

4.14 Transportation

This section evaluates potential transportation and circulation impacts that could result from implementation of the 123 Independence Drive Residential project (project; proposed project). Specifically, this section describes existing and future transportation and circulation characteristics within the study area, describes analysis methodologies and regulatory framework, identifies potential transportation impacts of the proposed project, and identifies the recommended mitigation measures for identified significant impacts.

As discussed in Chapter 2, Introduction, and Chapter 4, Environmental Analysis, two Notices of Preparation (NOPs) were circulated for this environmental impact report (EIR), one in January and February 2021, and one in September and October 2021. Public comments received in response to the NOPs pertaining to transportation and circulation include a letter from Caltrans specifying that the section should include a vehicle miles traveled (VMT) screening analysis, discussion relating to funding sources and mitigations along state facilities, and the assessment of travel demand. Another comment letter was received from the Sequoia Union High School District specifying that the section should assess impacts on travel routes near TIDE Academy school and expected traffic patterns as it relates to students' safety and site circulation of the proposed project. Both NOPs and the comments received in response to them are provided in Appendix A of this EIR.

For purposes of disclosing potential transportation impacts, projects in the City of Menlo Park (City) use the City's current Transportation Impact Analysis (TIA) Guidelines (2020) to ensure compliance with both state and local requirements. Up until July 1, 2020, the City's TIA Guidelines used roadway congestion or level of service (LOS) as the primary study metric for planning and environmental review purposes. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts under CEQA in an effort to meet the state's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. CEQA Section 21099(b)(2) states that upon certification of the revised guidelines for determining transportation impacts pursuant to CEQA Section 21099(b)(1), automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA. OPR identified VMT as the required CEQA transportation metric for determining potentially significant environmental impacts.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the section implementing SB 743 (CEQA Guidelines Section 15064.3). OPR developed a Technical Advisory on Evaluating Transportation Impacts in CEQA (2018), which contains OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. As of July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA. A local VMT threshold was adopted by City Council on June 23, 2020, which incorporated local VMT thresholds into the updated TIA Guidelines. The City Council, however, retained the requirement that the TIA also analyze LOS for (non-CEQA) planning purposes.

Therefore, the TIA includes both an assessment of VMT impacts using local VMT thresholds included in the updated TIA Guidelines for purposes of determining potentially significant environmental impacts pursuant to CEQA, as well as a summary of the LOS analysis for assessment of local congestion for planning purposes. However, in accordance with SB 743 for purposes of determining potentially significant environmental impacts, this EIR will focus on VMT as the threshold of significance instead of LOS. Because the City Council approved TIA Guidelines

also require an analysis of LOS for local planning purposes, that information is summarized in the Non-CEQA Analysis at the end of this section and Appendix J1, Transportation Impact Analysis, of this EIR.

In addition to the documents incorporated by reference, as identified in Section 2.7 of Chapter 2, Introduction of this EIR, the following analysis is based, in part, on the following sources:

- Transportation Impact Analysis (TIA) prepared by Dudek in September 2022 (Appendix J1)
- Transportation Demand Management Plan prepared by Hexagon Transportation Consultants, Inc., October 19, 2021 (Appendix J2)

4.14.1 Environmental Setting

This section describes the existing transportation network in the vicinity of the project site, including the roadway, transit, pedestrian, and bicycle systems.

Existing Street System

Characteristics of the existing street system within the study area are described below.

US 101 is a north-south, 10-lane, divided highway located south of the project site. The highway serves as a regional transportation corridor on the peninsula for the project, with access provided via the Marsh Road interchange. US 101 is designated as a Freeway/Expressway by the City of Menlo Park General Plan. The posted speed limit is 65 mph within the study area.

Marsh Road is a north-south, generally four-lane divided roadway with a raised median and left-turn pockets. The roadway is located west of the project site and connects the project to major corridors, including the Bayfront Expressway and US 101. Marsh Road is designated as a Thoroughfare from Bayfront Expressway to Scott Drive and Mixed-Use Collector from Scott Drive to Bay Road by the City of Menlo Park General Plan. The posted speed limit is 35 mph. Bicycle and pedestrian facilities and bus stops for the City of Menlo Park M3-Marsh Road Shuttle (M3 shuttle) are provided along the majority of the roadway within the study area.

Bayfront Expressway (State Route 84 or SR-84) is an east-west, six-lane, divided roadway with a raised median and left-turn pockets throughout the study area. The expressway connects the project site to major corridors and communities, including Interstate 880 (I-880) via the Dumbarton Bridge and communities in the East Bay. Bayfront Expressway is designated as a Freeway/Expressway by the City of Menlo Park General Plan. The posted speed limit is 50 mph within the vicinity of the project site. Sidewalk, curb, and gutters are not provided along the majority of Bayfront Expressway within the study area; however, pedestrian crosswalks and bicycle lanes are provided at major intersections connecting bicycle and pedestrian facilities along adjacent streets to the Class I Bike Path that runs parallel to westbound traffic on the expressway.

Independence Drive is generally an east-west, undivided, two-lane roadway with a two-way left-turn lane (TWLTL) located along the project site's southern boundary and is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Independence Drive serves as the primary roadway to and from the project site with bicycle and pedestrian facilities present throughout the roadway, except that there is no sidewalk, curb, or gutter along the northern edge of the roadway. Bike facilities along Independence drive are considered Class III Bike Routes. The posted speed limit is 25 mph.

Chrysler Drive is a north-south trending, undivided, two-lane roadway located immediately east of the project site and connects the project to major corridors, such as Bayfront Expressway. Chrysler Drive is considered a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities are present throughout the roadway, except that there is no sidewalk, curb, or gutter along the western edge of the roadway between Jefferson Drive and Constitution Drive. A bus stop for the M3 shuttle is present at the Chrysler Drive/Constitution Drive intersection, as well as the Chrysler Drive/Independence Drive intersection. The posted speed limit is 25 mph.

Constitution Drive is an east-west, undivided, two-lane roadway located immediately north of the project site that connects the project site to major corridors, such as Marsh Road. Constitution Drive is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities are located throughout the roadway. Bicycle facilities located along Constitution Drive are designated as Class II Bike Lanes per the City of Menlo Park's Draft Transportation Master Plan (TMP) (City of Menlo Park 2020b). Bus stops for the M3 shuttle are present along the westbound portion of the road. The posted speed limit is 30 mph.

Jefferson Drive is a generally east-west, undivided, two-lane roadway located east of the project site. Jefferson Drive is designated as a Mixed Use Collector by the City of Menlo Park General Plan. Bicycle and pedestrian facilities and a bus stop for the M3 shuttle are located along the roadway. No posted speed limit is present.

Chilco Street is a north-south, generally undivided, two-lane roadway located approximately 0.5 miles east of the project site. From Bayfront Expressway to Hamilton Avenue, Chilco street is considered a Mixed Use Collector, and considered a Neighborhood Collector from Hamilton Avenue to Newbridge Street by the City of Menlo Park General Plan. A vegetative divider between lanes is present near the Bayfront Expressway intersection. Bicycle facilities are present along the road's non-residential portions, while parking is generally permitted along the road's residential portions south of Hamilton Avenue. Pedestrian facilities and bus stops for the City of Menlo Park M1-Crosstown Shuttle (M1 shuttle) are located throughout the roadway. The posted speed limit is 40 mph within the study area.

Scott Drive is an east-west, two-lane, undivided roadway located to the south of the project site. Scott Drive is designated as a Local Access Road by the City of Menlo Park General Plan. Eastbound portions of the roadway generally permit parking and have pedestrian facilities. Bus stops for the M3 shuttle are present along the Scott Drive/Marsh Road intersection. No posted speed limit is present.

Florence Street-Bohannon Drive is a predominantly east-west, undivided, two-lane roadway with a TWLTL located south of the project site. Florence Street-Bohannon Drive is designated as a Local Access road by the City of Menlo Park General Plan. The Marsh Road intersection separates Florence Street to the west and Bohannon Drive to the east. Bicycle, pedestrian, and parking facilities are present on Florence street. Bicycle facilities along Florence Street are designated as Class II Bike Lanes per the TMP. Bus stops for SamTrans Route 207 bus and M3 shuttle are located along Florence Street and Bohannon Drive, respectively. The posted speed limit is 25 mph within the study area.

Bay Road is an east-west, two-lane, undivided roadway located approximately 0.5 miles south of the project site, connecting Marsh Road with Willow Road to the east. Bay Road is designated as a Neighborhood Collector by the City of Menlo Park General Plan. Bicycle facilities are present on both sides of the roadway, and pedestrian facilities are present along the road's westbound portion. Bicycle facilities along Bay Road are designated as Class II Bike Lanes per the TMP. Bus stops for Route 83 of the San Mateo County Transit District's SamTrans bus service are located throughout the roadway. The posted speed limit is 30 mph within the study area.

Middlefield Road is an east-west undivided roadway with left-turn pockets, located approximately 1.3 miles south of the project site. Middlefield Road is designated as an Avenue-Mixed Use by the Menlo Park General Plan. Bicycle, pedestrian facilities, and bus stops for SamTrans Route 296 and 397 buses are located along the roadway. Bicycle facilities along Middlefield Road are designated as Class II Bike Lanes per the TMP. The posted speed limit is 30 mph within the study area.

Willow Road is a north-south, four to six-lane divided roadway with left-turn lane pockets. The roadway is located approximately 1.5 miles east of the project site and serves as a connection between major corridors, including US 101 and Bayfront Expressway. Willow Road is designated as a Boulevard from Bayfront Expressway to Bay Road, an Avenue-Mixed Use from Bay Road to Middlefield Road, and a Neighborhood Collector from Middlefield Road to Alma Road, per the City of Menlo Park General Plan. Bicycle and pedestrian facilities and bus stops for SamTrans Route 296 and 397 buses, Dunbarton Express bus, and M1 shuttle are provided along the roadway. Bicycle facilities located along Willow Road are designated as Class II Bike Lanes per the TMP. Parking is generally not permitted along the roadway, except for some portions in residential areas. The posted speed limit ranges from 25 to 40 mph within the study area.

University Avenue is a north-south two to four-lane divided roadway with left-turn pockets located approximately 1.9 miles east of the project site. University Avenue is designated as a Boulevard according to the City of Menlo Park General Plan. Similar to Willow Road, University Avenue connects major corridors, including US 101 and Bayfront Expressway. Bicycle and pedestrian facilities and bus stops for SamTrans Route 280, 281, 296, and 397 buses, Dunbarton Express bus, and M1 shuttle are provided along the roadway. Bicycle facilities along University Avenue are classified as Tier II Bike Paths per the TMP. While parking is generally not permitted, some stretches of the road allow street parking. The posted speed limit is 25 mph within the study area.

Existing Transit Facilities

Figure 4.14-1, Existing Transit Facilities, shows the existing transit facilities within the study area. The project site is served by passenger rail and bus services. The Caltrain commuter rail system serves the Menlo Park Station, located at 1120 Merrill Street, approximately 2 miles south of the project site. The study area is also served by the Menlo Park Shuttle Service and the SamTrans bus service, which collectively provide local and regional public transit within the project area.

Caltrain

Caltrain is a commuter railroad operating between San Francisco and San Jose, with limited service to Gilroy. As of 2022, Caltrain's fleet consists of 29 locomotives, 134 passenger cars, and 52 bike cars that service 31 stations over a 51-mile corridor. Caltrain is owned and operated by the Peninsula Corridor Joint Powers Board, which is made up of representatives from the City and County of San Francisco, the San Mateo County Transit District, and the Santa Clara Valley Transportation Authority (Caltrain 2022).

As noted above, the proposed project would be served by Caltrain's Menlo Park Station, which is located approximately 2.0 miles to the south of the project. Weekday headways for northbound and southbound trains at this station average around 45 to 60 minutes.

Menlo Park Shuttle Service

The City of Menlo Park offers a free shuttle service for local community destinations and commuters working in business parks. The commuter shuttles serve Marsh Road and Willow Road business parks from the Caltrain station during commute hours by the M3 and M1 shuttles, respectively. However, the project site would mainly be served by the M3 shuttle. The M3 Shuttle serves the Menlo Park Caltrain Station, primarily operating along Marsh Road and roadways within the adjacent business parks, Middlefield Road, and Oak Grove Avenue. The nearest M3 shuttle stop is located at the intersection of Chrysler Drive and Independence Drive, immediately southeast of the project site. The M3 shuttle provides morning and afternoon commuter service with 60-minute peak service headways to synchronize with Caltrain's peak period schedule (City of Menlo Park 2022).

San Mateo County Transit District (SamTrans)

SamTrans bus services are part of the regional public transit and transportation effort conducted by the County of San Mateo to provide bus service throughout San Mateo County and into parts of San Francisco and Palo Alto. In total, SamTrans operates 76 bus routes throughout its service area (SamTrans 2022). Route 270 is the closest bus route to the project site, with stops along Haven Avenue and East Bayshore Road. Route 270 serves the Redwood City Transit Center, primarily operating along East Bayshore Road, Jefferson Drive, Broadway Street, Bay Road, and Marsh Road. The 3719 Haven Avenue bus stop would serve as the nearest stop to project site, located approximately 0.25 miles northwest. Route 270 provides 60-minute headways during weekday peak service (SamTrans 2022).

Existing Pedestrian Facilities

Pedestrian Facilities

The City of Menlo Park is continually looking for ways to improve the safety and availability of pedestrian facilities for commuters and residents within the City. The City's TMP indicates that, while the City's sidewalk network is largely complete, there are still a number of challenges that can make walking difficult for many residents. These issues include difficulty crossing multi-lane, high-traffic volume streets, lack of buffers between sidewalks from traffic, and obstruction of sidewalks by municipal and utility infrastructure (e.g., utility poles) (City of Menlo Park 2020b).

Land uses around the project site are predominantly comprised of offices, which serve as areas with active transportation users. Sidewalks are present along the eastbound portions of Independence Drive. Within Chrysler Drive, sidewalks are present along the southbound portion of the roadway near the road's intersection with Independence Drive and along all of the northbound portion of the road. Sidewalks are also present along the westbound portion of Constitution Drive and along a small section of the eastbound section of the roadway. These roadways are outfitted with storm drain outlets that either flow into the municipal storm drain system or directly into vegetated swales. Designated crosswalks are also present along most of the intersections near the project site.

Existing Bicycle Facilities

Figure 4.14-2, Existing and Proposed Bicycle Facilities, shows the existing and proposed bicycle facilities within the study area. The City's TMP also includes specific class designations for bicycle facilities within the City. The following designations are used to classify bicycle facilities with the City:

- **Class I Shared Use Path** allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. These facilities are frequently found in

parks, along rivers, beaches, and in greenbelt or utility corridors where there are few conflicts with motorized vehicles. Path facilities can also include amenities such as lighting, signage, and fencing.

- **Class II On-Street Bicycle Lanes** is designated exclusively for bicycle travel. On-street bicycle lanes are separated from vehicle lanes by striping and can include pavement stencils and other treatments. On-street bicycle lanes are most appropriate on collector streets with single-lane of traffic in each direction where moderate traffic volumes and speeds are too high for shared-roadway use.
- **Class III: Shared Roadways** allows for bicyclists and motor vehicles to use the same roadway space. These facilities are typically used on roads with low speeds and traffic volumes; however, they can be used on higher volume roads with wide outside lanes or shoulders. A motor vehicle driver will usually have to cross over into the adjacent lane to pass a bicyclist unless a wide outside lane or shoulder is provided.
- **Class IV: Separated Bikeways** is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of an on-street bike lane. A separated bikeway is physically separated from motor traffic by a vertical element and distinct from the sidewalk. In situations where on-street parking is allowed, separated bikeways are located between the parking and the sidewalk.

The closest designated bicycle facility is a Class III Bike Route along Independence Drive, located immediately south of the project site. In addition, an existing Class I Bike Path is provided along Bayfront Expressway and Class II Bike Lanes are present on Constitution Drive, Jefferson Drive, and Chrysler Drive. As indicated in the TMP, proposed bicycle facilities in the vicinity of the project site include an extension of the Class II Bike Lane along Haven Avenue Drive and a Class II Bike Lane along Marsh Road, from Bayfront Expressway to Bay Road.

4.14.2 Regulatory Framework

Federal Regulations

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the United States Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. The guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. The guidelines apply to all proposed roadways in the project area. The City's ADA Coordinator works out of City Hall to manage the City's efforts in complying with applicable accessibility regulations.

State Regulations

Assembly Bill 32

With Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing GHG emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32. In 2007, CARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, CARB defined its 1990 baseline level of emissions, and by 2011 it completed its major

rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the proposed cap and trade program, took effect in 2012. On December 11, 2008, CARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of SB 375 as the means for achieving regional transportation related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

Senate Bill 32

In 2016, the Legislature enacted SB 32 as a follow-up to AB 32. Health and Safety Code section 38566, added by SB 32, provides that “[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions to 40 percent below those that occurred in 1990.

Senate Bill 375

SB 375 requires metropolitan planning organizations (MPOs) to prepare a sustainable communities strategy (SCS) as part of their regional transportation plans (RTPs). MPOs must consider the information in the general plans of the municipalities in their jurisdiction when undertaking transportation planning and funding. The SCS demonstrates how transportation planning for the region will support attainment of the region’s GHG reduction targets for cars and light-duty vehicles. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern of the region and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the CARB. In 2017, the State Legislature passed SB 150, which requires CARB to prepare a report beginning in 2018 and every 4 years thereafter analyzing the progress made by each MPO in meeting the regional GHG emission reduction targets. The Metropolitan Transportation Commission (MTC) serves as the MPO for the Bay Area, including San Mateo County and Menlo Park. SB 375 also provides streamlining (i.e., limited CEQA review) for certain transit priority projects that are consistent with the SCS.

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the CEQA process for several categories of development projects including the development of infill projects in transit priority areas and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (Public Resources Code Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed the

OPR to develop an alternative metric(s) for analyzing transportation impacts in CEQA document and required that the alternative promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, development of multimodal transportation systems, and providing clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis would shift from vehicle delay to VMT within transit-priority areas (i.e., areas well served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts for all projects. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA, to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular jurisdictions. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance ... recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (CEQA Guidelines Section 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, which describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions as follows:

1. **Land Use Projects.** VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

OPR's regulatory text indicated that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020. However, the OPR Technical Advisory allows local agencies to retain their congestion-based LOS standards in general plans and for project planning purposes.

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the state highway system. Federal highway standards are implemented in the state by Caltrans. Any improvements or modifications to the state highway system within the study area would need to be approved by Caltrans.

On May 20, 2020, Caltrans adopted its VMT-Focused Transportation Impact Study Guide (TISG). The TISG provides guidance on how Caltrans will review land use projects, with a focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals. The TISG also identifies land use projects' possible transportation impacts to the state highway system and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus, and references OPR's 2018 Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

On July 2, 2020, Caltrans released the Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance. The purpose of the interim guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the state highway system and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically Local Roadway Safety Plans and Systemic Safety Analysis Reports, as a model for safety analysis of the local transportation network.

Regional and Local Regulations

Metropolitan Transportation Commission

MTC was created by the California Legislature in 1970 to plan and provide a cohesive vision for the Bay Area's transportation system. The Commission's scope over the years has expanded to address other regional issues, including housing and development. MTC provides planning, funding, coordination and technical assistance to cities, counties, transit agencies and other partners to bring the region together—to make life better for residents and make the Bay Area's transportation system more resilient to future challenges. MTC directly distributes more than \$1 billion per year to local public transit agencies and other recipients and prioritizes requests from local agencies for millions more in state and federal funds. In addition to coordinating with local agencies, MTC distributes state and federal funding through the Regional Transportation Improvement Program.

Plan Bay Area

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation and land use plan that is required by SB 375. All metropolitan regions in California must complete a Sustainable Communities Strategy as part of a Regional Transportation Plan. This strategy considers transportation measures in light of land use and housing to meet greenhouse gas reduction targets set by the California Air Resources Board. Plan Bay Area 2050 is a long-range plan charting the course for the future of the nine-county San Francisco Bay Area. Plan Bay Area 2050 focuses on four key elements—housing, the economy, transportation and the environment—and identifies goals, policies, and actions to make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. The latest plan was developed in 2021. The agencies estimate approximately 72 percent of housing and 48 percent of job growth will occur in the priority development areas between 2015 and 2050. The project site is not located within a priority development area, which are areas designated for growth by local governments.

City of Menlo Park General Plan

Transportation-related policies are included in the Circulation Element of the Menlo Park General Plan (City of Menlo Park 2016a). This section was added to the General Plan to provide framework for transportation planning within the city and was most recently updated in 2016 when the City updated its Land Use and Circulation Elements (commonly referred to as ConnectMenlo). The framework is based on existing practices and future considerations in land use, population, and regional transportation. The General Plan Circulation Element establishes a vision for the city with goals related to sustainability, reliability, and safety for all modes of transportation. The transportation goals for Menlo Park that relate to the proposed project include:

Goal CIRC-1: Provide and maintain a safe, efficient, attractive, user-friendly circulation system that promotes a healthy, safe, and active community and quality of life throughout Menlo Park.

Policy CIRC-1.7: **Bicycle Safety.** Support and improve bicyclist safety through roadway maintenance and design efforts.

Policy CIRC-1.8: **Pedestrian Safety.** Maintain and create a connected network of safe sidewalks and walkways within the public right of way ensuring that appropriate facilities, traffic control, and street lighting are provided for pedestrian safety and convenience, including for sensitive populations.

Goal CIRC-2: Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders.

Policy CIRC-2.1: **Accommodating All Modes.** Plan, design and construct transportation projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists, people with mobility challenges, and persons of all ages and abilities.

Policy CIRC-2.2: **Livable Streets.** Ensure that transportation projects preserve and improve the aesthetics of the city.

Policy CIRC-2.3: **Street Classification.** Utilize measurements of safety and efficiency for all travel modes to guide the classification and design of the circulation system, with an emphasis on providing “complete streets” sensitive to neighborhood context.

Policy CIRC-2.4: **Equity.** Identify low-income and transit-dependent districts that require pedestrian and bicycle access to, from, and within their neighborhoods.

Policy CIRC-2.7: Walking and Biking. Provide for the safe, efficient, and equitable use of streets by pedestrians and bicyclists through appropriate roadway design and maintenance, effective traffic law enforcement, and implementation of the City's Comprehensive Bicycle Development Plan and the El Camino Real/Downtown Specific Plan.

Policy CIRC-2.8: Pedestrian Access at Intersections. Support full pedestrian access across all legs of signalized intersections.

Policy CIRC-2.9: Bikeway System Expansion. Expand the citywide bikeway system through appropriate roadway design, maintenance, effective traffic law enforcement, and implementation of the City's Comprehensive Bicycle Development Plan, and the El Camino Real/Downtown Specific Plan.

Policy CIRC-2.10: Green Infrastructure. Maximize the potential to implement green infrastructure by: a) Reducing or removing administrative, physical, and funding barriers; b) Setting implementation priorities based on stormwater management needs, as well as the effectiveness of improvements and the ability to identify funding; and c) Taking advantage of opportunities such as grant funding, routine repaving or similar maintenance projects, funding associated with Priority Development Areas, public private partnerships, and other funding opportunities.

Policy CIRC-2.11: Design of New Development. Require new development to incorporate design that prioritizes safe pedestrian and bicycle travel and accommodates senior citizens, people with mobility challenges, and children.

Policy CIRC-2.14: Impacts of New Development. Require new development to mitigate its impacts on the safety (e.g., collision rates) and efficiency (e.g., VMT per capita) of the circulation system. New development should minimize cut-through and high-speed vehicle traffic on residential streets; minimize the number of vehicle trips; provide appropriate bicycle, pedestrian, and transit connections, amenities and improvements in proportion with the scale of proposed projects; and facilitate appropriate or adequate response times and access for emergency vehicles.

Goal CIRC-3: Increase mobility options to reduce traffic congestion, greenhouse gas emissions, and commute travel time.

Policy CIRC-3.1: Vehicle Miles Traveled. Support development and transportation improvements that help reduce per capita vehicle miles traveled.

Policy CIRC-3.2: Greenhouse Gas Emissions. Support development, transportation improvements, and emerging vehicle technology that help reduce per capita greenhouse gas emissions.

Policy CIRC-3.4: Level of Service. Strive to maintain level of service (LOS) D at all City-controlled signalized intersections during peak hours, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101. The City shall work with Caltrans to ensure that average stopped delay on local approaches to State-controlled signalized intersections does not exceed LOS E.

Goal CIRC-4: Improve Menlo Park's overall health, wellness, and quality of life through transportation enhancements.

Policy CIRC-4.1: Global Greenhouse Gas Emissions. Encourage the safer and more widespread use of nearly zero-emission modes, such as walking and biking, and lower emission modes like transit, to reduce greenhouse gas emissions.

Policy CIRC-4.2: Local Air Pollution. Promote non-motorized transportation to reduce exposure to local air pollution, thereby reducing risks of respiratory diseases, other chronic illnesses, and premature death.

Policy CIRC-4.3: Active Transportation. Promote active lifestyles and active transportation, focusing on the role of walking and bicycling, to improve public health and lower obesity.

Policy CIRC-4.4: Safety. Improve traffic safety by reducing speeds and making drivers more aware of other roadway users.

Goal CIRC-6: Provide a range of transportation choices for the Menlo Park community.

Policy CIRC-6.1: Transportation Demand Management. Coordinate Menlo Park's transportation demand management efforts with other agencies providing similar services within San Mateo and Santa Clara Counties.

Policy CIRC-6.4: Employers and Schools. Encourage employers and schools to promote walking, bicycling, carpooling, shuttles, and transit use.

Menlo Park Municipal Code

The proposed project is located in the Residential Mixed Use (R-MU) zoning district. The Zoning Ordinance requires development and implementation of a Transportation Demand Management (TDM) plan:

Chapter 16.45.090 Transportation Demand Management. As stated in Chapter 16.45.090 of the City's Zoning Ordinance, all new construction, regardless of size, and building additions of 10,000 or more square feet of gross floor area, or a change of use of 10,000 or more square feet of gross floor area shall develop a TDM plan to reduce associated vehicle trips to at least 20 percent below standard generation rates for uses on the individual project site. Each individual applicant is required to prepare its own TDM plan and provide an analysis to the satisfaction of the City's Transportation Manager of the impact of that TDM program.

The TDM Program Guidelines (July 2015) provide options for project applicants to mitigate the traffic impacts of new developments. The guidelines include an extensive list of TDM measures accompanied with the number of trips credited to each measure and the rationale for each measure. The list of recommended measures and the associated trip credit is maintained by City/County Association of Governments of San Mateo County (C/CAG) as part of the San Mateo County Congestion Management Program and are as follows:

Eligible TDM measures may include but are not limited to:

- Participation in a local Transportation Management Association that provides documented, ongoing support for alternative commute programs;
- Appropriately located transit shelter(s);
- Preferred parking for carpools or vanpools;
- Designated parking for car-share vehicles;

- Requiring drivers to pay directly for using parking facilities;
- Public and/or private bike share program;
- Provision or subsidy of carpool, vanpool, shuttle, or bus service, including transit passes for site occupants;
- Required alternative work schedules and/or telecommuting for non-residential uses;
- Passenger loading zones for carpools and vanpools at main building entrance;
- Safe, well-lit, accessible, and direct route to the nearest transit or shuttle stop or dedicated, fully accessible bicycle and pedestrian trail;
- Car share membership for employees or residents;
- Emergency Ride Home programs;
- Green Trip Certification.
- Measures receiving TDM credit shall be:
 - Documented in a TDM plan developed specifically for each project and noted on project site plans, if and as appropriate;
 - Guaranteed to achieve the intended reduction over the life of the development, as evidenced by annual reporting provided to the satisfaction of City's Transportation Manager;
 - Required to be replaced by appropriate substitute measures if unable to achieve intended trip reduction in any reporting year;
 - Administered by a representative whose updated contact information is provided to the City's Transportation Manager.

City of Menlo Park Complete Streets Policy

The Complete Streets Policy was adopted by the City in 2013. The policy confirms the City's commitment to provide safe and convenient travel along and across streets for all users. It also requires Complete Streets infrastructure to be considered for incorporation into all significant planning, funding, design, approval, and implementation processes for new, maintenance, and retrofit construction.

City of Menlo Park Neighborhood Traffic Management Plan

The Neighborhood Traffic Management Plan (City of Menlo Park 2004) was developed to mitigate the adverse effects of increased vehicle speeds and vehicle volumes on neighborhood streets. The primary goal of this plan is to correct unsafe conditions at prioritized locations with higher incidences and higher speeds. The plan recommends two levels of measures, Level I "Express" and Level II. Level I "Express" measures include education and enforcement initiatives. Level II measures are traffic management features that can be implemented to divert traffic and to restrict access to certain properties. The traffic management measures are recommended by City staff at the request of the community.

City of Menlo Park Transportation Master Plan

The City adopted the finalized TMP (City of Menlo Park 2020b) in November 2020 to serve as an update of the City's Bicycle and Sidewalk Plans and advance goals and policies set forth in the General Plan Circulation Element. The TMP provides the ability to identify appropriate projects to enhance the transportation network, conduct community engagement to ensure such projects meet the communities' goals and values, and prioritize projects

based on need for implementation. The following recommended TMP projects proposed within the vicinity of the project site and are identified below for informational purposes only in Table 4.14-1.

Table 4.14-1. City of Menlo Park Recommended TMP Projects

TMP Project No.	Location	Project	Project Details	Cost
1.	Haven Avenue from Marsh Road to Haven Court	Bayfront Expressway Multimodal Corridor Project	Construct Class I Multi-Use Path from Marsh Road to Atherton Channel. Establish Class II Bicycle Lanes from Haven Court to Atherton Channel. Install Bicycle and Pedestrian crossing upgrades.	\$2,866,000
2.	Bayfront Expressway & Marsh Road	Bayfront Expressway Multimodal Corridor Project	Recommended Improvements: Modify southbound Haven Avenue approach to reduce delay. Install Bicycle and Pedestrian crossing upgrades. Funded Improvements: Widen eastbound Marsh Road and add additional right turn lanes. Install Class I Multi-Use Path along eastbound Marsh Road	\$206,000
8.	Bayfront Expressway & Willow Road	Bayfront Expressway Multimodal Corridor Project	Install bike signals, high-visibility crosswalks and cross-bike markings. Reconstruct eastbound Willow Road right-turn channelizing island to improve pedestrian access. Remove southbound Bayfront Expressway channelizing island to provide space for shoulder-running bus lane and implement a right-turn overlap phase. Modify traffic signal to accommodate channelized right turn modifications. Install Transit Signal Priority (TSP) for queue jumps by shoulder-running buses.	\$1,757,000
14.	Marsh Road from Bay Road to Scott Drive	Marsh Road Bicycle Network Improvement	Bay Road to Florence Street: Establish Class II Buffered Bicycle Lanes in both directions (requires removal of parking on the north side of street). Florence Street to Scott Drive: Establish Class II Buffered Bicycle Lanes in both directions. Remove or modify existing median at Scott Drive.	\$1,491,000
178.	Marsh Road between Independence Drive to Scott Drive	Marsh Road Corridor Mobility Project	Establish Class II Bike Lanes. Implement Caltrans District 4 Bike Plan Project Number SM-101-X14 that calls for the construction of an additional bicycle and pedestrian bridge over US 101 north of Marsh Road.	\$30,341,000

Table 4.14-1. City of Menlo Park Recommended TMP Projects

TMP Project No.	Location	Project	Project Details	Cost
189.	University Drive between Oak Grove Avenue and Santa Cruz Avenue	Downtown Mobility Improvements	Establish Class II Bicycle Lanes on University Drive (requires removal of parking on at least one side of University Drive).	\$103,000

City of Menlo Park Transportation Impact Fee

The City of Menlo Park has a Transportation Impact Fee (TIF) codified in Municipal Code Chapter 13.26 to help fund transportation improvements as new development occurs in the City. New development and redevelopment projects are subject to the TIF to contribute to the cost of new transportation infrastructure associated with the development. The types of developments that are subject to the TIF are:

- All new development in all land use categories identified in the City’s zoning ordinance
- Any construction adding additional floor area to a lot with an existing building
- New single-family and multifamily dwelling units
- Changes of use from one land use category to a different land use category that requires Planning Commission approval.

The TIF provides a mechanism to modernize the City’s fee program to collect funds towards construction of the improvements expected to be identified and prioritized in the Transportation Master Plan (as noted above).

4.14.3 Thresholds of Significance

The significance criteria used to evaluate the project’s impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. Result in cumulatively considerable transportation impacts.

4.14.4 Impacts and Mitigation Measures

Project Traffic

Trip generation estimates for the proposed project are based on daily and AM and PM peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition (ITE 2021). In order to accurately represent the proposed project's trip generation, trips generated from the existing land uses that the project would replace were calculated and subtracted resulting in the net project trip generation. Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips. Table 4.14-2 displays the proposed project trip generation estimates.

Table 4.14-2. Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates¹									
Research and Development Center	760	per TSF	11.08	0.84	0.19	1.03	0.16	0.82	0.98
Manufacturing	140	per TSF	4.75	0.52	0.16	0.68	0.23	0.51	0.74
Multifamily Housing (Mid-Rise) - buildings 4 to 10 stories in height	221	per DU	4.54	0.09	0.28	0.37	0.24	0.15	0.39
Multifamily Housing (Low-Rise) - buildings 3 stories or less in height	220	per DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Trip Generation of Existing Uses									
119 Independence Drive - Tree Care	760	12.996 TSF	144	10	2	12	2	11	13
123-25 Independence Drive - Defense Contractor	760	12.335 TSF	137	10	2	12	2	10	12
127 Independence Drive - Medical Device R&D	760	13.822 TSF	153	12	3	15	3	11	14
130 Constitution Drive - Defense Contractor	760	25.528 TSF	283	22	5	27	4	21	25
1205 Chrysler Drive - Energy Company	140	39.302 TSF	187	20	7	27	9	20	29
<i>Existing Uses Subtotal</i>			904	74	19	93	20	73	93
Trip Generation of Proposed Project									
Residential - Multifamily (Apartments) - 4 stories in height	221	316 DU	1,435	27	90	117	76	48	124

Table 4.14-2. Project Trip Generation

Land Use	ITE Code	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential - Multifamily (Townhomes) - 3 stories in height	220	116 DU	782	12	35	47	37	22	59
<i>Proposed Project Subtotal</i>			<i>2,217</i>	<i>39</i>	<i>125</i>	<i>164</i>	<i>112</i>	<i>70</i>	<i>182</i>
<i>TDM Plan: 20 percent Reduction²</i>			<i>-443</i>	<i>-8</i>	<i>-25</i>	<i>-33</i>	<i>-22</i>	<i>-14</i>	<i>-36</i>
<i>Proposed Project Total</i>			<i>1,774</i>	<i>31</i>	<i>100</i>	<i>131</i>	<i>90</i>	<i>56</i>	<i>146</i>
Total Net Project Trip Generation (Proposed - Existing)			870	-43	81	38	70	-17	53

Source: ITE 2021

Notes: TSF = thousand square feet; DU = dwelling unit

¹ Trip rates from Trip Generation, 11th Edition, Institute of Transportation Engineers, 2021.

² Consistent with the City of Menlo Park City Ordinance 1026, a 20 percent reduction was applied to account for the proposed TDM plan that the project would be required to provide. The TDM would be expected to achieve the required minimum of 20 percent reduction of daily and peak hour vehicle trips.

As shown in Table 4.14-2, the proposed project after the application of the 20 percent reduction as required by the TDM plan would generate 1,774 daily trips, 131 AM peak hour trips (31 inbound and 100 outbound), and 146 PM peak hour trips (90 inbound and 56 outbound). After subtracting for the existing land uses, the proposed project’s net trip generation would be 870 daily trips, 38 AM peak hour trips (-43 inbound and 81 outbound), and 53 PM peak hour trips (70 inbound and -17 outbound). It is important to note that the negative trips are a result of the existing land uses consisting of employment generating uses that generate a greater proportion of inbound traffic in the AM peak hour and a greater proportion of outbound traffic in the PM peak hour as compared to the residential uses that the proposed project would construct.

Project trip distribution percentages are based on logical travel paths to and from the project site, as well as consideration of existing major routes of travel. The project’s trip distribution percentages were approved by the City’s Public Works Department prior to the completion of the transportation analysis and the TIA.

Project Impacts

Impact 4.14-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Table 4.14-3 summarizes the proposed project’s consistency with applicable programs, plans, policies, or ordinances addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Table 4.14-3. Applicable Programs, Plans, Ordinances, or Policies Addressing the Circulation System

Program/Plan/Plan/Ordinance/Policy	Project Evaluation
Plan Bay Area 2050	The proposed project would be consistent with the goals and policies contained in Plan Bay Area 2050, and would provide residential units near existing offices, commercial, and industrial uses, reducing the demand for automobile travel. The proposed

Table 4.14-3. Applicable Programs, Plans, Ordinances, or Policies Addressing the Circulation System

Program/Plan/Plan/Ordinance/Policy	Project Evaluation
	project is located in an area with adequate bicycle and transit facilities that would further facilitate a lower reliance on single-occupancy automobile use. All transit, bicycle, and pedestrian descriptions were described above and in Chapter 3.
C/CAG Congestion Management Program	The proposed project would generate fewer than 100 vehicle trips during the weekday PM peak hour and therefore, under C/CAG's Transportation Demand Management policy further analysis is not required.
City of Menlo Park Circulation Element Policies	<p>The City's Circulation Element policies are described above in Section 4.14.2. The proposed project would provide safe and convenient access to existing bicycle and pedestrian facilities, as well as provide adequate pedestrian facilities on-site and along the project's frontage. Site access would be provided to be able to all users, including persons with disabilities, persons with mobility challenges, ages, and all mode shares. A pedestrian paseo provided within the project site would further enhance the local community and provide green infrastructure. Equitable use of roads and pedestrian space for all users would be provided by the pedestrian and bicycle facilities within and near the project site.</p> <p>All site circulation, emergency access, and overall roadway safety metrics are evaluated within this analysis and have found to produce less than significant impacts. The project's TDM plan would provide additional measures to reduce automobile trips within the surrounding roadway network, reduce vehicle emissions and greenhouse gases. All intersections that exceed the LOS standards are described below, for informational purposes only.</p>
City of Menlo Park Municipal Code Section 16.45.090	As mandated by ordinance, the proposed project would implement a TDM plan (Appendix J2) to reduce vehicle trips to at least 20 percent below standard trip generation rates. The details of the TDM plan are provided below.
City of Menlo Park Complete Streets Policy	The proposed project would be consistent with the City's commitment to provide safe and convenient travel for all road users.
City of Menlo Park Neighborhood Traffic Management Plan	The proposed project would provide residential uses and include several driveways to spread out the distribution of traffic within the site and within the neighborhood.
City of Menlo Park Transportation Master Plan	The proposed project does not include any conflicts with projects and recommendations identified in the TMP. At locations where the proposed project would cause an intersection to operate in non-compliance with General Plan Policy CIRC-3.4 and the TIA Guidelines, modifications are identified that are consistent with a majority of the recommendations identified in the TMP.
City of Menlo Park Transportation Impact Fee	The proposed project is subject to all transportation impact fees and would contribute to the cost of new transportation infrastructure associated with the development of the proposed project

The proposed project would also comply with all existing regulations, including general plan and zoning regulations. The City's Public Works Department would review the project and project site plan for conformance with all standards and guidelines. The project would be constructed according to all City specifications and requirements.

Therefore, as described in Table 4.14-3, the proposed project would be consistent with all relevant programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-2: Would the project exceed an applicable VMT threshold of significance?

Implementation of the proposed project would not exceed an applicable VMT threshold of significance with implementation of TDM program as discussed for the residential use. Impact would be **less than significant**.

The City uses the following threshold of significance and methodology to address the substantial additional VMT significance criterion for residential projects.

VMT Significance Threshold

According to City VMT guidelines, the evaluation of residential land use is based on a daily VMT per capita metric. Using MTC travel demand model that has been customized for City's transportation analysis and as described in detail under VMT Analysis, this metric is calculated only for home-based trips, per OPR's technical advisory. Based on the latest citywide travel demand model, regional average residential VMT is 13.1 per capita. Therefore, the City's residential VMT impact threshold, at 15 percent below regional average, would be 11.2 daily VMT per capita.

VMT Analysis

To determine the appropriate VMT analysis tool (e.g., C/CAG VMT sketch model or City's travel demand model). Based on discussion with the City, the citywide travel demand forecast model was used. The model is a mathematical representation of travel within the nine Bay Area counties, as well as Santa Cruz, San Benito, Monterey and San Joaquin counties. The base model structure was developed by MTC and further refined by C/CAG and Santa Clara Valley Transportation Authority for use within San Mateo County and Santa Clara County. The City further refined this model for application with Menlo Park to add more detail to the zone structure and transportation network. The model has a base year of year 2019.

There are four main components of the model: 1) trip generation, 2) trip distribution, 3) mode choice, and 4) trip assignment. The model uses socioeconomic inputs (i.e., population, income, employment) aggregated into geographic areas, called transportation analysis zones (TAZ) to estimate travel within the model area. There are 80 TAZs within the model to represent the City of Menlo Park. The model was used to estimate the proposed project's effect on VMT in accordance with the City's VMT guidelines.

The most readily available long-range forecast year is 2040, which assumes buildout of the City of Menlo Park General Plan and any pending General Plan Amendments, buildout of the pending developments in the City of East Palo Alto (as of December 2020), and regional growth projected by the Association of Bay Area Governments

(ABAG), modified by VTA/C/CAG for model land use inputs. Therefore, the project’s VMT analysis was conducted under year-2040 conditions. The project’s VMT summary is provided in Table 4.14-4.

Table 4.14-4. Vehicle Miles Traveled Summary

Land use / VMT Metric	Regional Average	VMT Threshold (15 percent below Regional Average)	Project Transportation Analysis Zone (TAZ 3070)	VMT Impact	VMT Reduction needed
Residential /per capita	13.1	11.2	13.29	Yes	16 percent

Notes: All data referenced is from the latest Menlo Park citywide travel demand forecasting model provided by Hexagon. It should be noted that the City’s Transportation Guidelines do not include the latest VMT thresholds for residential and office uses.

Because the project is a residential use, the efficiency metric of VMT per capita was used. A project-specific model run was conducted and the project’s home based VMT was extracted from the TAZ. The project’s VMT was estimated to be 13.29 VMT per capita. The regional average VMT per capita is 13.1 and the threshold is 11.2 VMT per capita for the City. Therefore, the project VMT exceeds the VMT significance threshold by 16 percent. The estimated project VMT does not account for the project’s proposed TDM plan. Without any TDM measures, the project’s residential use may cause substantial additional VMT.

The TDM plan would need to achieve a minimum 16.0 percent reduction in VMT to reduce the proposed project’s impacts to less-than-significant levels, which is within the 20 percent reduction in vehicle trips required by Section 16.45.090 of the Menlo Park Municipal Code. The TDM measures to be implemented by the project include services, incentives, actions, and planning and design features related to the attributes of the site design and site amenities. Such design features encourage walking, biking, and use of transit. Some of the recommended TDM measures are programs that would be created and implemented by the Property Manager or the Transportation Coordinator. The project’s recommended TDM measures are provided in Table 4.14-5.

Table 4.14-5. Recommended TDM Measures

TDM Measure	Applies to Apartment Residents, Townhome Residents or Both	Implementation Responsibility
Program Administration		
Designating a Transportation Coordinator	Both	Property Manager
Online Kiosk/TDM Information Board ¹	Both	Transportation Coordinator
Transportation Information Packets	Both	Transportation Coordinator
Trip Planning Assistance	Both	Transportation Coordinator
Program Monitoring and Reporting		
Annual Resident Surveys	Both	Transportation Coordinator
Target Drive-alone Mode Share Monitoring	Both	Transportation Coordinator
Carpool and Vanpool Programs		
511 Ridematching Service	Both	Available to Public
Incentives for New Carpools/Vanpools	Both	Available to Public

Table 4.14-5. Recommended TDM Measures

TDM Measure	Applies to Apartment Residents, Townhome Residents or Both	Implementation Responsibility
Bicycle Facilities		
Bicycle Parking	Both	Building developer
Bicycle Repair Station	Both	Building developer
Ebike and Cargo Bicycle	Apartment Residents	Building developer
Resources (bikeway maps & other info)	Both	Building developer
Pedestrian Facilities		
Pedestrian Scale Lighting	Both	Building developer
New Sidewalks	Both	Building developer
Other On-Site Amenities		
Fitness Room and Club Room	Apartment Residents	Building developer
High-bandwidth Internet Connection	Apartment Residents	Building developer
Pet Spa	Apartment Residents	Building developer
Pool and SPA	Apartment Residents	Building developer
Transit Elements		
Transit Subsidy	Both ²	Building developer
Unbundled Parking	Apartment Residents	Building developer

Notes: 1. The building developer will have initial responsibility for creating an online kiosk and appointing the Transportation Coordinator. After the building is occupied, the Transportation Coordinator will have ongoing responsibility for the online kiosk and various program elements. 2. For ownership units (Townhomes), a free one-year transit pass will be given to each new owner upon original purchase from the developer.

Proposed TDM measures and estimated VMT reductions applicable to the project's residential use are described below and summarized in Table 4.14-6.

Table 4.14-6. TDM Measures and Estimated VMT Reduction

TDM Measure (CAPCOA ID)	Applied VMT Reduction Rate for Residential Use
Bike Parking (SDT-7)	0.63 percent
Pedestrian Network Improvement (SDT-1)	1 percent
Unbundled Parking (PDT-2) ^a	6 percent
Commute Trip Reduction Marketing (TRT-7)	2 percent
Increase Density (LUT-1)	5 percent
Transit Subsidies (TRT-4)	6 percent
Total	20.63 percent^b

Notes: a. Unbundled Parking will be applied to the proposed apartment residential units only. Source: California Air Pollution Control Officers Association (CAPCOA) report, August 2010. b. A reduction in trips is considered equivalent to a reduction in VMT.

These measures have been calculated by using the Bay Area Air Quality Management District (BAAQMD) TDM Tool that assists with calculating VMT reductions due to TDM measures based on the CAPCOA research. Based on the

TDM Tool, with the implementation of the proposed TDM measures, the project would achieve a reduction of more than 20 percent of the VMT generated by the proposed residential development as shown in Table 4.14-6 above.

The project would be required to implement a TDM Plan achieving a 20 percent reduction from gross ITE trip generation rates (for the project, this reduction equals 443 daily trips. As noted in the CAPCOA Handbook when estimating VMT or GHG reductions in the Transportation sub-sector, the adjustment factor from vehicle trips to VMT is 1. This assumes that all vehicle trips will average out to typical trip length (“assumes all trip lengths are equal”). Thus, it can be assumed that a percentage reduction in vehicle trips will equal the same percentage reduction in VMT.) Additionally, daily trips generated by projects is a metric that can be measured and periodically reviewed using the TDM plan. The Transportation Coordinator shall prepare, Implement, monitor and report a Residential TDM Plan for the project to the satisfaction of the City’s Transportation Manager and per the Menlo Park Municipal Code requirements. The TDM Plan reporting shall include annual commute surveys, annual driveway counts and annual reporting to demonstrate that 20 percent peak hour trip reduction requirement has been achieved. If the reduction has not been achieved in the reporting period, the report shall provide additional measures that will be implemented in the coming year in order to achieve the City’s requirement.

The required residential TDM Plan will include annual monitoring and reporting requirements on the effectiveness of the TDM program. The project applicant submitted a draft residential TDM Plan (Appendix J2), which contains specific measures that would meet this trip reduction requirement. The draft TDM Plan is subject to City review and approval. If the annual monitoring finds that the TDM reduction is not met, the TDM coordinator will be required to work with City staff to detail next steps to achieve the TDM reduction. Based on the City’s transportation engineer, if needed, there are additional measures that could be added to the TDM that would ensure the required reduction is met. Additional measures include scaling up certain measures as their popularity increases such as electric vehicle charging stations, bike and e-scooter parking and storage, and participation in further local and regional transit programs.

With the implementation of the required residential TDM Plan, the project’s VMT impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As described previously, the proposed project would provide for vehicular circulation system within each of the four proposed building lots, as shown on Figure 3-6, Proposed Circulation, and would provide access from Independence Drive, Chrysler Drive, Jefferson Drive, and Constitution Drive. Lot B would be accessed from Independence Drive and streets within this lot would not be connected with the adjacent Lot C other than by an emergency vehicle access route crossing the paseo. Lot C would have one 26-foot-wide access driveway off Independence Drive and Lot D would have one 26-foot-wide, access driveway off Chrysler Drive. Streets within Lot C and Lot D would be interconnected and remain accessible from one each other. Lot A would have a single driveway off Constitution Drive providing access into the parking garage. Internal streets that would provide emergency vehicle access would be 26 feet wide while other internal streets and driveways would be 20 feet wide.

All driveways and accessways to the project site would be designed according to the City’s standards and guidelines for construction and coordinated with the City’s Public Works Department for work done at existing intersections,

such as Chrysler Drive and Jefferson Drive. Vehicular queuing is expected to be minimally affected by the proposed project, and all queues are expected to be within all available storage lengths and would cause nominal changes in existing or future conditions. Specifically, the proposed project would not create vehicular queues or unsafe conditions at the nearby TIDE Academy school located along Jefferson Drive. The TIDE Academy school driveways and drop-off areas would not be impacted by the construction of the proposed project. All current safe routes to school locations would be unaffected and remain safe and available for students. During construction of the proposed project, there would be adequate traffic management signage and minimal construction traffic would utilize Jefferson Drive. Construction truck traffic would remain on the most efficient path of travel to all regional and locally signed truck routes. The proposed project is a residential use that is compatible with the mixed-use nature of the area and would not introduce vehicles, such as farm tractors, heavy machinery and equipment, or oversized haul trucks, which could be incompatible with the other residential, institutional, and commercial uses in the area.

The north project driveway along Constitution Drive would provide a gated entrance to the parking garage, and the driveway would have approximately 100 feet of length from the edge of the roadway to the secure gated area. A gate stacking analysis was conducted to evaluate the amount of vehicular storage provided to what would be required with this type of parking entrance configuration. According to the project trip distribution and trip assignment, approximately 76 inbound vehicles would arrive inbound to the parking garage in the PM peak hour.

Table 4.14-7 displays the gate service rates using the Crommelin method of estimation (Robert Crommelin and Associates 1972).

Table 4.14-7. Gate Service Rates

Gate Entrance ¹	Average Headway (seconds/vehicle)	Design Capacity (vehicles/hour)	Maximum Capacity (vehicles/hour)
Coded Care Operated Gate	8.9	340	425

Source: Appendix J1

Notes:

¹ The type of gate control is from Entrance-Exit Design and Control for Major Parking Facilities (Robert Crommelin and Associates 1972)

Traffic intensity is calculated based on the volume of inbound project vehicles and the rates presented in Table 4.14-7. Table 4.14-8 presents the traffic intensity at the gate (also known as the volume to service ratio). The inbound peak PM peak hour totaling 76 vehicles was divided by the design capacity service rate of 340 vehicles/hour to compute a traffic intensity of 0.224.

Table 4.14-8. Traffic Intensity

Gate Entrance	Traffic Intensity
North Project Driveway/Constitution Drive	76/340 = 0.224

Source: Appendix J1

Based on the gate stacking analysis using the Crommelin methodology above, a stacking reservoir of one vehicle behind the gate is required. Using the standard size of a passenger car as 22-feet in length, the approximately 100 feet of storage length that is provided from the gate entrance to the public roadway (Constitution Drive) is adequate. The proposed project gate would also be evaluated by the City’s Public Works Department as part of the standard design review process and would be constructed according to all City specifications.

Therefore, as described above, the proposed project would not substantially increase hazards due to a geometric design feature or introduce incompatible uses. Therefore, project impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Impact 4.14-4: Would the project result in inadequate emergency access?

As described above, and as shown previously in Figure 3-6, Proposed Circulation, the proposed project would provide four vehicular driveways, as well as a paseo connecting the northern and southern portions of the site. The southwest driveway and the southeast driveway located along Independence Drive would provide access to the southern and western portion of the site, while the project driveway located at the intersection of Chrysler Drive/Jefferson Drive would provide access to the eastern portion of the project site. The parking garage entrance driveway along Constitution Drive would also provide emergency vehicle access.

Additionally, emergency vehicle access would be provided via the northern leg of Lot 1, west of the apartment building, which would have a total width of 26 feet and would serve as an emergency vehicle access entrance and exit. A second 26-foot-wide emergency vehicle easement would extend east from the park to Chrysler Drive along the northern edge of Lot D. This emergency vehicle easement would also serve as a pedestrian pathway. The fire district will review the proposed residential site plan, including fire hydrant placement and emergency vehicle access, prior to issuance of building permits. Along Chrysler Drive, Constitution Drive, and Independence Drive, there is adequate width for emergency vehicles to access adjacent properties and for other vehicles to safely pull over and yield to emergency vehicles. The proposed project would not result in inadequate emergency access to adjacent parcels or properties within the study area. The vehicular circulation network would not change and overall emergency response to adjacent properties would remain adequate. Therefore, the proposed project would not result in inadequate emergency access, and impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact 4.14-5: Would the project result in cumulatively considerable transportation impacts?

Conflicts with a Program, Plan, Ordinance, or Policy Addressing the Circulation System

All future development would be required to comply with applicable state, regional, and local regulations and policies, including the General Plan and zoning regulations. Future developments would be required to minimize impacts to the transportation and circulation of the City's roadway network. The ConnectMenlo General Plan Update included adoption of several transportation policies to limit potential cumulative transportation impacts caused by projects within the City. The proposed project and all other pending and future projects within the City are required to comply with these policies, which address the topics of ensuring a safe transportation system, complete streets, sustainable transportation, health and wellness (through transportation enhancements), transit opportunities, transportation demand management, and parking.

The ConnectMenlo EIR evaluated consistency with plans, ordinances, and policies relating to vehicle transportation in Impact TRANS-1 and considered consistency with the San Mateo County Congestion Management Program in Impact TRANS-2. As required by the CEQA Guidelines at the time that the ConnectMenlo EIR was prepared, the analysis in Impacts TRANS-1 and TRANS-2 focused on potential changes in intersection and roadway segment levels of service. As discussed previously, recent changes in the CEQA Guidelines preclude consideration of level of service as an environmental effect. Refer to Section 4.14.5, Non-CEQA Analysis, for information regarding level of service. As noted in Table 4.14-3, the proposed project would generate fewer than 100 vehicle trips during the weekday PM peak hour and therefore, under C/CAG's Transportation Demand Management policy, further analysis is not required.

Implementation of the land use and transportation changes described in ConnectMenlo would create a built environment that supports a live/work/play environment with increased density and diversity of uses and a street network that supports safe and sustainable travel. The updates to the City's Circulation Element adopted under ConnectMenlo include a new emphasis on complete streets, multi-modal transportation, community circulation benefits from private development, transportation system safety and efficiency, and community transit services. This is expected to reduce VMT per capita within the Bayfront Area where the project site is located. In addition, all other future development would be required to comply with existing regulations, including General Plan policies and zoning regulations that have been adopted to minimize impacts related to transportation and circulation.

The City would implement the General Plan programs that require the City to annually update the Capital Improvement Program to reflect City and community priorities for physical projects related to transportation for all travel modes and bi-annually update data regarding travel patterns for all modes to measure circulation system efficiency (e.g., VMT per capita, traffic volumes) and safety (e.g., collision rates) standards, amongst others as listed above. Furthermore, implementation of zoning regulations would support adequate facilities and access to transportation and future development would be consistent with the City's Transportation Master Plan.

The proposed project is consistent with the land use and zoning designations assigned to the project site under ConnectMenlo. As discussed in Section 4.0, Environmental Analysis, the proposed project in combination with other approved and pending projects in the Bayfront area would result in 98 more multifamily dwelling units than were assumed in the ConnectMenlo EIR. However, the project's TDM plan would apply to all of the units within the project site and would provide the necessary reductions in VMT to ensure that the full project, including these additional 98 units, does not make a cumulatively considerable contribution to any cumulative impacts related to conflicts with programs, plans, ordinances, and policies addressing the circulation system. The City's General Plan programs, policies, and goals would be implemented to the 2040 Cumulative Year and would be monitored for additional updates as needed. Therefore, the proposed project, and all pending and future projects in the cumulative development scenario would not conflict with any program, plan, ordinance, or policy address the circulation system, and impacts would be **less than significant**.

Pedestrian and Bicycle Facilities

The ConnectMenlo EIR evaluated consistency with plans, ordinances, and policies related to alternative modes of travel in Impact TRANS-6. The ConnectMenlo EIR found that implementation of the ConnectMenlo General Plan Update would not provide adequate pedestrian or bicycle facilities to connect to the area wide circulation system.

Mitigation Measure TRANS-6a required updating the City's TIF program to secure funding mechanism for future pedestrian and bicycle improvements to mitigate impacts from future projects based on the current standards at the time the Final EIR was certified but would not reduce the impact to less-than-significant levels. At the time that

the ConnectMenlo EIR was certified, the TIF nexus study had not yet been prepared, the City could not guarantee improvements, and no additional mitigation measures were feasible and available. For these reasons, impacts to bicycle and pedestrian facilities were considered significant and unavoidable. Recently, the City's TIF program was updated and approved by the City Council. The City's Transportation Master Plan has been updated and the City Council approved the updated plan on November 17, 2020 (City of Menlo Park 2020b). Therefore, payments collected as part of the City's TIF program would mitigate impacts to cumulative pedestrian and bicycle facilities. There is no cumulative impact to pedestrian and bicycle facilities to which the project could contribute, and this impact would remain **less than significant**.

Transit Facilities

The ConnectMenlo EIR (City of Meno Park 2016b) found that implementation of the ConnectMenlo General Plan Update would generate a substantial increase in transit riders that could not be adequately serviced by existing public transit services, and implementation of ConnectMenlo would generate demand for transit services at sites more than one-quarter mile from existing public transit routes.

Mitigation Measure TRANS-6b required updates to the City's existing Shuttle Fee program to guarantee funding for operations of City-sponsored shuttle service that is necessary to mitigate impacts from future projects based on the then current City standards. However, because the nexus study had not yet been prepared, the City could not guarantee improvements, and no additional mitigation measures were feasible and available, impacts to transit were considered significant and unavoidable.

The ConnectMenlo EIR also found that implementation of ConnectMenlo would result in increased peak hour traffic delay at intersections on Bayfront Expressway, University Avenue, and Willow Road that could decrease the performance of transit service and increase the cost of transit operations. As discussed in Section 4.14.5, the proposed project would contribute to increased delays at the Willow Road/Bayfront Expressway intersection but would not contribute to increased delays on University Avenue. The City's TIF Program was updated and now includes a project to assist in the construction of a Bayfront Expressway Multimodal Corridor Project, which would alleviate the increased delays at the Willow Road/Bayfront Expressway such that transit service would not be significantly adversely affected. Thus, the project would not make a cumulatively considerable contribution to transit service, and this impact would remain **less than significant**.

Vehicle Miles Traveled

Consistent with OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA, a project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. An efficiency-based threshold applies only to the proposed project without regard to the VMT generated by the previously existing land use.

The project would be consistent with the development assumptions included in ConnectMenlo. Implementation of the land use and transportation changes described in ConnectMenlo would create a built environment that supports a live/work/play environment with increased density and diversity of uses and a street network that supports safe and sustainable travel, and is expected to reduce VMT per capita by providing housing within the study area where the project site is located and is surrounded by various offices. Consistent with the findings of the ConnectMenlo

EIR, the project, in combination with cumulative projects and as assessed for year 2040 which includes buildout of the City of Menlo Park General Plan, would have a less-than-significant cumulative impact with mitigation with respect to VMT. There would be no significant cumulative VMT impact to which the project could contribute, and the project would not combine with past, present, and foreseeable future projects to create such impact; therefore, this impact would remain **less than significant**.

Substantial Increase of Hazards Due to a Geometric Design Feature or Incompatible Uses

As discussed in the ConnectMenlo EIR, development projects within the City would be required to evaluate hazardous conditions and the follow all relevant zoning requirements to ensure that incompatible uses are limited and that roadway improvements would be designed according to City standards and subject to existing regulations that are aimed at reducing hazardous conditions with respect to circulation. Site plan review and the City's Public Work's Department would evaluate all development projects and ensure that projects are constructed according to the City's construction standards and specifications. The ConnectMenlo EIR found that buildout of the General Plan would result in less-than-significant impacts with respect to hazards due to design features or incompatible uses. Thus, there would be no significant cumulative impact to which the project could contribute, and the project would not combine with past, present, and foreseeable future projects to create such impact; therefore, impacts associated with transportation system hazards would remain **less than significant**.

Emergency Access

The ConnectMenlo EIR found that the ConnectMenlo General Plan Update included policies that would ensure efficient circulation and adequate access are provided in the city, which would help facilitate emergency response. All future development projects would be required to comply with all City regulations and site plan review as part of the City's project approval process. The Fire Department would review certain projects and together with the policies and goals as outlined in the City's General Plan, would ensure that minimal impacts result to emergency access and there would be no significant cumulative impact to which the project could contribute. The project is consistent with ConnectMenlo. Therefore, cumulative impacts associated with emergency access would remain **less than significant**.

Mitigation Measures

No mitigation measures are required.

4.14.5 Non-CEQA Analysis

Intersection Level of Service Analysis

An intersection LOS analysis is provided in this section for informational purposes only. The TIA contains the analysis methodology and standards, as located in Appendix J1.

Although the City of Menlo Park adopted VMT thresholds into their TIA Guidelines, the City continues to require LOS analysis for conformance with their General Plan. LOS is commonly used as a qualitative description of intersection operations and roadway segments and is based on the design capacity of the intersection configuration and roadway facility, compared to the volume of traffic using the facility. Compliance criteria identified in the ConnectMenlo General Plan Update Circulation Element (City of Menlo Park 2016) and the City of Menlo Park Traffic Impact Analysis Guidelines (City of Menlo Park 2020a) were used to evaluate the project's potential impacts on intersection LOS. Thresholds vary depending on street classification and location of the intersection in relation state

(Caltrans) approaches and jurisdictions. Potential improvements that could bring the proposed project into conformance with Circulation Policy 3.4 (strive to maintain LOS D at all City controlled intersections, except at the intersection of Ravenswood Avenue and Middlefield Road and at intersections along Willow Road from Middlefield Road to US 101) are also identified. Implementation of any such measures would require review and approval by City decision makers and implementation through project conditions of approval.

Near Term (2025) Plus Project Conditions

This section presents the results of a cumulative condition analysis that was conducted for a short-term horizon year (2025) assuming the proposed project is constructed and fully occupied. This section follows the City's TIA Guidelines for intersection LOS analysis. Further discussion regarding methodology, LOS definitions, policy standards, and thresholds are provided in Appendix J1. The PTV Vistro software was used to determine intersection LOS, consistent with HCM 6 methodology for both signalized and unsignalized intersections, and detailed LOS calculation worksheets are included in Appendix J1.

Table 4.14-9 identifies the LOS for each intersection included in the study area under the near term no project and plus project conditions and whether the project could cause the City's LOS standards to be exceeded. With the addition of project traffic, the following intersections would exceed the thresholds identified in the City's TIA guidelines and increase the average critical movement delay by 0.8 seconds or more during AM and/or PM peak hours. As such, the following intersections would be non-compliant with the City's TIA Guidelines under Near Term (2025) plus project conditions.

- #1 (Marsh Road/Bayfront Expressway) – LOS E in AM and PM peak hours (signalized)
- #9 (Chrysler Drive/Constitution Drive) – LOS F in AM peak hour; LOS E in PM peak hour (signalized)
- #10 (Chrysler Drive/Jefferson Drive – East Driveway) – LOS F in AM peak hour (unsignalized)
- #11 (Chrysler Drive/Independence Drive) - LOS F in AM peak hour; LOS E in PM peak hour (unsignalized)
- #14 (Willow Road/Bayfront Expressway) – LOS F in AM and PM peak hours (signalized)

The Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant was performed at the unsignalized intersections (#10 and #11) and is provided in Appendix J1. The warrant is not met in either peak hour primarily due to lower traffic volumes along Chrysler Drive.

A summary of recommended improvement measures is provided in Table 4.14-11 to improve intersection operations to pre-project conditions or better for consistency with the City's TIA Guidelines.

Table 4.14-9. Near Term (2025) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Near Term (2025)				Near Term (2025) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Near Term (2025) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM	AM	PM	AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS							Avg. Delay	LOS	Avg. Delay	LOS
1	Marsh Road/Bayfront Expressway	Menlo Park/State	HCM Signal		58.8	E	60.6	E	59.2	E	61.8	E	0.4	1.2	Yes	Yes	Yes	Yes	50.8	D	63.5	E
				NB	82.9	F	81.3	F	83.0	F	83.7	F	0.1	2.4	Yes	Yes			17.9	B	35.2	D
				EB	99.3	F	86.5	F	99.2	F	87.0	F	-0.1	0.6	Yes	Yes			68.5	E	77.3	E
2	Marsh Road/US 101 NB Off-Ramp	Menlo Park/State	HCM Signal		30.8	C	17.8	B	31.4	C	18.7	B	0.6	0.9	No	No	No	No				
3	Marsh Road/US 101 SB Off-Ramp	Menlo Park/State	HCM Signal		19.8	B	17.7	B	20.0	C	18.1	B	0.2	0.4	No	No	No	No				
4	Marsh Road/Scott Drive	Menlo Park	HCM Signal		19.3	B	32.7	C	19.4	B	32.8	C	0.1	0.1	No	No	No	No				
5	Marsh Road/Bay Road	Menlo Park	HCM Signal		23.9	C	18.7	B	23.9	C	18.7	B	0.0	0.0	No	No	No	No				
6	Marsh Road/Middlefield Road	Atherton	HCM Signal		37.6	D	38.1	D	38.0	D	38.3	D	0.4	0.2	No	No	No	No				
7	Marsh Road/Florence Street-Bohannon Drive	Menlo Park	HCM Signal		40.4	D	55.1	E	40.5	D	55.1	E	0.1	0.0	No	Yes	No	No				
8	Chrysler Drive/Bayfront Expressway	Menlo Park/State	HCM Signal		12.7	B	20.3	C	13.8	B	22.5	C	1.1	2.2	No	No	No	No				
9	Chrysler Drive/Constitution Drive	Menlo Park	HCM Signal		230.9	F	73.7	E	239.4	F	104.2	F	8.5	30.5	Yes	Yes	Yes	Yes	140.1	F	45.5	D
				SB	340.5	F	208.4	F	400.1	F	314.7	F	59.7	106.3	Yes	Yes			338.1	F	100.6	F
				EB	241.6	F	30.4	C	232.3	F	33.3	C	-9.2	2.9	Yes	No			47.6	D	30.5	C
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	HCM TWSC		56.6	F	20.8	C	67.3	F	28.9	D	10.7	8.1	Yes	No	Yes	Yes	20.1	C	22.1	C
11	Chrysler Drive/Independence Drive	Menlo Park	HCM TWSC		291.3	F	45.5	E	336.3	F	50.9	F	45.0	5.4	Yes	Yes	Yes	Yes	31.7	C	21.7	C
12	Chilco Street/Bayfront Expressway	Menlo Park/State	HCM Signal		33.8	C	57.6	E	33.9	C	58.7	E	0.1	1.1	No	Yes	No	No				
				NB	N/A	N/A	165.1	F	N/A	N/A	165.1	F	N/A	0.0	No	Yes						
13	Chilco Street/Constitution Drive	Menlo Park	HCM Signal		33.8	C	171.1	F	33.9	C	163.0	F	0.1	-8.1	No	Yes	No	No				
				EB	N/A	N/A	295.0	F	N/A	N/A	294.1	F	N/A	-1.0	No	Yes	No	No				

Table 4.14-9. Near Term (2025) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Near Term (2025)				Near Term (2025) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Near Term (2025) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM	AM	PM	AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS							Avg. Delay	LOS	Avg. Delay	LOS
14	Willow Road/Bayfront Expressway	Menlo Park/State	HCM Signal		137.1	F	113.0	F	136.9	F	114.3	F	-0.2	1.3	Yes	Yes	No	Yes	N/A	N/A	—³	—³
				NB	291.2	F	241.9	F	285.1	F	240.7	F	-6.1	-1.2	Yes	Yes			N/A	N/A	—³	—³
				SB	68.2	E	130.3	F	68.6	E	139.4	F	0.4	9.1	Yes	Yes			N/A	N/A	—³	—³
15	University Avenue/Bayfront Expressway	Menlo Park/State	HCM Signal		14.1	B	105.4	F	14.2	B	105.8	F	0.1	0.4	No	Yes	No	No				
				NB	N/A	N/A	161.3	F	N/A	N/A	161.1	F	N/A	-0.2	No	Yes	No	No				
D1	Southwest Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				12.7	B	13.1		N/A		B	No	No	No				
D2	Southeast Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				12.1	B	12.4		N/A		B	No	No	No				
D3	North Driveway/Constitution Drive	Menlo Park	HCM TWSC		N/A				17.7	C	12.0		N/A		B	No	No	No				

Notes: **Bold** – Exceeds LOS threshold

TWSC = two-way stop control; LOS reported for the movement with highest delay; NB = northbound; EB = eastbound; SB - southbound

N/A = not applicable – critical approach information is not relevant. Critical approach information is relevant where the proposed project would increase delay over the City’s LOS thresholds.

¹ Inconsistency with City standards is provided for informational purposes only to determine whether intersection LOS meets General Plan standards.

² The City’s TIA guidelines indicate that intersections with deficient LOS may result in "...a project [being] considered potentially noncompliant with local policies." The City has discretion to allow LOS to be exceeded in order to achieve other Circulation Element goals and policies.

³ TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to right-of way (ROW) constraints.

Cumulative (2040) Plus Project Conditions

This section presents the results of a cumulative condition analysis that was conducted for a long-term horizon year (2040) assuming both buildout of the General Plan and full operation of the proposed project. This section follows the City's TIA Guidelines for intersection LOS analysis. Further discussion regarding methodology, LOS definitions, policy standards, and thresholds are provided in Appendix J1. The PTV Vistro software was used to determine intersection LOS, consistent with HCM 6 methodology for both signalized and unsignalized intersections, and detailed LOS calculation worksheets are included in Appendix J1.

Table 4.14-10 identifies the LOS for each intersection included in the study area under the cumulative no project and plus project conditions and whether the project could cause the City's LOS standards to be exceeded. With the addition of project traffic, the following intersections would exceed the thresholds identified in the City's TIA guidelines and increase the average critical movement delay by 0.8 seconds or more during AM and/or PM peak hours. As such, the following intersections would be non-compliant with the City's TIA Guidelines under cumulative (2040) plus project conditions.

- #1 (Marsh Road/Bayfront Expressway) – LOS E in AM peak hour; LOS F in PM peak hour (signalized)
- #9 (Chrysler Drive/Constitution Drive) – LOS F in AM and PM peak hours (signalized)
- #10 (Chrysler Drive/Jefferson Drive – East Driveway) – LOS F in AM peak hour; LOS E in PM peak hour (unsignalized)
- #11 (Chrysler Drive/Independence Drive) - LOS F in AM peak hour (unsignalized)
- #13 (Chilco Street/Constitution Drive) – LOS F in AM and PM peak hours (signalized)
- #14 (Willow Road/Bayfront Expressway) – LOS F in AM and PM peak hours (signalized)

The MUTCD peak hour signal warrant was performed at the unsignalized intersections (#10 and #11) and is provided in Appendix J1. The warrant is not met in either peak hour primarily due to lower traffic volumes along Chrysler Drive.

A summary of recommended improvement measures is provided in Table 4.14-11 to improve intersection operations to pre-project conditions or better for consistency with the City's TIA Guidelines. However, it should be noted that per OPR's Technical Advisory Guidelines (OPR 2018), roadway improvements that are confined to the intersection and do not extend through to the next roadway segment (i.e., roadway remaining at 4-lane capacity, even with widening of lanes at intersection level), would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis.

It is noted that the ConnectMenlo EIR concluded that additional motor vehicle trips generated on the local roadway network as a result of the project would cause an increase in delay to peak hour vehicle traffic, resulting in significant impacts at some study intersections and roadway segments. The ConnectMenlo EIR was prepared before the 2018 CEQA Guidelines update, which included the section implementing SB 743 (CEQA Guidelines Section 15064.3) and before the City updated its Traffic Impact Analysis Guidelines. Thus, the ConnectMenlo EIR relied on LOS as a metric for defining significant environmental effects.

ConnectMenlo EIR Mitigation Measure TRANS-1a would require the widening of impacted roadway segments at appropriate locations throughout the city to add travel lanes and capacity to accommodate the increase in net daily trips. Implementation of Mitigation Measure TRANS-1a would reduce the impacts but not to a less than significant level. The ConnectMenlo EIR found that fully mitigating the impact to less than significant levels would be infeasible

because it would require eliminating most of the year 2040 traffic growth on impacted segments, including background traffic growth and regional traffic growth outside the boundary of the City. Therefore, impacts to roadway segments were considered significant and unavoidable. However, these impacts are no longer considered environmental effects under CEQA.

ConnectMenlo EIR Mitigation Measure TRANS-1b requires updates to the City's TIF program to secure a funding mechanism for future roadway and infrastructure improvements to mitigate impacts from future projects (based on the current standards at the time the Final EIR was certified) but would not reduce the impact to less than significant levels. The City could not guarantee improvements at the impacted intersections because the nexus study (for development impact fees under AB 1600) had not been prepared, some improvements could cause secondary environmental impacts that would need to be addressed prior to construction, and some impacted intersections are within the jurisdiction of the City of East Palo Alto and Caltrans. Therefore, impacts to intersections were considered significant and unavoidable. Recently, the City's TIF program was updated and approved by the City Council. The City's Transportation Master Plan has been updated and was adopted by the City Council on November 17, 2020. The identified roadway improvements would not fully mitigate the intersection impacts identified in the ConnectMenlo EIR; however, these impacts are no longer considered environmental effects under CEQA.

Table 4.14-10. Cumulative (2040) Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Cumulative (2040)				Cumulative (2040) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?¹		Inconsistent w/TIA Guidelines?²		Cumulative (2040) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM	AM	PM	AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS							Avg. Delay	LOS	Avg. Delay	LOS
1	Marsh Road/Bayfront Expressway	Menlo Park/State	HCM Signal		61.9	E	96.3	F	62.5	E	99.1	F	0.6	2.8	Yes	Yes	No	Yes	54.5	D	97.7	F
				NB	74.9	E	101.6	F	75.0	E	101.6	F	0.2	0.0	Yes	Yes			37.8	D	100.8	F
				EB	111.4	F	132.1	F	112.0	F	134.9	F	0.6	2.8	Yes	Yes			78.0	E	126.5	F
2	Marsh Road/US 101 NB Off-Ramp	Menlo Park/State	HCM Signal		61.6	E	21.3	C	62.2	E	22.8	C	0.6	1.5	Yes	No	No	No				
					21.8	C	18.0	B	22.4	C	18.3	B	0.6	0.3	No	No	No	No				
					31.7	C	36.9	D	31.8	C	37.0	D	0.1	0.1	No	No	No	No				
					64.9	E	54.9	D	64.8	E	54.9	D	-0.1	0.0	Yes	No	No	No				
				EB	182.5	F	N/A	N/A	182.5	F	N/A	N/A	0.0	N/A	Yes	No	No	No				
6	Marsh Road/Middlefield Road	Atherton	HCM Signal		48.3	D	45.4	D	49.1	D	45.7	D	0.8	0.3	No	No	No	No				
					60.3	E	90.9	F	60.4	E	90.8	F	0.1	-0.1	Yes	Yes	No	No				
8	Chrysler Drive/Bayfront Expressway	Menlo Park/State	HCM Signal	NB	84.9	F	195.9	F	84.9	F	195.0	F	0.0	-0.9	Yes	Yes						
					11.7	B	29.8	C	12.8	B	36.3	D	1.1	6.5	No	No	No	No				
					328.6	F	151.4	F	342.1	F	193.5	F	13.5	42.1	Yes	Yes	Yes	Yes	252.7	F	106.5	F
9	Chrysler Drive/Constitution Drive	Menlo Park	HCM Signal		635.8	F	489.9	F	713.5	F	640.0	F	77.7	150.1	Yes	Yes			633.0	F	321.4	F
				EB	266.6	F	40.4	D	253.4	F	43.0	D	-13.2	2.6	Yes	No			97.2	F	41.1	D
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	HCM TWSC		76.5	F	22.2	C	117.8	F	36.0	E	41.3	13.8	Yes	Yes	Yes	Yes	19.9	B	26.0	C
11	Chrysler Drive/Independence Drive	Menlo Park	HCM TWSC		47.9	E	17.8	C	60.5	F	18.5	C	12.6	0.7	Yes	No	Yes	Yes	15.5	B	18.7	B
12	Chilco Street/Bayfront Expressway	Menlo Park/State	HCM Signal		71.9	E	113.7	F	71.9	E	114.6	F	0.0	0.9	Yes	Yes	No	No				
				NB	138.1	F	337.5	F	138.1	F	337.5	F	0.0	0.0	Yes	Yes						
13	Chilco Street/Constitution Drive	Menlo Park	HCM Signal		87.1	F	201.4	F	87.6	F	202.8	F	0.5	1.4	Yes	Yes	No	Yes	N/A	N/A	116.4	F

Table 4.14-10. Cumulative (2040) Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	LOS Method	Critical Approach	Cumulative (2040)				Cumulative (2040) plus Project				Change in Avg. Delay		Inconsistent w/City Standards?1		Inconsistent w/TIA Guidelines?2		Cumulative (2040) plus Project w/Improvements			
					AM Peak		PM Peak		AM Peak		PM Peak		AM	PM	AM	PM	AM	PM	AM Peak		PM Peak	
					Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS	Avg. Delay	LOS							Avg. Delay	LOS	Avg. Delay	LOS
				NB	106.4	F	264.7	F	106.6	F	272.0	F	0.2	7.3	Yes	Yes			N/A	N/A	191.8	F
14	Willow Road/Bayfront Expressway	Menlo Park/State	HCM Signal		187.2	F	159.3	F	186.6	F	163.1	F	-0.6	3.8	Yes	Yes	No	Yes	N/A	N/A	-3	-3
				NB	379.9	F	255.0	F	373.7	F	253.8	F	-6.3	-1.2	Yes	Yes			N/A	N/A	-3	-3
				SB	60.6	E	387.4	F	60.8	E	421.4	F	0.2	34.0	Yes	Yes			N/A	N/A	-3	-3
15	University Avenue/Bayfront Expressway	Menlo Park/State	HCM Signal		13.2	B	141.2	F	13.2	B	141.7	F	0.0	0.5	No	Yes	No	No				
				NB	N/A	N/A	162.3	F	N/A	N/A	162.2	F	N/A	N/A	No	Yes						
D1	Southwest Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				11.2	B	11.3	B	N/A		No	No	No	No				
D2	Southeast Driveway/Independence Drive	Menlo Park	HCM TWSC		N/A				10.8	B	11.0	B	N/A		No	No	No	No				
D3	North Driveway/Constitution Drive	Menlo Park	HCM TWSC		N/A				17.6	C	12.1	B	N/A		No	No	No	No				

Notes: **Bold** - Exceeds LOS threshold

TWSC = two-way stop control; LOS reported for the movement with highest delay; NB = northbound; EB = eastbound; SB - southbound

N/A = not applicable - critical approach information is not relevant. Critical approach information is relevant where the proposed project would increase delay over the City's LOS thresholds.

1 Inconsistency with City standards is provided for informational purposes only to determine whether intersection LOS meets General Plan standards.

2 The City's TIA guidelines indicate that intersections with deficient LOS may result in "...a project [being] considered potentially noncompliant with local policies." The City has discretion to allow LOS to be exceeded in order to achieve other Circulation Element goals and policies.

3 TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to right-of way (ROW) constraints.

Table 4.14-11. Summary of Recommended Improvement Measures

No.	Intersection	Jurisdiction	Near Term (2025) Plus Project	Cumulative (2040) Plus Project	Improvement in TIF Fee Program? ^a	Project Responsibility
1	Marsh Road/Bayfront Expressway	Menlo Park/State	Modify signal phasing for eastbound right-turning movements to overlap phasing. ^c	Same	No	Design/Installation
9	Chrysler Drive/Constitution Drive	Menlo Park	Widen and reconfigure eastbound approach to one eastbound left-turn lane, one eastbound through lane, and one eastbound right-turn lane. ^c	Same	No	Design/Installation
10	Chrysler Drive/Jefferson Drive-East Driveway	Menlo Park	Install a traffic signal ^d	Same	Yes - Menlo Gateway Mitigation	Design/Installation
11	Chrysler Drive/Independence Drive	Menlo Park	Install a traffic signal ^d	Same	Yes - Chrysler Drive Intersection Improvements	Design/Installation
13	Chilco Street/Constitution Drive	Menlo Park	N/A	Widen and reconfigure eastbound approach to one eastbound left-turn lane, one eastbound through lane, and one eastbound right-turn lane ^c	No	Fair Share (0.54%)
				Widen and reconfigure westbound approach to one westbound left-turn lane, one westbound through lane, and one westbound right-turn lane ^c	No	Fair Share (0.54%)
				Modify signal phasing for east and westbound left-turning movements to protected-permitted phasing	No	Fair Share (0.54%)

Table 4.14-11. Summary of Recommended Improvement Measures

No.	Intersection	Jurisdiction	Near Term (2025) Plus Project	Cumulative (2040) Plus Project	Improvement in TIF Fee Program? ^a	Project Responsibility
14	Willow Road/ Bayfront Expressway	Menlo Park/ State	Widen the eastbound approach with an additional through lane. Widen the northbound approach with an additional left-turn lane. These physical improvements would not be feasible. ^{ee}	Same ^e	Yes - Bayfront Expressway Multimodal Corridor Project	Design/Installation

Notes:

- ^a Improvements included in City of Menlo Park Transportation Impact Fee (TIF) program and noted in the City of Menlo Park TIF Nexus Study (January 3, 2020).
- ^b Identifies either the project's responsibility to construct an improvement or contribute fair share towards the implementation of improvements outside of payment to the TIF program. Project responsibility and improvements will be determined in the project's conditions of approval.
- ^c May require right-of-way (ROW) acquisition and/or relocation of utilities and/or mature trees. This approach is also along private ROW.
- ^d MUTCD peak hour signal warrants are not met under either the 2025 or 2040 conditions with the addition of project traffic; however, signalization is recommended due to the volume of vehicles approaching on minor streets and potential for queuing along stop-controlled approaches. Additionally, signalization is included as part of the noted TIF projects at these intersections in the City of Menlo Park TIF Nexus Study.
- ^e TIF improvements include adaptive traffic signal coordination along the Bayfront Expressway corridor which is likely to improve LOS operations; however, LOS is unable to be quantified at this time. Additionally, physical intersection improvements are considered infeasible due to ROW constraints for both the eastbound approach and the northbound approach.

Parking Assessment

The project would include a total of 552 parking spaces; 510 spaces for residents and 42 spaces for guests. Lot A would be developed with 316 apartments and would offer 336 parking spaces (330 residential spaces and 6 guest spaces) in a parking structure with a single level below grade and a single level at grade. Eight of the residential spaces and one guest space would be ADA accessible. At the time of construction, 15 percent of the parking stalls in the apartment garage would be equipped with an electric vehicle (EV) charging station and one parking stall per residential unit would be “EV Ready,” meaning that conduits would be installed to facilitate adding a charging station in the future.

Each townhome unit would have either a one- or two-car garage. Lot B would be developed with 26 townhomes and would include 73 total parking spaces, 8 of which would be tandem spaces and therefore are not counted toward the number of parking spaces required under the Municipal Code. There would be 44 non-tandem residential parking spaces and 21 guest spaces. The guest spaces would be provided as surface parking along the western site boundary and south of buildings 1 and 2. Lot C would be developed with 18 townhomes and would offer 24 parking spaces (18 residential spaces and 6 guest spaces provided as surface parking within and adjacent to buildings 6 and 7). Lot D would be developed with 72 townhomes and would offer a total of 153 parking spaces (118 residential non-tandem spaces, 26 residential tandem spaces, and 9 guest spaces). Guest spaces would be provided as surface parking in the northeast corner of this lot and north of building 14 as well as the southeast corner of this lot across from building 20 (Appendix B). According to Municipal Code Section 16.45.080, the minimum spaces per unit is one space, and the maximum spaces per unit is 1.5 spaces. The project would provide a total of 552 parking spaces for 432 dwelling units, totaling approximately 1.3 spaces per unit. Therefore, the project would meet the City’s parking requirements.

4.14.6 References Cited

Caltrans (California Department of Transportation). 2002. “Guide for the Preparation of Traffic Impact Studies” [PDF]. Accessed December 2020. https://nacto.org/docs/usdg/guide_preparation_traffic_impact_studies_caltrans.pdf.

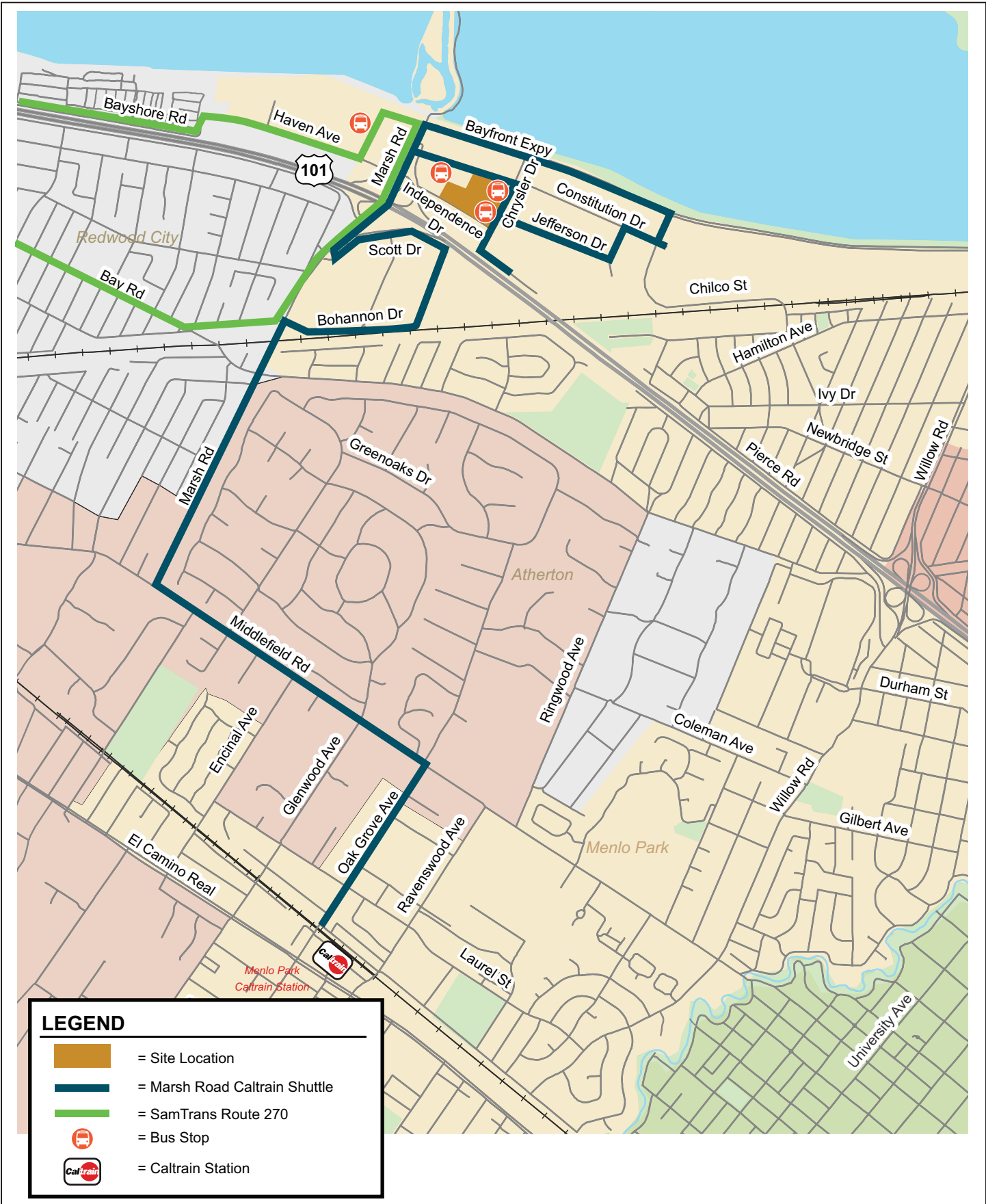
Caltrans. 2020. *Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance*. July 2020. Accessed December 2020. <https://dot.ca.gov/-/media/dot-media/programs/-transportation-planning/documents/sb-743/2020-07-01-interim-ldigr-safety-guidance-a11y.pdf>.

City of Menlo Park. 2004. *Neighborhood Traffic Management Program*. City of Menlo Park Transportation Division. November 16, 2004. Accessed July 2022. <https://www.menlopark.org/DocumentCenter/View/300/Neighborhood-Traffic-Management-Program>.

City of Menlo Park. 2005. *Menlo Park Comprehensive Bicycle Development Plan*. Accessed July 2022. <https://www.menlopark.org/DocumentCenter/View/372/Bicycle-Development-Plan?bidId=>.

City of Menlo Park. 2009. *City of Menlo Park Sidewalk Master Plan*. January 28, 2009. Accessed July 2022. <https://beta.menlopark.org/files/sharedassets/public/public-works/documents/capital-improvement-program/sidewalk-master-plan-20090128.pdf>.

- City of Menlo Park. 2015. Transportation Demand Management (TDM) Program Guidelines. Accessed July 2022. <https://www.menlopark.org/DocumentCenter/View/303/Transportation-Demand-Management-TDM-Guidelines?bidId=>.
- City of Menlo Park. 2016a. General Plan: *ConnectMenlo, Menlo Park Land Use and Mobility Update*. November 29, 2016.
- City of Menlo Park. 2016b. *ConnectMenlo: General Plan Land Use and Circulation Elements and M-2 Area Zoning Update EIR*. Draft. SCH No. 2015062054. Prepared by PlaceWorks for the City of Menlo Park. June 1, 2016. <https://beta.menlopark.org/Government/Departments/Community-Development/Planning-Division/Comprehensive-planning/ConnectMenlo/Environmental-Impact-Report>.
- City of Menlo Park. 2020c. *Transportation Impact Fee Nexus Study*. Accessed July 2022. <https://beta.menlopark.org/files/sharedassets/public/public-works/documents/transportation/transportation-projects/2020-transportation-master-plan.pdf>.
- City of Menlo Park. 2020b. *Transportation Master Plan*. Accessed July 2022. <https://beta.menlopark.org/files/sharedassets/public/public-works/documents/transportation/transportation-projects/2020-transportation-master-plan.pdf>
- City of Menlo Park. 2020a. *Transportation Impact Analysis Guidelines*. Accessed July 2022. <https://www.menlopark.org/DocumentCenter/View/302/Transportation-Impact-Analysis-Guidelines>
- ITE (Institute of Transportation Engineers). 2021. *Trip Generation Manual*. 11th ed.
- MTC and ABAG (Metropolitan Transportation Commission and Association of Bay Area Governments). 2021. *Plan Bay Area 2050*. October 2021.
- OPR (California Governor’s Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018. Accessed July 25, 2022. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.
- Robert Crommelin and Associates. 1972. *Alaska Marine Highway System Study*. Published in Encino, California.
- San Mateo County Transit District. 2022. About SamTrans. Accessed July 2022. <https://www.samtrans.com/about-samtrans>
- San Mateo County Transit District. Route 270 Schedule and Map - Redwood City Caltrans–Florence 17th/loop. <https://www.samtrans.com/routes/270>



LEGEND

- = Site Location
- = Marsh Road Caltrain Shuttle
- = SamTrans Route 270
- = Bus Stop
- = Caltrain Station

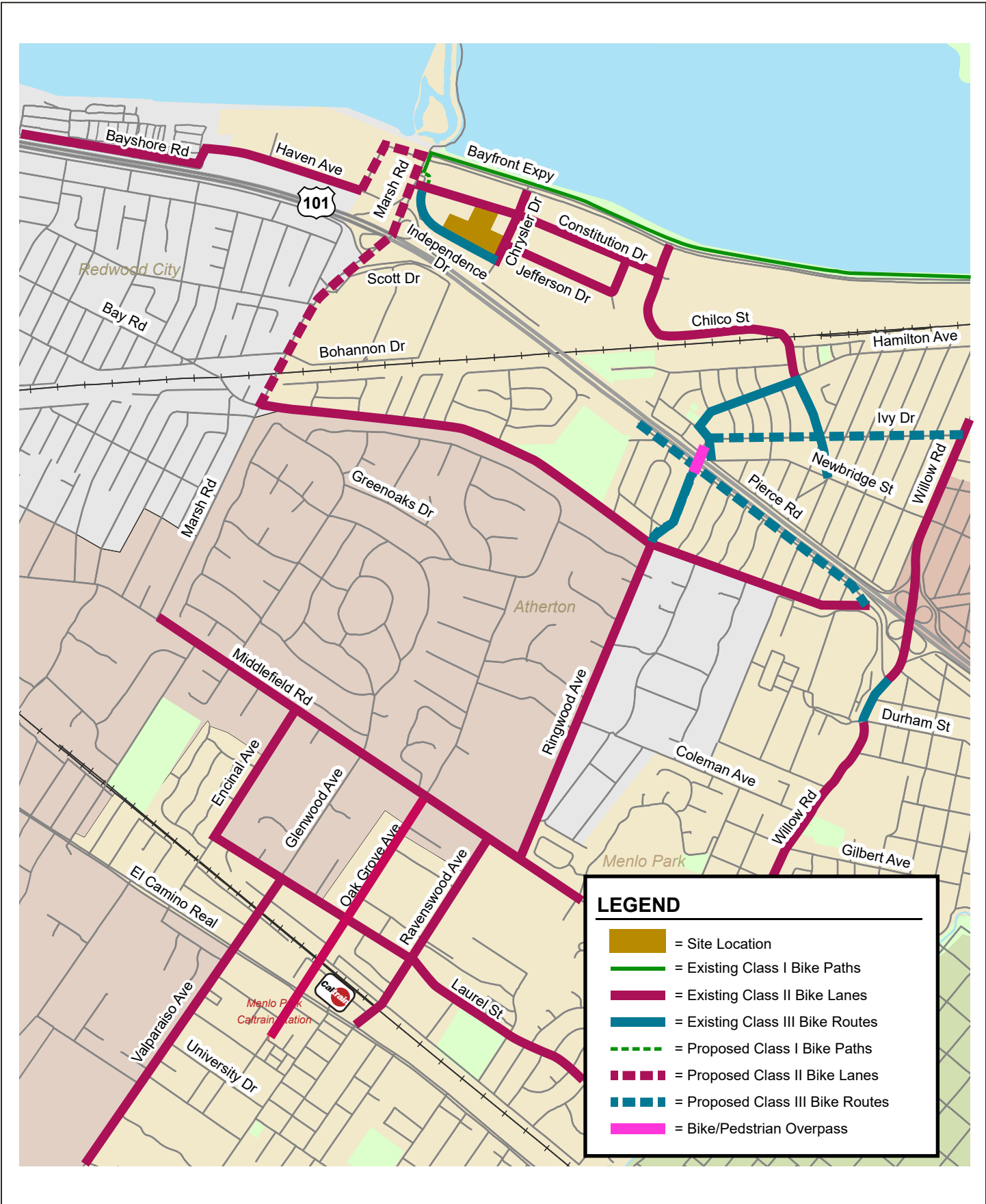
SOURCE: Hexagon 2022

FIGURE 4.14-1

Existing Transit Facilities

123 Independence Drive Residential Project

INTENTIONALLY LEFT BLANK



SOURCE: Hexagon 2022

FIGURE 4.14-2

Existing and Proposed Bicycle Facilities

123 Independence Drive Residential Project

INTENTIONALLY LEFT BLANK