
Very Low: up to 50 percent of area median income ¹	159
Low: between 51 and 80 percent of area median income ²	264
Moderate: between 81 and 120 percent of area median income	192
Above Moderate	417
Total	1,190

¹Total Very Low allocation is 317 units and includes Extremely Low allocation, which is a subset of the Very Low allocation.

²Includes 84 unaccommodated units from 2007-2014 RHNA.

Source: Union City 2015

Association of Bay Area Governments

As discussed in Section 4.8, *Land Use and Planning*, Union City is located within the ABAG planning area. ABAG functions as the Metropolitan Planning Organization (MPO) for Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara and Solano Counties, and is responsible for implementing the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is called Plan Bay Area 2040 (ABAG 2017). Plan Bay Area 2040 is a long-range integrated transportation and land-use/housing strategy for the San Francisco Bay Area through 2040.

Local

Union City Housing Element

The purpose of the Housing Element is to identify and analyze existing and projected housing needs in order to preserve, improve, and develop housing for all economic segments of the community,

consistent with the RHNA regulations described above. While the Housing Element is one of the seven required elements of the General Plan, the City adopted its current Housing Element in January 2015 as part of the State's fifth Housing Element planning cycle. The current Housing Element covers the period of January 2015 through January 2023 (Union City 2015). This Housing Element was submitted to the HCD for review and comment, and the City received certification of the Housing Element from HCD in February 19, 2015 (HCD 2015). The 2040 General Plan incorporates the adopted 2015 Housing Element. No substantive changes are being proposed to the Housing Element as part of its incorporation into the 2040 General Plan.

4.12.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

Population and housing trends in the City were evaluated by reviewing the most current data available from the U.S. Census Bureau, the California DOF, the current Union City 2002 General Plan, ABAG, and the 2014 RHNA. Impacts related to population are generally social or economic in nature. Under CEQA, a social or economic change generally is not considered a significant effect on the environment unless the changes are directly linked to a physical change.

Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would do any of the following:

1. Induce substantial unplanned population growth in an area either directly or indirectly
2. Displace substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere

For purposes of this analysis, substantial population growth is defined as growth exceeding ABAG or Bay Area AQMD population forecasts for Union City. Substantial displacement would occur if allowed land uses would displace more residences than would be accommodated through growth accommodated by the General Plan 2040.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan induce substantial unplanned population growth in an area either directly or indirectly?

Impact PH-1 IMPLEMENTATION OF GENERAL PLAN 2040 WOULD FACILITATE THE CONSTRUCTION OF NEW HOUSING IN UNION CITY, WHICH WOULD ALLOW THE CITY'S POPULATION TO INCREASE OVER TIME AND SLIGHTLY EXCEED ABAG POPULATION FORECASTS. HOWEVER, THE 2040 GENERAL PLAN IS INTENDED TO ACCOMMODATE AND PLAN FOR POPULATION GROWTH AND INCLUDES POLICIES TO MANAGE NEW DEVELOPMENT. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development projected by the General Plan 2040 is projected to result in approximately 4,330 additional residential units in the city by the year 2040 (see Section 2, *Project Description*, of this EIR). This additional housing would lead to an increase of approximately 11,486 residents in the city

from 2018 to 2040, as shown above in Table 4.12-1. The total population of the City in 2040 would be 84,477, which is 5.5 percent above ABAG's 2040 population forecast of 79,845 (ABAG 2019). However, the ABAG growth projection is based on the land use assumptions in the 2002 General Plan. Growth anticipated under the 2040 General Plan is intended in part to meet regional housing needs over the long term. While the development capacity allowed by the 2040 General Plan would exceed ABAG forecasts by 5.5 percent, vacant and underutilized parcels within Union City would be developed or redeveloped by 2040 (see further explanation in Section 2, *Project Description*).

Additionally, Goal LU-1 and related policies in the Land Use Element of the 2040 General Plan, listed below, would concentrate planned residential development and associated population growth in infill areas.

Goal LU-1: Strategically support infill development and redevelopment to transform Union City into a distinctive community with a dynamic, transit-oriented city center, attractive shopping and entertainment areas, and thriving and innovative work places.

Policy LU-1.2: Promote Infill and Enhance Neighborhoods. The City shall promote infill development and redevelopment of underutilized parcels while maintaining or enhancing the positive qualities of the surrounding neighborhoods.

Policy LU-1.3: Strategic Infill Areas. The City shall encourage redevelopment and infill in strategic areas, including the Historic Alvarado District along Union City Boulevard, Union Landing, the Greater Station District, and Mission Boulevard.

As discussed in Section 4.12.1, Union City has a current jobs-housing ratio of 0.95, which means that workers must travel to other communities to find employment. Growth under the 2040 General Plan would result in a more balanced jobs-housing ratio in 2040 by increasing jobs available in Union City (Table 4.12-1). Therefore, such growth would not result in any adverse effects associated with an increased imbalance of jobs and housing in the City.

One of the fundamental purposes of General Plan 2040 is to direct future development in such a way as to minimize the impacts of growth by emphasizing the intensification and reuse of already developed areas, thus minimizing pressure to develop on the remaining open space in the city and directing growth and redevelopment to infill areas, consistent with General Plan 2040 Policy LU-1.2 and Policy LU-1.3, listed above. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact PH-2 IMPLEMENTATION OF GENERAL PLAN 2040 WOULD NOT RESULT IN THE DISPLACEMENT OF SUBSTANTIAL NUMBERS OF HOUSING OR PEOPLE. TO THE CONTRARY, GENERAL PLAN 2040 WOULD FACILITATE THE DEVELOPMENT OF NEW HOUSING IN ACCORDANCE WITH STATE AND LOCAL HOUSING REQUIREMENTS, WHILE PRESERVING EXISTING RESIDENTIAL NEIGHBORHOODS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The General Plan 2040 would facilitate development in Union City through 2040. Policies LU-1.2 and LU-1.3, listed above, promote infill development and redevelopment of underutilized parcels while maintaining or enhancing the positive qualities of the surrounding neighborhoods. However, development facilitated by General Plan 2040 would result in the loss of 15 existing dwelling units, as shown in Table 2-2, in Section 2, Project Description. The loss of 15 units would not be substantial because the General Plan facilitates the development of 4,330 new dwelling units between 2018 and 2040, far exceeding the 15 units that would be demolished during this period. The new units facilitated by General Plan 2040 would be in accordance with State and local housing requirements.

Goal LU-4 and associated Policy LU-4.1 in the Land Use Element of General Plan 2040, listed below, would maintain existing neighborhoods and further ensure that displacement of housing and associated residents is minimized while also facilitating new development.

Goal LU-4: To preserve and enhance residential neighborhoods so they remain desirable places to live, maintain a variety of housing types, and contribute to the quality of life for Union City residents.

Policy LU-4.1: Maintain Neighborhoods. The City shall strive to protect and enhance the positive elements that define each neighborhood.

In summary, General Plan 2040 would facilitate the development of 4,330 new dwelling units, while resulting in the demolition or displacement of only 15 units. Because the number of new dwelling units would far exceed the number displaced, and because the policies of General Plan 2040 promote infill development and preservation of existing neighborhoods, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.13 Public Services and Recreation

This section assesses potential impacts to public services, including fire and police protection, public schools, and libraries from the 2040 General Plan. Impacts to water and wastewater infrastructure and solid waste collection and disposal are discussed in Section 4.16, *Utilities and Service Systems*. Impacts to parks and recreation are discussed in Section 4.18, *Effects Found Not to be Significant*.

4.13.1 Setting

a. Fire Protection

Alameda County Fire Department

The Alameda County Fire Department (ACFD) provides all-risk emergency and non-emergency services to the unincorporated areas of Alameda County, the cities of San Leandro, Dublin, Newark, and Union City, the Lawrence Berkeley National Laboratory, and the Lawrence Livermore National Laboratory. The ACFD provides a wide variety of services, including: emergency medical services; fire suppression; hazardous materials response; urban search and rescue; water rescue; community education; disaster preparedness; fire prevention and code compliance; regional dispatch; bulldozer operations; and reserve firefighter education and training program.

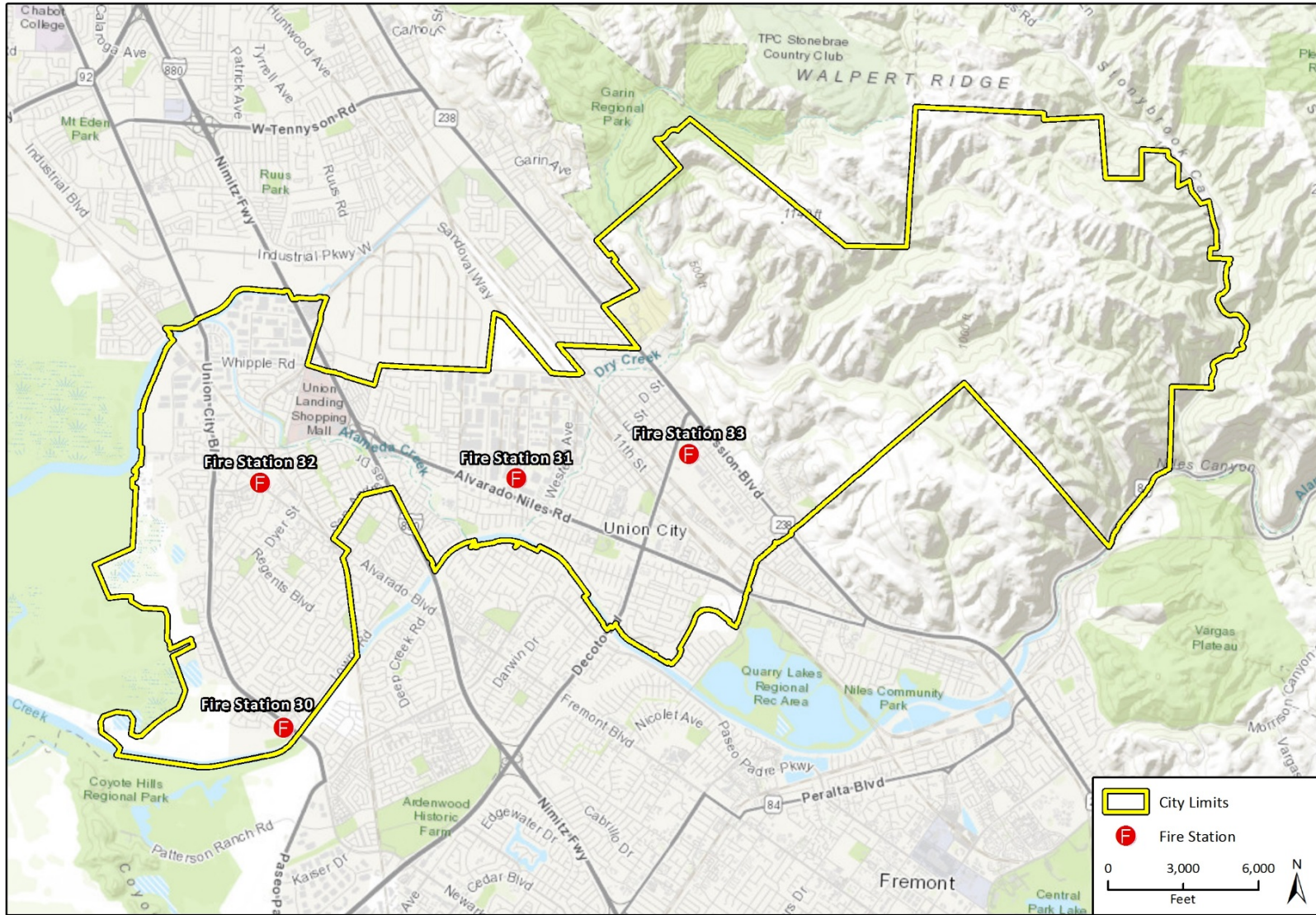
Staffing, Facilities, and Equipment

The ACFD is made up of over 450 authorized personnel. The Fire Chief provides overall leadership and is responsible for the effective management, coordination, and service delivery of all aspects of the ACFD. The Deputy Fire Chiefs, Fire Marshal, and Administrative Services Director oversee their respective organizational branches ensuring the overall day-to-day readiness of all aspects of the ACFD.

ACFD maintains 35 fire stations throughout its service area, four of which are within the City limits of Union City. In addition, the ACFD provides Fire Prevention staff in Union City. Existing stations are shown in Figure 4.13-1. The four fire stations within the City limits are as follows:

- Fire Station No. 30: Located at 35000 Eastin Court, this station serves west Union City, is staffed by three firefighters, and is home to two fire engines.
- Fire Station No. 31: Located at 33555 Central Avenue, this station serves central Union City, is staffed by three firefighters, and is home to Truck 31 and a reserve fire engine.
- Fire Station No. 32: Located at 31600 Alvarado Boulevard, this station serves the west side of Union City, is staffed by three firefighters, and is home to Engine 32 and a reserve fire engine.
- Fire Station No. 33: Located at 33942 7th Street, this station serves the east side of Union City, is staffed by three firefighters, and is home to two fire engines (Alameda County Fire Department 2018).

Figure 4.13-1 Alameda County Fire Department Stations in Union City



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Additional data provided by County of Alameda 2018.

Fig 4.13-1 Alameda County Fire Stations in Union City

Response Times

Maintaining low fire and emergency medical response times and high level of service is a high priority of ACFD and Union City. To achieve this, the City's current 2002 General Plan calls for a standard of 1.0 firefighter per 1,000 residents. In 2010, the City contracted with ACFD to provide emergency medical and fire protections services. The contract took effect on July 1, 2010 and stated that ACFD would maintain the then current service levels, which included, among other things, the staffing of all four fire stations.

b. Police Protection

Union City Police Department

The Union City Police Department (UCPD) provides police protection and law enforcement services to Union City. UCPD headquarters is located in the William M. Cann Memorial Civic Center at 34009 Alvarado-Niles Road. The UCPD also operates from two sub-stations, one located at 32195 Union Landing Boulevard and the other located at 31880 Alvarado Boulevard. Figure 4.13-2 shows the UCPD facilities with the City.

The UCPD currently employs over 130 employees, including 81 sworn officers, more than 25 full-time civilian support staff, and cadres of volunteers. Authorized Sworn staff includes the Chief of Police, two Captains, six Lieutenants, 12 Police Sergeants, and 60 Police Officers for a total of 81 sworn personnel (UCPD 2018). In addition, UCPD has a number of volunteers who provide their time to the UCPD and to the residents of Union City. With the UCPD employing 81 sworn officers and the population of Union City at approximately 72,991 (DOF 2018), the UCPD currently has 1.11 sworn officers per 1,000 residents.

UCPD Partnerships and Collaborations

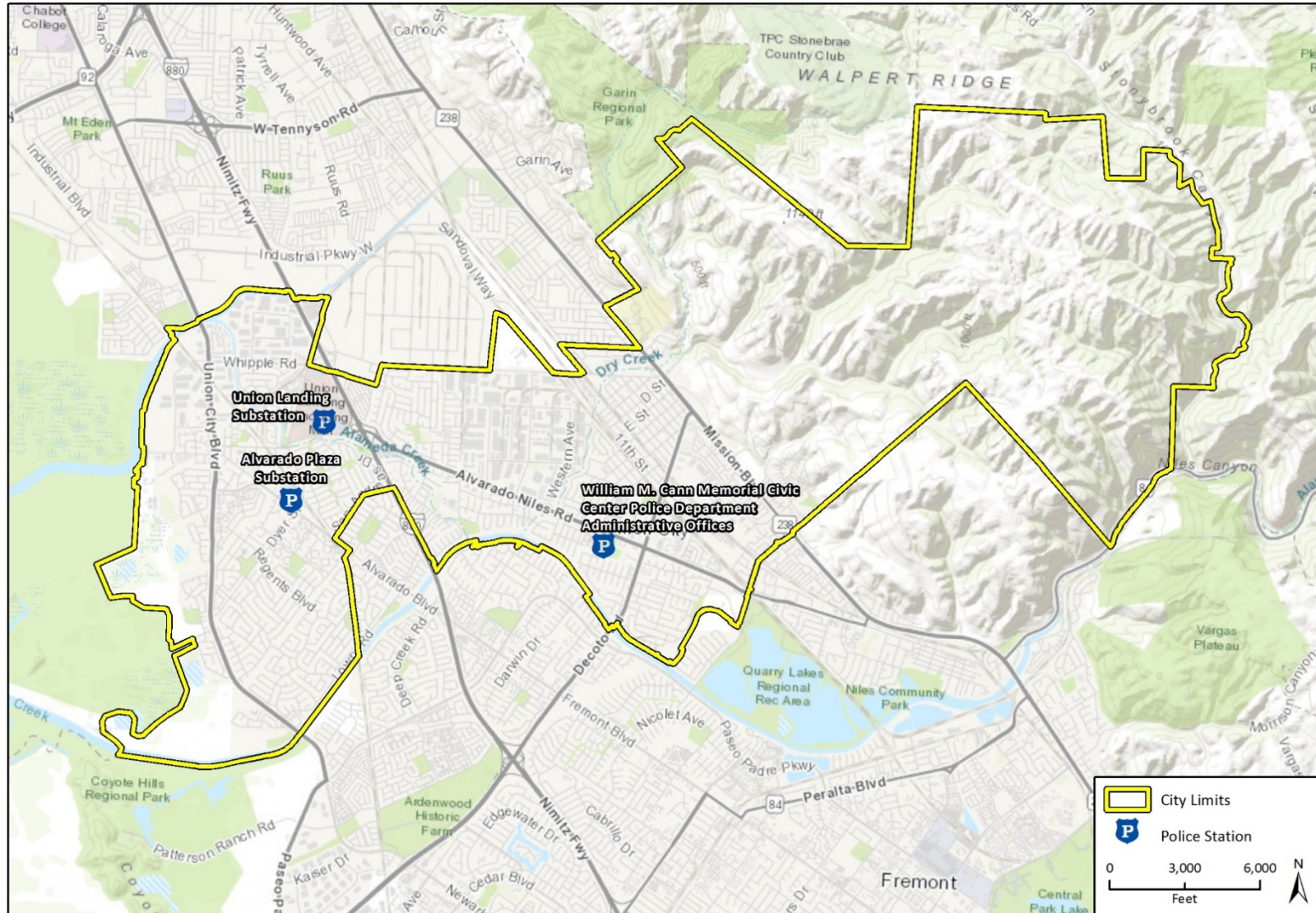
UCPD maintains partnerships and agreements with various local, regional and State entities. UCPD is a part of the California State Mutual Aid System in Region II, which includes Alameda, Del Norte, Humboldt, Mendocino, Lake, Sonoma, Napa, Solano, Marin, Contra Costa, San Mateo, Santa Clara, Santa Cruz, San Benito, and Monterey Counties. Alameda County is the Regional Coordinator for Region II. The mutual aid system is an ongoing cooperative effort among law enforcement agencies to ensure an effective and organized response to a wide range of emergencies.

If requested, the Alameda County Sheriff's Department provides additional support services to Union City, typically in the form of additional police officers for major events or incidents. The Alameda County Sheriff's Office is a full-service law enforcement agency accredited through the Commission on Accreditation for Law Enforcement Agencies and the American Correctional Association. The Alameda County Sheriff's Department includes seven divisions: Sheriff's Administration, Agency Watch Commander, Countywide Services, Detention and Corrections, Law Enforcement Services, Management Services, and Urban Area Security. The Sheriff's Department employs 1,500 staff including about 1,000 sworn officers (Alameda County Sheriff's Office 2018).

California Highway Patrol

The California Highway Patrol provides traffic safety and enforcement services on unincorporated roadways and State highways in Union City, such as Interstate 880. Union City is located in the Golden Gate Division of the California Highway Patrol, which operates twelve offices, three

Figure 4.13-2 Union City Police Department Stations



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Fig 4.13-2 Union City Police Department Stations

commercial inspection facilities, one communications center, and an air operations unit in the Bay Area. The nearest office to Union City is located in Hayward, just north of the City limits.

c. Schools

The New Haven Unified School District (NHUSD) provides public education in Union City and in part of Hayward. The NHUSD operates nine traditional public schools within Union City, as well as an independent study school and an adult school. The names of these schools, student capacity, and student enrollment during the 2017-2018 school year are presented in Table 4.13-1. NHUSD has experienced a decline in student enrollment over the last several years. Between the 2011 and 2018, NHUSD experienced a reduction of 1,670 students (California Department of Education [DOE] 2019). The locations of these schools in Union City are shown on Figure 4.8-1 in Section 4.8, *Hazards and Hazardous Materials*.

Table 4.13-1 NHUSD Schools in Union City

School Name	Grades	2017-2018 Enrollment
Alvarado Elementary	K-5	767
Delaine Eastin Elementary	K-5	775
Guy Emanuele Elementary	K-5	586
Tom Kitayama Elementary	K-5	811
Pioneer Elementary	K-5	795
Searles Elementary	K-5	673
Cesar Chavez Middle	6-8	1,252
Itliong-Vera Cruz Middle	6-8	1,378
James Logan High	9-12	3,735
Decoto School for Independent Study	K-12	118
New Haven Adult School	N/A	N/A

DOE. 2018. "2017-18 Enrollment by Grade." <https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=2766092&aggllevel=district&year=2017-18> (accessed August 1, 2018).

There are also four private schools that operate within the City, including Purple Lotus Society, Northstar, Mission Hills Middle School, and Union City Christian Academy.

d. Public Libraries

The Union City Library located in the Civic Center complex next to City Hall serves the residents of Union City as well as the nearby communities of Fremont, Hayward, and Newark. Operated as part of the Alameda County Library, the Union City Library offers a collection of over 100,000 items including a DVD and CD book collection. Special features of the collection include items in Chinese, Farsi, Gujarati, Hindi, Japanese, Korean, Punjabi, Spanish, and Tagalog. Other services include free internet and wireless access, access to laptop and iPad borrowing services and access to a typewriter, photocopiers, and text enlarger. A meeting room is available for use by community groups free of charge.

e. Parks

There are 30 parks in Union City, totaling approximately 136 acres. Many of the parks are centrally located within residential subdivisions, while others, such as Charles F. Kennedy Park on Decoto Road, serve as citywide community landmarks and gathering spaces. Additionally, the City is framed by a variety of natural open space resources: the hillside area in the east, the San Francisco Bay marshlands to the west, and Alameda Creek to the south. Providing access to these resources, four regional parks are in close proximity to the City: Eden Landing Ecological Reserve, Coyote Hills Regional Park, Quarry Lakes Regional Recreation Area, and Garin/Dry Creek Pioneer Regional Park (Union City 2015).

f. Regulatory Setting

There are no federal regulations pertaining to public services that are applicable to this analysis. Applicable State and local regulations are described below.

State

California Fire and Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC), which is located in Part 2 of Title 24, California Building Standards Code, of the CCR. The CBC is based on the International Building Code but has been amended for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

California State Assembly Bill 2926 (AB 2926) – School Facilities Act of 1986 – was enacted by the State of California in 1986 and added to the California Government Code (Section 65995). It authorizes school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also established that the maximum fees which may be collected under this and any other school fee authorization are \$1.50 per square foot (\$1.50/ft²) for residential development and \$0.25/ft² for commercial and industrial development.

AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 *et seq.* of the Government code. Under this statute, payment of statutory fees by developers serves as total mitigation under CEQA to satisfy the impact of development on school facilities. However, subsequent legislative actions have alternatively expanded and contracted the limits placed on school fees by AB 2926.

California Senate Bill 50

As part of the further refinement of the legislation enacted under AB 2926, the passage of SB 50 in 1998 defined the Needs Analysis process in government Code Sections 65995.5-65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. SB 50 generally provides for a 50/50 State and local school facilities match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether State funding is available; whether the school district is eligible for State funding; and whether the school district meets certain additional criteria involving bonding capacity, year-round schools, and the percentage of moveable classrooms in use.

California Government Code sections 65995-65998 sets forth provisions to implement SB 50. Specifically, in accordance with section 65995(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.” The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Pursuant to Government Code section 65995(i), “A State or local agency may not deny or refuse to approve a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in section 56021 or 56073 on the basis of a person's refusal to provide school facilities mitigation that exceeds the amounts authorized pursuant to this section or pursuant to section 65995.5 or 65995.7, as applicable.”

California Education Code section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

California Commission on Peace Officer Standards and Training

The California Commission on Peace Officer Standards and Training (POST) advocates for, exchanges information with, sets selection and training standards for, and works with law enforcement and other public and private entities. POST was established by the Legislature in 1959 to identify common needs that are shared by representatives of law enforcement.

Local

Union City Municipal Code, Chapter 2.36, Law Officer Training

Chapter 2.36 of the Union City Municipal Code requires that Union City adhere to the standards for the recruitment and training of peace officers and public safety dispatchers established by the California Commission on Peace Officer Standards and Training (POST), since Union City is qualified to receive aid from the State of California pursuant to Section 13522, Chapter 1 of Title 4, Part 4 of the California Penal Code. Pursuant to Section 13512 of said Penal Code the Commission and its representatives may take measures to ensure peace officer and public safety dispatcher personnel adhere to selection and training standards established by POST.

Union City Municipal Code

Chapter 17.30, Subdivisions, of the Union City Municipal Code requires any project that includes a residential subdivision to provide three acres of property (or an equivalent in-lieu fee) for every additional one thousand residents that the project will generate to be devoted to neighborhood and community parks. At the time of approval of the tentative map or parcel map, the City Council determines the land required for dedication or in-lieu fee payment. In addition, Section 18.105.310, Park facilities fee, establishes a fee to pay for municipally-owned park and recreation facilities to finance public facilities and pay for each development's fair share of the construction and acquisition costs for park improvements.

4.13.2 Impact Analysis

a. Methodology and Thresholds of Significance

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would do any of the following:

- 1 Result in substantial adverse physical impacts associated with the need for or provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for:
 - a. Fire protection
 - b. Police protection
 - c. Schools
 - d. Parks
 - e. Other public facilities
- 2 Result in substantial adverse physical impacts associated with the need for or provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for parks;
- 3 Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- 4 Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

b. Project Impacts and Mitigation Measures

Threshold 1a:	Would the General Plan result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives?
Threshold 1b:	Would the General Plan result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives?

Impact PS-1 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE POPULATION IN UNION CITY, GENERATING ADDITIONAL NEED FOR FIRE PROTECTION AND POLICE PROTECTION SERVICES. HOWEVER, ADHERENCE TO THE 2040 GENERAL PLAN POLICIES WOULD REDUCE IMPACTS RELATED TO THE CONSTRUCTION OF FIRE AND POLICE PROTECTION FACILITIES TO A LESS THAN SIGNIFICANT LEVEL.

As described in Section 2, *Project Description*, buildout of the 2040 General Plan would facilitate an estimated 11,486 new residents in Union City. As mentioned under Section 4.13.1, *Setting*, the current 2002 General Plan establishes a standard of 1.0 firefighter per 1,000 residents. This standard was adopted when Union City had its own fire department, prior to contracting with the ACFD in 2010 to provide fire protection services. ACFD continues to provide the same levels of service as were established in the 2010 contract.

The City's current 2002 General Plan assumed all fire protection services would be provided by the City's fire department, which existed at the time the current 2002 General Plan was adopted. The Plan did not account for the ACFD's ability to staff all fire stations and provide for consolidated fire administration services. In the event of an emergency, ACFD can dispatch firefighters from nearby fire stations, such as stations in Newark or the unincorporated County, in order to respond to an event in Union City.

Consistent with the 2040 General Plan Policy PF-10.2, as future buildout occurs under the 2040 General Plan, the City will evaluate operations and deployment of services to efficiently use resources. Additionally, new development under buildout of the 2040 General Plan would be required to comply with all applicable federal, State, and local regulations governing the provision of fire protection services, including adequate fire access, fire flows, and number of hydrants. This includes the 2016 California Fire Code, which contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for sprinkler systems and minimum fire flow rates for water mains. The ACFD includes a Fire Prevention Branch that reviews building, and facility plans through the City's development review and building permit processes. Fire Prevention personnel also inspect new and remodeled buildings and facilities to ensure that the structures meet State and local fire codes and standards.

The additional population in Union City would also increase the demand for police protection services. The League of California Cities recommends a police service ratio standard of 1.4 to 1.6 sworn officers per 1,000 residents. As the UCPD currently employs 81 sworn officers, the City has a ratio of approximately 1.1 sworn officers per 1,000 residents. The addition of 11,486 residents through the year 2040, reaching a total of 84,477 residents, would require the City to employ a total of 119 sworn officers, in order to meet the police service ratio of at least 1.4 police officers per 1,000 residents. As the City currently employs 81 sworn officers, the City would need to incrementally increase their police services by 38 sworn officers through the year 2040, which could require the construction of a new facility to house subsequent personnel, equipment, and vehicles. The placement and potential impacts of a new police facility are unknown at this time and separate environmental review may be required, which could result in the implementation of project-specific mitigation measures. The 2040 General Plan facilitates development within areas of Union City that are currently developed. Therefore, construction of new police facilities, if required, would likely occur on property previously disturbed or developed. This would reduce the potential for substantial environmental impacts.

The Public Facilities and Services Element and the Safety Element of the 2040 General Plan contain a number of goals and associated policies, listed below, for providing adequate and needed fire and police protection services in Union City.

General Plan Public Facilities and Services Element

Goal PF-1: Ensure the timely provision of public facilities and services that are adequately funded to meet the needs of existing and future city residents.

Policy PF-1.1: Ensure Adequate Facilities and Services. The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project unless the applicant can demonstrate that all necessary public facilities (including water service, sewer service, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other mean).

Policy PF-1.2: On-site and Off-site Infrastructure. The City shall require all new development and major modifications to existing development to construct necessary onsite and off-site infrastructure to serve the project in accordance with City standards.

Policy PF-1.3: Development Fair Share. The City shall require, to the extent legally possible, that new development or major modification to existing development pays the fair share cost of providing new public facilities and services and/or the cost for upgrading existing facilities.

Goal PF-9: Provide exceptional public safety and crime reduction services to maintain a safe and secure community, and continue to uphold police-community trust, engagement, and collaboration.

Policy PF-9.1: Police Staffing. The City shall strive to maintain Police Department staffing levels in line with population growth by using a baseline staffing benchmark based on the average staffing-to-population ratio of cities within Alameda County (sworn officers and civilian support staff).

Policy PF-9.2: Police Equipment and Facilities. The Police Department shall provide and maintain equipment, technologies, and facilities to meet modern standards of safety, dependability, and efficiency.

Policy PF-9.6: Coordinate Emergency Response Services with Local Agencies. The City should continue to coordinate and maintain mutual aid agreements with emergency response services with Alameda County, other jurisdictions within the county, special districts, service agencies, voluntary organizations, and state and federal agencies.

Policy PF-9.8: Provide Periodic Updates on Police Statistics. The City shall continue to provide updates to the City Council and the community regarding statistics such as crime rates, types of crime committed, and police accountability and use of force. Crime data shall also be mapped and made available to the public.

Goal PF-10: Ensure high quality fire and emergency response to prevent injury, loss of life, and property damage.

Policy PF-10.1: Maintain Agreement with ACFD. The City shall review and refine the agreement with ACFD, as needed. Levels of service provided under the contract, may be subject to budgetary limitations.

Policy PF-10.2: Fire Department Resources. The City shall encourage ACFD to evaluate operations and deployment of services to efficiently use resources.

Policy PF-10.3: Development Fees. The City shall require new development to build or fund its fair share of fire protection facilities, personnel, operations, and maintenance that, at minimum, maintains the above service standards.

Policy PF-10.5: Fire Department Review of Development Projects. The City shall engage fire personnel in the review of proposed development to identify necessary fire prevention and risk reduction measures.

Policy PF-10.7: Routine Fire Hydrant Maintenance. The City shall continue to work with ACWD to ensure that all fire hydrants are maintained and in a state of operational readiness.

Policy PF-10.8: Emergency Medical Services. The City shall ensure the provision of high-quality emergency medical response services, including paramedics and emergency medical technicians.

Policy PF-10.9: Coordinate Emergency Response Services with Local Agencies. The City should continue to coordinate and maintain mutual aid agreements with emergency response providers from local, State, and federal fire agencies.

General Plan Safety Element

Goal S-4: To provide increased fire safety through the provision of adequate fire protection infrastructures, public education, and outreach programs.

Policy S-4.1: Time Future Development to Ensure Adequate Fire Infrastructure. The City shall not approve new development unless the development will be protected by adequate fire control facilities and equipment by the time of occupancy.

Policy S-4.2: Require Sprinkler Systems and Smoke Detectors. The City shall require sprinkler systems and/or smoke detectors according to the adopted City building and fire codes.

Goals PF-1 and PF-9 as well as Policies PF-1.1, 1.2, 1.3, 9.1, and 9.2 of the 2040 General Plan are aimed at maintaining level of service through coordinating infrastructure and public services planning efforts between the City, developers and other provider agencies. Policy 9.6, *Coordinate Emergency Response Services with Local Agencies*, ensures that the City provides appropriate emergency response services for the community. Policy 10.5, *Fire Department Review of Development Projects*, calls for the city to review all new development proposals that have potential for safety concerns and may affect demand for fire prevention and protection to maintain adequate fire services and community safety. Policy 10.8, *Emergency Medical Services*, ensures that the City provides appropriate emergency medical response services for the community. These policies would allow for the City to continue to provide emergency and medical services and to ensure adequate police and fire service available under future development and associated population growth. Finally, City policies require that adequate funding is available to maintain levels of service and infrastructure needs under the additional growth projections. Goal S-4 and associated policies listed above would reduce the potential for fires, and therefore potentially reduce the number of calls the ACFD must respond to under buildout of the 2040 General Plan.

As mentioned above, there is potential for the ACFD and UCPD to increase staffing levels through the year 2040 to meet established standards under buildout of the 2040 General Plan. This could require the construction of new public service facilities that may result in environmental impacts. The specific impacts associated with the construction of such new facilities are not known at this time, and any analysis of such impacts would be speculative. In addition, any such new facilities

would require separate environmental analysis and any necessary project specific mitigation prior to being considered for approval. As a result, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 1c: Would the General Plan result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other objectives?

Impact PS-2 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN POPULATION OF SCHOOL-AGED CHILDREN IN UNION CITY. THIS WOULD INCREASE DEMAND FOR SCHOOL SERVICES AND POTENTIALLY CREATE THE NEED FOR NEW SCHOOL FACILITIES. COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD REDUCE IMPACTS RELATED TO THE CONSTRUCTION OF SCHOOL FACILITIES AND NEW DEVELOPMENT WOULD BE REQUIRED TO PAY IMPACT FEES WHICH WOULD RESULT IN LESS THAN SIGNIFICANT IMPACTS WITH REGARD TO THE PROVISION OF SCHOOL FACILITIES.

As shown in Table 2-2 in Section 2, Project Description, the 2040 General Plan would result in 4,315 new dwelling units in Union City in 2040. NHUSD utilizes the student generation rate of 0.7 per single family residence, consistent with the rate set by the State of California Office of Public School Construction to estimate future facility needs. Assuming each single-family residence houses one household, 3,021 new students will be added to Union City by 2040 under implementation of the 2040 General Plan. These additional students would increase enrollment in schools in Union City, potentially requiring the construction of new or expansion of existing school facilities.

The Public Facilities and Services Element of the 2040 General Plan includes goals and policies specific to education and providing school facilities for the City. Relevant goals and policies are listed below.

Goal PF-11: Ensure excellent schools that provide high-quality educational services, foster civic pride, and serve as neighborhood and community centers.

Policy PF-11.1: High-Quality Education Facilities. The City shall support NHUSD in their efforts to provide high-quality and modern education facilities that will accommodate projected changes in student enrollment.

Policy PF-11.2: Monitor School Enrollment Trends. The City shall work cooperatively with NHUSD in monitoring housing, population, and school enrollment trends.

Policy PF-11.3: Engage NHUSD on Long Range Planning Efforts. The City shall engage NHUSD in its long-range planning efforts to ensure the adequacy of existing school facilities to serve new development.

The General Plan policies would ensure that the City and NHUSD coordinate on long range planning efforts to facilitate NHUSD planning for future growth. NHUSD has seen a decline in student enrollment over the last several years. Between the 2011 and 2018, NHUSD saw a reduction of 1670 students.

All future development facilitated by 2040 General Plan is required to pay school impact fees which, pursuant to Section 65995 (3) (h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), are “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization.” With payment of mandatory school impact fees by developers in the City, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 1e: Would the General Plan result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other objectives?

Impact PS-3 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN THE CITY’S POPULATION. THIS WOULD INCREASE DEMAND FOR LIBRARY SERVICES AND POTENTIALLY CREATE THE NEED FOR NEW LIBRARY FACILITIES. COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD REDUCE IMPACTS RELATED TO THE CONSTRUCTION OF LIBRARY FACILITIES TO A LESS THAN SIGNIFICANT LEVEL.

As described in Section 2, *Project Description*, the population in Union City is anticipated to increase by 11,486 new residents by 2040. This increase in population would result in increased demand for public services such as libraries. This additional demand could potentially require the construction of new library facilities or expansion of existing library facilities. The 2040 General Plan facilitates development within areas of Union City that are currently developed. Therefore, construction of new library facilities, if required, would likely occur on property previously disturbed or developed. This would reduce the potential for substantial environmental impacts. In addition, any such new facilities would require separate environmental analysis and any necessary project specific mitigation prior to being considered for approval.

Goals and policies in the Public Facilities and Services Element of the 2040 General Plan support enhancement of Union City’s existing library facilities and services and encourage adaptations in the future to meet the community’s evolving learning needs. Relevant goals and policies are listed below.

Goal PF-12: Enhance and expand Union City’s library facilities and services to meet the educational and life-long learning needs of the community.

PF-12.1: Library Modernization. The City shall work with Alameda County Library to implement the 2016 Facilities Master Plan as it applies to Union City.

PF-12.2: Extended Library Hours. The City should encourage, and fund extended hours of operation at the Library to serve the City’s diverse population.

PF-12.3: Library Accessibility. The City shall ensure that library facilities are easily accessible by foot, bicycle, and transit to promote equitable access to library resources.

PF-12.4: Support Library Bond Measures. The City shall support State and local library infrastructure bond measures for the construction of new libraries.

Under these policies, the City would work with Alameda County to support efforts to provide adequate library facilities. In addition, these policies would support the initiative to ensure that funding is available for infrastructure to meet the needs of the proposed growth through 2040. With implementation of the goals and policies included in the 2040 General Plan, impacts to library facilities associated with development under the proposed 2040 General Plan would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 1d: Would the General Plan result in substantial adverse physical impacts associated with the provision of new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other objectives?
Threshold 2: Would the General Plan result in substantial adverse physical impacts associated with the need for or provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for parks?
Threshold 3: Would the General Plan increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Threshold 4: Would the General Plan include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact PS-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD RESULT IN AN INCREASE IN THE CITY'S POPULATION. THIS WOULD INCREASE DEMAND FOR PARKS AND POTENTIALLY CREATE THE NEED FOR NEW PARK FACILITIES. COMPLIANCE WITH 2040 GENERAL PLAN POLICIES WOULD REDUCE IMPACTS RELATED TO THE CONSTRUCTION OF PARK FACILITIES TO A LESS THAN SIGNIFICANT LEVEL.

The Union City Municipal Code requires any project that includes a residential subdivision to provide three acres of property (or an equivalent in-lieu fee) for every additional one thousand residents that the project will generate to be devoted to neighborhood and community parks. The City also charges new residential development (not associated with a subdivision) a Park Facilities Fee per unit that is used for acquisition of parkland. As detailed in Section 2, *Project Description*, the full buildout of the 2040 General Plan would result in an estimated additional 11,486 residents in Union City, increasing the population from 72,991 to 84,477. An increase in population would increase demand for parks and recreation facilities and potentially necessitate new or physically altered facilities to meet the increased demand for parkland. For example, the 2040 General Plan proposes a potential new park on an existing Caltrans facility in the City. Construction of new parks and physical alteration of existing parks to accommodate increasing population may result in

environmental impacts. However, it is not known at this time where new parks may be constructed or what improvements may occur at existing parks.

To ensure that park land and park access increase concurrently with population growth, the Special Areas Element and Health and Quality of Life Element of the 2040 General Plan includes the goals and policies related to parks and recreation. In addition, goals, policies, and mitigation measures included throughout this EIR would ensure that impacts from construction of new parks or alternation of existing parks would reduce impacts to the extent feasible. Goals and policies from the 2040 related to park land, access, and recreation are as follows:

Goal SA-2: To develop the core of the Station District surrounding the Intermodal Station as a major transit hub, business center, and residential address that is well connected with the rest of the City.

Policy SA-2.2: Strong Public Spaces. The City shall ensure that the Core Station District includes strong public spaces, including inviting parks, plazas, and community gathering places, which are integrated with ground floor retail uses and complement the Intermodal Station.

Goal SA-4: To transform the Station East area into a vibrant, 21st century employment district that is a center of prosperity and innovation, focused on providing a quality experience for those who live and work in Union City.

Policy SA-4.22: Parkland and Public Spaces. New residential development within the Station East area shall contribute its fair share towards the development of parkland. The City shall consider allowing plazas, civic spaces, and other gathering spaces that contribute to the public realm as a contribution towards meeting parkland requirements. Recreational pathways may also be considered.

Goal SA-5: To provide for a variety of housing opportunities and create additional open space and park opportunities along the East-West Connector site that will serve as a new gateway to Union City.

Policy SA-5.4: Provide a City Park. The City shall seek to provide a new City park on the Gateway Site that is adequate in size to accommodate sports activities, such as soccer and/or baseball. Any new residential development on the Gateway Site shall contribute its fair share to park improvements. The City shall consider locating the park so that it buffers residential uses from the East-West Connector and provides recreation facilities to serve the neighborhood and the community as space allows.

Policy SA-5.5: Purchase Remnant Lands to Connect to Arroyo Park. The City shall make efforts to acquire from Caltrans remnant lands from the East-West Connector to expand access to Arroyo Park.

Goal HQL-2: Maintain, expand, and improve Union City's parks and recreation facilities to meet existing and future needs.

Policy HQL-2.1: Increase Parkland. The City shall strive to increase the number and/or size of neighborhood and/or community parks.

Policy HQL-2.2: Parkland Dedication for Ownership Housing. The City shall require new residential subdivisions (i.e., ownership housing) to dedicate parkland at a ratio of 3.0 acres per 1,000 new residents or pay an equivalent in-lieu fee to offset the increase in park needs resulting from new residents. Where on-site parkland is dedicated, it shall be improved by the

developer and accessible to the general public. The City may use in-lieu fees to purchase land for new parks or to renovate or expand existing parks and recreation facilities.

Policy HQL-2.3: Park Impact Fees for Rental Housing. The City shall continue to collect Park Facilities Fees on new multifamily rental housing to offset the increase in park needs resulting from new residents. Park Facilities Fees shall only be used to build new parks.

Policy HQL-2.4: Acquire New Land for Parks and Recreational Facilities. The City shall strive to meet growing recreational needs of residents and their neighborhoods through the acquisition of land for the addition of new parks and recreation facilities.

Policy HQL-2.7: Park and Recreation Master Plan. The City shall comprehensively update the Parks and Recreation Master Plan to take inventory of existing parks and recreational facilities; evaluate the recreational needs of Union City residents, workers, and visitors; and set priorities for the improvement of existing parks and development of new parks to accommodate the diverse needs of existing and future users.

Policy HQL-2.8: Creative Approaches to Providing Parks and Open Space. The City shall encourage creative approaches to expand parks and open space in the city, including the development of plazas, courtyards, pocket parks, parklets, pedestrian promenades, community gardens, rooftop patios, and civic spaces.

Policy HQL-2.9: School Collaboration to Maximize Access to Recreational Facilities. The City shall collaborate with the New Haven Unified School District to maximize public access to school recreational facilities and grounds, as appropriate.

Policy HQL-2.14: Promote Park Stewardship. The City shall promote pride of ownership in local parks by involving residents and neighborhood groups in park maintenance and improvements, recreation programs, community outreach, and special events.

Policy HQL-2.16: Collaborate to Expand Regional Parks. The City shall collaborate with the East Bay Regional Park District, Alameda County Flood Control District, and other regional agencies to expand access to regional parks and open space in and around Union City, promote greater public awareness of regional parkland, and improve access to regional park facilities.

Policy HQL-2.17: Support Expansion of Regional Trail System. The City shall support the expansion of a regional trail system in and around Union City, including the Bay Trail and the Ridge Trail. The City shall work with the appropriate regional agencies to improve access from Union City neighborhoods to these trails by improving existing trails, and developing new trail connections, bike lanes, parking, and signage.

Compliance with the Union City Municipal Code would require property or payment of in-lieu fees, or a Park Facilities fee for development of neighborhood and community parks. Fees and dedication of parkland would assist in providing sufficient recreational facilities to meet the needs of the projected City population in 2040. In addition, compliance with General Plan goals and policies would potentially result in development of new recreational opportunities including parks. Goals, policies, and mitigation measures discussed throughout this EIR would ensure impacts from construction of new parks and enhancements to existing parks are reduced to the extent feasible. Because the 2040 General Plan and the Municipal Code regulate provision of parkland concurrently with development and population growth, impacts to parks and recreation facilities would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

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4.14 Transportation

This section evaluates the potential impacts on the local and regional circulation system that would result from implementation of the 2040 General Plan. This includes an analysis of the potential for the proposed General Plan to increase local and regional traffic volumes, increase hazards due to a design feature, interfere with emergency access, or conflict with applicable alternative transportation programs. This analysis is primarily based on the findings of the Transportation Impact Analysis (TIA) prepared for the proposed 2040 General Plan, prepared by Hexagon Transportation Consultants, Inc. (Hexagon), dated December 2018 (refer to Appendix D for traffic data).

4.14.1 Setting

a. Roadway Network

There is a natural hierarchy of streets that provide various levels of access and mobility, with freeways accommodating the highest volumes and speeds, cross-town streets connecting to freeways and operating at moderate speeds and/or volumes, and local streets that link neighborhoods, parks and schools to the cross-town streets and to each other, with many of these serving adjacent development and neighborhoods.

Freeways and Highways

- **Interstate 880** is an eight-lane freeway that runs north-south through the center of the City. It provides regional access via interchanges at Whipple Road, Alvarado-Niles Road, and Fremont Boulevard/Alvarado Boulevard just south of Union City. Interstate 880 traverses roughly 50 miles from Oakland to San Jose. Interstate 880 is a major regional commuter route, providing connections to San Francisco, Contra Costa, Alameda, Santa Clara, and San Mateo Counties.
- **State Route 238**, also referred to as Mission Boulevard, is a four- to six-lane State highway that runs north-south along the base of the foothills at the eastern side of the City. Between Whipple Road and Decoto Road, State Route 238 is six lanes wide.
- **State Route 84** is an east-west State highway that is located in Fremont, just south of Union City. In the vicinity of Union City, State Route 84 extends from the Dumbarton Bridge to State Route 238, following an east-west route between the bridge and Interstate 880, along Interstate 880, Thornton Avenue, Fremont Boulevard, Peralta Boulevard, and Mowry Avenue.

Regional Arterials

- **Decoto Road** is a four-lane arterial that runs from Interstate 880 to State Route 238. Decoto Road provides access to the Union City BART station.
- **Alvarado-Niles Road** is a four-lane, east-west arterial that extends from Niles Boulevard in Fremont to Dyer Street in Union City. Beyond Dyer Street, the road transitions to more narrow street called Smith Street
- **Whipple Road** is a two- to four-lane, east-west arterial that runs from State Route 238 to Union City Boulevard. Whipple Road primarily serves industrial areas of the City but also provides access to residential development.

- **Union City Boulevard** is a four lane, north-south major arterial that runs from the City’s northerly boundary with Hayward to the City’s southerly boundary with Fremont. Union City Boulevard serves a mix of commercial, industrial, and residential uses north of Alvarado Boulevard and primarily serves residential uses south of Alvarado Boulevard.
- **Dyer Street** is a four-lane, arterial that generally runs north to south and extends from Union City Boulevard to Whipple Road. Dyer Street primarily serves commercial uses north of Alvarado-Niles Road/Smith Street and serves residential and commercial uses south of Alvarado-Niles Road/Smith Street.
- **Alvarado Boulevard** is a four-lane, east-west arterial that runs from Interstate 880 to Union City Boulevard. Alvarado Boulevard serves both residential and commercial uses.
- **Smith Street** is a two-lane, east-west primary collector that runs from Union City Boulevard to Dyer Street. Smith Street serves both residential and commercial uses. Smith Street feeds directly to Alvarado-Niles Road.
- **Central Avenue** is a four-lane, north-south arterial that extends from Whipple Road to just south of Alvarado-Niles Boulevard. Central Avenue serves industrial and commercial uses.
- **11th Street** is a two- to four lane street. On the south side of Decoto Road, 11th Street is a four-lane boulevard that provides access to the Station District public parking lots, parcels for future high density office and residential, and existing high density and medium density residential uses. Eleventh Street is a backbone street of the core of the Station District. Eleventh Street will link Decoto Road to the Quarry Lakes Parkway and provide a secondary point of access to the BART Station and Station District from the future Quarry Lakes Parkway. On the north side of Decoto Road, 11th Street is a two-lane street that functions as a residential collector and provides access to low density residential neighborhood streets.
- **Quarry Lakes Parkway.** This planned east-west arterial was originally funded by the 1986 Alameda County Measure B. Since that time, the roadway has transitioned from a regional connector, known as State Route 84, to a local roadway that is now referred to as Quarry Lakes Parkway (formerly referred to as the East-West Connector). An environmental impact report (EIR) was prepared by Alameda County Transportation Commission in 2009 and adopted by the cities of Union City (City Council Resolution 3816-09) and Fremont that same year. As a four-lane parkway, this roadway is critical to providing public safety access to the high-density development around the BART/Intermodal Station. The planned parkway will also provide multimodal facilities including bicycle lanes.

b. Bicycle Facilities

The Union City Pedestrian and Bicycle Master Plan (2012), provides a vision, strategies, and actions for bicycle transportation in Union City. It serves as an update to the previous plan prepared in 2006 by providing an updated inventory of the City’s existing and planned bicycle paths, bicycle lanes, and bicycle routes. It also contains an updated list of proposed bikeways and bicycle support facilities. The plan seeks to improve connections throughout the City with an emphasis on connections to transit facilities, neighboring communities, and the regional bicycle network.

The four types of bikeways identified by the California Department of Transportation (Caltrans) in the Highway Design Manual are identified below (Caltrans 2018).

- **Class I Bikeway.** Typically called a “bike path” or “bike trail,” a Class I bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway.

- **Class II Bikeway.** Often referred to as a “bike lane,” a Class II bikeway provides a striped and stenciled lane for one-way travel on a street or highway.
- **Class III Bikeway.** Generally referred to as a “bike route,” a Class III bikeway provides for shared use with pedestrian or motor vehicle traffic and is identified only by signing.
- **Class IV Bikeway.** Often called “cycle tracks,” these are a version of separated bicycle paths that are designated for and limited to bicycle use only and include a separation between bikeway and through traffic lanes.

While bicyclists are permitted on all roads, with the exception of access-controlled freeways, bikeway designations recognize that certain roadways provide more optimal routes for bicyclists.

The Union City Pedestrian and Bicycle Master Plan identifies Class I trails, which provide recreational opportunities for walking and biking. These trails are as follows (Union City 2012):

- **Alameda Creek Regional Trail**, which runs from Union City Boulevard in the west to Canyon Road near Niles Canyon in Fremont in the east.
- **Alameda Creek Trail**, which runs along the northern fork of Alameda Creek from Union City Boulevard north of Whipple Road to Smith Street near Dyer Street.
- **Dry Creek Trail**, which follows Dry Creek from its southern terminus at Alameda Creek north to State Route 238.
- **Mariner Park Trail**, which runs between Benson Road and Union City Boulevard.
- **William Cann Civic Center Park Trail**, which connects Decoto Road and the Alameda Creek Regional Trail through William Cann Civic Center Park.
- **Quarry Lakes Parkway** from the City of Fremont to Mission Boulevard

According to the City’s Pedestrian and Bike Master Plan, the City’s bicycle network includes:

- 6.9 miles of paved and unpaved off-street Class I Bike paths
- 12.3 miles of Class II Bike Lanes
- 0.5 mile of Class III Bike Routes
- The Class I bicycle paths are generally located along the area’s flood control channels. There is one existing Class III facility located on Smith Street between Union City Boulevard and Dyer Street. The majority of the City’s other existing on-street bicycle facilities are Class II bike facilities. In addition, the plan covers bicycle support facilities and treatments, such as signage, bicycle signal detection, and bicycle parking. Existing and planned bicycle facilities in Union City are shown in Figure 4.14-1.

c. Pedestrian Facilities

Pedestrian facilities in Union City primarily consist of sidewalks and recreational trails, pedestrian countdown timers, lighted crosswalks, and flashing signs. The type and condition of sidewalks varies by area in the City. Along major roadways, sidewalks provide access along the roadways, and crosswalks are marked at key signalized crossings. The Union City Pedestrian and Bicycle Master Plan identifies Class I trails which provide recreational opportunities for walking and biking. Union City has an established network of multi-use paths, which allow pedestrians to follow many of the City’s creeks as they run between numerous parks.

The Union City Creek Trail is a Class I path that extends throughout much of Union City. It consists of several discontinuous sections as follows. Union City Creek Trail extends 2.3 miles from Union City

Boulevard to Casa Verde Park, 1.2 miles along Alameda Creek from Interstate 880 to Alameda Creek at William Cann Memorial Park, 0.8 mile along Dry Creek from Alvarado-Niles Road to the Union Pacific railroad tracks, 0.6 mile from Alameda Creek near Perry Road to Decoto Road, and 0.4 mile along Dry Creek from Whipple Road to State Route 238. Other Class I multi-use paths or trails are:

- Depot Road Trail is a 0.2-mile Class I trail that extends from D Street to H Street
- Arroyo Park Trail is a 0.1-mile Class I trail that extends from Perry Road to Osprey Drive
- Mariner Park Trail is a 0.9-mile Class I trail that extends from Benson Road to Union City Boulevard

As shown in Figure 4.14-2, planned Class I pedestrian facilities include trails, pedestrian corridors, neighborhood pedestrian safety improvements, sidewalk gap closures, community trail connections, and pedestrian spot improvements.

d. Transit Service

BART

The San Francisco Bay Area Rapid Transit District (BART) provides heavy-rail, regional transit service via five rail lines in four Bay Area counties: Alameda, Contra Costa, San Francisco, and San Mateo Counties. The Union City station is served by the Richmond – Warm Springs/South Fremont line and the Fremont-Daly City line. The Fremont-Richmond line provides service every 15 minutes during the weekday until 7:30 p.m. and every 20 minutes during weekday evenings and weekends. This train line runs until midnight every day, with weekday, Saturday, and Sunday service beginning at 4:00 a.m., 6:00 a.m., and 8:00 a.m., respectively. The Fremont-Daly City line provides service every 15 minutes during the weekday and every 20 minutes on Saturday. This train line runs until 6:00 p.m. every day, with weekday and Saturday service beginning at 5:00 a.m. and 9:00 a.m., respectively.

Figure 4.14-3 shows the locations of the BART line and stations in the City.

Since the adoption of the 2002 General Plan, the Union City Redevelopment Agency has invested over \$120 million to create a two-sided BART station with a free pedestrian pass-through and a passenger rail link; clean up contaminated lands; and build backbone infrastructure to access the BART/Intermodal station that includes roads, bike paths and pedestrian walkways. This investment to expand and reconfigure the BART station and improve access to BART and the surrounding properties has been a key economic development and land use planning focus of the City's since the 2002 General Plan.

Figure 4.14-1 Existing and Planned Bicycle Facilities

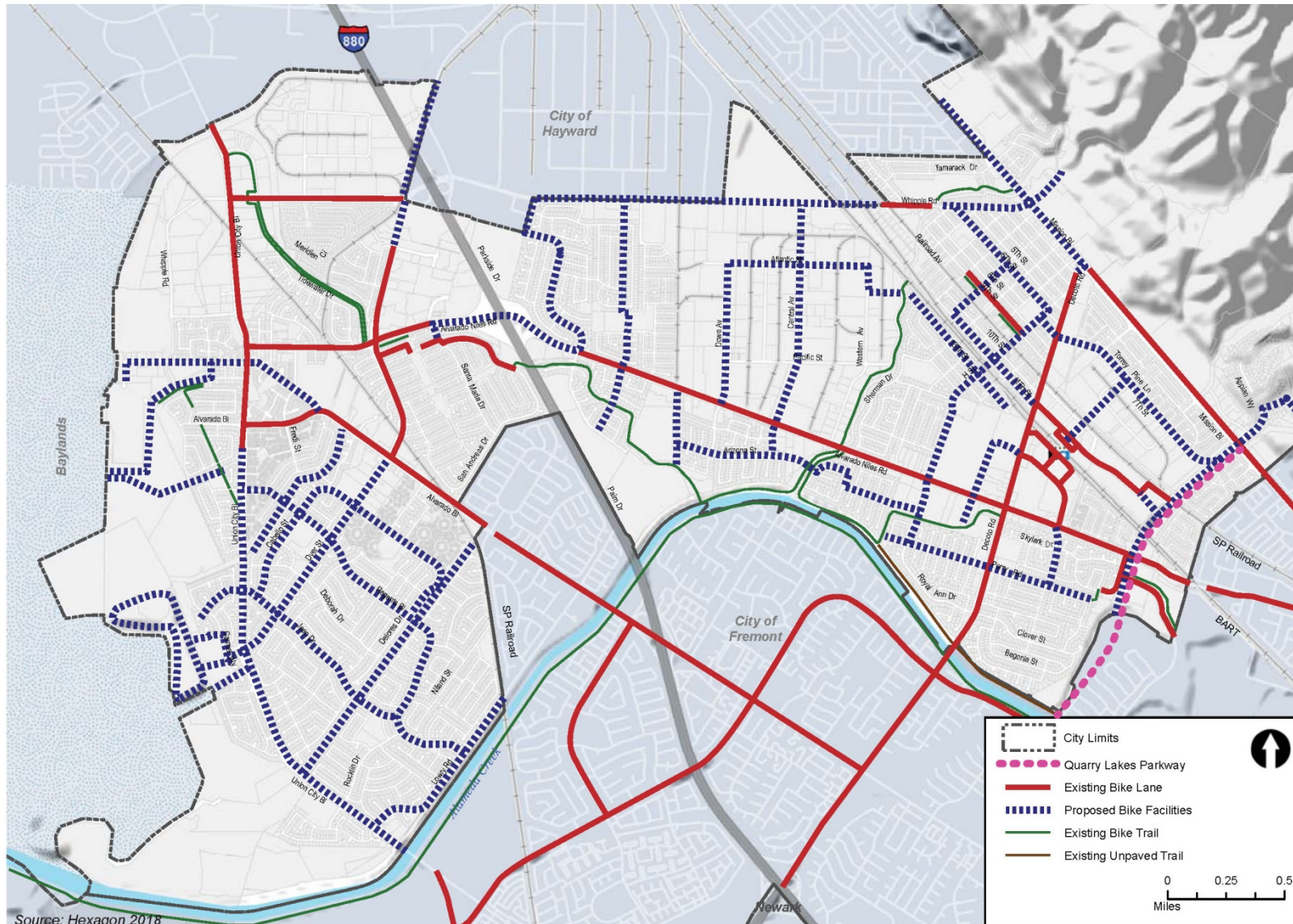
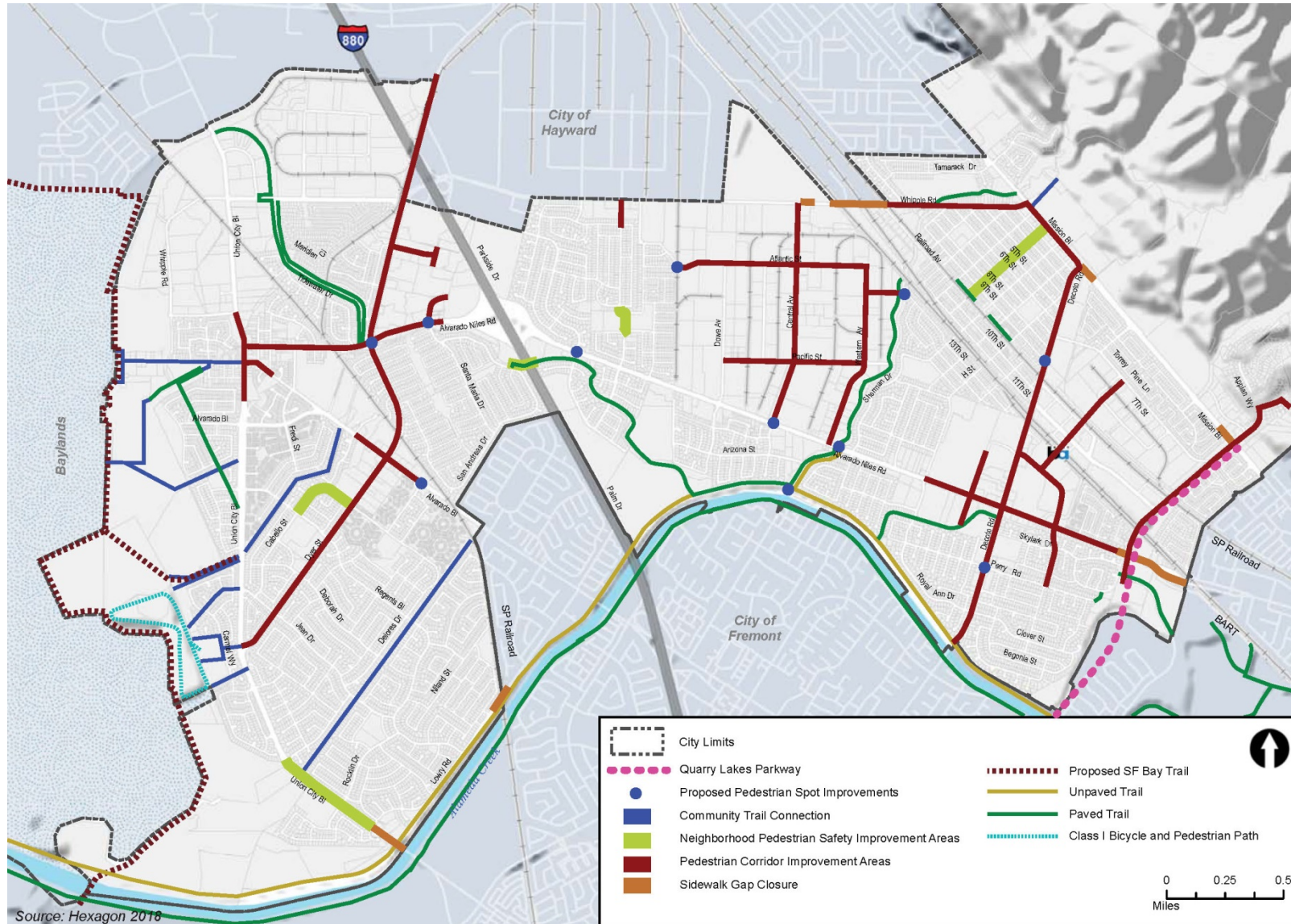


Figure 4.14-2 Existing and Planned Pedestrian Facilities



Intercity Passenger Rail Service and Planned Rail Projects

Union City Intermodal Station Passenger Rail Project

In March 2006, Union City adopted an EIR for the Union City Intermodal Station Passenger Rail Project (City Council Resolution 3124-06). The Passenger Rail Project would allow passenger trains to connect to the BART station as part of the planned Intermodal Station. The Passenger Rail Project facilitates potential Dumbarton Rail, ACE and Capitol Corridor rail service. The City is in the process of completing improvements to the existing BART station to provide a free pedestrian pass-through that will interface with the new rail station and transit-oriented development to the east.

The Intermodal Station is sponsored by Union City with the support of the 2005 Metropolitan Transportation Commission (MTC) Resolution 3434, a resolution to support “Transit-oriented Development (TOD) for Regional Transit Expansion Projects.”

Rail Service

Amtrak operates the Capitol Corridor service, an intercity passenger train system that provides rail service to 16 stations in eight Northern California counties along a 170-mile rail corridor. The Capitol Corridor service is coordinated with other rail users: Amtrak, the Union Pacific Railroad, Caltrans, and the various agencies and communities that make up the Capitol Corridor.

No Amtrak stations exist in Union City; however, residents, workers, and visitors have access to Amtrak via the Fremont Amtrak station located on Fremont Boulevard 2.5 miles south of Union City. Alameda-Contra Costa Transit (AC Transit) provides bus service to the Fremont Amtrak station via line 99, line 210, and line U. Capitol Corridor passengers boarding at the Fremont station may also transfer to Amtrak routes providing access to over 500 destinations in 46 states, including service to Canada. On weekdays train service is available from 7:00 a.m. to 8:00 p.m. with a frequency ranging every one to three hours. During weekends and holidays train service runs from 8:00 a.m. to 8:00 p.m. with a frequency ranging every one to three hours (Hexagon 2018).

Figure 4.14-3 shows the location of the Amtrak station and the rail line in the City.

The Altamont Commuter Express (ACE) provides weekday commuter service between Stockton and San Jose. No ACE stations exist in Union City; however, ACE train service is provided in Fremont at the same Fremont Amtrak station described above. AC Transit provides connection to ACE service at the Fremont Amtrak station via line 99, line 210, and line U. Four trains depart from Stockton every morning and four trains depart from San Jose every afternoon (Hexagon 2018).

Regional Rail Plan

In 2007 MTC prepared a Regional Rail Plan. This plan has provided a framework for the vision of how passenger rail can support the transit needs of the Bay Area. Union City is identified in the Rail Plan as an intermodal station. The Alameda County Transportation Commission, in partnership with MTC, continues to study passenger rail service in southern Alameda County, including a passenger rail link to BART at Union City.

Included in the Regional Rail Plan is Dumbarton Rail/Dumbarton Corridor, an east-west connection that is planned across the old Dumbarton rail bridge. San Mateo County Transit District (SamTrans) has been the primary sponsor of this project. Due to cost, the Dumbarton Rail/Corridor project has stalled; however, SamTrans announced June 6, 2018 that its board of directors will be working with Facebook and Plenary Group, an infrastructure developer, to look into how to advance projects on

the Dumbarton Transportation Corridor. Union City continues to participate in this regional transportation planning initiative.

As part of an effort to improve passenger rail service between Oakland and San Jose, the Capitol Corridor is evaluating the possibility of providing service on the Coast Subdivision, located on the west side of Union City. The 2040 General Plan identifies this as a possible opportunity for developing a Priority Development Area around a new passenger rail station in the Union City Boulevard vicinity.

Union City will continue to engage in planned regional transportation efforts that impact the local community. These transportation projects have provided the framework for the high-density land use in the Station District, and will continue to frame future land use decision in order to integrate land use and transportation.

Local and Regional Bus Service

AC Transit operates 11 bus routes in Union City including local, All-Nighter, and Transbay services. Route 801, a part of the All-Nighter regional bus network, provides after-hours service with timed connections north to Oakland and south to Fremont. Routes U and SB are Transbay routes connecting the East Bay to San Francisco and the Peninsula. Other routes provide direct and connecting services in Alameda County. Union City Transit provides nine local bus routes in Union City, connecting neighborhoods to the Union City BART station, Union Landing, and other City centers (Hexagon 2018).

Dumbarton Express is a regional public transit service connecting Alameda, San Mateo, and Santa Clara Counties via the Dumbarton Bridge. The Dumbarton Express service consists of two bus lines, the DB and DB1 that provide service between the Union City BART station and the Stanford area and Palo Alto Caltrain station. During the week, service on both lines is from approximately 5:30 a.m. to 8:45 p.m. with buses about every 20 minutes during peak travel periods (Hexagon 2018).

Google bus service is a private service that provides employee buses between the Union City BART station and the Google campus in Mountain View.

Figure 4.14-4 shows AC Transit's bus system serving Union City. Figure 4.14-5 shows a map of Union City Transit's bus system serving Union City. Most bus stops in Union City are indicated by free standing poles with signs indicating the bus route number. Some stops, such as those at the BART station, include other amenities, including shelters, benches, and bus route maps.

Paratransit Service

AC Transit and BART, as fixed-route operators, are federally-mandated by the Americans with Disabilities Act (ADA) to provide complementary paratransit services that mirror the fixed-route bus/rail services that they offer. East Bay Paratransit is a service of both AC Transit and BART. They provide all regional ADA paratransit trips. Union City offers Union City Paratransit within City limits,

Figure 4.14-4 AC Transit Bus Routes

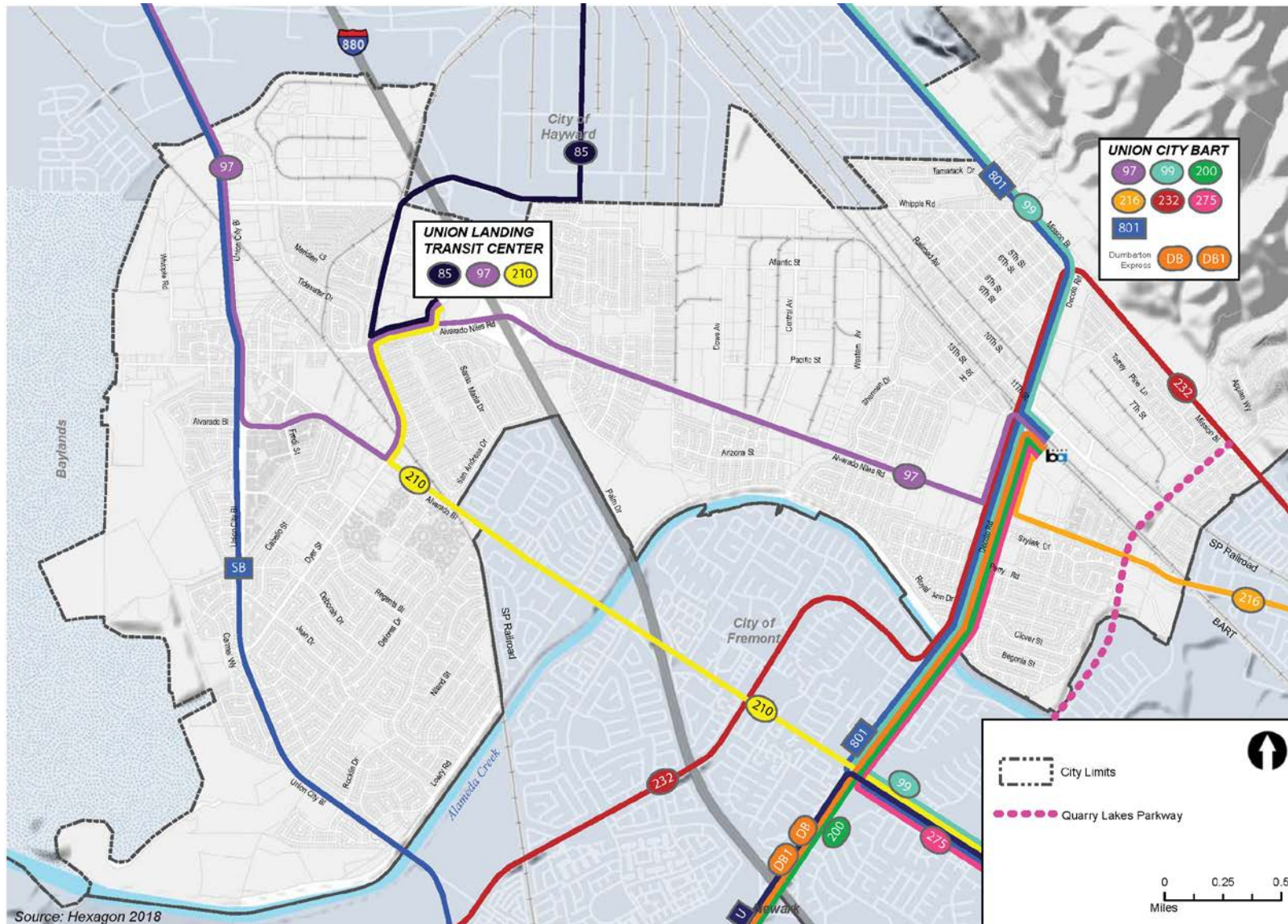
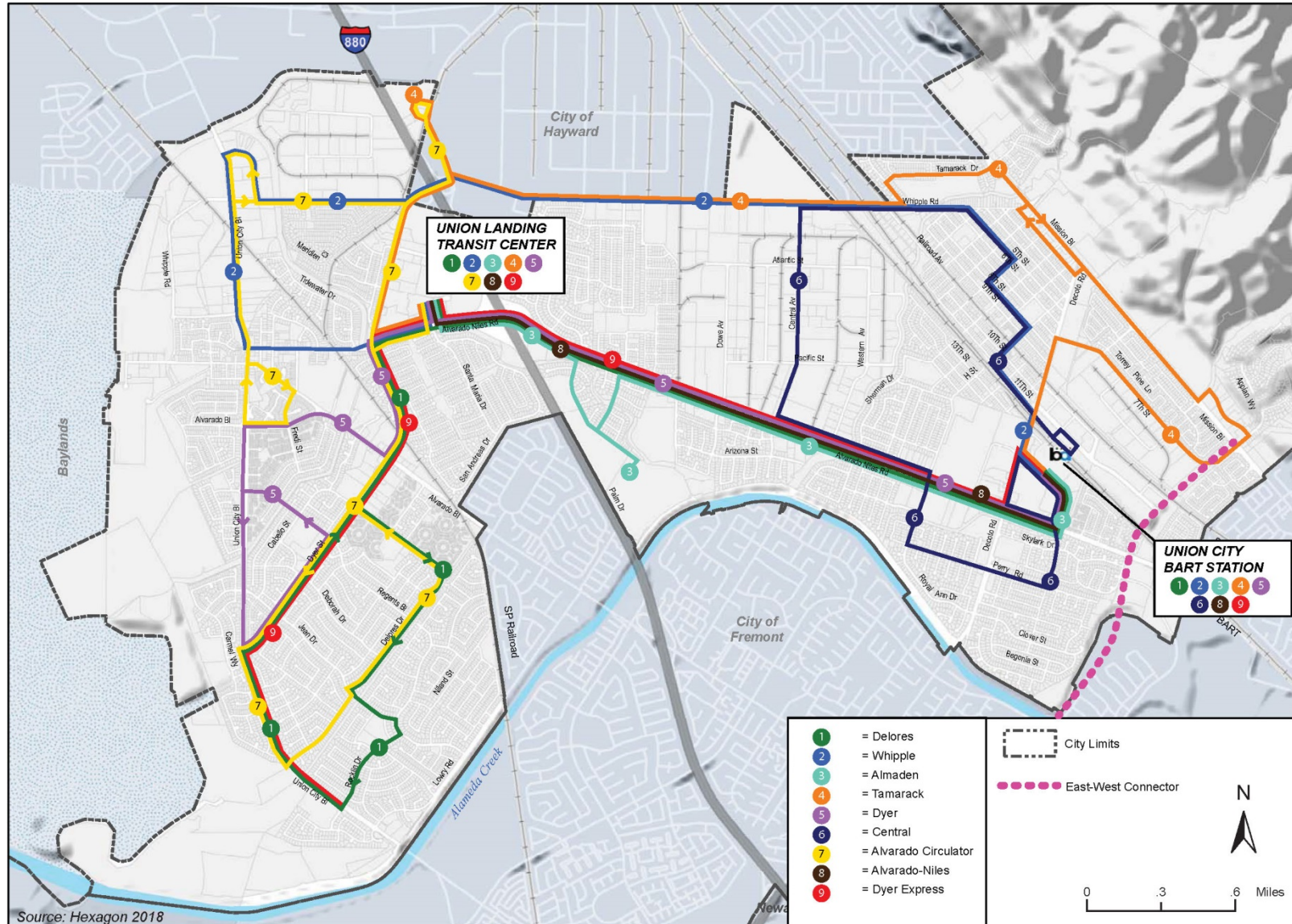


Figure 4.14-5 Union City Transit Bus Routes



providing services required under the ADA. Union City Paratransit also offers an additional service known as Paratransit Plus, which offers limited service to southern Hayward, northern Fremont and Newark.

Privately-operated non-ADA-required paratransit services also exist in the City. These programs are operated by non-transit operators, and do not need to follow any federal guidelines. Examples are paratransit van shuttle services operated by senior centers or communities. These services can charge their desired fare, establish their own service hours, and place age restrictions.

Taxi and Ride-Hailing Services

Union City is served by several taxicab companies. Taxis and other ride-hailing services (i.e. Uber and Lyft) can be used as a principal source of commute or as a means of transfer between intermediate stops and destinations. They can be pre-booked by phone, internet, or text, and in the case of taxis, can be hired on the spot. Their multiple means of access make them versatile and convenient, but their high cost can make them impractical for use on a regular basis.

Long Distance Bus Service

Greyhound Lines, Inc. is an intercity, long-distance bus service offering services to over 3,700 destinations in the United States, Canada, and Mexico. Greyhound does not have a station in Union City; however, Greyhound operates five buses from its Hayward station on B Street near the Hayward BART station.

e. Existing Truck Routes

Commercial vehicles are allowed to operate on only a portion of the available public roads. According to the existing 2002 General Plan, Union City's major truck routes include: Interstate 880, Alvarado Boulevard, Union City Boulevard, Whipple Road, Central Avenue, Alvarado-Niles Road, Decoto Road, Industrial Parkway, and State Route 238 (Union City 2002).

f. Aviation Facilities

The Hayward Executive Airport is the closest airport to Union City, located about four miles north of Union City, and is owned and operated by the City of Hayward. The airport is situated on a 543-acre site providing two parallel runways for general aviation operations. The airport provides approximately 131,400 square yards of apron area for aircraft movement and local and transient aircraft tiedowns. Over 430 aircraft are based at the airport from single-engine airplanes to sophisticated corporate jets. The Airport had 83,275 aircraft operations in 2012 (Union City 2015).

The Airport Master Plan (2002) for Hayward Executive Airport outlines future air transportation demand. The Airport Master Plan describes future development planned for the airport to meet projected facility needs and improve the airport's overall operational efficiency. The airport is included in the National Plan of Integrated Airport Systems as a reliever airport for the Oakland International Airport, San Francisco International Airport, and San Jose International Airport. The function of a reliever airport is to reduce the aircraft mix at commercial service primary airports and provide less congested airports for smaller jet and general aviation operations.

g. Traffic Study Freeway and Roadway Segments

Study Roadway Segments

The study area for the TIA includes the freeway and roadway segments most likely to be impacted by new development in Union City, particularly the major arterials and collector streets in the City and freeway segments. These types of roads were selected for the study because traffic from local roadways and minor collector streets typically funnel to major collectors or freeways to get from origin to destination. The study area consists of the following roadway segments, shown on Figure 4.14-6.

Freeway Segments

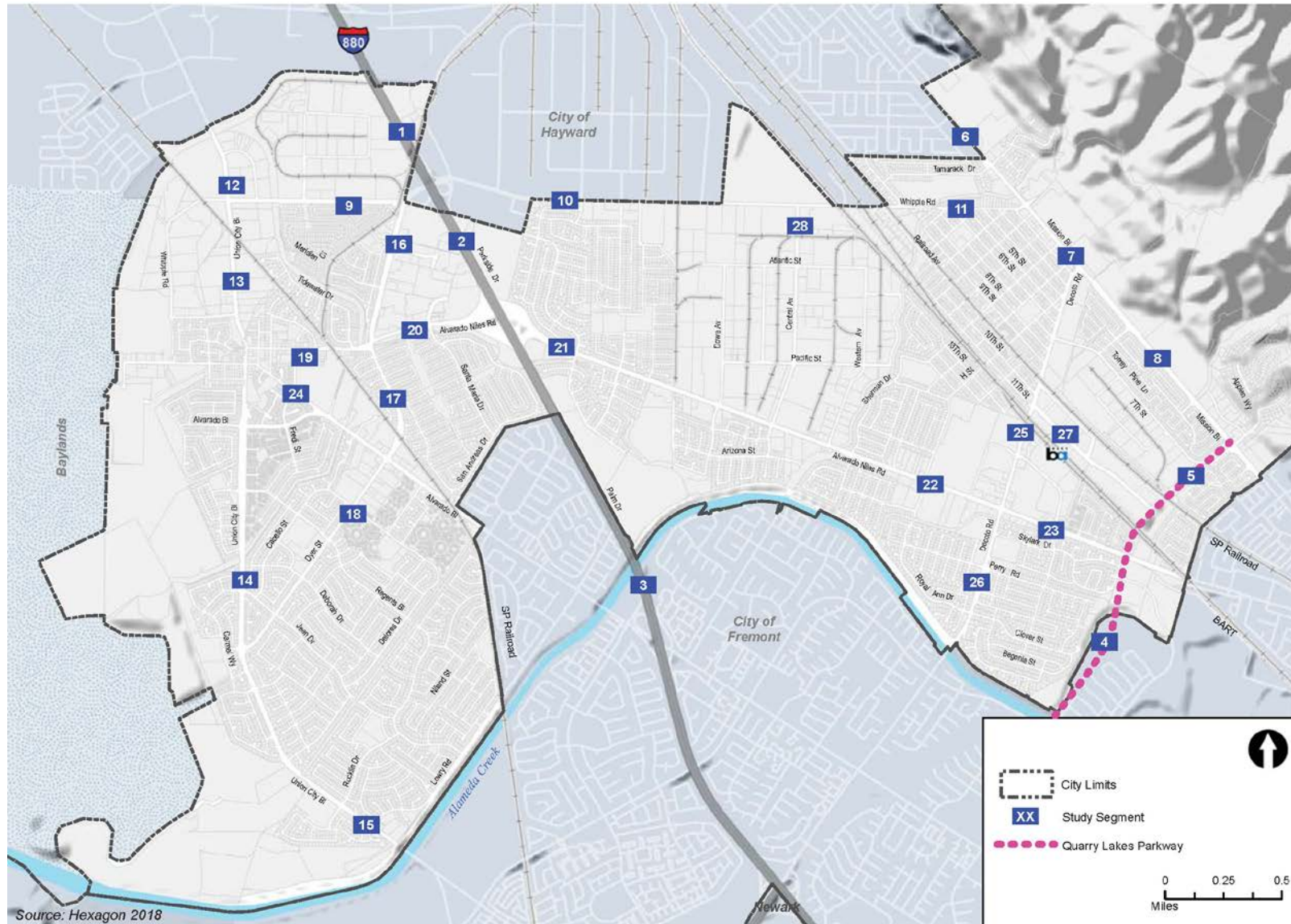
- Interstate 880 north of Whipple Road (mixed-flow)*
- Interstate 880 north of Alvarado-Niles Road (mixed-flow)*
- Interstate 880 north of Alvarado Boulevard (mixed-flow)*

Roadway Segments

- (future) Quarry Lakes Parkway north of Paseo Padre Parkway
- (future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard
- State Route 238 (Mission Boulevard) north of Whipple Rd*
- State Route 238 (Mission Boulevard) north of Decoto Rd*
- State Route 238 (Mission Boulevard) south of Decoto Rd*
- Whipple Road west of Interstate 880
- Whipple Road east of Interstate 880*
- Whipple Road west of State Route 238*
- Union City Boulevard north of Whipple Road*
- Union City Boulevard north of Smith Street*
- Union City Boulevard north of Dyer Street*
- Union City Boulevard north of Paseo Padre Parkway*
- Dyer Street north of Smith Street*
- Dyer Street north of Alvarado Boulevard*
- Dyer Street south of Alvarado Boulevard*
- Smith Street west of Dyer Street*
- Alvarado-Niles Road west of Interstate 880*
- Alvarado-Niles Road east of Interstate 880*
- Alvarado-Niles Road west of Decoto Road*
- Alvarado-Niles Road east of Decoto Road*
- Alvarado Boulevard west of Dyer Street*
- Decoto Road south of State Route 238*
- Decoto Road south of Alvarado-Niles Road*
- 11th Street north of future Quarry Lakes Parkway
- Central Avenue south of Whipple Road

* Denotes an Alameda County Congestion Management Agency (CMA) roadway segment.

Figure 4.14-6 Union City Study Roadway Segments



Level of Service Definitions

The analysis of peak-hour Level of Service (LOS) has traditionally been the primary indicator of circulation system performance. The TIA uses LOS to quantify and measure the performance of the existing street system to accommodate existing and future traffic. The LOS for each study roadway segment is determined by comparing the traffic volume on the roadway to its capacity (V/C ratio), as determined by the type of roadway and the number of lanes available for vehicular traffic. LOS values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. Table 4.14-1 displays the LOS thresholds for roadway segments based on the 2017 Alameda County Transportation Commission (ACTC) Congestion Management Program and the Union City 2002 General Plan Transportation Element.

Table 4.14-1 Roadway Segment Level of Service Thresholds

LOS	V/C Ratio		Description
	ACTC Standard	Union City Standard	
A	0.00-0.35	0.00-0.60	Relatively free flow; very slight or no delay
B	0.36-0.58	0.61-0.70	Vehicle platoons are formed; slight delay
C	0.59-0.75	0.71-0.80	Stable flow or operation; acceptable delay
D	0.76-0.90	0.81-0.90	Approaching unstable flow or operation; queues develop but quickly clear; tolerable delay
E	0.91-1.00	0.91-1.00	Unstable flow or operation; the segment has reached capacity congestion and intolerable delay.
F	>1.00	>1.00	Forced flow or operation; below capacity; jammed

Source: Hexagon 2018

Each jurisdiction determines acceptable LOS for roadways in its jurisdiction. The current 2002 General Plan identifies LOS “D,” or a V/C ratio of 0.85, as the goal for the City’s major streets during peak commute hours (Hexagon 2018). However, Interstate 880, State Route 238, and Decoto Road are exceptions, and LOS E is the goal for these roadway segments. Additionally, the Alameda County CMA has established a roadway LOS E as the standard on all CMA routes.

Baseline Level of Service

An analysis of operations on the study roadway segments was conducted by Hexagon as part of the traffic impact study (Appendix D). To identify existing conditions, traffic counts were conducted on the study roadway segments in May 2018. Traffic counts were conducted during the weekday AM peak hour and PM peak hour. The AM peak hour of traffic is generally between 7:00 and 9:00 a.m., and the PM peak hour is typically between 4:00 and 6:00 p.m. It is during these periods that the most congested traffic conditions occur on an average day. The existing conditions data collection sheets and LOS calculations are contained in Appendix D.

Existing 2018 LOS conditions on the study roadway segments are summarized in Table 4.14-2 and Table 4.14-3. Table 4.14-2 presents the LOS conditions during AM peak hour and Table 4.14-3 presents the LOS conditions for PM peak hour. As shown most study roadway segments meet the current LOS standard. However, as shown in the tables, segments of Interstate 880, Decoto Road, Union City Boulevard, and Alvarado-Niles Road would operate unacceptably during AM peak hour, PM peak hour, or both AM and PM peak hour.

Table 4.14-2 Study Roadway Segments Level of Service: AM Peak Hour

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
State Highways						
1	Interstate 880 north of Whipple Road (mixed-flow)	E	NB	0.880	D	Yes
1	Interstate 880 north of Whipple Road (HOV)	E	NB	0.647	C	Yes
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	NB	0.850	D	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	NB	0.574	B	Yes
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	NB	0.886	D	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	NB	0.571	B	Yes
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	EB	N/A	N/A	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	EB	N.A	N/A	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	NB	0.441	B	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	NB	0.323	A	Yes
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	NB	0.477	B	Yes
Arterials						
9	Whipple Road west of Interstate 880	D	EB	0.492	B	Yes
10	Whipple Road east of Interstate 880	D	EB	0.753	D	Yes
11	Whipple Road west of State Route 238	D	EB	0.363	B	Yes
12	Union City Boulevard north of Whipple Road	D	NB	0.626	C	Yes
13	Union City Boulevard north of Smith Street	D	NB	0.643	C	Yes
14	Union City Boulevard north of Dyer Street	D	NB	0.276	A	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	NB	0.253	A	Yes
16	Dyer Street north of Smith Street	D	NB	0.485	B	Yes
17	Dyer Street north of Alvarado Boulevard	D	NB	0.414	B	Yes
18	Dyer Street south of Alvarado Boulevard	D	NB	0.366	B	Yes
19	Smith Street west of Dyer Street	D	EB	0.674	C	Yes
20	Alvarado-Niles Road west of Interstate 880	D	EB	0.784	D	Yes
21	Alvarado-Niles Road east of Interstate 880	D	EB	0.781	D	Yes
22	Alvarado-Niles Road west of Decoto Road	D	EB	0.467	B	Yes
23	Alvarado-Niles Road east of Decoto Road	D	EB	0.296	A	Yes
24	Alvarado Boulevard west of Dyer Street	D	EB	0.438	B	Yes
25	Decoto Road south of State Route 238	E	NB	0.577	B	Yes
26	Decoto Road south of Alvarado-Niles Road	E	NB	0.801	D	Yes

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
27	11 th Street north of future Quarry Lakes Parkway	D	EB	0.221	A	Yes
28	Central Avenue south of Whipple Road	D	NB	0.221	A	Yes
State Highways						
1	Interstate 880 north of Whipple Road (mixed-flow)	E	SB	1.001	F	No
1	Interstate 880 north of Whipple Road (HOV)	E	SB	0.637	C	Yes
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	SB	0.895	D	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	SB	0.548	B	Yes
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	SB	1.010	F	No
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	SB	0.758	D	Yes
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	WB	N/A	N/A	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	WB	N/A	N/A	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	SB	0.934	E	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	SB	0.631	C	Yes
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	SB	0.708	C	Yes
Arterials						
9	Whipple Road west of Interstate 880	D	WB	0.724	C	Yes
10	Whipple Road east of Interstate 880	D	WB	0.644	C	Yes
11	Whipple Road west of State Route 238	D	WB	0.472	B	Yes
12	Union City Boulevard north of Whipple Road	D	SB	1.247	F	No
13	Union City Boulevard north of Smith Street	D	SB	0.957	E	No
14	Union City Boulevard north of Dyer Street	D	SB	0.734	C	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	SB	0.908	E	No
16	Dyer Street north of Smith Street	D	SB	0.498	B	Yes
17	Dyer Street north of Alvarado Boulevard	D	SB	0.504	B	Yes
18	Dyer Street south of Alvarado Boulevard	D	SB	0.312	A	Yes
19	Smith Street west of Dyer Street	D	WB	0.638	C	Yes
20	Alvarado-Niles Road west of Interstate 880	D	WB	0.666	C	Yes
21	Alvarado-Niles Road east of Interstate 880	D	WB	0.863	D	No
22	Alvarado-Niles Road west of Decoto Road	D	WB	0.436	B	Yes
23	Alvarado-Niles Road east of Decoto Road	D	WB	0.484	B	Yes
24	Alvarado Boulevard west of Dyer Street	D	WB	0.350	A	Yes

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
25	Decoto Road south of State Route 238	E	SB	0.938	E	Yes
26	Decoto Road south of Alvarado-Niles Road	E	SB	0.962	E	Yes
27	11th Street north of future Quarry Lakes Parkway	D	WB	0.136	A	Yes
28	Central Avenue south of Whipple Road	D	SB	0.445	B	Yes

Source: Hexagon 2018

Table 4.14-3 Study Roadway Segments Level of Service: PM Peak Hour

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
State Highways						
1	Interstate 880 north of Whipple Road (mixed-flow)	E	NB	1.088	F	No
1	Interstate 880 north of Whipple Road (HOV)	E	NB	0.348	A	Yes
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	NB	0.930	E	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	NB	0.369	B	Yes
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	NB	1.070	F	No
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	NB	0.468	B	Yes
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	EB	N/A	N/A	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	EB	N.A	N/A	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	NB	0.911	E	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	NB	0.622	C	Yes
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	NB	0.700	C	Yes
Arterials						
9	Whipple Road west of Interstate 880	D	EB	0.676	C	Yes
10	Whipple Road east of Interstate 880	D	EB	0.766	D	Yes
11	Whipple Road west of State Route 238	D	EB	0.521	B	Yes
12	Union City Boulevard north of Whipple Road	D	NB	0.945	E	No
13	Union City Boulevard north of Smith Street	D	NB	0.802	D	Yes
14	Union City Boulevard north of Dyer Street	D	NB	0.628	C	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	NB	0.976	E	No
16	Dyer Street north of Smith Street	D	NB	0.697	C	Yes
17	Dyer Street north of Alvarado Boulevard	D	NB	0.563	B	Yes

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
18	Dyer Street south of Alvarado Boulevard	D	NB	0.496	B	Yes
19	Smith Street west of Dyer Street	D	EB	0.850	D	Yes
20	Alvarado-Niles Road west of Interstate 880	D	EB	0.829	D	Yes
21	Alvarado-Niles Road east of Interstate 880	D	EB	0.976	E	No
22	Alvarado-Niles Road west of Decoto Road	D	EB	0.579	B	Yes
23	Alvarado-Niles Road east of Decoto Road	D	EB	0.393	B	Yes
24	Alvarado Boulevard west of Dyer Street	D	EB	0.410	B	Yes
25	Decoto Road south of State Route 238	E	NB	0.878	D	Yes
26	Decoto Road south of Alvarado-Niles Road	E	NB	1.147	F	No
27	11th Street north of future Quarry Lakes Parkway	D	EB	0.134	A	Yes
28	Central Avenue south of Whipple Road	D	NB	0.134	A	Yes
State Highways						
1	Interstate 880 north of Whipple Road (mixed-flow)	E	SB	0.880	D	Yes
1	Interstate 880 north of Whipple Road (HOV)	E	SB	0.435	B	Yes
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	SB	0.882	D	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	SB	0.420	B	Yes
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	SB	0.885	D	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	SB	0.412	B	Yes
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	WB	N/A	N/A	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	WB	N/A	N/A	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	SB	0.535	B	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	SB	0.372	B	Yes
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	SB	0.462	B	Yes
Arterials						
9	Whipple Road west of Interstate 880	D	WB	0.538	B	Yes
10	Whipple Road east of Interstate 880	D	WB	0.748	C	Yes
11	Whipple Road west of State Route 238	D	WB	0.436	B	Yes
12	Union City Boulevard north of Whipple Road	D	SB	0.811	D	Yes
13	Union City Boulevard north of Smith Street	D	SB	0.764	D	Yes
14	Union City Boulevard north of Dyer Street	D	SB	0.308	A	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	SB	0.377	B	Yes

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	V/C	LOS	Operates Acceptably?
16	Dyer Street north of Smith Street	D	SB	0.543	B	Yes
17	Dyer Street north of Alvarado Boulevard	D	SB	0.489	B	Yes
18	Dyer Street south of Alvarado Boulevard	D	SB	0.411	B	Yes
19	Smith Street west of Dyer Street	D	WB	0.733	C	Yes
20	Alvarado-Niles Road west of Interstate 880	D	WB	0.828	D	Yes
21	Alvarado-Niles Road east of Interstate 880	D	WB	0.904	E	No
22	Alvarado-Niles Road west of Decoto Road	D	WB	0.561	B	Yes
23	Alvarado-Niles Road east of Decoto Road	D	WB	0.619	C	Yes
24	Alvarado Boulevard west of Dyer Street	D	WB	0.355	B	Yes
25	Decoto Road south of State Route 238	E	SB	0.671	C	Yes
26	Decoto Road south of Alvarado-Niles Road	E	SB	0.843	D	Yes
27	11th Street north of future Quarry Lakes Parkway	D	WB	0.170	A	Yes
28	Central Avenue south of Whipple Road	D	SB	0.250	A	Yes

Source: Hexagon 2018

h. Regulatory Setting

State

Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed Senate Bill (SB) 743 into law which includes changes to elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant environmental impacts related to the California Environmental Quality Act. The revised criteria rely upon quantification of a vehicle miles traveled (VMT) metric instead of a LOS metric. The most recent version of the CEQA Guidelines was adopted in early 2019 and incorporates the changes pursuant to SB 743. Based on guidance from OPR, jurisdictions have a two-year grace period in which to implement the revised guidelines once they are formally adopted by the State.

State of California and Caltrans Regarding Complete Streets

On September 30, 2008, the California Complete Streets Act of 2008 was signed into law. As of January 2011, AB 1358 requires any substantive revision of the circulation/mobility element of a city or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

CALTRANS DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the State. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. Deputy Directive 64-R1 states:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."

Successful long-term implementation of this directive is intended to result in more options for people to go from one place to another, less traffic congestion and greenhouse gas emissions, more walkable communities (with healthier, more active people), and fewer barriers for older adults, children, and people with disabilities.

DIRECTOR'S POLICY 22: DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all State highways, was adopted by Caltrans in November of 2001. The policy reads:

The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.

The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

Caltrans Facility Operation

Intersections of ramps from Interstate 880 to Union City streets are under the jurisdiction of Caltrans. Under their adopted standards, Caltrans indicates that they endeavor to maintain operation at the transition from LOS C to LOS D. Based on previous discussions with Caltrans staff, it is understood that the standard is to be applied to the overall average intersection delay and not associated with any single movement or approach. Under this approach, if one movement experiences very high delay and has moderate to high traffic volumes, the overall delay and LOS should reflect the critical nature of the condition. However, if one movement is expected to experience high delay, but has very low traffic volumes, the overall intersection operation will likely still meet Caltrans standards.

Regional and Local

Plan Bay Area 2040

The current Regional Transportation Plan (RTP) produced by ABAG and MTC, the *Plan Bay Area 2040*, was adopted in July 2017 (ABAG and MTC 2017). The Plan sets forth regional transportation and land use policy, and provides capital program planning for all regional, State, and federally funded projects. In addition, the Plan provides strategic investment recommendations to improve regional transportation system performance through the year 2040, including investments in regional highway, transit, local roadway, bicycle, and pedestrian projects. Transportation projects programmed in the vicinity of Union City include the Union City Commuter Rail Station. The Plan also programs countywide funding for roadway rehabilitation, improved transit headways, safe routes to school projects, and bicycle-pedestrian improvements.

Countywide Transportation Plan

The ACTC, also referred to as the Alameda County CMA, acts as the countywide planning and programming agency for transportation related issues in Alameda County. Every four years, the ACTC updates the Alameda Countywide Transportation Plan, a long-range policy document that serves as a guide for future transportation projects, programs, policies, and advocacy for all of Alameda County through 2040 (ACTC 2016). It addresses all parts of Alameda County's transportation system, including capital, operation, and maintenance for all transportation modes. The Countywide Transportation Plan establishes countywide goals, objectives, and policies for improving mobility on Alameda County's streets, highways, transit systems, and bicycle/pedestrian facilities, as well as strategies to reduce transportation related impacts. There are no major roadway projects in Union City with funding identified in the Countywide Transportation Plan other than those for which the City's traffic mitigation fee is identified as the funding source.

Union City Bicycle and Pedestrian Master Plan

The 2012 Union City Bicycle and Pedestrian Master Plan provides a blueprint for developing a system of trails, bikeways, and other transportation and recreation facilities for non-motorized users in Union City (Union City 2012). The Bicycle and Pedestrian Master Plan considers a broad range of non-motorized travel methods, including commute bicycling; recreational on-road and off-road bicycling; walking, jogging, and running; motorized and non-motorized wheelchairs; and other forms of non-motorized, wheeled transportation. The Bicycle and Pedestrian Master Plan was most recently updated in 2011 to reflect updated background information, pediatrician and bicycle facilities constructed since 2006, a Safe Routes to School analysis completed in 2010, and feedback received from the City's Planning Commission and Bicycle and Pedestrian Advisory Committee and the public.

City of Union City 2002 General Plan

Union City has existing goals and policies in the 2002 General Plan relative to traffic operation and the transportation system. Many of the policies include measures intended to promote greater efficiency for the City's transportation system for all users, including motorists, public transit users, bicyclists, pedestrians, and emergency responders. The policies contained under Goals TR-A.1 and TR-A.2 aim to establish a safe, convenient, and efficient roadway system that minimizes peak hour traffic congestion. Furthermore, policies contained under Goals TR-B.1 and TR-B.2 focus on improving access to and quality of the public transportation system for residents and workers in

Union City. The policies therein include measures to ensure compliance with ADA requirements, improve connectivity with regional public transportation networks, and promote Union City as a major transit hub, with many policies targeting the Station District. Further, policies to support the Station District and Intermodal Station are carried throughout 2002 General Plan Transportation Element under Goals TR-A.1, TR-A.2, TR-B.1, TR-B.2, TR-C.1, TR-C.2, TR-D.1. Lastly, policies contained under Goals TR-C.1, TR-C.2, and TR-C.4 focus on supporting bicycle and pedestrian travel throughout the City by targeting greater funding and planning efforts for future active transportation investments.

4.14.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methods

The following text describes the methodology applied to the analysis of transportation and circulation impacts. The year 2040 was chosen as the year for the future conditions analysis, as 2040 is the planning horizon year of the 2040 General Plan.

Study Scenarios and Analysis of Peak Hour LOS

Traffic operations were evaluated for weekday AM peak hour (7:00 a.m. to 9:00 a.m.) and PM peak hour (4:00 p.m. to 6:00 p.m.) on the study roadway segments for the following traffic scenarios:

- Existing Conditions (2018)
- Existing Plus Project Conditions (2040)
- Cumulative Plus Project Conditions (2040)

The Existing Plus Project Conditions scenario includes zero-growth land use projections and the existing transportation network outside Union City, but within Union City includes the land uses and planned transportation improvements associated specifically with buildout of the proposed 2040 General Plan. Traffic volumes under Existing Plus Project Conditions scenario were estimated based on traffic forecasts produced by the ACTC Traffic Demand Model.

The Cumulative Plus Project Conditions scenario includes the land uses and planned transportation improvements associated specifically with buildout of the proposed 2040 General Plan in Union City, as well as the cumulative land use projections outside Union City and regional planned transportation improvements. Regional planned transportation improvements include transportation improvements planned and funded under the Alameda Countywide Transportation Plan and included in the ACTC Travel Demand Model. Cumulative Plus Project Conditions traffic volumes were estimated using the ACTC Travel Demand Model forecasts based on buildout of the proposed 2040 General Plan for Union City, and ABAG's 2040 socio-economic projections for regional land use growth outside Union City. The ACTC Travel Demand Model was used to assign these traffic volumes to the planned future network.

Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Statute and Guidelines, with the exception of threshold 6. Threshold 6 was developed by the City specifically for analyzing traffic delay impacts. For the purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities
2. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
3. Substantially increase traffic-related hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
4. Result in inadequate emergency access
5. Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads and highways

For purposes of this analysis, traffic circulation and congestion impacts would be significant if the General Plan would cause either of these scenarios:

- The LOS on the roadway segment degrades from its LOS standard or better under Existing Conditions to an unacceptable LOS under Existing Plus Project Conditions or Cumulative Plus Project Conditions; or
- If the roadway is already operating below its LOS standard under Existing Conditions, and the Existing Plus Project Conditions traffic volumes causes the roadway V/C ratio to increase by 0.03 or more.

With the exception of Interstate 880, State Route 238 (Mission Boulevard), and Decoto Road, the City's current 2002 General Plan identifies LOS D, or a V/C ratio of 0.85, as the goal for the City's major streets during peak commute hours. LOS E is the standard for Interstate 880, State Route 238 (Mission Boulevard), and Decoto Road.

Additionally, the Alameda County CMA has established LOS E as the standard on all CMA roadways. According to the CMA, a project would cause a significant impact to roadway operations if the addition of project traffic: (1) causes a freeway or Metropolitan Transportation System (MTS) roadway segment to degrade to LOS F or, (2) increases the volume-to-capacity ratio (V/C) by 0.03 or more on a freeway or MTS roadway segment that is operating at LOS F without the project. This standard is applied for the determination of impacts to study roadways segment under CMA designation.

In addition, the City's and ACTC's LOS definitions vary in V/C ratio range for LOS A through LOS C, as shown in Table 4.14-1. The ACTC's LOS definitions are more conservative and more recently established than those of the City's. Therefore, to provide a conservative assessment of impacts to study roadway segments resulting from implementation of the 2040 General Plan, this analysis uses the LOS definitions established by the ACTC to determine impacts to roadway LOS.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact T-1 NEW DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD ACCOMMODATE INCREASES IN TRAFFIC THROUGHOUT UNION CITY. THIS TRAFFIC INCREASE WOULD NOT CONFLICT WITH POLICIES CONTAINED IN THE PLAN BAY AREA 2040 OR THE CITY'S PEDESTRIAN AND BICYCLE MASTER PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As discussed earlier, the *Plan Bay Area 2040* (Plan) sets forth regional transportation and land use policy and provides capital program planning for all regional, State, and federally funded projects in MTC's jurisdiction. The Plan contains goals and performance targets through the year 2040 regarding transportation system operation, such as directing all non-agricultural development within the urban footprint and increasing non-auto mode share by 10 percent. As discussed under Impact LU-2 in Section 4.10, *Land Use and Planning*, the proposed 2040 General Plan would not conflict or be inconsistent with the *Plan Bay Area 2040*.

Furthermore, the City's Pedestrian and Bicycle Master Plan (2012) intends to make bicycling and walking integral modes of transportation in Union City. In 2011, the Pedestrian and Bicycle Master Plan was updated to reflect changes to background information, pedestrian and bicycle facilities that had been constructed since its last update in 2006, Safe Routes to School analysis completed in 2010, and feedback received from the City's Planning Commission, the Bicycle and Pedestrian Advisory Committee, and public. The 2011 update included a list of pedestrian and bicycle improvement projects that are recommended to be implemented over the following two to 20 years. Many of the Pedestrian and Bicycle Master Plan's mid-term and long-term projects include improvements along key roadways, such as Alvarado Niles Road, Santa Maria Drive, and Mission Boulevard.

To accommodate the planned improvements in the Pedestrian and Bicycle Master Plan, the 2040 General Plan Mobility Element includes policies and implementation programs that aim to facilitate the implementation of planned bicycle projects. For example, Policy M-2.1, Close Network Gaps, requires that the City implement planned bicycle and pedestrian improvements to close gaps in the bicycle and pedestrian networks. Similarly, Policy M-2.15, Safe Routes to School, requires that the City seek funding for and assist New Haven Unified School District in implementing a Safe Routes to School program, projects for which are recommended in the City's Pedestrian and Bicycle Master Plan. In addition, Implementation Program M-2.A, Pedestrian and Bicycle Master Plan Update, requires that the City review and update the Pedestrian and Bicycle Master Plan every 5 to 10 years, beginning in fiscal year 2019/2020. As the proposed 2040 General Plan includes policies and implementation programs designed to facilitate the implementation of improvement projects contained in the City's Pedestrian and Bicycle Master Plan, the 2040 General Plan would be consistent with the goals and policies of the City's Pedestrian and Bicycle Master Plan. The 2040 General Plan also encourages active transportation by facilitating infill development that is generally within walking or bicycling distance to other land uses, such as retail shopping uses or office employment uses.

Because the proposed 2040 General Plan would not conflict or be inconsistent with the *Plan Bay Area 2040* and the City's Pedestrian and Bicycle Plan, the 2040 General Plan would result in less than significant impacts regarding conflicts or inconsistencies with programs, plans, ordinances, or policies addressing the circulation system.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 2: Would the General Plan conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact T-2 DEVELOPMENT AND POPULATION GROWTH FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE VMT IN UNION CITY AND VMT PER SERVICE POPULATION WOULD NOT BE 15 PERCENT BELOW THE NINE BAY AREA REGIONAL VMT PER SERVICE POPULATION. THEREFORE, THE 2040 GENERAL PLAN WOULD BE INCONSISTENT WITH CEQA GUIDELINES SECTION 15064.3, SUBDIVISION (B). IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Due to the programmatic nature of this EIR, the specific locations and types of future infill and redevelopment projects accommodated by the 2040 General Plan cannot be determined at this time. Nonetheless, as the proposed 2040 General Plan contains a land use strategy of prioritizing infill, reuse, mixed use, and higher-density development, future projects are likely to be located within one-half mile of an existing major transit stop or a stop along an existing high-quality transit corridor.

The TIA conducted for the 2040 General Plan includes an analysis of Union City's transportation system operation under an existing (2018) baseline and a future 2040 scenario with implementation of the 2040 General Plan as well as regional VMT for the nine Bay Area counties. Table 4.14-4 shows the estimated existing VMT in Union City in 2018 and the projected VMT in 2040 under buildout of the proposed 2040 General Plan as well as regional VMT for 2018 and 2040.

Table 4.14-4 Daily VMT and VMT per Service Population

Scenario	VMT	Service Population ¹	VMT Per Service Population
2018 Baseline Union City	1,158,983	92,519	12.53
2018 Baseline Bay Area Region ²	155,843,218	12,030,820	12.95
2040 Proposed General Plan	1,532,819	121,710	12.59
2040 Bay Area Region	195,247,967	14,948,877	13.06

¹ Service population is comprised of total population and jobs .

² Bay Area region includes the nine Bay Area counties

Source: Hexagon 2018 (see Appendix D)

As shown in Table 4.14-4, implementation of the proposed 2040 General Plan is projected to generate more VMT in 2040 than under existing conditions; however, the 2040 General Plan would have a lower per service population VMT than the regional average of 13.06. The Office of Planning and Research's (OPR) Technical Advisory provides recommendations for implementing Section 15064.3 of the CEQA Guidelines related to VMT. OPR recommends that if a project does not achieve a level of 15 percent or more below regional VMT it may indicate a significant transportation impact. As shown in Table 4.14-4 the VMT per service population from the 2040 General Plan of

12.59 is 2.8 percent below the existing regional VMT per service population of 12.95 and does not achieve a 15 percent reduction.

With limited opportunities for new development in Union City, the 2040 General Plan emphasizes infill and reuse development within the City limits, encourages higher-density and mixed use projects where appropriate, and supports walkable design that compliments the existing natural and built environment to reduce VMT per service population. The 2040 General Plan further provides the policy framework to guide future development toward land uses that support walking, biking, and transit ridership, including a Vision Zero policy. The 2040 General Plan places a greater emphasis on active transportation infrastructure such as protected bike lanes and enhanced pedestrian crossings, improved transit facilities and services, and ADA accessibility.

In addition to the 2040 General Plan's land use strategy, the 2040 General Plan contains several policies and implementation programs intended to minimize or avoid VMT generated by Union City residents. For example, Policy M-5.2, *Community Car-Sharing*, Policy M-5.3, *Explore Car Sharing and Bike Sharing Opportunities*, and Implementation Program M-4.C, *Establish Impact Fee to Include Other Modes*, aim to increase the transportation mode shares for active transportation and public transit. Implementation of the 2040 General Plan includes policies and implementation programs intended to minimize or avoid excess VMT and vehicle trips. However, even with application of VMT reductions from policies and implementation measures, the proposed 2040 General Plan would not achieve 15 percent reduction below the existing regional VMT per service population. Therefore, impacts would be potentially significant.

Mitigation Measures

As described above goals, policies, and implementation measures in the 2040 General Plan are designed to reduce VMT in Union City through infill development, higher-density and mixed use development, and trip reduction measures. However, even with implementation of these VMT reduction measures VMT per service population in Union City would not achieve the 15 percent reduction as recommended by the OPR Technical Advisory. There are no other feasible mitigation measures available because the 2040 General Plan emphasizes infill and reuse development designed to reduce VMT and contains goals and policies aimed at minimizing VMT. Impacts would be significant and unavoidable.

Significance After Mitigation

Impacts would be significant and unavoidable.

Threshold 4: Would the General Plan substantially increase traffic-related hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact T-3 THE PROPOSED 2040 GENERAL PLAN IS A PROGRAM-LEVEL PLAN THAT DOES NOT DIRECTLY ADDRESS PROJECT-LEVEL DESIGN FEATURES. ROADWAY IMPROVEMENTS AND SITE ACCESS MEASURES WOULD BE DESIGNED AND REVIEWED IN ACCORDANCE WITH CITY STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Union City maintains standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. Through the development review process, City staff evaluates development proposals that includes projects that add traffic to streets, which are not designed to current standards. If needed, street improvements are identified therein, and the project is conditioned to construct or provide funding for an improvement that would minimize or eliminate the hazard. Typical improvements include shoulder widening, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, prohibiting certain turning movements, signaling intersections, and increasing sight distance, among other measures. New and upgraded roadways needed to accommodate new development would be designed according to applicable federal, State, and local design standards. Development and infrastructure projects in Union City would be required to comply with the 2040 General Plan, Union City Municipal Code, and applicable State and local regulations. As a result, and in consideration of the proposed 2040 General Plan's policies regarding infrastructure safety, listed below, impacts would be less than significant.

The 2040 General Plan establishes the following goals and policies that are intended to result in roadway designs that safely accommodate all users:

Goal M-1: Design and maintain streets to be safe and accessible for all categories of users.

Policy M-1.3: Planning for Complete Streets. The City shall incorporate "complete streets" practices as a routine part of everyday operations, and a factor to be considered in every projects, program, and practice relating to the transportation network for all categories of users, and work in coordination with other departments, agencies, and jurisdictions to maximize opportunities for complete streets, connectivity, and cooperation.

Policy M-1.4: Safe Travel for All Users. The City shall ensure complete streets infrastructure sufficient to enable reasonably safe travel along and across the right of way for each category of users is incorporated into all planning, funding, design, approval, and implementation process for any construction, reconstruction, retrofit, maintenance, operations, alteration, or repair of streets, except that specific infrastructure for a given category of users may be excluded if an exception is approved by the Public Works Director.

Goal M-2: To provide a robust and interconnected bicycle and pedestrian circulation system throughout the City.

Policy M-2.9: Safe Pedestrian Environment. The City shall implement improvements to create a safe pedestrian environment.

Policy M-2.11: Minimize Cub Cuts. The City shall require new development to minimize the number and width of curb cuts for vehicle traffic to reduce vehicle conflicts with pedestrians.

Policy M-2.12: Safety in Sidewalk Design. The City shall prioritize safety in the design of sidewalk improvements along major arterials, including separating sidewalks from vehicle travel lanes where possible.

Goal M-4: Establish a safe, convenient, and efficient street network that facilitates vehicle travel throughout Union City.

Policy M-4.5: Require Projects to Address Transportation Impacts. The City shall require developers to address the impacts that their projects will have on the City's transportation system and implement all feasible mitigation measures, including impact fees, street improvements, traffic signal and intelligent transportation systems improvements, transportation demand management, and improvement of non-automobile transportation modes.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

This impact would be less than significant without mitigation.

Threshold 5: Would the General Plan result in inadequate emergency access?

Impact T-4 THE PROPOSED 2040 GENERAL PLAN IDENTIFIES CIRCULATION IMPROVEMENTS AND POLICIES THAT WOULD SUPPORT EMERGENCY ACCESS THROUGHOUT THE CITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Implementation of the 2040 General Plan would result in increased development and facilitate population growth, which would increase the number of users on the City's transportation system. Adequate emergency access provisions will need to be made to accommodate increased population and growth. The 2040 General Plan contains several policies intended to maintain and improve emergency vehicle access throughout the City, listed below. For instance, Policy M-1.1, *Complete Streets for All Users*, listed below, would require the City to strive to create a comprehensive, integrated network of roadways for all users, including emergency responders.

Goal M-1: Design and maintain streets to be safe and accessible for all categories of users.

Policy M-1.1: Complete Streets for All Users. The City shall strive to create a comprehensive, integrated network of roadways (including streets, roads, highways, bridges, and other portions of the transportation system) that provide safe, comfortable, and convenient travel for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, emergency responders, seniors, children, youth, and families.

Goal M-4: Establish a safe, convenient, and efficient street network that facilitates vehicle travel throughout Union City.

Policy M-4.7: Grade Separations. The City shall implement grade separations to facilitate emergency vehicle response, improve safety and accessibility for all users, reduce delays, improve transit reliability, and improve aesthetics.

Policy M-4.10: Emergency Vehicle Access. The City shall periodically review emergency vehicle access on private property (areas required to provide fire and emergency vehicle access) and ensure property owners maintain these access routes.

Policy M-4.16: Traffic Signal Technology. All new traffic signals should be equipped with audible signal devices, traffic signal timing and coordination, and signal emergency vehicle preemption, where feasible. The City shall continue to evaluate new technologies that will improve movements of pedestrians, bicyclists, public transit and emergency vehicles.

In addition, the 2040 General Plan is a program-level plan that does not directly address project-level components that will be required to maintain adequate emergency access. Union City staff, including emergency responders, review all development applications to ensure that applicable requirements are met, including provisions for adequate access for emergency responders and response vehicles listed in the Fire Code. Given the project's accommodation of future traffic, established procedures for reviewing project-level emergency access needs, and in consideration of the 2040 General Plan policies affecting emergency response, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 5: Would the General Plan conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads and highways?

Impact T-5 NEW DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE TRAFFIC IN UNION CITY. THIS TRAFFIC MAY CAUSE DELAYS THAT CONFLICT WITH APPLICABLE CITY LOS STANDARDS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Growth and development in Union City associated with buildout of the 2040 General Plan would increase traffic on local intersections compared to existing conditions. Additionally, development outside the City's boundaries would also contribute to increased traffic on Union City road segments. Table 4.14-5 and Table 4.14-6 summarize the LOS during AM and PM peak hours, respectively, at study road segments under Existing Plus Project Conditions scenario and Cumulative Plus Project scenario. As described above, Cumulative Plus Project Conditions include growth and planned infrastructure improvements throughout Alameda County and the region, in addition to the growth that would be facilitated in Union City under the 2040 General Plan.

Table 4.14-5 2040 AM Peak Hour Road Segment Levels of Service

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
State Highways									
1	Interstate 880 north of Whipple Road (mixed-flow)	E	NB	0.885	D	No	1.082	F	Yes
1	Interstate 880 north of Whipple Road (HOV)	E	NB	0.681	C	No	0.489	B	No
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	NB	0.849	D	No	1.045	F	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	NB	0.591	C	No	0.438	B	No
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	NB	0.889	D	No	1.172	F	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	NB	0.596	C	No	0.449	B	No
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	EB	0.630	C	N/A	0.834	D	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	EB	0.314	A	N/A	0.530	B	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	NB	0.636	C	No	0.727	C	No
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	NB	0.458	B	No	0.523	B	No
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	NB	0.504	B	No	0.627	C	No
Arterials									
9	Whipple Road west of Interstate 880	D	EB	0.531	B	No	0.896	D	Yes
10	Whipple Road east of Interstate 880	D	EB	0.900	D	Yes	1.388	F	Yes
11	Whipple Road west of State Route 238	D	EB	0.205	A	No	0.434	B	No
12	Union City Boulevard north of Whipple Road	D	NB	0.491	B	No	0.567	B	No
13	Union City Boulevard north of Smith Street	D	NB	0.683	C	No	0.811	D	No

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Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
14	Union City Boulevard north of Dyer Street	D	NB	0.277	A	No	0.393	B	No
15	Union City Boulevard north of Paseo Padre Parkway	D	NB	0.247	A	No	0.387	B	No
16	Dyer Street north of Smith Street	D	NB	0.513	B	No	0.518	B	No
17	Dyer Street north of Alvarado Boulevard	D	NB	0.430	B	No	0.437	B	No
18	Dyer Street south of Alvarado Boulevard	D	NB	0.364	B	No	0.366	B	No
19	Smith Street west of Dyer Street	D	EB	0.761	D	No	0.765	D	No
20	Alvarado-Niles Road west of Interstate 880	D	EB	0.845	D	No	0.848	D	No
21	Alvarado-Niles Road east of Interstate 880	D	EB	0.821	D	No	0.826	D	No
22	Alvarado-Niles Road west of Decoto Road	D	EB	0.603	C	No	0.794	D	No
23	Alvarado-Niles Road east of Decoto Road	D	EB	0.297	A	No	0.426	B	No
24	Alvarado Boulevard west of Dyer Street	D	EB	0.462	B	No	0.606	C	No
25	Decoto Road south of State Route 238	E	NB	0.879	D	No	0.904	E	No
26	Decoto Road south of Alvarado-Niles Road	E	NB	0.807	D	No	0.814	D	No
27	11 th Street north of future Quarry Lakes Parkway	D	EB	0.334	A	No	0.329	A	No
28	Central Avenue south of Whipple Road	D	NB	0.318	A	No	0.318	A	No
State Highways									
1	Interstate 880 north of Whipple Road (mixed-flow)	E	SB	1.032	F	Yes	0.948	E	No
1	Interstate 880 north of Whipple Road (HOV)	E	SB	0.686	C	No	0.293	A	No
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	SB	0.895	D	No	0.922	E	No
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	SB	0.575	B	No	0.289	A	No

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	SB	1.010	F	No	1.056	F	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	SB	0.765	D	No	0.331	A	No
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	WB	0.474	B	N/A	0.993	E	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	WB	0.321	A	N/A	0.604	C	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	SB	1.047	F	Yes	1.306	F	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	SB	0.722	C	No	1.029	F	Yes
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	SB	0.740	C	No	1.162	F	Yes
Arterials									
9	Whipple Road west of Interstate 880	D	WB	0.765	D	No	0.787	D	No
10	Whipple Road east of Interstate 880	D	WB	0.752	D	No	0.764	D	No
11	Whipple Road west of State Route 238	D	WB	0.241	A	No	0.244	A	No
12	Union City Boulevard north of Whipple Road	D	SB	0.831	D	No	1.172	F	No
13	Union City Boulevard north of Smith Street	D	SB	1.051	F	Yes	1.177	F	Yes
14	Union City Boulevard north of Dyer Street	D	SB	0.748	C	No	0.965	E	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	SB	0.923	E	No	1.201	F	Yes
16	Dyer Street north of Smith Street	D	SB	0.500	B	No	0.976	E	Yes
17	Dyer Street north of Alvarado Boulevard	D	SB	0.521	B	No	0.974	E	Yes
18	Dyer Street south of Alvarado Boulevard	D	SB	0.333	A	No	0.458	B	No
19	Smith Street west of Dyer Street	D	WB	0.670	C	No	0.671	C	No

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
20	Alvarado-Niles Road west of Interstate 880	D	WB	0.718	C	No	0.861	D	Yes
21	Alvarado-Niles Road east of Interstate 880	D	WB	1.044	F	Yes	1.078	F	Yes
22	Alvarado-Niles Road west of Decoto Road	D	WB	0.604	C	No	0.681	C	No
23	Alvarado-Niles Road east of Decoto Road	D	WB	0.488	B	No	0.491	B	No
24	Alvarado Boulevard west of Dyer Street	D	WB	0.368	B	No	0.412	B	No
25	Decoto Road south of State Route 238	E	SB	1.153	F	Yes	1.273	F	Yes
26	Decoto Road south of Alvarado-Niles Road	E	SB	0.971	E	No	0.993	E	No
27	11th Street north of future Quarry Lakes Parkway	D	WB	0.289	A	No	0.469	B	No
28	Central Avenue south of Whipple Road	D	SB	0.462	B	No	0.495	B	No

Bold = roadway segments that would be impacted by the proposed 2040 General Plan Source: Hexagon 2018

Table 4.14-6 2040 PM Peak Hour Road Segment Levels of Service

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
State Highways									
1	Interstate 880 north of Whipple Road (mixed-flow)	E	NB	1.109	F	No	1.079	F	No
1	Interstate 880 north of Whipple Road (HOV)	E	NB	0.375	B	No	0.272	A	No
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	NB	0.951	E	No	1.003	F	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	NB	0.376	B	No	0.241	A	No
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	NB	1.072	F	No	1.139	F	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	NB	0.477	B	No	0.257	A	No

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	EB	0.866	D	N/A	0.998	E	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	EB	0.480	B	N/A	0.750	C	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	NB	1.034	F	Yes	1.194	F	Yes
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	NB	0.726	C	No	0.892	D	No
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	NB	0.755	D	No	1.006	F	Yes
Arterials									
9	Whipple Road west of Interstate 880	D	EB	0.716	C	No	0.842	D	No
10	Whipple Road east of Interstate 880	D	EB	0.856	D	Yes	0.971	E	Yes
11	Whipple Road west of State Route 238	D	EB	0.268	A	No	0.273	A	No
12	Union City Boulevard north of Whipple Road	D	NB	0.630	C	No	0.974	E	No
13	Union City Boulevard north of Smith Street	D	NB	0.863	D	Yes	1.069	F	Yes
14	Union City Boulevard north of Dyer Street	D	NB	0.638	C	No	0.911	E	Yes
15	Union City Boulevard north of Paseo Padre Parkway	D	NB	0.989	E	No	1.306	F	Yes
16	Dyer Street north of Smith Street	D	NB	0.707	C	No	0.990	E	Yes
17	Dyer Street north of Alvarado Boulevard	D	NB	0.572	B	No	0.944	E	Yes
18	Dyer Street south of Alvarado Boulevard	D	NB	0.497	B	No	0.617	C	No
19	Smith Street west of Dyer Street	D	EB	0.853	D	Yes	0.854	D	Yes
20	Alvarado-Niles Road west of Interstate 880	D	EB	0.834	D	No	1.115	F	Yes
21	Alvarado-Niles Road east of Interstate 880	D	EB	1.054	F	Yes	1.073	F	Yes

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Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
22	Alvarado-Niles Road west of Decoto Road	D	EB	0.679	C	No	0.714	C	No
23	Alvarado-Niles Road east of Decoto Road	D	EB	0.399	B	No	0.442	B	No
24	Alvarado Boulevard west of Dyer Street	D	EB	0.439	B	No	0.531	B	No
25	Decoto Road south of State Route 238	E	NB	0.883	D	No	0.888	D	No
26	Decoto Road south of Alvarado-Niles Road	E	NB	1.145	F	No	1.176	F	No
27	11 th Street north of future Quarry Lakes Parkway	D	EB	0.419	B	No	0.711	C	No
28	Central Avenue south of Whipple Road	D	NB	0.370	B	No	0.377	B	No
State Highways									
1	Interstate 880 north of Whipple Road (mixed-flow)	E	SB	0.900	D	No	0.959	E	No
1	Interstate 880 north of Whipple Road (HOV)	E	SB	0.468	B	No	0.368	B	No
2	Interstate 880 north of Alvarado-Niles Road (mixed-flow)	E	SB	0.882	D	No	1.093	F	Yes
2	Interstate 880 north of Alvarado-Niles Road (HOV)	E	SB	0.441	B	No	0.329	A	No
3	Interstate 880 north of Alvarado Boulevard (mixed-flow)	E	SB	0.885	D	No	1.106	F	Yes
3	Interstate 880 north of Alvarado Boulevard (HOV)	E	SB	0.415	B	No	0.333	A	No
4	(future) Quarry Lakes Parkway north of Paseo Padre Parkway	E	WB	0.696	C	N/A	0.781	D	N/A
5	(future) Quarry Lakes Parkway north of Alvarado-Niles Boulevard	E	WB	0.385	B	N/A	0.580	B	N/A
6	State Route 238 (Mission Boulevard) north of Whipple Road	E	SB	0.749	C	No	0.880	D	No
7	State Route 238 (Mission Boulevard) north of Decoto Road	E	SB	0.514	B	No	0.614	C	No

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
8	State Route 238 (Mission Boulevard) south of Decoto Road	E	SB	0.515	B	No	0.655	C	No
Arterials									
9	Whipple Road west of Interstate 880	D	WB	0.594	C	No	0.992	E	Yes
10	Whipple Road east of Interstate 880	D	WB	0.881	D	Yes	1.160	F	Yes
11	Whipple Road west of State Route 238	D	WB	0.240	A	No	0.346	A	No
12	Union City Boulevard north of Whipple Road	D	SB	0.580	B	No	0.679	C	No
13	Union City Boulevard north of Smith Street	D	SB	0.784	D	No	0.954	E	Yes
14	Union City Boulevard north of Dyer Street	D	SB	0.316	A	No	0.402	B	No
15	Union City Boulevard north of Paseo Padre Parkway	D	SB	0.381	B	No	0.468	B	No
16	Dyer Street north of Smith Street	D	SB	0.543	B	No	0.602	C	No
17	Dyer Street north of Alvarado Boulevard	D	SB	0.498	B	No	0.542	B	No
18	Dyer Street south of Alvarado Boulevard	D	SB	0.417	B	No	0.422	B	No
19	Smith Street west of Dyer Street	D	WB	0.788	D	No	0.843	D	No
20	Alvarado-Niles Road west of Interstate 880	D	WB	0.904	E	Yes	0.906	E	Yes
21	Alvarado-Niles Road east of Interstate 880	D	WB	0.962	E	Yes	0.971	E	Yes
22	Alvarado-Niles Road west of Decoto Road	D	WB	0.754	D	No	0.763	D	No
23	Alvarado-Niles Road east of Decoto Road	D	WB	0.656	C	No	0.661	C	No
24	Alvarado Boulevard west of Dyer Street	D	WB	0.357	B	No	0.424	B	No
25	Decoto Road south of State Route 238	E	SB	0.891	D	No	0.894	D	No
26	Decoto Road south of Alvarado-Niles Road	E	SB	0.836	D	No	0.840	D	No
27	11th Street north of future Quarry Lakes Parkway	D	WB	0.269	A	No	0.323	A	No

Segment Number	Roadway Segment	LOS Standard	Direction of Travel	Scenario					
				Existing Plus Project Conditions (2040)			Cumulative Plus Project Conditions (2040)		
				V/C	LOS	Impact?	V/C	LOS	Impact?
28	Central Avenue south of Whipple Road	D	SB	0.353	B	No	0.390	B	No

Bold = roadway segments that would be impacted by the proposed 2040 General Plan Source: Hexagon 2018

As shown in Table 4.14-5 and Table 4.14-6, several study roadway segments would operate at unacceptable LOS under either the Existing Plus Project Conditions scenario or the Cumulative Plus Project Conditions scenario, or both.

The proposed 2040 General Plan contains policies that aim to improve circulation and reduce traffic congestion throughout Union City. While the TIA models the project growth and land use development under buildout of the 2040 General Plan, the policies of the 2040 General Plan cannot be modeled, and therefore the resultant LOS in the tables above do not account for the effects of the policies. These policies are as follows:

Policy M-4.3: Level of Service (LOS). The City shall strive to achieve traffic Levels of Service (LOS) D at all signalized intersections on arterial and collector streets during peak commute hours, with the exception of intersections on major regional routes, including I-880 and Mission Boulevard (SR 238). If maintaining the LOS standards would, in the City’s judgement, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation, and/or implement vehicle trip reduction measures as part of a development project or a City-initiated project.

Policy M-4.5: Require Projects to Address Transportation Impacts. The City shall require developers to address the impacts that their projects will have on the City’s transportation system, and implement all feasible mitigation measures, including impact fees, street improvements, traffic signal and Intelligent Transportation Systems (ITS) improvements, transportation demand management (TDM) measures, and improvement of non-automobile transportation modes.

Policy M-4.6: Transportation Impact Fee and Other Funding. The City shall establish a transportation impact fee to ensure new development pays its fair share contributions to transportation improvements, and shall continue to explore other funding sources to assist large-scale capital projects.

Policy M-4.11: Support East-West Connector. The City shall pursue the timely construction of the East-West Connector as a partially depressed and at-grade parkway from Mission Boulevard to I-880 to resolve current circulation deficiencies, improve the area's regional access and visibility, and stimulate the market for region-serving retail, light industrial/service commercial, and office uses.

Policy M-4.14: Dyer Street Extension. The City shall plan for the extension of Dyer Street to link the Calaveras Landing and Union Landing shopping centers.

Although the 2040 General Plan contains the above policies intended to improve circulation and congestion management throughout the City, it would remain possible that additional growth

facilitated by the 2040 General Plan would result in unacceptable LOS on the roadway segments identified in Table 4.14-5 and Table 4.14-6. Impacts would be significant.

Mitigation Measures

The proposed 2040 General Plan facilitates development and population growth in Union City through 2040. While the 2040 General Plan encourages infill development and redevelopment in the urbanized areas of the City, including near transit and the BART station, the additional population growth would result on more vehicles trips on General Plan Area roadways. Because the 2040 General Plan is unable to influence the use of privately-owned vehicles in the city beyond what is already contained in the 2040 General Plan, there is no feasible mitigation to avoid this impact.

Significance After Mitigation

Impacts would be significant and unavoidable.

Threshold 5: Would the General Plan conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads and highways?

Impact T-6 NEW DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE TRAFFIC ON CMA ROADWAYS SURROUNDING UNION CITY. THIS TRAFFIC MAY CONFLICT WITH THE LOS STANDARDS OF THE ALAMEDA COUNTY CMA. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Impacts to freeway and Metropolitan Transportation System (MTS) segments resulting from implementation of the 2040 General Plan were evaluated in the TIA using the methods prescribed by the Alameda County CMA. All CMA roadway facilities located within Union City have been analyzed under Impact T-5 for both AM and PM peak hours; however, the CMA analysis requirements include the analysis of CMA facilities which lead to or from Union City. Therefore, the CMA analysis reported under this impact includes only an evaluation of the freeway and MTS roadway segments located outside Union City.

Implementation of the 2040 General Plan would result in unacceptable LOS on the southbound segment of State Route 238 (Mission Boulevard) between 7th Street in Union City and Nursery Avenue in Fremont. The LOS on this segment would degrade from an acceptable LOS C under existing conditions to an unacceptable LOS F under Cumulative Plus Project Conditions scenario in 2040. This is primarily a result of vehicle trips originating from Union City destined for locations outside Union City, vehicle trips originating from outside Union City destined for locations in Union City, and vehicle trips originating outside Union City destined for other locations outside Union City but require passing through Union City to reach their destination. Nonetheless, implementation of the 2040 General Plan would result in a potentially significant impact regarding conflicts with the LOS standards of the Alameda County CMA.

Mitigation Measures

The proposed 2040 General Plan facilitates development and population growth in Union City throughout 2040. While the 2040 General Plan encourages infill development and redevelopment in the urbanized areas of the City, including near transit and the BART station, the additional population growth would result on more vehicles trips on CMA roadways, including State Route 238. Because the 2040 General Plan is unable to influence the use of privately-owned vehicles in the city

beyond what is already contained in the 2040 General Plan, there is no feasible mitigation to avoid this impact.

Significance After Mitigation

This impact would remain significant and unavoidable.

4.15 Tribal Cultural Resources

This section evaluates potential effects on tribal cultural resources related to implementation of the 2040 General Plan.

4.15.1 Setting

Union City lies within an area traditionally occupied by the Ohlone. A full discussion of the prehistoric and ethnographic setting of the region is presented in Section 4.4, *Cultural Resources*.

a. Regulatory Setting

Federal

No existing federal regulations pertain to tribal cultural resources within Union City.

State

Assembly Bill 52

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, “tribal cultural resources.” Assembly Bill 52 establishes that “A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and meets either of the following criteria:

- a) 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
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

If a lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, AB 52 requires the implementation of mitigation measures identified in the consultation process required under PRC Section 21080.3.2. If consultation fails to identify specific mitigation, PRC Section 21084.3(b) lists the following measures that may be considered, where feasible, to avoid or minimize the impacts:

- Avoidance and preservation of the resources in place, including, but not limited to: planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
 - Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - Protecting the resource.

Senate Bill 18

California Government Code Section 65352.3, adopted pursuant to the requirements of SB 18, requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction, and are identified, upon request, by the Native American Heritage Commission (NAHC). As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

b. Existing Conditions

As part of the process of identifying tribal cultural resources issues within or near the project site, the NAHC conducted a search of the Sacred Lands File (SLF). The SLF search stated that the SLF search was completed with negative results.

AB 52 and SB 18 Consultation

In accordance with AB 52 and SB 18, Union City prepared and mailed letters to local Native American contacts informing them of the General Plan 2040 on October 8, 2018. None of the tribes contacted responded to request consultation. Copies of correspondence are provided in Appendix E.

4.15.2 Impact Analysis

a. Methodology and Thresholds of Significance

According to Appendix G of the *CEQA Guidelines*, an impact on Tribal Cultural Resources (TRCs) would be significant if the 2040 General Plan would:

1. 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:

- a) 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
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The presence and significance of a potential tribal cultural resource is determined through consultation between lead agencies and local California Native Americans. Impacts to tribal cultural resources are highly dependent on the nature of the resource but, in general, could occur if there is destruction or alteration of the resource and its surroundings, restricted access to the resource, or other disturbances.

Threshold 1: Would the General Plan cause a substantial adverse change in the significance of a tribal cultural resource?
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Impact TCR-1 DEVELOPMENT PROJECTED BY GENERAL PLAN 2040 MAY INVOLVE EXCAVATION, WHICH HAS THE POTENTIAL TO IMPACT PREVIOUSLY UNIDENTIFIED TRIBAL CULTURAL RESOURCES. IMPACTS ON TRIBAL CULTURAL RESOURCES WOULD BE LESS THAN SIGNIFICANT.

Effects on tribal cultural resources can only be known once a specific project has been proposed because the effects are highly dependent on the individual project site conditions, and the characteristics of the proposed activity, including but not limited to the level of ground disturbance associated with construction activities. Although the current AB 52 consultation for this document did not identify any specific TCRs within the City, new TCRs may be identified or established during implementation of the 2040 General Plan which is expected to occur over many years. Therefore, as specific projects are proposed, consultation with tribes under AB 52 would occur to determine if any TCRs may be impacted by specific projects. If TCRs are identified during AB 52 consultation, compliance with AB 52 on a project by project basis, as required, would ensure that development under the proposed 2040 General Plan does not have a detrimental effect on TCRs. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts to human burials would be less than significant without mitigation.

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4.16 Utilities and Service Systems

This section evaluates potential effects on utilities related to implementation of the proposed project by identifying anticipated demands and existing and planned service availability.

4.16.1 Setting

a. Water Supply and Delivery

Alameda County Water District

The Alameda County Water District (ACWD) serves an area of approximately 105 square miles and covers the communities of Fremont, Newark, and Union City. ACWD produces, stores, treats, and distributes water for a population of over 330,000 people in southern Alameda County and, as of June 2013, provided water service through over 83,000 connections.

ACWD manages 825 miles of water pipelines and manages 12 reservoirs and tanks. Because of the historic drought in 2014, and the widespread conservation efforts by ACWD customers, total production in 2014 was approximately 40,200 acre-feet. However, this is a lower amount than in both 2012 and 2013 when the total production was 47,000 and 49,800 acre-feet, respectively. Water is provided to ACWD from three sources: local supplies, the State Water Project (SWP), and San Francisco's Regional Water. Local supplies include fresh groundwater from the Niles Cone Subbasin, desalinated brackish groundwater from portions of the groundwater basin previously impacted by saltwater intrusion, and surface water from the Del Valle Reservoir. From 2006 to 2015, approximately 29 percent of ACWD's supply came from the SWP, 17 percent from the San Francisco Regional Water System, and 54 percent from local supplies (ACWD 2015). The SWP and San Francisco Regional Water Supplies are imported into the ACWD service area through the South Bay Aqueduct and Hetch Hetchy Aqueduct, respectively. The amount of water available from these sources is variable in any given year due to hydrologic conditions and other factors.

Service Area

As described above, ACWD's 105 square-mile service area encompasses the cities of Union City, Fremont, and Newark, a combined population of over 330,000, and over 7,500 businesses. ACWD's service area is bounded by San Francisco Bay on the west, the hills of the Diablo Range on the east, the city of Hayward to the north, and Alameda Creek to the south. The western portion of the service area adjacent to San Francisco Bay consists primarily of salt evaporation ponds and saltwater marshes. These ponds and marshes extend from one to four miles inland and cover an area of approximately 35 square miles.

ACWD is located in the San Francisco Bay Hydrologic Region as defined by the California Department of Water Resources. The mean annual precipitation within ACWD service area is geographically variable due to the Diablo Range on the eastern boundary of the service area. Along the Diablo Range the mean annual precipitation is the highest at approximately 20 inches. However, along the western boundary, adjacent to the San Francisco Bay, the mean annual precipitation is approximately 13 to 15 inches. The mean annual precipitation at the Niles precipitation gauging station, located approximately one-mile northeast of Niles, California, and approximately eight miles downstream (west) from James H. Turner Dam on San Antonio Creek, is approximately 19 inches.

The precipitation in the area is highly seasonal with over 75 percent of the rainfall occurring in the winter months between November and March (ACWD 2016; Union City 2015).

Supply and Distribution

Water for the ACWD comes from three sources: local supplies, the SWP, and San Francisco's Regional Water System. Surface water is imported from the Sacramento-San Joaquin River Delta and/or Lake Del Valle via the South Bay Aqueduct. This water is purified at ACWD's surface water treatment plant and then delivered to customers.

Water purchased from the San Francisco Regional Water System is surface water that originates in either the Hetch Hetchy Reservoir in Yosemite National Park, or locally in Calaveras or San Antonio Reservoirs in the Alameda Creek watershed. Hetch Hetchy water meets all federal and State criteria for watershed protection, disinfection treatment, bacteriological quality, and operational standards, and has been granted a filtration exemption by the United States Environmental Protection Agency (USEPA) and the California Department of Public Health. Water from the local reservoirs is treated at ACWD's Water Treatment Plant No. 2 which is a surface water treatment plant, located on Mission Boulevard near the I-680 interchange near Fremont. Water from the San Francisco system is normally delivered through Hetch Hetchy Aqueduct connections in Fremont. Additional connections in Fremont and Newark may be used to meet peak summer water demands and in times of emergency. San Francisco Regional Water System water is administered by the Bay Area Water Supply and Conservation Agency.

Blended water consists of a combination of purchased San Francisco Regional Water System water and local groundwater. The groundwater supply comes from the Niles Cone Groundwater Basin, which underlies the Tri-City area and is replenished through infiltration from local rainwater, runoff from the Alameda Creek Watershed, and the water from the South Bay Aqueduct. Purchased San Francisco Regional Water System water is blended with Peralta/Tyson and Mowry Wellfield water at ACWD's Blending Facility and is delivered to customers living in north Fremont, Union City, and parts of Newark. Desalted or desalinated water is produced at the Newark Desalination Facility (NDF) from brackish local groundwater. The desalination water produced by the NDF is blended with the Aquifer Reclamation Program well water to achieve a more balanced mineral content before being delivered to customers (Union City 2015).

Bay Area Water Supply and Conservation Agency

The Bay Area Water Supply and Conservation Agency, of which ACWD is a member agency, was created in 2003 to represent the interests of the 24 cities, water districts, a water company, and Stanford University that purchase water on a wholesale basis from the San Francisco Public Utilities Commission. The Bay Area Water Supply and Conservation Agency water management objective is to ensure that a reliable, high quality supply of water is available where and when people within the service area need it. In February 2015, the Bay Area Water Supply and Conservation Agency (BAWSCA) published the Long-Term Reliable Water Supply Strategy Phase II Final Report developed to meet the projected water needs of its member agencies and their customers through 2035 and to increase their water supply reliability under normal and drought conditions (BAWSCA 2015).

Del Valle Reservoir

Del Valle Reservoir is about 30 miles east of Union City. The reservoir serves multiple purposes including flood control, water supply, and recreation. Natural inflows into the reservoir due to rainfall runoff are shared between ACWD and the Alameda County Flood Control District Zone 7.

ACWD uses its share of the natural inflow either to supply its water treatment plants or to provide additional supplies for groundwater recharge. The Del Valle Reservoir also serves as a temporary storage facility for SWP supplies.

Niles Cone Groundwater Basin

Local runoff from the Alameda Creek watershed accounts for about 40 percent of the ACWD total water supply and is mainly used to recharge the aquifers of the Niles Cone Groundwater Basin. This runoff, together with water released from the South Bay Aqueduct at a location east of the town of Sunol, flows down Alameda Creek and into the Alameda Creek Flood Control Channel. Here, the water is captured behind two large, inflatable rubber dams. These dams divert water to the Quarry Lakes where water percolates to recharge the underlying groundwater basin. Groundwater is extracted from 16 wells in the basin. Together, these wells are capable of producing up to 47.5 million gallons of water per day. This water is blended with San Francisco Regional Water System supplies before being delivered to customers.

State Water Project

The State Water Project (SWP) supplies about 40 percent of the ACWD total water supply. This water is imported from the Sacramento-San Joaquin River Delta via the South Bay Aqueduct and purified at the water treatment plants before it is delivered to customers. The SWP, managed by the Department of Water Resources, is the largest State-built, multi-purpose water project in the country. The SWP facilities include 28 dams and reservoirs, 26 pumping and generating plants, and approximately 660 miles of aqueducts. The water stored in the SWP storage facilities originates from rainfall and snowmelt runoff in Northern and Central California watersheds. The primary storage facility for the SWP is Lake Oroville in the Feather River Watershed. Releases from Lake Oroville flow down the Feather River to the Sacramento River, which subsequently flows to the Sacramento-San Joaquin River Delta. The SWP diverts water from the Delta through the Banks Pumping Plant, which lifts water from the Clifton Court Forebay in the Delta to the California Aqueduct and Bethany Reservoir. From Bethany Reservoir the South Bay Pumping Plant lifts water into the South Bay Aqueduct, which delivers SWP water to ACWD and other Bay Area water agencies in Alameda and Santa Clara Counties.

Treatment Facilities

Before being delivered to ACWD customers, the source water supplies are treated to meet and surpass all State and federal drinking water standards. ACWD operates two surface water treatment plants that treat SWP water and local surface water from Del Valle Reservoir. In addition, the Newark Desalination Facility treats brackish groundwater to remove salts and other impurities; the Blending Facility blends San Francisco Regional Water System water with local fresh groundwater; and a Regional Water System Direct Takeoff receives direct supplies of San Francisco Regional Water System water. Details of the facilities operated by the ACWD are as follows:

- **Mission San Jose Water Treatment Plant (MSJWTP):** Originally placed in service in 1974, the facility uses membrane ultra-filtration technology for treatment of surface water from the South Bay Aqueduct. The Water Treatment Plant is located near I-680 on Vargas Road. Originally, the design production rate at MSJWTP with the UF system was intended to be 8-10 million gallons per day (MGD) depending upon the applied water temperature. However, the plant is not capable of producing more than 4 MGD due to excessive fouling and fiber breakage. Given these limitations, the sustainable production rate at MSJWTP is 3.2 MGD.

- **Water Treatment Plant No. 2 (WTP2):** Placed into service in 1993, this treatment plant is a conventional ozone plant used to treat water delivered via the South Bay Aqueduct. It is located on State Route 238, also called Mission Boulevard, near the Interstate 680 interchange in Fremont. The maximum design production rate at WTP2 is 28 MGD. However, this production rate is reduced due to recirculation of some process flows and reduced output when filters are off-line for backwashing. As a result, the sustainable production rate at WTP2 is 22 MGD. In 2014 this facility underwent upgrades that will save energy, reduce maintenance costs, be more reliable, and enable WTP2 to continue to produce water that meets or exceeds all federal and State drinking water standards for years to come.
- **Blending Facility:** Placed in service in 1992, this facility reduces the hardness of the ACWD's production well water by combining it with softer water from San Francisco Regional Water Supplies. The Blending Facility uses three parallel in-line static mixers, each with a design capacity of 20 MGD, which provide the mixing for the water from the Mowry and Peralta/Tyson Wellfields and San Francisco Regional Water Supplies. The Blending Facility production rate is limited by several factors including hydraulic capacity, hardness targets, and water costs. Normal sustainable output from the Blending Facility is 45 MGD, however, the distribution system can be controlled by valves such that total production can reach 60 MGD.
- **Newark Desalination Facility (NDF):** Placed in service in September 2003, the desalination facility uses a reverse osmosis membrane filtration process to treat brackish groundwater. The facility is located near Cherry and Central Avenue in Newark. The first phase of the NDF production produced up to 5 MGD of permeate water. After an expansion of the plant was finalized in August 2010, the facility doubled the production of permeate to 10 MGD, for a total blended production of 12.5 MGD to the distribution system.
- **Regional Water System Direct Takeoff:** ACWD can receive direct supplies of water via any of the eight takeoffs from the San Francisco Regional Water Supply system located within the service area. Water purchased from the San Francisco Water Supply system is already treated with chloramines, and all delivered water supplies have been fluoridated since 2005. The Fremont take-off is the primary source of water for the blending facility.

Consumption

Water consumption patterns in the ACWD service area are a function of many independent factors, including growth, weather conditions, economic conditions, and water conservation efforts. From 2001 to 2007 overall consumption in the service area was relatively flat, attributed primarily to less robust local economic conditions, mild weather, and on-going water conservation programs. After 2007 ACWD saw significant declines in overall water consumption, which is attributed to a combination of continued economic downturn, 2007-2009 successive dry year conditions, and statewide conservation campaigns. The resulting substantive reduction in demand for water has changed ACWD's near and future anticipated levels of demands. Table 4.16-1 provides a summary of the future projections in terms of the water supply versus water demand from the year 2020 to a projected year of 2040.

Table 4.16-1 ACWD Projected Water Supply and Use: Normal Year (Acre-Feet per Year)

	2020	2025	2030	2035	2040
Water Supply	77,200	76,900	76,600	76,300	76,000
Water Demand	62,900	67,000	68,600	69,300	69,800
Projected Difference	14,300	9,900	8,000	7,000	6,200

Source: ACWD 2016

Conservation

ACWD offers a wide variety of rebates, incentives, and technical assistance to its residential, commercial, industrial, institutional, and large landscape customers to encourage water conservation. Some of the current water conservation programs include: water savings assistance program for low-income homeowners; free water conserving devices; free home water audits; high water use notifications; leak detection program; water use efficiency surveys; and a water-efficient landscape rebate program.

b. Wastewater and Storm Drainage

Union Sanitary District

The Union Sanitary District (USD) is an independent special district that provides wastewater collection, treatment, and disposal services in Union City. USD provides both primary and secondary treatment services: the primary treatment uses screening and sedimentation, while the secondary treatment uses activated sludge. USD maintains 783 miles of sewer pipeline and in 2013 treated an average of 24 million gallons of wastewater per day. USD receives its revenue from four primary sources: sewer service charges; capacity fees; other minor operating revenues such as permits, inspections, and outside work that USD performs in cooperation with other municipalities; and interest earning on reserve funds (USD 2015).

Service Area and Facilities

The USD service area encompasses a total of 60.2 square miles in southern Alameda County: 9.9 square miles in Union City, 13.8 square miles in Newark, and 36.4 square miles in Fremont. USD serves a total population of over 347,000 residents. In 2018 USD had a total of 114,251 connections. Domestic/residential living units accounted for about 111,136, or about 97 percent of the total number of connections. The other USD connections were 1,768 commercial connections and 1,347 industrial connections (USD 2018b).

The USD service area is made up of three drainage basins: Irvington, Newark, and Alvarado. Each basin contains a separate pump station and each pump station collects the wastewater from within its particular basin. The Alvarado Basin covers all of Union City and a small portion of Fremont. The USD's Alvarado Treatment Plant is located in the Alvarado Basin within the City's Horner-Veazy area. The Alvarado Treatment Plant uses activated sludge as the biological liquid treatment process to meet the National Pollutant Discharge Elimination System (NPDES) permit requirements for secondary treatment. Additional treatment processes include primary and secondary clarification, and chlorination. The capacity of the Alvarado Treatment Plant is 33 MGD (USD 2018a). Solids handling at the Alvarado Treatment Plant includes: sludge thickening, digestion and dewatering. Dewatered sludge is transported by truck to approved agricultural fields in Sacramento, Solano, and Alameda Counties, where biosolids are surface applied and incorporated into the soil.

Disposal

All wastewater generated within the USD service area, including peak wet weather flows, receives full secondary treatment at the Alvarado Treatment Plant and is discharged to the East Bay Dischargers Authority's (EBDA) system for disposal in San Francisco Bay. There are no wet weather bypasses or overflows from the USD's facilities. The EBDA system conveys treated effluent for discharge to the Bay from several local agencies. The facilities consist of approximately 58,000 feet of pipeline ranging in diameter from 60 inches, where USD discharges into the system, to 96 inches at the outfall. USD's contractual discharge capacity is about 43 MGD (USD 2015).

Storm Drains

The City owns and maintains the public storm drain system, which includes all of the storm drains, pipes, catch basins, and manholes within the City right-of-way. The outfalls, channels, creeks, and pump stations are owned and operated by Alameda County Flood Control and Water Conservation District. All storm drains in Union City flow directly to nearby creeks, wetlands, and the Bay.

The Environmental Programs Division of Union City conducts the industrial and illicit discharge inspection program. Additionally, the City reviews storm water pollution prevention plans (SWPPP), conducts storm water event inspections of construction sites, and receives and investigates complaints about illicit discharges into the public storm drain system.

c. Solid Waste and Recycling

Republic, a private company, is responsible for the collection of all municipal solid waste generated in Union City. Republic collection vehicles deliver the material to the Fremont Recycling and Transfer Station in Fremont, California. The solid waste is then transferred onto larger trucks and transported to the Altamont Landfill and Resource Recovery Facility, located 48 miles east of Union City in Livermore, California. A disposal agreement with Waste Management, owner/operator of the Altamont Landfill, ensures long-term disposal capacity at the landfill for Union City and neighboring jurisdictions.

Weekly curbside collection of residential recyclables in Union City is provided by Tri-CED. Single stream recycling allows residents to place cans, bottles, paper, plastics, etc. in the same receptacle. No sorting of materials is required by the resident. Tri-CED employees process the recyclables at the non-profit's large Materials Recovery Facility, located at 33377 Western Avenue in Union City. The facility also houses a certified California Redemption Center, where residents can redeem aluminum cans, plastic beverage bottles, glass bottles, and containers labeled with the California Redemption Value symbol. Year round drop off of unwanted electronic waste, such as televisions, computer screens, and cell phones is also available at the buyback center.

According to the Solid Waste Facility Permit for the Altamont Landfill, peak traffic volume for incoming waste materials shall not exceed 557 trips per day, and the peak tonnage of incoming waste shall not exceed 11,150 tons per day (CalRecycle 2005). The maximum permitted capacity of the landfill is 124.4 million cubic yards or 87.1 million tons per the Solid Waste Facility Permit. According to the CalRecycle, the remaining capacity of the landfill in December 2014 was 65,400,000 cubic yards, or 45.8 million tons (CalRecycle 2018).

According to CalRecycle (2017), the Altamont Landfill receives approximately 530 tons per day of municipal solid waste for disposal, based on the daily average for 2013 through 2017. Municipal solid waste comes from primarily the Bay Area region, but also from more distant municipalities and cities, such as Ukiah, Sacramento, and Monterey (CalRecycle 2018). Table 4.16-2 presents the

amount of solid waste disposed of at the Altamont Landfill that originated from Union City between the years of 2013 and 2017. As the table shows, only nominal amounts of solid waste are disposed of at landfills other than the Altamont Landfill.

Table 4.16-2 Annual Solid Waste Disposal – Union City

Year	Solid Waste Disposed of at Altamont Landfill (annual tons)	Solid Waste Disposed of at other Regional Landfills (annual tons)*
2013	34,882	4,484
2014	33,932	5,001
2015	34,536	5,224
2016	35,610	5,248
2017	36,421	6,896

*Other regional landfills include: Azusa Land Reclamation Co. Landfill, Corinda Los Trancos Landfill, Covanta Stanislaus Inc., Fink Road Landfill, Foothill Sanitary Landfill, Guadalupe Sanitary Landfill, Highway 59 Disposal Site, Keller Canyon Landfill, Kirby Canyon Recycling & Disposal Facility, Monterey Peninsula Landfill, Newby Island Sanitary Landfill, Potrero Hills Landfill, Recology Hay Road, Redwood Landfill, Vasco Road Sanitary Landfill, Zanker Material Processing Facility, and Zanker Road Class III Landfill

Source: Disposal Reporting System: Jurisdiction Disposal and Alternative Daily Cover Tons by Facility (CalRecycle 2017)

d. Regulatory Setting

Federal

Clean Water Act

The federal Clean Water Act, enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the U.S. Environmental Protection Agency the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. At the State and regional levels in California, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB).

Clean Water Act Section 402

Section 402 of the Clean Water Act requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source, such as a pipe, ditch, or channel, into a surface water of the United States must obtain permission under the NPDES permit. All NPDES permits are written to ensure that the surface water receiving discharges will achieve specified water quality standards.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations (CFR), Part 258 (Resource Conservation and Recovery Act RCRA, Subtitle D) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

State

Sustainable Groundwater Management Act

In September 2014, Governor Brown signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins.

The developed area of Union City, generally coinciding with area west of State Route 238, is within the Santa Clara Valley-Niles Cone Subbasin. The ACWD is designated as the exclusive groundwater sustainability agency for this Subbasin. As an exclusive local agency, ACWD is required to submit an Alternative to a Groundwater Sustainability Plan or a Groundwater Sustainability Plan for the management of the Santa Clara Valley-Niles Cone Subbasin. The ACWD is preparing an Alternative to a Groundwater Sustainability Plan, but it has not been adopted to date (ACWD 2018).

Senate Bills 610 and 221, Water Supply Assessment and Verification

Senate Bills (SB) 610 and 221 amended State law, effective January 1, 2002, to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large development projects with greater than 500 dwelling units or 500,000 square feet of commercial space. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610 water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects as defined in Water Code 10912 subject to CEQA. Under SB 221 approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

California Department of Water Resources

The California Department of Water Resources is responsible for preparing and updating the California Water Plan, which is a policy document that guides the development and management of State water resources. The plan is updated every five years to reflect changes in resources and urban, agricultural, and environmental water demands. The California Water Plan suggests ways of managing demand and augmenting supply to balance water supply with demand.

Urban Water Management Planning Act

In 1983 the California Legislature enacted the Urban Water Management Planning Act (Water Code Section 10610–10656). The Act states that every urban water supplier that provides water to 3,000

or more customers, or that provides over 3,000 acre-feet annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act requires that urban water suppliers adopt an urban water management plan (UWMP) at least once every five years and submit them to the Department of Water Resources. Noncompliant urban water suppliers are ineligible to receive funding pursuant to Division 24, commencing with Section 78500, or Division 26, commencing with Section 79000, or receive drought assistance from the State until the UWMP is submitted and deemed complete pursuant to the Urban Water Management Planning Act.

Senate Bill 7x7 Statewide Water Conservation

In November 2009 the California State Legislature passed and the Governor approved a comprehensive package of water legislation, including SB 7x7 addressing water conservation. In general SB 7x7 requires a 20 percent reduction in per capita urban water use by 2020, with an interim 10 percent target in 2015. The legislation requires urban water users to develop consistent water use targets and to use those targets in their UWMPs.

Porter-Cologne Water Quality Control Act (California Water Code)

The State of California is authorized to administer Federal or State laws regulating water pollution within the State. The Porter-Cologne Water Quality Control Act (Water Code §§ 13000, *et seq.*) includes provisions to address requirements of the Clean Water Act. These provisions include National Pollutant Discharge Elimination System (NPDES) permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the State. Additionally, the Porter-Cologne Act states that the quality of all the waters of the State, including groundwater and surface water, must be protected for the use and enjoyment by the people of the State.

In California, the NPDES program is administered by the SWRCB through the Regional Water Quality Control Boards (RWQCB) and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. The federal Clean Water Act prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California, and adopted an NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise known as the Construction General Permit (Order 2009-0009, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Construction General Permit requires that the landowner and/or contractor file permit registration documents prior to commencing construction and then pay a fee annually through the duration of construction. These documents include a notice of intent, risk assessment, site map, stormwater pollution prevention plan (SWPPP), and signed certification statement. The SWPPP must include measures to ensure that: all pollutants and their sources are controlled; non-stormwater discharges are identified and eliminated, controlled, or treated; site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges; and BMPs installed to reduce or eliminate pollutants after construction are completed and maintained. The Construction General Permit specifies minimum BMP requirements for stormwater control based on the risk level of the site. The Permit also specifies minimum qualifications for a qualified SWPPP developer and qualified SWPPP practitioner.

Title 22 of California Code of Regulations

Title 22 regulates the use of reclaimed wastewater. In most cases only disinfected tertiary water may be used on food crops where the recycled water would come into contact with the edible portion of the crop. Disinfected secondary treatment may be used for food crops where the edible portion is produced below ground and will not come into contact with the secondary effluent. Lesser levels of treatment are required for other types of crops, such as orchards, vineyards, and fiber crops.

The California Department of Public Health sets specific requirements for treated effluent reuse, or recycled water, through Title 22 of the California Code of Regulations. These requirements are primarily set to protect public health. The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 are used to regulate recycled wastewater and are administered jointly by the California Department of Public Health and the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from un-disinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water. Salt concentrations, such as chloride, nitrogen, and sodium, in the effluent are regulated based on the Basin Plan for the San Francisco Bay Basin (San Francisco Bay RWQCB 2017), which also considers local groundwater quality.

California Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) oversees, manages, and monitors waste generated in California. CalRecycle provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste substances and non-hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016, both of which are described below.

Assembly Bill 939

AB 939 (Public Resources Code 41780) requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of the integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing and stimulate the purchase of recycled products.

Assembly Bill 341 – Mandatory Commercial Recycling.

The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. AB 341 required all businesses that generate four or more cubic yards of garbage per week and multi-family dwellings with five or more units to recycle by July 1, 2012. AB341 also sets a statewide goal of 75 percent waste diversion.

Senate Bill 1016

SB 1016 requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, the Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board will be required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years

Regional and Local

Municipal Stormwater Permitting Program

The San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049 (MRP) issues the Waste Discharge Requirements and NPDES Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of over 70 municipalities, including Union City, and local agencies in five Bay Area counties. Under the MRP, permittees are prohibited from non-stormwater discharges into storm drain systems and watercourses. Permitted discharges must not cause or contribute to a violation of any applicable water quality standard for receiving waters. Upon a determination by either the MRP permittee(s) or the RWQCB that discharges are causing or contributing to an exceedance of an applicable water quality standards, the permittee(s) must notify, within no more than 30 days, and thereafter submit a report to the RWQCB. The report must describe controls or best management practices (BMPs) that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The MRP also sets forth requirements for monitoring water quality.

Provision C.3 of the MRP establishes discharge requirements for new development and redevelopment projects. The goal of Provision C.3 is for the MRP permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. According to the MRP, this goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Union Sanitation District Sewer System Management Plan

The USD Sewer System Management Plan (SSMP) focuses proper management, operation, and maintenance of all parts of the sanitary sewer system to help reduce and prevent sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur (USD 2015). The goals of the USD SSMP are to:

- Properly manage, operate, and maintain all parts of the wastewater collection system
- Provide a safe work environment for employees
- Minimize preventable SSO
- Understand the condition of and maintain infrastructure to maximize the life of the collection system
- Operate and maintain systems to minimize impact on customers

- Prepare for emergencies
- Be a part of the community and be a responsible public agency
- Involve employees in the strategic planning process
- Effectively plan system expansion in order to meet the capacity needs of the three cities that USD serves
- Set high, achievable standards for the construction of new infrastructure

The Alameda County Waste Reduction and Recycling Initiative Charter Amendment (Measure D)

Alameda County residents approved Measure D in November 1990. Measure D requires that a per ton disposal surcharge be imposed at the Altamont and Vasco Road Landfills in order to provide the necessary funds to design and implement municipal recycling services for residents and businesses. The Alameda County Recycling Board collects an \$8.23 per ton landfill disposal fee imposed by Measure D to support waste reduction efforts. The distribution of Measure D funds is as follows: 50 percent to cities for recycling programs; 15 percent discretionary to supplement the other categories and for administration; 10 percent grants to non-profits; 10 percent for source reduction; 10 percent for market development; and 5 percent for recycled product procurement price preference. Funds disbursed to municipalities must be used "...for the continuation and expansion of municipal recycling programs." Measure D is intended to ensure that the State's waste diversion mandates are met and possibly exceeded by supporting source reduction and recycling in Alameda County.

Alameda County Integrated Waste Management Plan: Countywide Element

The Countywide Integrated Waste Management Plan is a State-mandated plan prepared by the Alameda County Waste Management Authority. The Plan identifies solid waste facilities and wastesheds within Alameda County. It describes the countywide plan for reaching the State-mandated 50 percent recycling goal and the county-mandated 75 percent recycling goal. Waste reduction and disposal facilities in the county that require Solid Waste Facility Permits must conform to policies and siting criteria contained in the Countywide Integrated Waste Management Plan.

Alameda County Mandatory Recycling Ordinance

The Alameda County Mandatory Recycling Ordinance prohibits the disposal of certain readily recyclable materials. It requires multifamily residential properties with five or more units and businesses with four cubic yards or more of weekly garbage service to provide on-site recycling to handle the amount of recyclable materials generated at the location. Phase 1 of the Ordinance became effective July 1, 2012. Phase II of the Ordinance expands the recycling requirement to all businesses and adds discarded food and compostable paper products to list of covered materials. The City plans to participate in Phase II in near future.

Alameda County Reusable Bag Ordinance

The objective of this countywide ordinance is to reduce the use of single-use carryout bags and to promote the use of reusable bags. As of January 1, 2013, grocery stores and other stores in Alameda County that sell packaged food no longer provide single-use plastic carryout bags, nor do they distribute paper bags or reusable bags for free at checkout, pursuant to the Ordinance.

Union City Municipal Code Chapter 7: Health and Sanitation

Chapter 7 of the Union City Municipal Code includes regulations related to the storage, accumulation, collection and disposal of solid waste in the City. Requirements associated with the diversion of recyclables, green waste and other materials are also outlined. It also adopts and incorporates the Alameda County Waste Management Authority Mandatory Recycling Ordinance No. 2012-1 (“Mandatory Recycling Ordinance, The Ordinance”), passed on January 25, 2012, which requires, among other things, that covered jurisdictions implement commercial solid waste recycling programs that consist of education, outreach and monitoring of businesses and report to the State on the progress achieved in implementing the program. Union City Municipal Code Chapter 15.75 Construction and Demolition Debris Recycling regulates the disposal of debris from construction and demolition projects within the City and to divert such debris from landfill. Union City Municipal Code Chapter 7.10 Single-use bag reduction adopts and incorporates the Single Use Bag Reduction Ordinance No. 2012-02 of the Alameda County Waste Management Authority designed to reduce the use of single-use carryout bags and promote the use of reusable bags at the point-of-sale in Union City.

Union City Climate Action Plan

The Union City Climate Action Plan provides a plan to achieve a measurable reduction in GHG emissions, consistent with State law (i.e., Assembly Bill 32 and Executive Order S-03-05). The plan includes a series of “Waste Reduction” policies designed to increase waste diversion, strengthen construction and demolition recycling standards, expand outreach programs, and increase waste reduction in municipal facilities. The total GHG reduction potential of the Waste Reduction Action Area is approximately nine percent of the total GHG reductions of the CAP. In addition, the plan presents a strategy to achieve the City’s goal of reducing GHG emissions 20 percent below 2005 levels by the year 2020.

4.16.2 Impact Analysis

a. Methodology and Thresholds of Significance

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, implementation of the 2040 General Plan may have a significant adverse impact if it would do any of the following:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments
4. Generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals
5. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

IMPACT UTL-1 DEVELOPMENT PROJECTED BY THE 2040 GENERAL PLAN WOULD INCREASE DEMAND FOR ELECTRIC POWER, NATURAL GAS, TELECOMMUNICATIONS, AND STORMWATER DRAINAGE. HOWEVER, DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD OCCUR IN DEVELOPED AREAS OF THE CITY WHERE THESE FACILITIES EXIST AND RELOCATION, IF APPLICABLE, WOULD OCCUR IN PREVIOUSLY DISTURBED OR DEVELOPED AREAS GENERALLY. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the 2040 General Plan would create additional demand for electricity, natural gas, and telecommunication facilities. As discussed in Impact E-1 in Section 4.5, *Energy*, the 2040 General Plan would implement a land-use strategy that promotes greater overall energy efficiency in community and municipal operations. 2040 General Plan policies and implementation programs would ensure that development under the 2040 General Plan would comply with existing energy efficiency regulations, and would encourage new development to take advantage of voluntary energy efficiency programs. As described in Section 4.5, *Energy*, development facilitated by the proposed 2040 General Plan would not result in inefficient or wasteful use of energy. Development facilitated by the 2040 General Plan would occur within the already developed and urbanized areas of the City where electric and natural gas infrastructure are present, as well as telecommunication infrastructures. Therefore, the 2040 General Plan would not require expansion or relocation of electric power, natural gas, or telecommunication facilities such that significant environmental effects would result. Additionally, the Public Facilities and Services Element of the 2040 General Plan contains the following policy that would minimize the potential for electric and gas infrastructure to result in environmental impacts:

Policy PF-7.3: Coordination on Siting of Utilities. The City shall coordinate with utility providers in the siting, site layout, and design of gas and electric facilities, including changes to existing facilities, to minimize environmental, aesthetic, electromagnetic, and safety impacts on existing and future residents.

As described in Impact HWQ-2 in Section 4.9, *Hydrology and Water Quality*, development facilitated by the 2040 General Plan would create new impervious surfaces, which would result in stormwater runoff. This runoff could enter the City's municipal storm drain system. Because the 2040 General Plan is focused on infill development, especially in the focus areas, the conversion of open space and permeable surfaces to impervious surfaces would be minimized. Additionally, as described in Impact HWQ-2, the amount of new impervious surfaces would be reduced through Low Impact Development (LID) goals and policies in the 2040 General Plan, including Policy RC-3.5, and the requirements of Provision C.3 of the MRP. Provision C.3.c lists some LID principles, including green roofs, permeable pavement, preserving undeveloped open space, biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes that could be implemented. LID techniques would reduce impervious surfaces and would allow for more infiltration of precipitation and stormwater, which would support groundwater recharge and reduce the need for new storm drain facilities. Because development would occur within urbanized areas of the City, and LID techniques would be incorporated, the construction or relocation of new storm drain facilities would not have significant environmental impacts. With implementation of the 2040 General Plan

policies, impacts related to electric power, natural gas, telecommunication, and storm drain facilities would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

<p>Threshold 1: Would the General Plan require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</p>
<p>Threshold 2: Would the General Plan have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?</p>

IMPACT UTL-2 DEVELOPMENT PROJECTED BY THE 2040 GENERAL PLAN WOULD INCREASE DEMAND FOR WATER SUPPLY. HOWEVER, WITH ADHERENCE TO THE 2040 GENERAL PLAN POLICIES AND ACWD DROUGHT CONTINGENCY PLANS, WATER SUPPLIES WOULD BE ADEQUATE TO SUPPORT NEW DEVELOPMENT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Growth and development facilitated by the 2040 General Plan would create additional demand for water in Union City. As described above in Impact UTL-1, development facilitated by the 2040 General Plan would occur within developed areas of the City, generally as infill development or redevelopment. Therefore, water infrastructure exists and is available for new development. Because the 2040 General Plan would allow for increased density in some areas of Union City compared to existing land use designations, water infrastructure, such as pipeline, could require upgrades. Installation of upgraded infrastructure would result in ground disturbance. Generally, this ground disturbance would occur in previously disturbed or developed areas, reducing the potential for environmental impacts. As described in Section 4.3, *Biological Resources*, compliance with mitigation measures and 2040 General Plan policies would minimize impacts to sensitive environmental resources where upgrades require construction in streams and other undeveloped areas of the City. Therefore, the 2040 General Plan would not result in construction or relocation of water facilities such that significant environmental impacts would result.

The water demand calculations for the development facilitated by the 2040 General Plan are based on sewage generation factors developed by the City of Los Angeles (City of Los Angeles 2006). Household sizes in Los Angeles are generally comparable to those in the General Plan area. In addition, the Los Angeles factors are conservatively applied to development facilitated by the 2040 General Plan, where the climate is generally wetter than the climate in southern California. Each development type has its own associated sewage generation factor by unit, which were used to calculate projected sewage generation volumes for each type of new development. Sewage generation projections were then multiplied by a water demand factor of 1.1 to calculate the water demand. This is a commonly used approach to estimate water supply demands. Table 4.16-3 shows the total projected water demand by development type facilitated under buildout of the 2040 General Plan.

Table 4.16-3 Projected Total Water Demand by Development Type

Development Type	2040 General Plan Growth Forecast	Sewage Generation Factor	Projected Water Demand (gpd)	Projected Water Demand (AFY)
Single Family Residential	444 units	180 gpd/unit	87,912	99
Multi-Family Residential	3,886 units	120 gpd/unit	512,952	575
Commercial	950,186 sq. ft	80 gpd/1,000 sq. ft	83,616	94
Industrial	3,220,088 sq. ft	80 gpd/1,000 sq. ft	283,368	317
Office	3,898,839 sq. ft	150 gpd/1,000 sq. ft	643,308	721
Total			1,611,157	1,806

gpd = gallons per day; AFY = acre-feet per year; sq. ft = square feet

Note: Sewage generation projections were all multiplied by a water demand factor of 1.1 to calculate the original water demand.

Source for water demand factors used in calculations: City of Los Angeles 2006

As shown above in Table 4.16-1, ACWD projections indicate that water supply in 2040 exceed water demand by 6,200 AFY during a normal water year. The additional 1,806 AFY of water demand generated by development facilitated by the 2040 General Plan would represent approximately 29 percent of the excess supply in 2040. Therefore, the growth and development facilitated by the 2040 General Plan would not exceed water supplies in normal water years. According to the ACWD’s UWMP, during a multiple-drought year scenario, the demand for water in 2040 would exceed available water supplies by approximately 4,900 AFY (ACWD 2016). Therefore, the additional 1,806 AFY demand for water generated from development facilitated by the 2040 General Plan would exceed supplies in 2040 under a multiple-year drought. The ACWD has prepared a contingency plan that it can implement if faced with water shortages, which would allow it to reduce the level of water supplied by up to 50 percent, if needed. For example, ACWD can draw from reserve supplies to help meet short-term demands, can implement reduction in demand, and can augment its supply offsite to help meet demand during drought conditions.

The Public Facilities and Services Element of the 2040 General Plan contains Goal PF-3 and associated policies, listed below, to reduce impacts on water supplies and encourage the conservation of water.

Goal PF-3: Ensure the provision of a water system with adequate supply, distribution, and storage facilities to provide safe and reliable water to meet the existing and future needs of the city.

Policy PF-3.1: Enhance and Improve Water Service. The City shall encourage efforts by ACWD that enhance and/or improve water service to Union City residents and businesses.

Policy PF-3.2: Preserve and Enhance Water Supply. The City shall support Alameda County Water District in their efforts to preserve and enhance the water supply.

Policy PF-3.3: Ensure Adequate Water Supply Prior to Approving New Development. The City shall coordinate with ACWD to review development proposals to ensure that new development can be adequately served by the District's water supply system. The City shall only approve new development where an adequate public water supply and conveyance system exists or will be provided by the ACWD.

Policy PF-3.4: Ensure Interconnected Water Distribution System. With concurrence of the ACWD, water distribution systems are to be interconnected ("looped") wherever feasible to facilitate the reliable delivery of water anywhere in the city.

Policy PF-3.5: Water Efficient Landscape Ordinance. The City shall promote efficient water use and reduced water demand by ensuring compliance with the City's Water Efficient Landscape Ordinance. The City shall review and update the Water Efficiency Landscape Ordinance, as needed, to ensure that it is consistent with State law.

Policy PF-3.6: Require Water Conservation Features. The City shall require new development and City facilities to incorporate water conservation features to reduce overall water usage.

Policy PF-3.7: Water Conservation Education and Incentives. The City shall work with Alameda County Water District to expand outreach programs and incentivize water conservation throughout Union City.

Policy PF-3.8: Promote Bay Friendly Landscaping. The City shall continue to require the incorporation of Bay-Friendly landscaping practices into new development and promote the incorporation of these practices into existing landscapes.

Policy PF-3.9: Participate in Updates to the Urban Water Management Plan. The City shall work collaboratively with Alameda County Water District on updates to their Urban Water Management Plan, which is the District's long-term resource planning document for ensuring that adequate water supplies are available to meet existing and future water needs.

Policy PF-3.10: Monitor Wells. The City shall work collaboratively with Alameda County Water District during the development review process to ensure that wells are managed or removed consistent with District standards.

Policies PF-3.1 and 3.2 require maintaining the water supply and water service for future use in Union City, while Policy PF-3.3 requires that adequate water supply is available prior to the approval of new development under the 2040 General Plan. Additionally, Policies PF-3.5 through 3.8 promote water-efficient landscaping and improved water conservation initiatives in the community, in existing landscapes and with new development. As described above, the growth and development facilitated by the 2040 General Plan would not exceed available or anticipated water supplies in normal water years (non-drought scenarios), or in multiple-drought year scenarios; however, with full build-out of the 2040 General Plan, the anticipated water demand in 2040 would exceed anticipated water supplies by approximately 4,900 AFY (ACWD 2016).

Adherence to the 2040 General Plan policies listed above, notably Policy PF-3.3, would address this potential water supply shortfall by ensuring that the City would not approve new development(s) under the 2040 General Plan prior to confirmation from ACWD that adequate water supply for said development(s) is available. In addition, individual developments that meet certain criteria under Senate Bill 610, described above under *Regulatory Setting*, will be required to prepare a Water Supply Assessment (WSA), which identifies and verifies water supply availability under normal water year conditions, single dry year conditions, and multiple dry year conditions. The WSA will be attached to the CEQA document for the applicable project, and subject to public comment and review as part of the CEQA process. In addition, the ACWD will need to approve a project's WSA before the project may be implemented. With adherence to the 2040 General Plan policies described above, as well as compliance of build-out projects with Senate Bill 610, potential impacts to water supply would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 1: Would the General Plan require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Threshold 3: Would the General Plan 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?

IMPACT UTL-3 DEVELOPMENT PROJECTED BY THE 2040 GENERAL PLAN WOULD INCREASE DEMAND FOR WASTEWATER TREATMENT. HOWEVER, THE EXISTING WASTEWATER TREATMENT PLANT HAS SUFFICIENT CAPACITY FOR FUTURE DEVELOPMENT, AND THE 2040 GENERAL PLAN CONTAINS POLICIES TO ENSURE TREATMENT IS ADEQUATE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Growth and development facilitated by the 2040 General Plan would create additional demand for wastewater treatment in Union City. Because development facilitated by the 2040 General Plan would occur within the urbanized area of the City, existing wastewater infrastructure exists. Similar to water infrastructure, as described above in Impact UTL-2, increased density could require upgraded pipeline or pumps. Generally, the ground disturbance required to construct these upgrades would occur in previously disturbed or developed areas, reducing the potential for environmental impacts. As described in Section 4.3, *Biological Resources*, compliance with mitigation measures and 2040 General Plan policies would minimize impacts to sensitive environmental resources where upgrades require construction in streams and other undeveloped areas of the City. Therefore, the 2040 General Plan would not result in construction or relocation of wastewater facilities such that significant environmental impacts would result.

The wastewater generation calculations for the development facilitated by the 2040 General Plan are based on sewage generation factors developed by the City of Los Angeles (City of Los Angeles 2006). Each development type has its own associated sewage generation factor by unit, which were used to calculate projected wastewater generation volumes for each type of new development. Table 4.16-4 shows the total projected wastewater that would be generated by development type facilitated under buildout of the 2040 General Plan.

Table 4.16-4 Projected Total Wastewater Generation by Development Type

Development Type	2040 General Plan Growth Forecast	Sewage Generation Factor	Projected Wastewater Volume (gpd)
Single Family Residential	444 units	180 gpd/unit	79,920
Multi-Family Residential	3,886 units	120 gpd/unit	466,320
Commercial	950,186 sq. ft	80 gpd/1,000 sq. ft	76,015
Industrial	3,220,088 sq. ft	80 gpd/1,000 sq. ft	257,607
Office	3,898,839 sq. ft	150 gpd/1,000 sq. ft	584,826
Total			1,464,688

gpd = gallons per day; sq. ft = square feet

Source for water demand factors used in calculations: City of Los Angeles 2006

As described above, the Alvarado Treatment Plant has the capacity to treat 33 million gallons of wastewater per day, but currently treats approximately 25 million gallons daily on average (USD 2018a). Therefore, the Alvarado Treatment Plant currently has capacity to treat an additional 8 million gallons daily on average. As shown in Table 4.16-4, above, development facilitated by the 2040 General Plan would generate approximately 1.5 million gallons of wastewater per day. Accordingly, there is sufficient treatment capacity at the Alvarado Treatment Plant for the growth and development that would be facilitated by the 2040 General Plan.

Further, the Public Facilities and Services Element of the 2040 General Plan contains the following goals and associated policies to ensure new development is connected to the existing sanitary sewer system and that wastewater service is adequate.

Goal PF-1: Ensure the timely provision of public facilities and services that are adequately funded to meet the needs of existing and future city residents.

Policy PF-1.1: Ensure Adequate Facilities and Services. The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project unless the applicant can demonstrate that all necessary public facilities (including water service, sewer service, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other means).

Policy PF-1.3: Development Fair Share. The City shall require, to the extent legally possible, that new development or major modification to existing development pays the fair share cost of providing new public facilities and services and/or the cost for upgrading existing facilities.

Goal PF-4: Ensure adequate wastewater collection, treatment, and disposal.

Policy PF-4.1: Coordinate to Ensure Adequate Wastewater Service for New Development. The City shall coordinate its review of development proposals with USD to ensure new development can be adequately served.

Policy PF 4.2: Require Public Sewer System. The City shall only approve new development where it will be served by a public sewer system.

Policy PF-4.4: Support USD Water Reclamation Efforts. The City shall support USD in efforts to reuse treated wastewater by reclaiming it for irrigation or as a recharge to the underground water storage.

Implementation of these policies identified in the 2040 General Plan would ensure that impacts to wastewater associated with the new development facilitated by the 2040 General Plan would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

<p>Threshold 4: Would the General Plan generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p> <p>Threshold 5: Would the General Plan comply with federal, State, and local management and reduction statutes and regulations related to solid waste?</p>
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IMPACT UTL-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN WOULD INCREASE THE VOLUME OF SOLID WASTE GENERATED IN UNION CITY. HOWEVER, LOCAL INFRASTRUCTURE SERVING UNION CITY HAS ADEQUATE CAPACITY TO ACCEPT THE ADDITIONAL WASTE. FURTHER, THE 2040 GENERAL PLAN CONTAINS POLICIES TO INCREASE RECYCLING AND COMPLY WITH FEDERAL, STATE, AND LOCAL MANAGEMENT REDUCTION REGULATIONS. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of the 2040 General Plan would generate additional solid waste. Construction of the development facilitated by the 2040 General Plan would create construction debris, such as scrap lumber and flooring materials. Operation of the development facilitated by the 2040 General Plan would create typical household wastes associated with residential and office and commercial uses. Industrial development facilitated by the 2040 General Plan would also generate solid waste.

As shown above in Table 4.16-2, the Altamont Landfill has received between 33,932 and 36,421 tons per year of solid waste from Union City during the five-year period between 2013 and 2017. Additionally, other landfills in the region received between 4,484 and 6,896 tons of solid waste from Union City during these years, as shown in Table 4.16-2, above. Using these reported volumes of solid waste, and the population of Union City during each of these years, a per capita solid waste disposal rate was calculated for the City, as shown in Table 4.16-5. As shown in the table, the average per capita solid waste disposal rate in the City, in recent years, is approximately 0.56 tons per year per person.

Table 4.16-5 Annual Solid Waste Disposal Per Capita – Union City

Year	Solid Waste Disposal Originating from Seaside (annual tons)	Population	Solid Waste Disposal Per Capita (annual tons)
2013	39,366	71,318	0.55
2014	38,933	71,850	0.54
2015	39,760	72,103	0.55
2016	40,858	72,518	0.56
2017	43,317	72,975	0.59
Average			0.56

Sources: CalRecycle 2017; California Department of Finance 2018

At full buildout of the 2040 General Plan, the population of Union City is projected to be 84,477, as described in Section 2, *Project Description*. Based on the average per capita solid waste disposal rate for the City between 2013 and 2017, as shown in Table 4.16-5, a total of approximately 47,346 tons would be generated in year 2040, under full buildout of the 2040 General Plan. Thus, the approximately 47,346 tons of solid waste generated from the population of Union City annually in 2040 would be approximately 0.1 percent of the remaining capacity of the landfill, 45.8 million tons, reported by CalRecycle at the end of 2014.

The approximately 47,346 tons of solid waste that would be generated annually at full buildout of the 2040 General Plan would be equivalent to approximately 0.05 tons per day. As described above, the Altamont Landfill is permitted to receive 11,500 tons per day. Thus, under implementation of the 2040 General Plan, solid waste generated by the population of Union City would account for less than 0.1 percent of the permitted daily capacity of the landfill, which is 11,500 tons per day. Therefore, the Altamont Landfill has permitted capacity to accommodate the solid waste disposal needs that would be anticipated from the growth envisioned in the 2040 General Plan.

The 2040 General Plan includes goals and policies to support the provision of adequate service, reduction and diversion of waste from landfills, and expansion of recycling programs for residents and businesses. Although the Altamont Landfill currently has sufficient landfill capacity for the growth facilitated by the 2040 General Plan, the policies in the 2040 General Plan are consistent with Union City’s desire to promote sustainability and reduce the need for landfills. These policies are provided in the Public Facilities and Services Element of the 2040 General Plan and are listed below.

Goal PF-6: Maintain and support the provision of an efficient program for the management and reduction of solid waste materials, including reuse, recycling, collection, and disposal, to protect public health and the natural environment, to conserve energy and natural resources, and to extend landfill capacity.

Policy PF-6.1: Adequate Service. The City shall strive to ensure that franchise haulers provide convenient, dependable, and competitively priced solid waste, recycling, and organics collections services.

Policy PF-6.2: Solid Waste Disposal. The City shall ensure that the franchise haulers dispose of solid waste in an environmentally sound, dependable, and cost-effective manner.

Policy PF-6.3: Solid Waste Diversion. The City shall meet or exceed State goals regarding waste diversion from landfills and Alameda County Waste Management Authority requirements for

recycling and composting, through enhancement of programs that reduce, reuse, and recycle waste and through ongoing and consistent public outreach and education, monitoring, and enforcement activities.

Policy PF-6-10: Design New Development to Accommodate Recycling and Waste Collection. All new development with private roads shall be required to construct interior roadways that can accommodate the weight of recycling trucks and waste hauling trucks. Multi-family development shall be designed to provide adequate street space and a clear point of travel to easily service containers in the designated collection area. Multi-family developments with centralized waste, recycling and organics collection areas shall be designed to minimize distances from homes and recycling area.

Policy PF-6.11: Fair Share Recycling and Solid Waste Disposal Rates. The City shall strive to have recycling and solid waste collection/processing/disposal rates for residential and commercial uses be based on the fair share cost to provide these services.

Policy PF-6.12: Maintain Competitive Rates. The City shall strive to maintain recycling and solid waste collection/processing/disposal rates that are competitive with nearby cities.

Policies PF-6.1 through 6.3 ensure that solid waste is disposed of in an environmentally sound manner, State solid waste diversion goals and County recycling and composting requirements are met. Additionally, Policy PF-6.10 requires that all new development can accommodate recycling and waste collection and Policies 6.11 and 6.12 encourage competitive rates for recycling and solid waste disposal for the community. With adherence to these 2040 General Plan policies, impacts related to solid waste would be less than significant.

Mitigation Measure

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.17 Wildfire

This section addresses the potential for the 2040 General Plan to exacerbate wildfire risks. Additionally, the potential impacts related to exposure to wildfire, including smoke and subsequent flooding and runoff are assessed in this section.

4.17.1 Setting

a. Overview of Wildfire

A wildfire is an uncontrolled fire in an area of combustible vegetation that is generally extensive in size. Wildfires differ from other fires in that they take place outdoors in areas of grassland, woodlands, brush land, scrubland, peatland, and other wooded areas that act as a source of fuel, or combustible material. Buildings may become involved if a wildfire spreads to adjacent communities. The primary factors that increase an area's susceptibility to wildfire include slope and topography, vegetation type and condition, and weather and atmospheric conditions. These factors, as they exist and occur relative to Union City are described below.

Slope and Aspect

According to the California Department of Forestry and Fire Protection (CAL FIRE), sloping land increases susceptibility to wildfire because fire typically burns faster up steep slopes (CAL FIRE 2000). Additionally, steep slopes may hinder firefighting efforts. Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation. As a result, this slope is warmer and the vegetation drier than on slopes facing a northerly to northeasterly direction, increasing the potential for wildfire ignition and spread (CAL FIRE 2000).

Generally, the urbanized area of Union City is located west of State Route 238. Topography in this area of Union City is nearly flat (U.S. Geological Survey 2018). Because this area of Union City is flat and not sloping, it has no distinguishable aspect. East of State Route 238, in the hillside area of Union City, topography is sloping, steeply in areas. While there are various sub-ridges and slopes in the hillside area, the overall aspect is southwesterly (U.S. Geological Survey 2018).

Vegetation

Vegetation is "fuel" to a wildfire and it changes over time. The relationship between vegetation and wildfire is complex, but generally some vegetation is naturally fire resistant, while other types are very flammable. For example, cured grass is much more flammable than standing trees (CAL FIRE 2017). Grass is considered an open fuel, in which oxygen has free access to promote the spread of fire. Additionally, weather and climate conditions, such as drought, can lead to increasing dry vegetation with low moisture content, increasing its flammability.

Vegetation cover within Union City, excluding landscaped lawns, is limited to marshland areas at the western edge of the City and the hillside area east of State Route 238. Vegetation cover in the marshlands is mapped as Pacific Coastal Marsh (Union City 2015). This vegetation cover does not present a high risk of wildland fire fuel because of the wet conditions typical of marshes. Several vegetation community types have been mapped in the hillside area. However, the two dominant communities are California Mixed Evergreen Forest and Woodland and Introduced Annual and

Perennial Grassland (Union City 2015). Both of these vegetation communities, as well as the other minor vegetation communities mapped within the hillside area are susceptible to wildfire.

Weather and Atmospheric Conditions

Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility (CAL FIRE 2016). Fire moves faster under hot, dry, and windy conditions. Wind may also blow burning embers ahead of a fire, causing its spread. Drought conditions also lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

According to the Western Regional Climate Center, average annual precipitation in Union City is 14.31 inches. Generally, in an average or typical year, most precipitation is received from October through April (Western Regional Climate Center 2016). May through September is the driest parts of the year, and coincide with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters and fires during the autumn, winter, and spring months are become more common. For example, the devastating Camp Fire in Butte County ignited during November 2018.

Prevailing winds in Union City are generally westerly to northwesterly (California Air Resources Board 1984). Westerly to northwesterly prevailing wind means that winds generally move across Union City from the west to the east, from the Bay toward the hillside area at the eastern edge of the City.

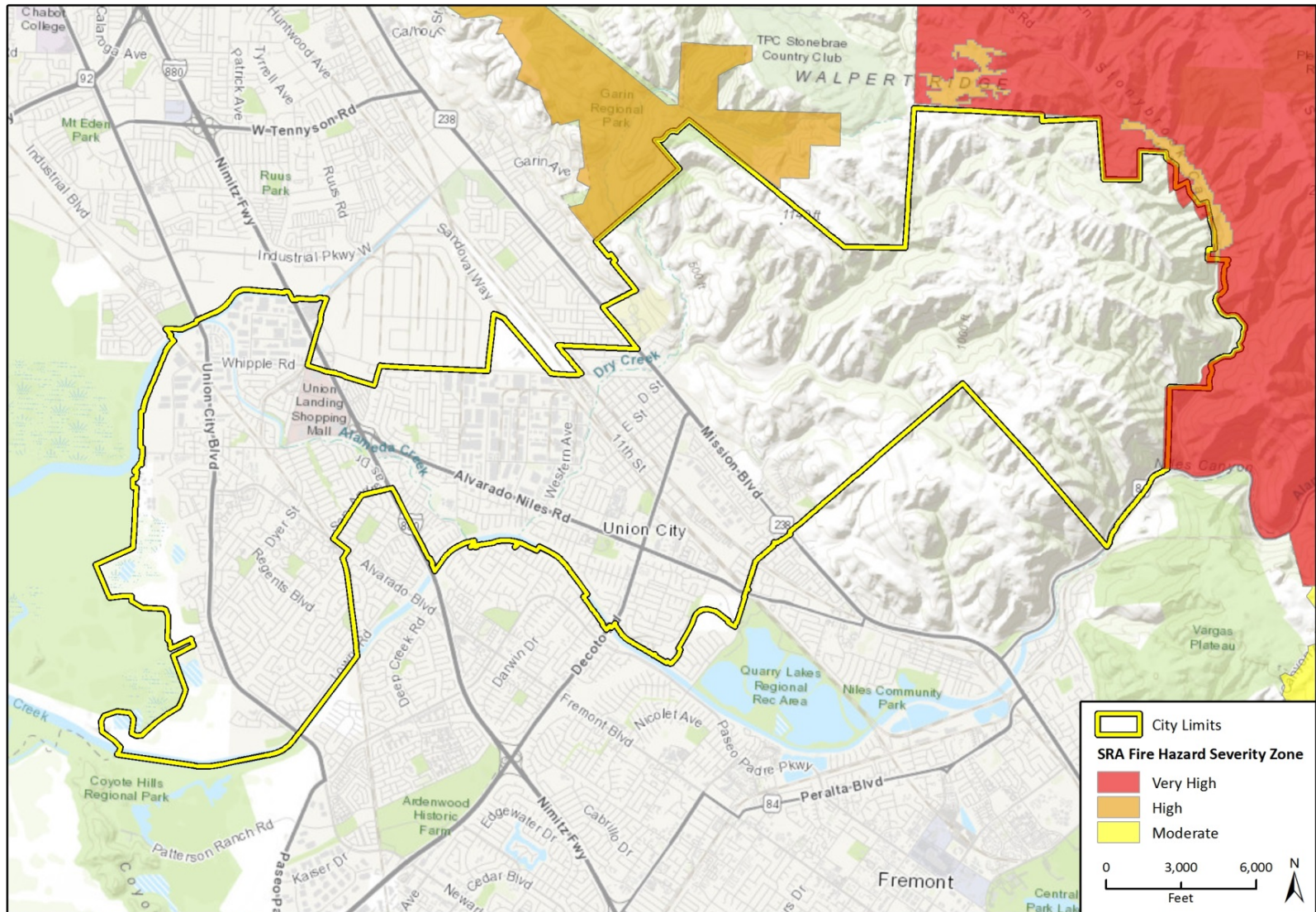
b. Wildfire Hazards

In California, responsibility for wildfire prevention and suppression is shared by federal, state and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones. CAL FIRE maps three zones on SRA: 1) Moderate Fire Hazard Severity Zones; 2) High Fire Hazard Severity Zones; and 3) Very High Fire Hazard Severity Zones. Only the Very High Fire Hazard Severity Zones are mapped on for LRA. Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

According to LRA mapping, no land within the City limits is designated as a Very High Fire Hazard Severity Zone (CAL FIRE 2008). Additionally, according to CAL FIRE, there are no SRA mapped within the City limits (CAL FIRE 2007). However, SRA mapping indicates that both High and Very High Fire Hazard Severity Zone occurs adjacent to the City limits around the hillside area east of State Route 238, as shown on Figure 4.17-1.

Figure 4.17-1 SRA Fire Hazard Severity Zones



Imagery provided by Esri and its licensors © 2018.
Fire Hazard data provided by California Department of Forestry and Fire Protection 2007.

Fig 4.17-1 SRA Fire Hazard Severity Zones

c. Regulatory Setting

Federal

The Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance. There are two different levels of State disaster plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act has also established new requirements for local mitigation plans.

National Fire Plan

The National Fire Plan was developed under Executive Order 11246 in August 2000, following a historic wildland fire season. Its intent is to establish plans for active response to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

State

The California Fire Plan

The Strategic Fire Plan for California is the State’s road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018, and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan (CAL FIRE 2018). In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of the 21 CAL FIRE units and six contract counties. The plans include stakeholder contributions and priorities, and identify strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

California Office of Emergency Services

The California Office of Emergency Services (OES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks, and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 in order for the State to receive Federal funding. The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

Wildland Urban Interface Building Standard

On September 20, 2007 the Building Standards Commission approved the Office of the State Fire Marshal emergency regulations amending the California Code of Regulations, Title 24, Part 2, known as the 2007 California Building Code (CBC). These codes include provisions for ignition-resistant construction standards in the wildland urban interface.

California Fire Code (2016)

The 2016 Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to some construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California.

Regional and Local

Association of Bay Area Governments Multi-Jurisdictional Local Hazard Mitigation Plan

The Association of Bay Area Governments' (ABAG) Multi-Jurisdictional Local Hazard Mitigation Plan covers mitigation measures that should be adopted by participating municipalities across the San Francisco Bay Area. The mitigation measures focus on hazards such as earthquake, fire, flood, and tsunami (ABAG 2011). The ABAG hazard mitigation planning process provided local governments with the tools necessary to meet federal hazard mitigation planning requirements, and this regional template has been used by numerous counties and cities within the ABAG planning area, including Union City.

Union City/Newark Multi-Jurisdictional Hazard Mitigation Plan

In 2016, the Cities of Union City and Newark prepared an updated multi-jurisdictional hazard mitigation plan (HMP) using the lessons learned from the 2011 ABAG hazard mitigation planning efforts. The HMP aims to reduce risks for those who live in, work in, and visit the Cities of Union City and Newark and provides a planning framework for all foreseeable natural hazards. The HMP's goals and recommendations intend to lay the groundwork for the development and implementation of local mitigation activities and partnerships for long-term benefits, including the following (Union City/Newark Planning Team 2016):

- Increased understanding of hazards faced by all planning partners,
- More sustainability and disaster-resistant communities,
- Financial savings through partnerships that support planning and mitigation efforts,
- Focused use of limited resources on hazards that have the biggest impact on the communities, and
- Reduced long-term impacts and damage to human health and structures, and reduced repair costs.

Santa Clara Unit Strategic Fire Plan

The CAL FIRE Strategic Fire Plan for the Santa Clara Unit, last updated in 2013, applies to Alameda County and neighboring counties to the north, east, and south. This plan documents an assessment of wildfire hazards in the Santa Clara Unit and identifies strategic targets to minimize fire risks, such as fire prevention and vegetation management (CAL FIRE 2011).

4.17.2 Impact Analysis

a. Methodology and Thresholds of Significance

Methodology

The assessment of impacts related to wildfire hazards and risks were evaluated using fire hazard severity zone mapping for Alameda County (CAL FIRE 2007), aerial imagery, and topographic mapping. Additionally, weather patterns related to prevailing winds and precipitation trends were evaluated as they relate to the spread and magnitude of wildfire.

Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, implementation of the General Plan 2040 may have a significant adverse impact if it would do any of the following:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes
5. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires

b. Project Impacts and Mitigation Measures

Threshold 1: Would the General Plan substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact WFR-1 THE 2040 GENERAL PLAN POLICIES ADDRESS EMERGENCY ACCESS, RESPONSE, AND PREPAREDNESS. THE POLICIES ENFORCE MAINTAINING AN EMERGENCY MANAGEMENT PLAN. THEREFORE, THE 2040 GENERAL PLAN WOULD NOT IMPAIR AN EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The Safety Element of the 2040 General Plan directs the City to accommodate safety needs when planning and designing, while increasing the resiliency of the City's residents and businesses to respond to and be prepared for potential emergencies and disasters. This would include emergency vehicle access and location of emergency response facilities. Goal S-2 and related policies in the Safety Element of the 2040 General Plan, listed below, would ensure adequate emergency response within Union City.

Goal S-2: Ensure efficient, effective, and coordinated response to natural and man-made disasters.

Policy S-2.1: Ensure Emergency Access for New Construction. The City shall not permit new construction in areas where emergency access cannot be adequately ensured.

Policy S-2.2: Comprehensive Emergency Management Plan. The City shall maintain an up-to-date Comprehensive Emergency Management Plan that is consistent with the State and Federal disaster preparedness requirements.

Policy S-2.4: Emergency Operations Center. The City shall maintain an Emergency Operations Center, either in an existing facility or a newly constructed facility.

Policy S-2.5: Emergency Preparedness Staffing. The City shall seek funding for a staff person dedicated to managing emergency preparedness activities, including coordinating training activities for City staff and community members and coordination with outside agencies.

Policy S-2.6: Emergency Response Training. The City shall participate in disaster response exercises and provide for emergency response training of personnel and elected officials.

Policy S-2.17: Redundant Emergency Communications. The City shall participate with regional partners to provide a redundant communication system that will provide enhanced and coordinating communications during an emergency or disaster.

In addition, the Alameda County Fire Department reviews and approves development projects to ensure that emergency access meets standards. Implementation of 2040 General Plan policies and actions associated with emergency planning and response, in addition to Fire Department review, would ensure that potential impacts from implementation of the proposed project on emergency response and evacuation would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

<p>Threshold 2: Would the General Plan, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?</p>

Impact WFR-2 THE 2040 GENERAL PLAN DOES NOT FACILITATE URBAN DEVELOPMENT IN AREAS MOST SUSCEPTIBLE TO WILDFIRE. PREVAILING WIND AND SLOPES WOULD GENERALLY SPREAD FIRE AND RELATED SMOKE AWAY FROM AREAS WHERE URBAN DEVELOPMENT IS ENVISIONED. ADDITIONALLY, THE 2040 GENERAL PLAN POLICIES WOULD REDUCE THE POTENTIAL FOR THE UNCONTROLLED SPREAD OF A WILDFIRE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Wildfire risk in Union City is limited to the hillside area east of State Route 238 because this area is undeveloped and contains large tracts of vegetation cover that can act as fire fuel. This area is also adjacent to large areas of vegetation cover and open space outside of the City limits, which further increases the potential for wildfires. The 2040 General Plan does not include changes to the land use designations in the hillside area that would allow for more or increased residential development compared to what is currently allowed under the 2002 General Plan.

As described above, prevailing winds in Union City are generally westerly to northwesterly (California Air Resources Board 1984), moving west to east across the City. Therefore, the prevailing winds would move wildfire in the hillside area and the related smoke and air pollutants, eastward,

away from the urbanized areas of the City. Additionally, fire tends to burn and spread uphill, and the hillside area generally slopes uphill toward the east, away from the developed areas of the City. Although a few neighborhoods and businesses exist along the eastern side of State Route 238, such as the areas east of where State Route 238 intersects, Tamarack Drive, Appian Way, and O Connell Lane, development under the 2040 General Plan would not introduce new people or structures to this area beyond what is currently permitted under existing zoning and land use designations. Further, Policy S-4.3 in the Safety Element of the 2040 General Plan, listed below, is intended to reduce the risk of wildfire in the hillside area.

Policy S-4.3: Reduce Risk of Fire in Hillside Areas. The City will endeavor to reduce the risk of loss from brushfires in the undeveloped hillside areas of the city through such measures as landscaping with fire resistant plants between residential and open space areas, weed control, controlled burns, and placement of trails and roads to serve as firebreaks. New development within the hillside area will only be permitted where studies in support of the specific plan for that area demonstrate that fire safety can be assured.

The policy includes measures such as landscaping with fire resistant plants between residential and open space areas, weed control, controlled burns, and placement of trails and roads to serve as firebreaks in the hillside area. This measure would reduce the potential for uncontrolled spread of wildfire in the hillside area. Policy S-4.4, listed below would reduce the potential for occupants of residences to be exposed to controllable wildfire, regardless of location with Union City.

Policy S-4.4: Require Brush Clearance and Vegetative Management to Reduce Fire Risk. The City shall require weed abatement, brush clearance, and vegetative management for all properties to reduce fire risk including those located east of Mission Boulevard.

In summary, the 2040 General Plan does not include changes to the land use designations in the hillside area that would allow for more or increased development compared to what is currently allowed under the 2002 General Plan, which is the area of the City most susceptible to wildfire. Therefore, the land use scenario envisioned by the 2040 General Plan would not exacerbate existing wildfire risks or expose residents or business occupants to pollutant from a wildfire beyond existing conditions. In addition, the 2040 General Plan includes polices to reduce the potential for uncontrolled wildfires in the hillside area and to reduce the potential for structural damage from uncontrolled fire. This impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 3: Would the General Plan require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact WFR-3 THE 2040 GENERAL PLAN FACILITATES GROWTH PRIMARILY AS INFILL AND REDEVELOPMENT WITHIN URBANIZED AREAS OF THE CITY WHERE INFRASTRUCTURE AND ROADS CURRENTLY EXIST. THE GENERAL PLAN POLICIES REQUIRE MAINTENANCE OF FIRE ACCESS ROADS, WHICH COULD HAVE TEMPORARY OR ONGOING NOISE IMPACTS AND VEGETATION REMOVAL IMPACTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT BECAUSE MAINTENANCE WOULD BE INFREQUENT AND WOULD REDUCE THE POTENTIAL FOR FIRE RISK.

The 2040 General Plan would facilitate growth in Union City, including 4,330 new residential dwelling units and more than 8 million square feet of non-residential development through 2040. This growth would occur primarily as infill and redevelopment within the urbanized areas of Union City, as shown on Figure 2-4 in Section 2, *Project Description*. Therefore, the majority of roads and utility infrastructure required for growth facilitated by the 2040 General Plan would be existing or would occur in currently developed areas, resulting in negligible temporary or ongoing environmental impacts. Because this development would occur in urbanized areas of Union City, where large tracts of vegetation cover are not present, the risk of wildfire would not be exacerbated.

Wildfire risk in Union City is greatest in the hillside area east of State Route 238 where large areas of vegetation cover exists as fuel for fires. The 2040 General Plan does not include changes to the land use designations in the hillside area that would allow for more or increased development. Therefore, the 2040 General Plan would not increase the need for fuel breaks or emergency water sources in the hillside area to protect structures from wildfire.

The Safety Element of 2040 General Plan includes Policy S-4.5, listed below, which requires that the City maintain fire access roads throughout the City.

Policy S-4.5: Maintain Fire Access. The City shall use appropriate means to maintain fire access roads throughout the City on public and private property.

Maintenance of fire access roads could generate temporary or ongoing impacts related to noise and vegetation removal. These impacts would be less than significant because maintenance would be infrequent and limited to areas immediately next to fire access roads. Additionally, maintenance of these fire access roads would reduce the potential for severe or catastrophic wildfires, rather than exacerbate them. Accordingly, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

Threshold 4: Would the General Plan expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Threshold 5: Would the General Plan expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact WFR-4 IF A SEVERE WILDFIRE WERE TO OCCUR IN THE HILLSIDE AREA OF UNION CITY, STRUCTURES DOWNSLOPE WOULD BE AT RISK OF FLOODING OR LANDSLIDES. HOWEVER, THE 2040 GENERAL PLAN DOES NOT INCLUDE CHANGES TO THE LAND USE DESIGNATIONS IN THE HILLSIDE AREA OR AREAS ADJACENT TO THE BASE OF THE HILLSIDE AREA THAT WOULD ALLOW FOR MORE OR INCREASED DEVELOPMENT. IN ADDITION, 2040 GENERAL PLAN POLICIES WOULD REDUCE THE POTENTIAL FOR WILDFIRE IN THE HILLSIDE AREA. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Severe wildfires damage the forest or shrub canopy, the plants below, as well as the soil. This can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Slopes at risk of wildfire in Union City are limited to the hillside area east of State Route 238. If a severe wildfire were to occur in the hillside area of Union City, structures downslope would be at risk of flooding or landslides. Other areas of Union City are generally flat to gently sloping, and developed with little to no wildfire fuels or vegetation cover prone to ignition. If a structural fire or large urban fire were to occur in the more flat and urbanized areas of Union City, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to the developed conditions.

The 2040 General Plan does not include changes to the land use designations in the hillside area that would allow for more or increased development. However, the one-block segment of Retail Commercial land uses immediately west of State Route 238 between Whipple Road and Decoto Road would change to Corridor Mixed Use Commercial land uses. The new land uses would accommodate more intense development than existing conditions. Therefore, the proposed changes in land use would introduce new residents and business occupants immediately downslope of the hillside area which could be at risk from flooding or landslides following the event of a wildfire. As a result, the 2040 General Plan would increase the number of structures and people in a limited area exposed to flooding or landslides following a wildfire.

Nonetheless, Policy S-4.3 in the Safety Element of the 2040 General Plan is intended to reduce the risk of wildfire in the hillside area. The policy includes measures such as landscaping with fire resistant plants between residential and open space areas, weed control, controlled burns, and placement of trails and roads to serve as firebreaks in the hillside area. This measure would reduce the potential for severe wildfire in the hillside area. As a result, the potential risk for structures and people to be exposed to flooding or landslides downslope of hillside area following a fire would be reduced. Accordingly, impacts of the 2040 General Plan would be less than significant.

Mitigation Measures

No mitigation measures are required.

Significance After Mitigation

Impacts would be less than significant without mitigation.

4.18 Effects Found Not to be Significant

State CEQA Guidelines §15128 requires an EIR to briefly describe any possible significant effects that were determined not to be significant and, therefore, were not discussed in detail. This section addresses the potential environmental effects of the 2040 General Plan that clearly would not be significant and are not addressed in the preceding sections of this EIR.

The discussion is based on the thresholds contained in the *CEQA Guidelines* Appendix G. Any items not addressed in this section are addressed in Sections 4.1 through 4.17 of this EIR.

4.18.1 Agriculture and Forestry Resources

Appendix G of the State CEQA Guidelines states that a significant impact on agriculture may result 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
- 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 the loss of forest land or conversion of forest land to non-forest use;
- 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.

According to the Department of Conservation, there are no Williamson Act contracts within the City (California Department of Conservation 2015). There are also no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within Union City (California Department of Conservation 2016). While no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance occur within Union City, the current General Plan designates agricultural land uses in the southwest corner of the City, and throughout much of the hillside area east of State Route 238. The 2040 General Plan maintains this agriculture land use designation, consistent with the current General Plan. Therefore, the 2040 General Plan would not result in the conversion of land with an agricultural use designation to non-agriculture uses and there would be no impact.

As described in Section 4.3, *Biological Resources*, there are a variety of vegetation communities in Union City, including California mixed evergreen, western oak woodland, redwood forest, and chaparral. The vegetation communities containing stands of trees, such as California mixed evergreen, are located in the hillside area, east of State Route 238. The 2040 General Plan does not include changes to the land use designations in the hillside area of the City. Therefore, there would be no impact to forest land or timberland.

4.18.2 Mineral Resources

The *CEQA Guidelines* Appendix G states that a significant impact on mineral resources may result if the project would:

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

While quarries have historically operated adjacent to Union City in the City of Fremont, no mining occurs within Union City. A known deposit of regionally significant construction aggregate (sand, gravel, crushed rock) minerals exists in the vicinity of O’Connell Lane, in the hillside area located east of State Route 238 (Union City 2015). The area where this deposit occurs is designated as Residential (3-6 du-ac) and Private Institutional in the current General Plan, as shown on Figure 2-3 in Section 2, *Project Description*.

Development on areas containing mineral resources could result in the permanent loss of those minerals. However, as shown on Figure 2-4 in Section 2, *Project Description*, the 2040 General Plan does not include land use designation changes in the hillside area east of State Route 238, where the known mineral deposit occurs. Therefore, the 2040 General Plan would not facilitate new or additional development within the area of the mineral deposit. The 2040 General Plan would have no impact on the availability of mineral resources within Union City.

5 Other CEQA Required Discussions

This section discusses growth-inducing impacts and irreversible environmental impacts that would be caused by the proposed project.

5.1 Growth Inducement

Section 15126(d) of the CEQA Guidelines requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if project-induced growth could result in significant physical effects in one or more environmental issue areas.

5.1.1 Population and Employment Growth

As discussed in Section 4.12, *Population and Housing*, the buildout anticipated under the 2040 General Plan could accommodate an estimated 11,486 new residents and 4,330 new dwelling units in Union City. With the estimated growth under the General Plan, Union City would have a 2040 population of 84,477 and 24,813 dwelling units. This would result in a population that would exceed ABAG growth projections by 5.5 percent. While the development capacity allowed by the 2040 General Plan would exceed ABAG forecasts by 5.5 percent, vacant and underutilized parcels within Union City would be developed or redeveloped by 2040.

As discussed under Impact PH-1 of Section 4.12, *Population and Housing*, numerous goals and policies of the 2040 General Plan are aimed at reducing the impacts associated with population and housing unit growth, such as encouraging infill in areas identified as having high growth and/or redevelopment potential.

Finally, it is the specific purpose of the project to guide growth and development in Union City such that infill development would be prioritized and open space areas would be preserved and enhanced. Therefore, by its nature, the proposed project is intended to reduce the potential for uncontrolled growth and associated environmental impacts. For the reasons discussed above, implementation of the project would not lead to such impacts.

5.1.2 Removal of Obstacles to Growth

The 2040 General Plan encourages development within Union City's strategic infill areas, pursuant to 2040 General Plan Policy LU-1.3. Although development of some vacant lands within Union City would require new utility connections and possibly roadways, new development would occur primarily where existing roads, water, and sewer and other utilities are in place and in a manner that minimizes the impact of development on existing infrastructure and services. In addition, major infrastructure extensions generally are not envisioned, and improvements would be primarily limited to the replacement and upgrade of aging facilities and enhancement of existing infrastructure in key locations. All new development envisioned as part of the 2040 General Plan

would occur within City limits. Therefore, because new development would use existing facilities and major infrastructure extensions would not occur the 2040 General Plan would not inhibit growth within Union City.

5.2 Irreversible Environmental Effects

Section 15126(c) of the CEQA Guidelines requires that EIRs evaluating projects involving amendments to public plans, ordinances, or policies contain a discussion of significant irreversible environmental changes. CEQA also requires decision-makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. This section addresses the use of non-renewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the development that would be facilitated by implementation of the 2040 General Plan.

Construction activity associated with planned development that would be accommodated under the 2040 General Plan would involve the use of building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to Union City or the proposed the 2040 General Plan. The addition of new residential and non-residential development in the City through 2040 would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. Increasingly efficient building fixtures and automobile engines, as well as implementation of policies included in the 2040 General Plan, are expected to offset the demand to some degree. It is not anticipated that growth accommodated under the General Plan would significantly affect local or regional energy supplies.

Growth facilitated by the General Plan would require an irreversible commitment of city services, water supply, and wastewater treatment. As discussed in Section 4.13, *Public Services*, and Section 4.16, *Utilities and Service Systems*, impacts to public services and utilities would be reduced to a less than significant level with implementation of policies included in the 2040 General Plan.

The additional vehicle trips associated with growth through 2040 would incrementally increase local traffic, noise levels, and regional air pollutant and greenhouse gas emissions. As discussed in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*, implementation of the 2040 General Plan policies, regional air pollution programs, and mitigation measures would reduce the air pollutant and GHG emissions associated with individual future development projects. Air quality pollutants would be reduced to below significance thresholds; however, GHG emissions would not be reduced to below significant thresholds. As discussed in Section 4.11, *Noise*, implementation of proposed policies and mitigation measures would reduce the noise impacts associated with future growth, however construction noise would not be reduced to a less than significant level. As discussed in Section 4.14, *Transportation/Traffic*, the 2040 General Plan policies and mitigation measures would reduce the majority of traffic impacts to a less than significant level. However, population growth facilitated by the 2040 General Plan and the region would result in additional vehicle trips on area roadways, resulting in significant and unavoidable traffic impacts on several roadways.

6 Alternatives

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the 2040 General Plan that would attain most of the basic project objectives but would avoid or substantially lessen the significant adverse impacts.

6.1 Development of Alternatives

Project alternatives considered were evaluated for their potential feasibility, their ability to achieve most of the project objectives, and their ability to reduce or substantially lessen significant environmental effects. The following section provides an overview of the project objectives and then describes the alternatives that were considered but ultimately rejected from further consideration in this section, as well as the alternatives that are analyzed in detail.

6.2 Project Objectives/Guiding Principles

As discussed in Section 2.0, *Project Description*, the 2040 General Plan vision, and thus the objectives for the future are as follows:

Union City is the heart of the Bay Area and a regional center for commerce, community, and culture. Our economy is strong and diverse and provides high paying jobs across a broad range of local businesses, high profile companies, and emerging industries. Our residents and neighborhoods are safe and healthy and our community is celebrated for its diversity and equitable treatment of everyone. Union City provides effective and efficient public services and is fiscally stable.

The 2040 General Plan sets the guiding principles for the City. The guiding principles are contained on pages 6 through 12 of the 2040 General Plan Introduction and abbreviated below:

- **Economic Development:** Promote Union City as a civic, cultural, and economic destination within the greater Bay Area to attract new businesses and facilitate new economic development opportunities and succeed in the global marketplace; expand the skills and knowledge of the workforce, protect and expand economic assets in Union City, and expand the job base.
- **Health and Quality of Life:** Promote a healthy and safe quality of life in Union City; prioritize education; promote access to healthy foods; attract and retain accessible, affordable, and quality health and recreation services and facilities; support and expand Youth and Family Services programs.
- **Land Use:** Maintain a balanced mix of residential, employment, and commercial uses; create a vibrant 24-hour Station District; ensure livable, healthy, and well-designed neighborhoods that are walkable and bicycle friendly; encourage higher-density developments and mixed-use projects in appropriate areas; promote and increase infill and reuse, while maintaining quality of life and important community character; and implement sustainable and resilient development practices.

- **Community Design:** Enhance gateways into the community; ensure new development respects the community’s natural setting; ensure new development is compatible with the scale and character of existing neighborhoods; preserve and protect important historic and cultural resources; create attractive commercial and mixed-use corridors and centers; create vibrant public places that serve as gathering places; and locate and design buildings, streetscapes, and public spaces that contribute to walkable neighborhoods, corridors, and districts.
- **Housing:** Promote a mix of housing types and affordability; and include a mix of housing types within neighborhoods to promote a diversity of household types and housing choices.
- **Mobility and Access:** Develop a balanced, integrated, multimodal transportation system that is efficient and safe; create a safe and convenient transportation network that incorporates complete streets concepts; continue providing a variety of transportation choices that promote alternatives to the automobile; and support the integration of emerging transportation technologies and modes.
- **Sustainability and Resiliency:** Reduce greenhouse gas (GHG) emissions to address climate change; protect natural resources; continue to promote sustainable levels of energy, water, and resource consumption; encourage residents and businesses to live, work, and operate in a more sustainable manner; and enhance the understanding of future risks ability to absorb, respond to, and recover from emergencies or other changes.
- **Parks and Recreation:** Maximize public access and use of city and regional open space and recreational areas; support the development of regional open spaces that connect Union City to the Bay Area; support the development of additional parkland for active recreational uses; expand and improve existing pedestrian and bike trails; and provide innovative recreational and sports facilities, services, and programs.
- **Public Safety:** Improve coordination among residents and businesses and City Departments to address security issues and maintain a safe community; support and expand the City’s Youth Violence Prevention Program and community policing unit; minimize vulnerability to natural disasters and manmade hazards; strengthen emergency response capabilities; modernize older public facilities to improve seismic safety; support and expand the Community Emergency Response Team (CERT) program; and ensure public facilities and infrastructure investment contribute to the safety and security of residents.
- **Services and Facilities:** Provide quality public services, facilities, and infrastructure throughout the city; expand and enhance telecommunication and broadband access; maintain transparency and improve accountability in all City decisions, practices, and service areas; promote opportunities for community education and involvement; ensure the fair treatment of residents of all races, cultures, and incomes with respect to City plans and policies; promote joint use of public facilities; ensure City revenues are sufficient to maintain and enhance City services, programs, and facilities; and ensure new development is fiscally neutral or positive to the City and provides a net social or economic benefit to the community.

6.3 Alternatives Evaluated in the Draft EIR

The analysis of alternatives focuses on the various land use scenarios that incorporate different assumptions regarding the combinations of future land uses and associated infrastructure improvements. Alternatives provided are intended to reduce, substantially lessen, or avoid significant and unavoidable impacts. As discussed in Section 4, *Environmental Impact Analysis*, the 2040 General Plan would have significant and unavoidable impacts related to greenhouse gas

emissions (Impact GHG-1), construction noise (Impact N-1), vibration (Impact N-3), and transportation (Impacts T-5 and T-6). An alternative location for the project as a whole is not possible. However the alternatives below consider different patterns of land use and infrastructure to accommodate forecasted future growth and regional housing needs in Union City, while attaining most of the project objectives/guiding principles.

The following alternatives are evaluated in this EIR:

- Alternative 1: No Project Alternative
- Alternative 2: Reduced Density Alternative
- Alternative 3: Enhanced Employment Alternative

6.4 Alternative 1: No Project Alternative

6.4.1 Description

Section 15126.6(e) of the *CEQA Guidelines* requires a specific alternative of “no project” be evaluated in an EIR in order to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving that project. *CEQA Guidelines* Section 15126.6(e)(3) describes the two general types of no project alternative: (1) when the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the no project alternative would be the continuation of that plan; and (2) when the project is not a land use/regulatory plan, such as a specific development on an identifiable property, the no project alternative is the circumstance under which that project is not processed (i.e., no development occurs). Alternative 1 represents the former alternative type of no project and assumes the continued implementation of the current 2002 General Plan.

Alternative 1 is comprised of a land use pattern that reflects the land use identified in the existing 2002 General Plan. Under this alternative, the proposed 2040 General Plan would not be adopted and the existing General Plan, including the land use map and all of the General Plan goals and policies, would remain in place through the horizon year of 2040. Thus, any new development in Union City would occur consistent with the existing land use designations and the allowed uses within each designation. Similarly, any new infrastructure in Union City would occur as envisioned in the 2002 General Plan.

Development under this alternative compared to the 2040 General Plan provides less infill residential development and less dense residential development on infill or undeveloped property within the City. This alternative would not include the Station East Mixed Use land use designation near the BART station. Instead, these properties would continue to be designated as Research and Development Campus, as shown on Figure 2-3 in Section 2, *Project Description*. Because this alternative would not include the higher density and infill residential development within developed areas of the City or the Station East Mixed Use designation, overall development and anticipated growth would be reduced compared to the 2040 General Plan. Overall growth would be similar to that anticipated under the current 2002 General Plan with approximately 22,000 dwelling units and a population of approximately 78,257 in the year 2040 (Hexagon 2018). This would be a reduction in overall development and growth compared to the 2040 General Plan which anticipates approximately 24,813 dwelling units and a population of approximately 84,477. This alternative would generate 27,477 total jobs in Union City in 2040, whereas the proposed 2040 General Plan would generate 37,233 (Hexagon 2018).

In addition to the existing 2002 General Plan, information provided in the following analysis of this alternative is derived from the *Final Environmental Impact Report for the City of Union City General Plan Update* (Union City 2002). The *Final Environmental Impact Report for the City of Union City General Plan Update* was prepared in conjunction with the existing 2002 General Plan and assessed the potential impacts of implementing the 2002 General Plan. Some physical, regulatory, and social conditions have changed since certification of the *Final Environmental Impact Report for the City of Union City General Plan Update*, such as the rate of population growth, groundwater supplies, and vehicle emission standards. Thus, the level of significance for impacts in the following analyses may differ from the impact findings in the *Final Environmental Impact Report for the City of Union City General Plan Update* based on current conditions.

6.4.2 Impact Analysis

a. Aesthetics

Development under this alternative would continue the land use pattern that currently exists in Union City. The City's visual character, and light and glare conditions would be slightly improved as compared to the 2040 General Plan because this alternative would involve less dense infill development, reduced overall development, and would not include the Station East Mixed Use Land use designation. Less dense development in the focus areas would result in better visibility and reduced light and glare. Impacts to scenic vistas under this alternative would be reduced as compared to the 2040 General Plan because less intensive development is anticipated under this alternative. Therefore, this alternative would avoid the significant and unavoidable impact to hillside and Baylands scenic vistas and maintain existing views. Continued implementation of the 2002 General Plan would have similar benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards because the 2002 General Plan includes arts and culture policies. Both the 2002 General Plan and the 2040 General Plan includes goals, policies, and implementation measures that promote good design within new development, emphasize the visual quality of the public realm, and the design of streetscapes that protect views, but less dense development under this alternative could potentially result in reduced light and glare. Impacts would be less than significant and reduced as compared to the under the proposed 2040 General Plan due to the reduction in the overall level and intensity of development allowed under the current General Plan and the avoidance of the significant and unavoidable scenic vista impact in the 2040 General Plan.

b. Air Quality

Buildout of the 2002 General Plan would accommodate approximately 2,813 fewer housing units than the 2040 General Plan. Short-term emissions that would occur from construction of the 2,813 housing units would be avoided under this alternative. Similarly, non-residential development would be reduced under this alternative, resulting in reduced construction-related emissions as compared to the 2040 General Plan. Therefore, this alternative would have similar construction-related impacts on air quality despite less overall construction in Union City.

Because 2,813 fewer residential units would be constructed in Union City under this alternative, the long-term on-site emissions from use of natural gas for residential heating, cooking, and water heating would be reduced compared to the proposed 2040 General Plan. This alternative would result in approximately 197,044 fewer daily VMT compared to the 2040 General Plan. Reduced VMT would result in less operational emissions associated with mobile sources.

Infill development would be reduced under this alternative resulting in lower density development in specified arterial corridors, such as along Union City Boulevard and Decoto Road. Therefore, Alternative 1 would result in lower toxic air contaminants (TAC) for sensitive receptors near arterial corridors compared to the 2040 General Plan. However, as described in Section 4.2, *Air Quality*, the proposed 2040 General Plan would require implementation of Mitigation Measure AQ-1, which requires health risk assessments and implementation of measures to reduce exposure to TACs for projects near roadways with high average daily trips. There is no equivalent measure in the 2002 General Plan.

While the No Project Alternative would result in reduced VMT compared to the 2040 General Plan, VMT would increase by approximately 15.3 percent above existing conditions in 2040. Similarly, the service population would increase by approximately 7.2 percent. Because VMT associated with buildout of the 2002 General Plan would increase by approximately 15.3 percent, it would exceed the rate of increase from the forecast service population of approximately 8.1 percent. Therefore, criteria pollutant impacts would be significant and unavoidable. Overall, compared to the proposed 2040 General Plan, the No Project Alternative would have greater air quality impacts due to an increase in TACs and an increase in the rate of VMT versus the rate of population increase compared to the 2040 General Plan.

c. Biological Resources

As described in Section 4.3, *Biological Resources*, potential habitat suitable for special status species occurs in the hillside area east of State Route 238, along creeks and waterways, and the marshland areas at the western City limits. These areas are designated as open space and agriculture under both this alternative and the proposed 2040 General Plan. There would be no change in the land use designations for these potential habitat areas between the current 2002 General Plan and the proposed 2040 General Plan. Therefore, impacts to biological resources in these sensitive areas would be similar to the 2040 General Plan.

Under this alternative, similar parcels would be developed as under the proposed 2040 General Plan, but densities would be reduced compared to the 2040 General Plan. Nonetheless, this alternative could have the potential to impact nesting birds in the Plan Area. Therefore, potential impacts to special status species under the No Project Alternative would be potentially significant and similar to the 2040 General Plan. However, both the 2002 General Plans contains policies applicable to biological resources that would reduce biological impacts related to nesting birds. Therefore, the No Project Alternative would have less than significant impacts to wetland areas, trees, riparian habitats, and migratory wildlife corridors, similar to the proposed 2040 General Plan. Overall, compared to the proposed 2040 General Plan, the No Project Alternative would have reduced biological resources impacts as a result of reduced development.

d. Cultural Resources

The No Project Alternative would have the potential to impact cultural and historic resources in Union City through development of individual projects. The 2002 General Plan designates development within the same urbanized areas of Union City as the proposed 2040 General Plan, however overall development would be less dense than the 2040 General Plan. Therefore, the No Project Alternative would have reduced, but still potentially significant impacts to cultural and historic resources as the proposed 2040 General Plan. Further, the 2002 General Plan includes policies requiring review of development projects under CEQA and the National Historic Preservation Act that would lead to identification of resources and the application of mitigation

measures on a project by project basis, which are not included in the 2040 General Plan. Therefore, policies included in the 2002 General Plan would reduce impacts to cultural resources compared to the 2040 General Plan. The 2040 General Plan includes Mitigation Measure CR-1 requiring cultural resources surveys prior to project construction as discussed in Section 4.4, *Cultural Resources*. Alternative 1 would not require a mitigation measure. Therefore, impacts under the No Project Alternative would be reduced to less than significant, compared to the 2040 General Plan.

e. Energy

The proposed 2040 General Plan and No Project Alternative do not substantially differ in development footprints. However, the 2040 General Plan's land use scenario encourages a greater degree of high-density, transit-oriented, and mixed-use development. The colocation of residences and jobs minimizes vehicle trip lengths and, in some cases, reduces additional vehicle trips and associated transportation fuel consumption. Therefore, as compared to the No Project Alternative, the land use scenario of the proposed 2040 General Plan is designed to reduce vehicle trips and related energy consumption. Therefore, the No Project Alternative would have greater energy consumption than the 2040 General Plan. In addition, the 2002 General Plan does not contain energy efficiency and renewable policies that require the City to implement an array of energy efficiency and renewable energy measures through the year 2040 nor is consistent with energy efficiency goals contained in the Union City Climate Action Plan. The inefficient and unnecessary consumption of energy would be greater under the No Project Alternative. Overall, compared to the proposed 2040 General Plan, the No Project Alternative would have increased energy impacts.

f. Geology and Soils

Under this alternative development would occur within similar areas of Union City as the 2040 General Plan, but development would be reduced compared to the 2040 General Plan. Therefore, development under the No Project Alternative would occur on the same geologic units, soils, and slopes as developed under the 2040 General Plan, but development would not be as intensive as the 2040 General Plan. The potential for loss of topsoil, placement of development atop expansive soils, or accidental discovery of paleontological resources would thus be reduced under this alternative because although it would occur in similar areas there would be less overall development. Development under this alternative would be required to comply with applicable regulations, such as the California Building Code, the Uniform Building Code, the Union City Municipal Code, and the Clean Water Act, risks associated with topsoil loss, and expansive soils would be less under this alternative.

Growth and development under this alternative would be subject to seismic hazards, similar to development facilitated under the proposed 2040 General Plan. However, mandatory compliance with applicable building codes and regulations would reduce potential risks associated with seismic hazards. Both the proposed 2040 General Plan and the 2002 General Plan contain policies and implementation programs aimed at preventing and minimizing potential risks associated with earthquake hazards. However, the 2040 General Plan modifies policies in the current 2002 General Plan to encourage greater earthquake safety. While the current 2002 General Plan does not include these policies, full buildout of the 2002 General Plan would accommodate fewer residents and housing units than the proposed 2040 General Plan. Therefore, compared to the proposed 2040 General Plan, the No Project Alternative would expose fewer people and structures to risks from seismic hazards. Overall, impacts of the No Project Alternative would be less than significant and less than the proposed 2040 General Plan.

g. Greenhouse Gas Emissions/Climate Change

Implementation of the No Project Alternative would involve less overall development and associated growth than would occur under the proposed 2040 General Plan. Therefore, this alternative would have reduced construction related GHG emissions. Additionally, the No Project Alternative would result in less VMT and related GHG emissions. While this alternative would result in fewer sources of GHG emissions, the land use scenario and the associated GHG emissions envisioned under this alternative would not be consistent with applicable state regulations including Assembly Bill 32, Senate Bill 32, or the 2017 Scoping Plan. Similarly, development facilitated by the 2040 General Plan would result in 2040 GHG emissions that exceed reductions necessary to meet statewide GHG emission reduction goals. However, the proposed 2040 General Plan contains policies and implementation programs intended to facilitate greater GHG emission reductions than is mandated under the 2002 General Plan. Because this alternative would not include these emissions reduction policies and programs, GHG emissions would be higher than the 2040 General Plan and would have significant and unavoidable impacts, similar to the 2040 General Plan. Therefore, although both alternatives would result in significant and unavoidable impacts related to GHG emissions, the No Project Alternative would result in potentially greater impacts than the 2040 General Plan regarding consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions.

h. Hazards/Hazardous Materials

The No Project Alternative would accommodate fewer residents and jobs than the proposed 2040 General Plan. Therefore, the No Project Alternative would expose fewer people to potential hazards and hazardous materials as compared to the proposed 2040 General Plan. In addition, compliance with existing regulatory requirements would address potential impacts related to hazards and hazardous materials. Therefore, impacts related to the use, handling, transport, or emissions of hazardous materials under the No Project Alternative would be less than significant, similar to the proposed 2040 General Plan.

The No Project Alternative would result in a similar land use pattern in Union City as the proposed 2040 General Plan. Therefore, the potential for projects to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would be similar under this alternative as under the 2040 General Plan. Impacts would be less than significant and similar to the 2040 General Plan.

The proposed 2040 General Plan contains several policies and implementation programs in addition to the policies and implementation programs contained in the 2002 General Plan intended to strengthen emergency and disaster preparedness. Therefore, impacts related to emergency disaster preparedness would be slightly greater under this alternative. However, the 2002 General Plan facilitates fewer residents, reducing the number of people affected by a potential emergency disaster. As a result, impacts related to hazards and hazardous materials resulting from implementation of the No Project Alternative would be less than significant and similar to the proposed 2040 General Plan.

i. Hydrology and Water Quality

The No Project Alternative would result in reduced development as compared to the 2040 General Plan and However, development under this alternative would consist of a similar land use pattern as the proposed 2040 General Plan. Therefore, development under this alternative would result in slightly reduced impervious surfaces and stormwater runoff volumes and velocity as the proposed

2040 General Plan. Both the 2002 General Plan and the proposed 2040 General Plan contain policies to reduce potential water quality impacts. Additionally, development under this alternative would be subject to the same regulatory requirements, such as NPDES permit requirements, governing runoff and protecting water quality and supply as the proposed 2040 General Plan. In addition, the No Project Alternative would result in a smaller population in 2040, and demand for groundwater would be reduced compared to the proposed 2040 General Plan. Impacts under this alternative would be less than significant and less than the proposed 2040 General Plan.

j. Land Use and Planning

Development under the No Project Alternative would occur in a similar land use pattern as the proposed 2040 General Plan. This alternative encourages orderly development in designated focus areas and would not divide established communities, similar to the 2040 General Plan. However, the 2002 General Plan was adopted prior to the development and adoption of ABAG and MTC's *Plan Bay Area 2040* (ABAG and MTC 2017). Therefore, the 2002 General Plan is inconsistent with several *Plan Bay Area 2040* goals and measures to reduce environmental impacts, such as reducing adverse health impacts by substantially reducing emissions. Therefore, impacts under this alternative would be potentially significant. Impacts would be greater compared to the 2040 General Plan, which is consistent with *Plan Bay Area 2040*.

k. Noise

Buildout of the 2002 General Plan would result in reduced development compared to the proposed 2040 General Plan. Therefore, less construction and associated construction noise and vibration would occur under the No Project Alternative as compared to the proposed 2040 General Plan, particularly in the already developed areas of the city and the proposed Station East Mixed Use land use area near the BART station. The 2002 General Plan contains policies to reduce construction noise during nighttime hours, similar to the proposed 2040 General Plan. Reduced development under this alternative would result in less construction noise. However, construction noise under this alternative may still exceed City standards, similar to the 2040 General Plan. Construction noise levels could be slightly reduced under this alternative, but would remain significant and unavoidable similar to the 2040 General Plan.

Daily VMT on area roadways would be less under this alternative as compared with the 2040 General Plan. Less VMT would result in reduced vehicle noise as compared to the 2040 General Plan. Overall, noise and vibration impacts under this alternative would be significant and unavoidable and slightly less than the proposed 2040 General Plan.

l. Population and Housing

Under the No Project Alternative, the existing land use designations in the 2002 General Plan would continue to define the type of development that occurs throughout Union City. Implementation of the No Project Alternative would accommodate 78,257 residents and 22,000 housing units in Union City through 2040. This would be approximately 6,220 fewer residents and 2,813 fewer housing units than would be accommodated by implementation of the proposed 2040 General Plan. Thus, compared to the proposed 2040 General Plan, the No Project Alternative would result in less population growth.

The current 2002 General Plan provides for orderly development and growth. The displacement of people or housing units as a result of the No Project Alternative would be minimal because development in Union City would continue pursuant to the existing 2002 General Plan. Impacts

would be less than significant. Compared to the proposed 2040 General Plan, the No Project Alternative would have reduced impacts on population and housing.

m. Public Services

Under the No Project Alternative, the existing land use designations in the 2002 General Plan would continue to define the type of development that occurs throughout Union City. The No Project Alternative would result in reduced development as compared to the proposed 2040 General Plan. Therefore, the No Project Alternative would generate less demand for fire, police, school, and library services. However, as discussed in Section 4.13, *Public Services*, the proposed 2040 General Plan includes policies that direct the City to strive to maintain adequate public service facilities.. Impacts would be less than significant, and overall, similar to the proposed 2040 General Plan.

n. Transportation

The No Project Alternative would result in reduced development as compared to the proposed 2040 General Plan. Therefore, daily VMT under this alternative would be 1,335,775, which is an approximately 13 percent reduction compared to the 2040 General Plan. The No Project Alternative would reduce VMT approximately 10 percent below the existing regional VMT per service population for the nine Bay Area counties. This alternative would not achieve a 15 percent reduction below the regional VMT per service population and impacts would remain significant and unavoidable.

As shown in Table 6-1, this alternative would generate an estimated 22,034 AM peak hour trips and 24,190 PM peak hour trips. The No Project Alternative would result in 3,892 fewer AM peak hour trips and 3,907 fewer PM peak hour trips as compared to the 2040 General Plan. Therefore, traffic on area roadways would be reduced under this alternative and overall roadway segment impacts would be lessened. However, this alternative would not avoid significant and unavoidable traffic impacts on area roadway segments, including Mission Boulevard north of Whipple Road and Union City Boulevard North of Dryer Street. The 2002 General Plan does not include trip reduction policies that would remove vehicles from area roadways.

Goals and policies in the 2002 General Plan would apply under this alternative and would support emergency access and safety design. However, policies of the 2002 General Plan may conflict with policies contained in ABAG/MTC’s Plan Bay Area 2040. Overall, this alternative would result in slightly reduced impacts to study segments compared to the 2040 General Plan, but would not reduce the significant and unavoidable traffic impacts.

Table 6-1 Alternative 1 – Trip Generation Comparison

	Proposed Project	Alternative 1: No Project	Difference
AM Peak Hour Trips	25,926	22,034	(3,892)
PM Peak Hour Trips	28,097	24,190	(3,907)

() = negative number

Source: Hexagon 2018 (see Appendix C)

o. Tribal Cultural Resources

As discussed in Section 4.15, *Tribal Cultural Resources*, tribal cultural resources impacts are highly dependent on both the individual project site conditions and the characteristics of the proposed

activity. Under the No Project Alternative, the existing land use designations in the 2002 General Plan would continue to define the type of development that occurs throughout Union City. Because the 2002 General Plan facilitates development within the same areas of Union City as would be facilitated by the proposed 2040 General Plan, the potential to encounter tribal cultural resources would be similar under this alternative as to the proposed 2040 General Plan. However, reduced development under this alternative could result in less impacts to tribal cultural resources because there is potential for less ground disturbance. In addition, development under this alternative would be subject to laws and regulations requiring Native American consultation, protection of human remains, and pre-historic artifacts. Impacts would be less than significant with adherence to applicable laws and regulations. Compared to the proposed 2040 General Plan, the No Project Alternative would have slightly reduced but similar impacts on tribal cultural resources. Impacts would remain less than significant.

p. Utilities and Service Systems

As discussed in Section 4.16, *Utilities and Service Systems*, the Alameda County Water District (ACWD) and Alvarado Treatment Plant would have adequate water supply and wastewater treatment capacity to service the City's anticipated 2040 population of 84,477 persons. The No Project Alternative would result in reduced development and a population of 78,257 persons. Therefore, there would be excess water supply and the Alvarado Treatment Plan would have excess capacity under this alternative. However, the 2002 General Plan does not contain goals and policies related to conserving water supply and wastewater reduction measures that would be implemented under the 2040 General Plan. Impacts to landfills would be slightly reduced as compared to the 2040 General Plan because there would be less overall development. Therefore, the No Project Alternative would have a less than significant impact to water supply, wastewater facilities, and landfill facilities, similar to the proposed project.

q. Wildfire

As discussed in Section 4.17, *Wildfire*, wildfire risk to Union City is primarily limited to the undeveloped hillside area east of State Route 238. The No Project Alternative would not expand the current development footprint into this area prone to wildfire hazard and areas at risk of wildfire in the City would remain under the Open Space and Agriculture land use designations. Overall, impacts would be less than significant, similar to the 2040 General Plan.

6.5 Alternative 2: Reduced Density Alternative

6.5.1 Description

Alternative 2 would reduce the residential and non-residential development density facilitated by the proposed 2040 General Plan such that approximately 50 percent fewer new housing units and new employment opportunities would be created. Development would occur within the same areas where development would occur under the 2040 General Plan, only at a reduced density. For example, the proposed General Plan would accommodate an approximately 21 percent increase in the number of housing units in Union City, whereas Alternative 2 would accommodate an approximately 10.5 percent increase, or about 50 percent of that accommodated by the 2040 General Plan. This alternative is similar to Alternative 1 in that overall density would be less compared to the proposed 2040 General Plan, thus accommodating a smaller population in 2040. However, Alternative 2 would allow for increased density compared to Alternative 1. Table 6-2

provides a comparison of the housing units and employment in Union City under this alternative compared with the proposed 2040 General Plan and Alternative 1. Table 6-2 also shows the population growth estimate, based on 50 percent fewer newer housing units than the proposed 2040 General Plan.

Table 6-2 Comparison of Density Facilitated by Alternative 2

Development/Growth	Proposed 2040 General Plan	Alternative 1	Alternative 2
Housing Units			
Existing - 2018	20,498	20,498	20,498
Net New Through 2040	4,315	1,502	2,158
2040 Total	24,813	22,000	22,656
Percent Growth	21.0	7.3	10.5
Population			
Existing - 2018	72,991	72,991	72,991
Net New Through 2040	11,486	5,266	5,743
2040 Total	84,477	78,257	78,734
Percent Growth	15.7	7.2	7.9
Employment			
Existing - 2018	18,475	18,475	18,475
Net New Through 2040	18,758	9,002	9,379
2040 Total	37,233	27,477	27,854
Percent Growth	101.5	48.7	50.8

6.5.2 Impact Analysis

a. Aesthetics

Alternative 2 would implement the same policies as the 2040 General Plan but would reduce residential and non-residential development by approximately 50 percent. Therefore, impacts to the City’s visual character, and light and glare conditions would be reduced as compared to the proposed 2040 General Plan. This alternative would not avoid the significant and unavoidable impacts to scenic resources because development of tall buildings could still occur. However, impacts would be reduced as a result of reduced development. Alternative 2 would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the 2040 General Plan. Impacts would be reduced as compared to the proposed 2040 General Plan, and would remain significant and unavoidable similar to the 2040 General Plan.

b. Air Quality

Alternative 2 would result in 50 percent less development than the 2040 General Plan and thus less construction in Union City. Alternative 2 would implement the same development policies as the proposed 2040 General Plan, including Policy RC-5.2, which is intended to reduce construction-related emissions. Short-term emissions would thus be reduced under this alternative.

Similarly, the long-term on-site emissions from use of natural gas for residential heating, cooking, and water heating would be reduced compared to the proposed 2040 General Plan because there would be less residential development. In addition, Alternative 2 would result in fewer VMT as compared to the proposed 2040 General Plan. Reduced VMT would result in less operational emissions associated with mobile sources. Additionally, reduced residential development would place fewer sensitive receptors near major emissions sources and impacts to receptors from TACs would be reduced. Similar to the 2040 General Plan, Mitigation Measure AQ-1 would be implemented under this alternative and reduce impacts to people being exposed to TACs by requiring Health Risks Assessments for new sensitive receptors or emissions sources for projects near roadways with high average daily trips.

Under this alternative the service population in Union City would increase by 13.5 percent compared to existing conditions. Because development would be reduced by 50 percent under this alternative it was assumed that VMT would also be reduced by 50 percent and would thus increase 12.5 percent above existing conditions. Therefore, the increase in VMT associated with buildout of Alternative 2 would not exceed the rate of increase from the forecast service population. Therefore, impacts on criteria pollutants would be less than significant, similar to the proposed 2040 General Plan. Overall, compared to the proposed 2040 General Plan, Alternative 2 would have fewer air quality impacts.

c. Biological Resources

Alternative 2 would reduce residential and non-residential development by approximately 50 percent as compared to the 2040 General Plan, but would not alter the land uses identified in the 2040 General Plan. Less development potentially would result in reduced impacts to biological resources. Overall, impacts to biological resources under Alternative 2 would be less than the 2040 General Plan. However, impacts would remain less than significant with mitigation because Mitigation Measure BIO-1 to add a nesting bird protection policy would still apply under Alternative 2.

d. Cultural Resources

Buildout of Alternative 2 would have the potential to impact cultural and historic resources in Union City, similar to the 2040 General Plan. Reduced development would reduce impacts to cultural resources because fewer historic and archaeological impacts would be potentially disturbed. In addition, goals and policies in the 2040 General Plan would continue to protect valuable cultural resources. Overall, impacts to cultural resources under this alternative would be less than the 2040 General Plan. However, impacts would remain less than significant with mitigation because Mitigation Measure CR-1 to require a cultural resources study implementation program would still apply to Alternative 2.

e. Energy

Alternative 2 would reduce development in Union City by 50 percent, although the proposed 2040 General Plan and Alternative 2 do not substantially differ in their 2040 development land use pattern. This alternative includes less dense development compared to the 2040 General Plan's land use scenario that encourages a greater degree of high-density and mixed-use development. Less dense development would result in less construction and thus reduced energy consumption for construction vehicles. Similarly, a reduced level of development would result in reduced consumption of energy from operational uses including heating and transportation fuel. However,

Alternative 2 would still promote a mixed-use and transit oriented development, which leads to lower energy consumption. Similar to the 2040 General Plan, Alternative 2 would implement new energy efficiency and renewable energy policies and implementation programs that would reduce energy consumption and would be consistent with energy goals and policies contained in the current Union City Climate Action Plan. Therefore, Alternative 2 would have reduced energy consumption. Overall, compared to the proposed 2040 General Plan, Alternative 2 would have reduced energy impacts and impacts would be less than significant, similar to the 2040 General Plan.

f. Geology and Soils

Alternative 2 would facilitate development within the same areas of Union City as the proposed 2040 General Plan, although new residences and other development would be reduced by approximately 50 percent. Therefore, development under Alternative 2 would occur on the same geologic units, soils, and slopes as developed under the 2040 General Plan. Reduced development under this alternative would reduce geology and soils impacts as compared to the 2040 General Plan because there would be less impacts from subsidence liquefaction, collapse, and other geologic hazards in the Plan Area. However, similar to the 2040 General Plan development would be required to comply with applicable regulations, such as the California Building Code, the Uniform Building Code, the Union City Municipal Code, and the Clean Water Act that include erosion control, best management practices, and engineering design to reduce geologic hazards.

Less overall development would reduce impacts to paleontological resources because less ground disturbance would occur under this alternative. However, impacts would remain less than significant with mitigation because Mitigation Measure GEO-1 requires implementation of a paleontological resources protection program, which would still apply to Alternative 2.

Alternative 2 would implement the same policies and programs as the proposed 2040 General Plan aimed at preventing and minimizing potential risks associated with earthquake hazards. Overall, impacts of Alternative 2 would be less than significant with mitigation and similar to the proposed 2040 General Plan.

g. Greenhouse Gas Emissions/Climate Change

Implementation of Alternative 2 would involve less overall development and associated growth than would occur under the proposed 2040 General Plan. Therefore, this alternative would have reduced construction related GHG emissions and natural gas consumption for heating and power.

Additionally, Alternative 2 would result in less VMT compared to the 2040 General Plan and GHG emissions from vehicle sources would be reduced.

Reduced population and employment projections under this alternative would result in a new per capita threshold of 1.3 MT CO₂e capita per year. Assuming that 50 percent less development would result in a 50 percent reduction in GHG emissions, implementation of Alternative 2 would result in 2.44 MT CO₂e capita per year. Therefore, similar to the 2040 General Plan the service population per year threshold would be exceeded under this alternative. Reduced development would lessen GHG emissions; however, impacts would remain significant and unavoidable with implementation of Mitigation Measure GHG-1 to update the City's climate action plan. Similar to the 2040 General Plan under this alternative if and when the City's CAP is updated GHG would be reduced to less than significant.

Alternative 2 would be consistent with GHG reduction measures in the City's Climate Action Plan and ABAG/MTC's Plan Bay Area 2040 because Alternative 2 contains the same policies and

implementation programs intended to facilitate greater GHG emission reductions as the 2040 General Plan. Therefore, Alternative 2 would result in similar impacts to the 2040 General Plan regarding consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Overall, although GHG emissions under this alternative would be reduced, impacts would remain significant and unavoidable similar to the 2040 General Plan.

h. Hazards/Hazardous Materials

Buildout of Alternative 2 would accommodate 50 percent less residents and jobs than the proposed 2040 General Plan. Therefore, Alternative 2 would expose fewer people to potential hazards and hazardous materials as compared to the 2040 General Plan. Similar to the 2040 General Plan, compliance with existing regulatory requirements would reduce potential impacts related to hazards and hazardous materials. Therefore, impacts related to the use, handling, transport, or emissions of hazardous materials under Alternative 2 would be less than significant and slightly reduced as compared to the proposed 2040 General Plan.

Alternative 2 facilitates development within the same areas of Union City as would be facilitated by the proposed 2040 General Plan. Therefore, the potential for projects to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would be similar under this alternative and the 2040 General Plan. Impacts would be less than significant, similar to the 2040 General Plan.

Alternative 2 would implement the same policies and programs as included in the proposed 2040 General Plan intended to strengthen emergency and disaster preparedness. Therefore, Alternative 2 would result in similar impacts regarding emergency preparedness than the proposed 2040 General Plan. Additionally, as described above, Alternative 2 would result in fewer residences, reducing the number of people affected by a potential emergency disaster. As a result, impacts related to hazards and hazardous materials under Alternative 2 would be less than significant and reduced as compared to that of the proposed 2040 General Plan.

i. Hydrology and Water Quality

Buildout of Alternative 2 would reduce development by 50 percent as compared to the 2040 General Plan. Alternative 2 would develop the same areas of Union City as would be developed during buildout of the proposed 2040 General Plan. Although the same areas would be developed, development facilitated under Alternative 2 would result in fewer impervious surfaces as the proposed 2040 General Plan. Stormwater runoff volumes and velocity would therefore be reduced under this alternative compared to the proposed 2040 General Plan. Similar to the 2040 General Plan, Alternative 2 contains policies that would reduce potential water quality impacts. Additionally, development under this alternative would be subject to the same regulatory requirements, such as NPDES permit requirements, governing runoff and protecting water quality and supply as the proposed 2040 General Plan. Because Alternative 2 would result in reduced development, the demand for groundwater would be reduced compared to the proposed 2040 General Plan. Impacts under this alternative would be less than significant and slightly less than the proposed 2040 General Plan.

j. Land Use and Planning

Buildout of Alternative 2 would reduce development by 50 percent as compared to the 2040 General Plan. Similar to the 2040 General Plan, Alternative 2 encourages orderly development in designated focus areas and would not divide established communities. Because the same goals and

policies would be implemented under Alternative 2 as the 2040 General Plan, this alternative would be consistent with and compatible to other applicable land use plans, policies, and regulations. As with the 2040 General Plan, Alternative 2 would be consistent with the *Plan Bay Area 2040* goals and measures, such as Goal 2 Adequate Housing, to reduce environmental impacts. Similar to the 2040 General Plan, this alternative would include provisions for providing adequate housing. For example, Policy LU-5.1 would apply under this alternative which states that the City shall continue to provide opportunities for a variety of housing types at varying densities and affordability levels. In addition, Policy HE-A.3 would also apply, which encourages home builders to use multifamily designated land for the highest allowable density housing to make use of land and facilities more efficient and provide more affordable housing opportunities. Impacts would be similar to the 2040 General Plan and less than significant.

k. Noise

Buildout of Alternative 2 would reduce development by 50 percent as compared to the 2040 General Plan. Therefore, less construction and associated construction noise and vibration would occur under Alternative 2 as compared to the proposed 2040 General Plan. Similar to the proposed 2040 General Plan, Alternative 2 would contain policies to reduce construction noise during nighttime hours, as well as policies that control measures be included as a standard condition of approval of new projects. As a result, construction noise and vibration levels would be substantially reduced under Alternative 2 as compared to the proposed 2040 General Plan, but would remain significant and unavoidable because construction noise may still exceed City standards.

Daily VMT on area roadways would be less under buildout of Alternative 2 as compared with the 2040 General Plan because there would be less overall development. Less VMT would result in reduced noise from motor vehicles at sensitive receptors located along area roadways. Overall, noise and vibration impacts under this alternative would be similar to the proposed 2040 General Plan and would remain significant and unavoidable because construction noise and vibration may still exceed City standards.

l. Population and Housing

Alternative 2 would have reduced density than the 2040 General Plan. However, land use designations would remain similar to the 2040 General Plan defining the type of development that occurs throughout Union City. Buildout of Alternative 2 would accommodate 78,734 residents and 22,656 housing units in Union City. This would be approximately 5,743 fewer residents and 2,157 fewer housing units than would be developed under the proposed 2040 General Plan. Thus, compared to the proposed 2040 General Plan, Alternative 2 would result in less population growth. Similar to the proposed 2040 General Plan, Alternative 2 would provide for orderly development and growth. Goals and policies from the proposed 2040 General Plan would also apply to Alternative 2, which would ensure that development of new housing occurs in accordance with state and local requirements, while preserving existing residential neighborhoods. Impacts would be less than significant. Compared to the proposed 2040 General Plan, Alternative 2 would have slightly reduced impacts on population and housing.

m. Public Services

Buildout of Alternative 2 would accommodate 50 percent fewer residents and housing units than the proposed 2040 General Plan. Therefore, Alternative 2 would generate less demand for fire, police, school, and library services compared to the proposed 2040 General Plan. Additionally, as

discussed in Section 4.13, *Public Services*, the proposed 2040 General Plan includes policies that direct the City to strive to maintain adequate public service facilities, which would be implemented under Alternative 2. Therefore, impacts would be less than significant, and overall, reduced as compared to the proposed 2040 General Plan.

n. Transportation

Alternative 2 would reduce density by 50 percent compared to the 2040 General Plan. Therefore, it was assumed that this alternative would generate approximately 50 percent fewer AM and PM peak hour trips and VMT than the 2040 General Plan. Therefore, project related traffic on area roadway segments would be reduced by approximately 50 percent. Although Alternative 2 would substantially reduce the traffic volume and volume to capacity ratio at impacted roadway segments, such as I-880 north of Whipple Road, traffic impacts would remain significant and unavoidable, because this alternative would not remove enough trips from area roadways. In addition because this alternative would proportionally reduce density the VMT per service population would remain the same as under the 2040 General Plan. As compared to the regional VMT per service population VMT under this alternative would not reduce VMT per service population by 15 percent and impacts to VMT would remain significant and unavoidable.

Goals and policies in the 2040 General Plan would still apply under this alternative. Therefore, Alternative 2 would support emergency access and safety design, and would not conflict with policies contained in ABAG/MTC's Plan Bay Area 2040 or the City's Pedestrian and Bicycle Master Plan. Overall, this alternative would result in fewer impacts to study roadway segments than those associated with the 2040 General Plan and would reduce impacts to a less than significant level.

o. Tribal Cultural Resources

As discussed in Section 4.15, *Tribal Cultural Resources*, tribal cultural resources impacts are highly dependent on both the individual project site conditions and the characteristics of the proposed activity. Under Alternative 2, similar land use pattern would occur as the proposed 2040 General Plan and would define development that occurs throughout Union City, however development would be reduced by 50 percent. Overall, tribal cultural resources impacts under Alternative 2 would be less than the 2040 General Plan because reduced development would have less potential to unearth tribal cultural resources. Similar to the 2040 General Plan, development under Alternative 2 would be subject to laws and regulations requiring Native American consultation, protection of human remains, and pre-historic artifacts. Impacts would be less than significant with adherence to applicable laws and regulations. Overall, tribal cultural resources impacts under Alternative 2 would be less than the 2040 General Plan and impacts would remain less than significant, similar to the 2040 General Plan.

p. Utilities and Service Systems

As discussed in Section 4.16, *Utilities and Service Systems*, the Alameda County Water District (ACWD) and Alvarado Treatment Plant would have adequate water supply and wastewater treatment capacity to service the City's anticipated 2040 population of 84,477 persons. Alternative 2 would result in a 50 percent reduction in development and a population of 78,734 persons. Therefore, there would be excess water supply and the Alvarado Treatment Plant would have excess capacity under this alternative. Additionally, the goals and policies in the 2040 General Plan related to water supply and wastewater reduction would be implemented under this alternative to further reduce impacts to utilities and service systems. Impacts to landfills would be slightly reduced

as compared to the 2040 General Plan because there would be 50 percent less overall development. Therefore, Alternative 2 would have a less than significant impact to water supply and landfill facilities, similar to the proposed project.

q. Wildfire

As discussed in Section 4.17, *Wildfire*, wildfire risk to Union City is primarily limited to the undeveloped hillside area east of State Route 238. Alternative 2 would not expand the current development footprint into the areas prone to wildfire hazard. As a result, Alternative 2 would have the same impact regarding wildfires and associated hazards as the 2040 General Plan. In addition, goals and policies in the 2040 General Plan related to wildfire suppression and preparedness would be implemented under this alternative to further reduce wildfire impacts. Overall, impacts would be less than significant, similar to the 2040 General Plan.

6.6 Alternative 3: Enhanced Employment Alternative

6.6.1 Description

Alternative 3, the Enhanced Employment Alternative, would consist of the same policies and land use designations as the proposed 2040 General Plan, with the exception of the designations within the Greater Station District, Union City Boulevard, and Horner/Veasy focus areas of the City. Alternative 3 would reprogram these three focus areas to emphasize a mix of commercial, office, and industrial land uses which are employment generating development. It would designate some areas east of the Union Pacific railroad tracks in the Greater Station District for office and commercial development and retain others for research and development. Station East would be designated for office and employment generating uses and would not include residential designations under this alternative. Alternative 3 also includes intensification of the existing commercial centers at Alvarado-Niles Road and Decoto Road with employment and commercial uses. Union City Boulevard would retain its special industrial land use on the west side as well as retail commercial, similar to the 2040 General Plan. However unlike the 2040 General Plan, this alternative would accommodate only retail commercial, office and employment generating uses, without the potential for residential components, on the east side of Union City Boulevard. Horner-Veasy would retain its planned industrial use for areas west of Whipple Road, but the site west of Whipple Road would not be designated for low-density residential. Instead, this alternative would designate the site west of Whipple Road as industrial, commercial, or other employment generating uses.

Because this alternative places more emphasis on employment growth and less on residential development compared with the proposed General Plan, it would accommodate a smaller population in Union City in 2040. There would be a smaller population and fewer housing units within Union City in 2040, but there would be more jobs and employment opportunities within the City compared to the proposed 2040 General Plan. Additional employment opportunities under this alternative would increase the number of local jobs for Union City residents and would thus lower commute distances and VMT compared to the 2040 General Plan.

6.6.2 Impact Analysis

a. Aesthetics

Alternative 3 would develop more employment-generating land uses than residential uses compared to the proposed 2040 General Plan. As a result, visibility from and of scenic vistas, the City's visual character, and light and glare conditions would be similarly impacted as under the proposed 2040 General Plan. Overall, aesthetic impacts under this alternative would not be substantially different than identified as part of the proposed 2040 General Plan because residential development in the Greater Station District, Union City Boulevard, and Horner/Veasby focus areas would become employment generating development under this alternative. The significant and unavoidable impact to scenic vistas would not be avoided under this alternative. Alternative 3 would have the same benefits with respect to creating public art, inviting gathering places, and implementation of higher quality architectural standards as the 2040 General Plan because this alternative would include the same goals and policies in the 2040 General Plan. Impacts would be significant and unavoidable and similar to those under the proposed 2040 General Plan.

b. Air Quality

Alternative 3 would replace housing units with employment-generating facilities compared with the proposed 2040 General Plan. Short-term emissions that would occur from construction of this alternative would be similar to impacts identified for the proposed project because a similar amount of development would occur. Additionally, Alternative 3 would implement the same development policies as the proposed 2040 General Plan, including Policy RC-5.2, which is intended to reduce construction-related emissions. Therefore, Alternative 3 would have similar construction-related impacts on air quality.

Because fewer residential units would be constructed in Union City under this alternative, long-term on-site emissions from use of natural gas for residential heating, cooking, and water heating would be reduced compared to the proposed 2040 General Plan. While employment-generating facilities require heating, residential units typically have higher natural gas demands (U.S. Energy Information Administration 2019). Therefore, operational emissions resulting from employment generating development instead of residential development would be reduced under this alternative. Alternative 3 would also result in reduced VMT compared to the proposed 2040 General Plan as a result of less residential development and increased employment-generating development within the City, which would allow for existing and planned residences to shorten commute lengths by increasing employment opportunities within the City. Reduced VMT would result in less operational emissions associated with mobile sources. In addition, because this alternative would accommodate only retail commercial, office, and industrial, without residential components in the east side of Union City Boulevard and west of Whipple Road Alternative 3 would expose fewer sensitive receptors to major emissions sources. Impacts from TACs would be reduced. However, similar to the 2040 General Plan, Mitigation Measure AQ-1 would still apply under this alternative and reduce impacts to people being exposed to TACs by requiring Health Risks Assessments for new sensitive receptors or emissions sources. Impacts would remain less than significant with mitigation incorporated under this alternative.

Under Alternative 3 both VMT and service population would increase above existing conditions. It is anticipated that the increase in VMT associated with buildout of Alternative 3 would not exceed the rate of increase from the forecast service population because providing additional employment opportunities in Union City would result in an increase in service population and smaller increase in

VMT because Alternative 3 would provide additional employment opportunities within the City. These additional employment opportunities within the City would lower commute distances for Union City residents, thus lowering VMT compared to the proposed 2040 General Plan. Therefore, impacts on criteria pollutants would be less than significant, similar to the proposed 2040 General Plan. Overall, compared to the proposed 2040 General Plan, Alternative 3 would have reduced air quality impacts.

c. Biological Resources

Alternative 3 would develop more employment-generating land uses than residential uses compared to the proposed 2040 General Plan. Therefore, a similar amount of development in the Greater Station District, Union City Boulevard, and Horner/Veasy focus areas of the City would occur under this alternative. Therefore, ground disturbing impacts for Alternative 3 would be similar to the 2040 General Plan. Similar to the 2040 General Plan, the large open space area in the northwestern portion of the city that contains sensitive biological resources would maintain their open space and agriculture uses under this alternative. However, impacts would remain less than significant with mitigation because Mitigation Measure BIO-1 to add a nesting bird protection policy would still apply under Alternative 3. Therefore, biological resource impacts would be similar to those identified under the 2040 General Plan.

d. Cultural Resources

Alternative 3 would develop more employment-generating land uses than residential uses compared to the proposed 2040 General Plan. Therefore, a similar amount of development and thus ground disturbance would occur in the Greater Station District, Union City Boulevard, and Horner/Veasy focus areas of the City under this alternative. Buildout of Alternative 3 would have similar potential to impact cultural and historic resources in Union City as the 2040 General Plan. Alternative 3 would not substantially increase potential impacts to cultural resources, and all policies and mitigation measure provided in Section 4.4, *Cultural Resources*, would apply under Alternative 3. Impacts would remain less than significant with mitigation because Mitigation Measure CR-1 to require a cultural resources study implementation program would still apply to Alternative 3. Compared to the proposed 2040 General Plan, Alternative 3 would have similar impacts.

e. Energy

Alternative 3 would develop more employment-generating land uses than residential uses compared to the proposed 2040 General Plan. However, the amount of construction would be similar to the 2040 General Plan. Therefore, construction energy consumption would be similar to the 2040 General Plan.

The proposed 2040 General Plan and Alternative 3 do not substantially differ in their 2040 development footprints; however, the land use scenario for Alternative 3 would implement reduced residential development in the Greater Station District, Union City Boulevard, and Horner/Veasy focus areas of the City. While employment-generating facilities require heating, residential units typically have higher natural gas demands (U.S. Energy Information Administration 2019). Therefore, energy consumption from employment-generating facilities would be reduced under this alternative as compared to the 2040 General Plan. In addition, the increase in employment-generating areas minimizes vehicle trip lengths by providing more jobs in the City, which would result in fewer vehicle trips and associated transportation fuel consumption under Alternative 3.

Finally, similar to the 2040 General Plan, Alternative 3 would implement new energy efficiency and renewable policies, as well as implementation programs to reduce energy consumption. Therefore, the inefficient and unnecessary consumption of energy would be reduced under Alternative 3. Overall, although energy consumption under this alternative would be less, impacts would remain less than significant similar to the 2040 General Plan.

f. Geology and Soils

Alternative 3 would facilitate development within the same areas of Union City as the proposed 2040 General Plan, although proposed residential uses within the Greater Station District, Union City Boulevard, and Horner/Veasy focus areas of the City would be replaced with employment-generating uses. Therefore, development under Alternative 3 would occur on the same geologic units, soils, and slopes as developed under the 2040 General Plan. A similar amount of development would occur under this alternative as the 2040 General Plan. Therefore, impact from subsidence, liquefaction, collapse, and other geologic hazards in the Plan Area would be similar to the 2040 General Plan. Development would be required to comply with applicable regulations, such as the California Building Code, the Uniform Building Code, the Union City Municipal Code, and the Clean Water Act. Therefore, risks associated with topsoil loss and expansive soils would not substantially differ between Alternative 3 and the proposed 2040 General Plan.

Because similar development would occur under this alternative, ground disturbance impacts would be similar to the 2040 General Plan. Therefore, the potential to unearth unknown resources would not substantially differ between Alternative 3 and the 2040 General Plan. Impacts would remain less than significant with mitigation because Mitigation Measure GEO-1 to require implementation of a paleontological resources protection program would still apply to Alternative 3.

Alternative 3 would implement the same policies and programs as the proposed 2040 General Plan aimed at preventing and minimizing potential risks associated with earthquake hazards. Overall, impacts of Alternative 3 would be less than significant with mitigation and similar to the proposed 2040 General Plan.

g. Greenhouse Gas Emissions/Climate Change

Implementation of Alternative 3 would involve less residential and more employment-generating development than would occur under the proposed 2040 General Plan. Therefore, short-term construction GHG emissions and natural gas consumption would be similar to the 2040 General Plan. Alternative 3 would result in less VMT compared to the 2040 General Plan because increased employment-generating development within the City would allow for existing and future residents to shorten commute lengths by increasing employment opportunities within Union City. Therefore, GHG emissions from mobile sources would be reduced under this alternative.

Although this alternative would result in additional employment-generating development and a reduction in residential development, overall GHG emissions under Alternative 3 would be similar to the 2040 General Plan because the amount of development would be similar. However, this alternative would accommodate a smaller population in Union City in 2040 because there would be fewer housing units. Therefore, GHG emissions under Alternative 3 would not be substantially reduced and would still exceed the service population emissions threshold established as part of the 2040 General Plan. Impacts would remain significant and unavoidable with implementation of Mitigation Measure GHG-1 to update the City's climate action plan consistent with state regulations. Similar to the 2040 General Plan, under this alternative if and when the City's CAP is updated in accordance with GHG reduction targets, GHG would be reduced to less than significant.

Alternative 3 would be consistent with GHG reduction measures in the City's Climate Action Plan and ABAG/MTC's Plan Bay Area 2040 because Alternative 3 contains the same policies and implementation programs intended to facilitate similar GHG emission reductions as the 2040 General Plan. Therefore, Alternative 3 would result in similar impacts to the 2040 General Plan regarding consistency with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Overall, GHG emissions under this alternative would be similar to the 2040 General Plan and would remain significant and unavoidable.

h. Hazards/Hazardous Materials

Buildout of Alternative 3 would accommodate fewer residents and more jobs than the proposed 2040 General Plan resulting in a smaller 2040 population in Union City. However, Alternative 3 would expose a similar number people to potential hazards and hazardous materials as compared to the proposed 2040 General Plan because this alternative would result in additional employees in Union City resulting in a similar number of people being exposed to potential hazards. Similar to the 2040 General Plan, compliance with existing regulatory requirements would address potential impacts related to hazards and hazardous materials. Therefore, impacts related to the use, handling, transport, or emissions of hazardous materials under Alternative 3 would be similar to the proposed 2040 General Plan.

Alternative 3 facilitates development within the same areas of Union City as would be facilitated by the proposed 2040 General Plan. Therefore, the potential for projects to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would be similar under this alternative and the 2040 General Plan. Impacts would be less than significant, similar to the 2040 General Plan.

Alternative 3 would implement the same policies and programs as included in the proposed 2040 General Plan intended to strengthen emergency and disaster preparedness. Therefore, Alternative 3 would result in similar impacts regarding emergency preparedness as the proposed 2040 General Plan. As a result, impacts related to hazards and hazardous materials resulting from implementation of Alternative 3 would be less than significant and similar to the proposed 2040 General Plan.

i. Hydrology and Water Quality

Buildout of Alternative 3 would result in fewer residential units and greater jobs than the 2040 General Plan. Development under Alternative 3 would occur in the same areas of Union City as the proposed 2040 General Plan. Therefore, development facilitated under Alternative 3 would create a similar amount of impervious surfaces. Stormwater runoff volumes and velocity would therefore be similar under this alternative to the 2040 General Plan. Alternative 3 would include 2040 General Plan policies to reduce potential water quality impacts. Additionally, development under this alternative would be subject to the same regulatory requirements, such as NPDES permit requirements, governing runoff and protecting water quality and supply as the 2040 General Plan. Because Alternative 3 would result in a smaller population in 2040, the demand for groundwater would be reduced compared to the proposed 2040 General Plan because residential uses require more water use than employment generating land uses (City of Los Angeles 2006). Overall, impacts under this alternative would be less than significant and similar to the 2040 General Plan.

j. Land Use and Planning

Alternative 3 would result in development within the same areas of Union City as the 2040 General Plan. Similar to the 2040 General Plan, Alternative 3 encourages orderly development in the designated focus areas and would not divide established communities. In addition, this alternative would be consistent and compatible with other applicable land use plans, policies, and regulations including Plan Bay Area 2040 goals and measures, such as Goal 2 Adequate Housing, to reduce environmental impacts. Similar to the 2040 General Plan, this alternative continues to provide for residential development on infill sites within the Greater Station District and other areas of the City and includes provisions for providing adequate housing. For example, Policy LU-5.1 would apply under this alternative which states that the City shall continue to provide opportunities for a variety of housing types at varying densities and affordability levels. In addition, Policy HE-A.3 would also apply, which encourages home builders to use multifamily designated land for the highest allowable density housing to make use of land and facilities more efficient and provide more affordable housing opportunities. Impacts would therefore be similar to the 2040 General Plan and less than significant.

k. Noise

Buildout of Alternative 3 would result in fewer residential units and greater jobs than the 2040 General Plan. Therefore, similar construction and associated construction noise and vibration impacts would occur under Alternative 3 as compared to the proposed 2040 General Plan. Consistent with the proposed 2040 General Plan, Alternative 3 contains policies to reduce construction noise during nighttime hours. Specifically, Policy S-8.9, which requires construction noise control measures that are to be included as a standard condition of approval of new projects. As a result, construction noise and vibration levels would be similar under Alternative 3 compared with the proposed 2040 General Plan because there would be a similar amount of development under Alternative 3.

Daily VMT on area roadways would be less under buildout of Alternative 3 as compared with the 2040 General Plan because Alternative 3 would provide more employment opportunities in the City and reduce overall VMT. Therefore, roadway noise would be reduced at sensitive receptors located along area roadways. Overall, noise and vibration impacts under this alternative would be similar to the proposed 2040 General Plan and would remain significant and unavoidable because construction noise and vibration impacts may still exceed applicable City thresholds.

l. Population and Housing

Under Alternative 3, commercial, office, and other employment generating land uses would replace residential land use designations proposed in the Greater Station District, Union City Boulevard, and Horner/Veasby focus areas of the City. Thus, while residential development on infill sites in other parts of the City would continue under this alternative, compared to the 2040 General Plan, Alternative 3 would result in a smaller 2040 population. Similar to the 2040 General Plan, Alternative 3 provides for orderly development and growth. Goals and policies from the proposed 2040 General Plan would also apply to Alternative 3, which would ensure that development of new housing occurs in accordance with state and local housing requirements. Compared to the 2040 General Plan, Alternative 3 would have reduced impacts on population and housing and would remain less than significant.

m. Public Services

Buildout of Alternative 3 would accommodate fewer residents and housing units than the 2040 General Plan. Therefore, although there would be fewer residences under this alternative the number of employees would be increased compared to the 2040 General Plan. Alternative 3 would generate slightly reduced demand for fire, police, school, and library services compared to the proposed 2040 General Plan because even though a similar amount of development would occur residents create a higher demand on public services because they more frequently utilize services. As discussed in Section 4.13, *Public Services*, the 2040 General Plan includes policies that direct the City to strive to maintain adequate police staffing levels. These policies would also be implemented under Alternative 3. Therefore, impacts would be less than significant, and overall, slightly reduced as compared to the 2040 General Plan.

n. Transportation

Implementation of Alternative 3 would involve less residential and more employment-generating development than would occur under the proposed 2040 General Plan. This alternative would result in additional employment opportunities for residents of Union City and would thus substantially reduce overall VMT because it would reduce work length trips. However, the reduction in VMT under this alternative would not achieve a 15 percent reduction below the regional VMT per service population and significant and unavoidable impacts related to VMT would not be avoided.

Similarly, this alternative would generate fewer AM and PM peak hour trips, as fewer high-density residential development and more employment-generating development would be included as compared to the proposed 2040 General Plan. Due to the decreased commute trip length for city residents, workers would be encouraged to utilize alternative forms of transportation, including public transit and bicycles, which would remove additional vehicle trips from local roadways. However, even though this alternative would lessen traffic impacts, impacts would remain significant and unavoidable because it cannot be determined if the reduction in trips would avoid roadway segment impacts.

Goals and policies in the 2040 General Plan would still apply under this alternative. Therefore, Alternative 2 would support emergency access, safety design, and would not conflict with policies contained in ABAG/MTC's Plan Bay Area 2040 or the City's Pedestrian and Bicycle Master Plan. Overall, this alternative would result in reduced impacts to study intersections than those associated with the 2040 General Plan; however impacts would remain significant and unavoidable.

o. Tribal Cultural Resources

As discussed in Section 4.15, *Tribal Cultural Resources*, tribal cultural resources impacts are highly dependent on both the individual project site conditions and the characteristics of the proposed activity. A similar amount of development and thus ground disturbance would occur in the Greater Station District, Union City Boulevard, and Horner/Veasby focus areas of the City under this alternative and all other areas of the Plan Area would be developed similar to the 2040 General Plan. Buildout of Alternative 3 would thus have similar potential to impact tribal cultural resources in Union City as the 2040 General Plan because there would be a comparable amount of ground disturbance. Similar to the 2040 General Plan, development under Alternative 3 would be subject to laws and regulations requiring Native American consultation, protection of human remains, and pre-historic artifacts. Impacts would be less than significant with adherence to applicable laws and regulations. Overall, tribal cultural resources impacts under Alternative 3 would be similar to the 2040 General Plan and impacts would remain less than significant.

p. Utilities and Service Systems

As discussed in Section 4.16, *Utilities and Service Systems*, the Alameda County Water District (ACWD) and Alvarado Treatment Plant would have adequate water supply and wastewater treatment capacity to service the City’s anticipated 2040 population of 84,477 persons. Alternative 3 would accommodate a smaller population in Union City in 2040. Therefore, there would be excess water supply and the Alvarado Treatment Plan would have excess capacity under this alternative. Impacts to landfills would be similar to the 2040 General Plan because although there would be increased employment generating land uses, overall development density would be similar to the 2040 General Plan. Additionally, the goals and policies in the 2040 General Plan related to water supply and wastewater reduction would be implemented under this alternative to further reduce impacts to utilities and service systems. Therefore, Alternative 3 would have a less than significant utilities impact, similar to the proposed project.

q. Wildfire

As discussed in Section 4.17, *Wildfire*, wildfire risk to Union City is primarily limited to the undeveloped hillside area east State Route 238. Alternative 3 would not expand the current development footprint into the areas prone to wildfire hazard. As a result, Alternative 3 would have the same impact regarding wildfires and associated hazards as the 2040 General Plan. In addition, goals and policies in the 2040 General Plan related to wildfire suppression and preparedness would be implemented under this alternative to further reduce wildfire impacts. Overall, impacts would be less than significant, similar to the 2040 General Plan.

6.7 Alternatives Considered but Rejected

Two alternatives, described in the following sections, were considered but ultimately rejected from being reviewed and analyzed as potential alternatives to the proposed project. The first of these alternatives is the “No Construction of the Quarry Lakes Parkway Alternative.” The Quarry Lakes Parkway project has already been approved by the Alameda County Transportation Authority and is not a project directly resulting from the implementation of the proposed 2040 General Plan. The project will occur with or without adoption of the 2040 General Plan. As such, this alternative was ultimately rejected.

The second alternative which was considered but rejected, the Designate Vacant Parcels Currently Identified for Residential and Employment Generating Uses as Open Space alternative, would meet most of the project objectives related to health, quality of life, sustainability, resiliency, and parks and recreation. However, it was rejected because it would not meet the objectives/guiding principles related to economic development and housing.

Each of the alternatives considered but rejected is described below, along with the reasons for rejecting them from further consideration.

6.7.1 No Construction of the Quarry Lakes Parkway Alternative

This alternative consists of not constructing the Quarry Lakes Parkway. The Quarry Lakes Parkway is a proposed parkway that extends from Mission Boulevard to Paseo Padre Parkway in Fremont that will include Class 1 and 2 bicycle lanes and pedestrian amenities. .

The No Construction of the Quarry Lakes Parkway alternative was rejected from further consideration because the project has already been approved by the Alameda County

Transportation Authority and is not a project directly resulting from the implementation of the proposed 2040 General Plan. The Final Environmental Impact Report for the project was completed and approved in April 2009. This alternative would not alter any of the impacts associated with the 2040 General Plan because the Quarry Lakes Project is not a project directly resulting from the implementation of the proposed 2040 General Plan.

6.7.2 Designate Vacant Parcels Currently Identified for Residential and Employment Generating Uses as Open Space

Similar to the proposed 2040 General Plan, this alternative would facilitate infill development and redevelopment of underutilized parcels within the urbanized areas of Union City. However, parcels that are currently vacant but designated for development under the 2040 General Plan would instead be designated as open space under this alternative. Similar to the proposed 2040 General Plan, this alternative would include development of the vacant parcels comprising the Station East and other Station District sub-areas of the Greater Station District focus area. As an example of parcels that would be designated as open space under this alternative, there are vacant parcels on the east side of Union City Boulevard near its intersection with the Union Pacific Railroad that the 2040 General Plan designates as mixed-use employment. Under this alternative, these parcels would be designated as open space and would not be developed with mixed use employment.

Because this alternative would result in more open space areas within Union City, there would be less residential and non-residential development compared with the proposed 2040 General Plan. With reduced development the population growth and employment growth facilitated under this alternative would be less compared with the 2040 General Plan. Therefore, this alternative may result in fewer impacts related to ground disturbance, including biological resources, archaeological resources, and geology and soils and would substantially lessen greenhouse gas, noise, and traffic impacts.

This alternative was rejected from further consideration because it would fail to meet most of the General Plan objectives/guiding principles. This alternative would conserve vacant parcels in the City, some of which are currently identified in the City's adopted and certified Housing Element, and would result in reduced housing opportunities especially for populations that are identified as low and very low income. Therefore, this alternative would not meet the objective/guiding principle to promote a mix of housing types and affordability because it would reduce opportunities for mixed-use development and related housing. This would also result in legal concerns due to the City not meeting its Regional Housing Needs Assessment and inconsistency between the Housing Element and other General Plan elements. In addition, maintaining vacant parcels as open space would not meet the objective to promote Union City as an economic destination to attract new businesses and facilitate new economic development opportunities because it would reduce non-residential development. Because this alternative would not meet most of the objectives/guiding principles of the 2040 General Plan it was ultimately rejected.

6.8 Environmentally Superior Alternative

This section compares the impacts of the three alternatives to those of the 2040 General Plan. Table 6-3 shows whether each alternative would have impacts that are less than, similar to or greater than the 2040 General Plan for each of the issue areas studied.

The No Project Alternative (Alternative 1) would not be considered environmentally superior overall because while it would involve less development and growth it would not include goals and policies of the 2040 General Plan that would reduce environmental impacts, specifically policies related to noise, energy efficient development, and transit oriented land use development. Alternative 1 would result in increased impacts for energy, land use and planning, and greenhouse gases. Further, Alternative 1 would not eliminate the significant and unavoidable greenhouse gas emissions and transportation impacts and the City's Climate Action Plan would still need to be updated under this alternative. Additionally, although traffic impacts would be slightly reduced under this alternative as a result of less development, traffic impacts would remain significant and unavoidable. Finally, the significant and unavoidable noise impact would not be reduced under this alternative because although overall development would be reduced construction noise and vibration may still exceed City standards.

Alternative 2, the Reduced Density Alternative, performs similar or better to the 2040 General Plan for all of the environmental resource impact areas. This alternative would result in less intensive development in both residential and non-residential areas within the city, reducing both population growth and employment opportunities compared to the 2040 General Plan. Therefore, Alternative 2 would result in fewer impacts to the majority of issue areas including aesthetics, air quality, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, population and housing, public services, and utilities and service systems. Alternative 2 would not eliminate the significant and unavoidable traffic impact even though this alternative would reduce project traffic on area roadway segments by 50 percent, thus substantially reducing traffic impacts. Similarly, Alternative 2 would lessen but not eliminate the significant and unavoidable greenhouse gas emission impact because the service population per year threshold would be exceeded under this alternative and the City's Climate Action Plan would still need to be updated. In addition, the significant and unavoidable noise impact would occur under this alternative because construction noise and vibration impacts may still exceed City standards.

Alternative 3, the Enhanced Employment Alternative, would perform similar or better than the 2040 General Plan for all issue areas. This alternative would reduce population growth while increasing employment opportunities within the city. Therefore, Alternative 3 would result in fewer impacts to some issue areas including air quality, energy, population and housing, traffic, and utilities and service systems. Impacts would be similar to the 2040 General Plan for all other issue areas. In addition, Alternative 3 would substantially reduce, but not eliminate, the significant and unavoidable traffic impact because it would reduce commuter work trip lengths and encourage alternative methods of transportation. In addition, Alternative 3 would reduce but not eliminate the significant and unavoidable greenhouse gas emission impact because the City's Climate Action Plan would still need to be updated. Finally, Alternative 3 would not reduce the significant and unavoidable noise impact because the amount of development would be similar under this alternative as the 2040 General Plan and construction noise and vibration impacts may still exceed City standards.

Although both Alternative 2 and Alternative 3 would be superior to the 2040 General Plan, based on the information presented herein, Alternative 2 is determined to be the environmentally superior alternative when considering overall environmental impacts relative to the performance metrics. Alternative 2 would substantially reduce impacts in the majority of environmental issue areas and would have similar impacts as the 2040 General Plan in two issue areas, land use and planning and wildfire. However, Alternative 2 would less fully meet the objectives/guiding principles of the 2040 General Plan because it reduces new housing development and limits employment opportunities.

Therefore, Alternative 2 would not meet the project objectives of housing and economic development.

After Alternative 2, Alternative 3 is the next most environmentally superior alternative when considering overall environmental impacts relative to the performance metrics. Alternative 3 would substantially lessen the significant and unavoidable traffic impact, but would perform similar to the 2040 General Plan in the majority of environmental issue areas. However, this alternative would reduce fewer overall impacts compared to Alternative 2, and it would not avoid the GHG and noise significant and unavoidable impacts. Table 6-3 shows a comparison of all three alternatives. Similar to Alternative 2, Alternative 3 would not meet all of the objectives of the 2040 General Plan. Alternative 3 would focus on employment opportunities and would reduce housing development such that this alternative would not meet the project objective for housing.

Table 6-3 Alternative Comparison

Issue	Alternative 1	Alternative 2	Alternative 3
Aesthetics	+	= / +	=
Air Quality	-	= / +	= / +
Biological Resources	= / +	= / +	=
Cultural Resources	+	= / +	=
Energy	-	= / +	= / +
Geology and Soils	= / +	= / +	=
Greenhouse Gas Emissions/Climate Change	= / -	= / +	=
Hazards/Hazardous Materials	=	= / +	=
Hydrology and Water Quality	= / +	= / +	=
Land Use and Planning	-	=	=
Noise	= / +	= / +	= / +
Population and Housing	= / +	= / +	= / +
Public Services	=	= / +	= / +
Transportation	= / +	= / +	= / +
Tribal Cultural Resources	= / +	= / +	=
Utilities and Service Systems	=	= / +	= / +
Wildfire	=	=	=
+ Superior to the proposed project (reduced level of impact) = Similar level of impact to the proposed project - Inferior to the proposed project (increased level of impact) = / + Slightly superior to the proposed project in one or more aspects, but not significantly superior = / - Slightly inferior to the proposed project in one or more aspects, but not significantly inferior + / - Some areas inferior to the proposed project, and some areas superior, but not significantly inferior or superior			

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