



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

## 580 Dubuque Avenue

### Preliminary Transportation Demand Management (TDM) Program

Prepared for:

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# 1.

## Introduction

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This Transportation Demand Management (TDM) program was developed for the proposed Research and Development (R&D) building at 580 Dubuque Avenue, hereafter referred to as “Project” in South San Francisco, California. The City of South San Francisco is referred to as “City” in this report. The goal of the TDM program is to reduce the number of vehicle trips generated by the project in compliance with the City’s requirements for alternative mode use.

The purpose of TDM as stated in *Chapter 20.400, Transportation Demand Management* of the City’s Municipal Code is to (1) reduce the amount of traffic generated by new development, pursuant to the City’s police power and necessary in order to protect the public health, safety and welfare; (2) ensure that expected increases in traffic resulting from growth in employment opportunities in the City will be adequately mitigated; (3) reduce drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities; (4) promote the more efficient utilization of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage; and (5) establish an ongoing monitoring and enforcement program to ensure that the desired alternative mode use percentages are achieved.

According to the South San Francisco Municipal Code, any non-residential development that would generate 100 or more average daily trips is expected to incorporate measures that have a demonstrable effect of reducing the number of trips generated to achieve a minimum alternative mode use of 28%. For projects requesting an increase in Floor Area Ratio (FAR), a higher percentage of alternative mode use is required. Since the proposed project is located adjacent to the Caltrain station, the project would be required to achieve an alternative mode use of 40%. Also, compared to the Municipal Code, the project would provide fewer parking spaces than typically required by the Municipal Code, which both necessitates and supports alternative mode use.

This TDM plan seeks to reduce auto dependency through a combination of appropriate measures to promote alternative forms of transportation thereby reducing parking demand. The project will implement trip reduction elements and goals outlined in the City’s TDM ordinance. This TDM Plan includes the following alternative transportation mode-use strategies, which will mitigate employee commute trips typically associated with an office/R&D project and ensure that the project complies with the City’s 40% alternative mode use requirement.

1. TDM Infrastructure and Physical Measures
2. Programmatic TDM Measures

3. Compliance with TDM requirements of the City/County Association of Governments of San Mateo County (C/CAG)
4. TDM Monitoring and Reporting

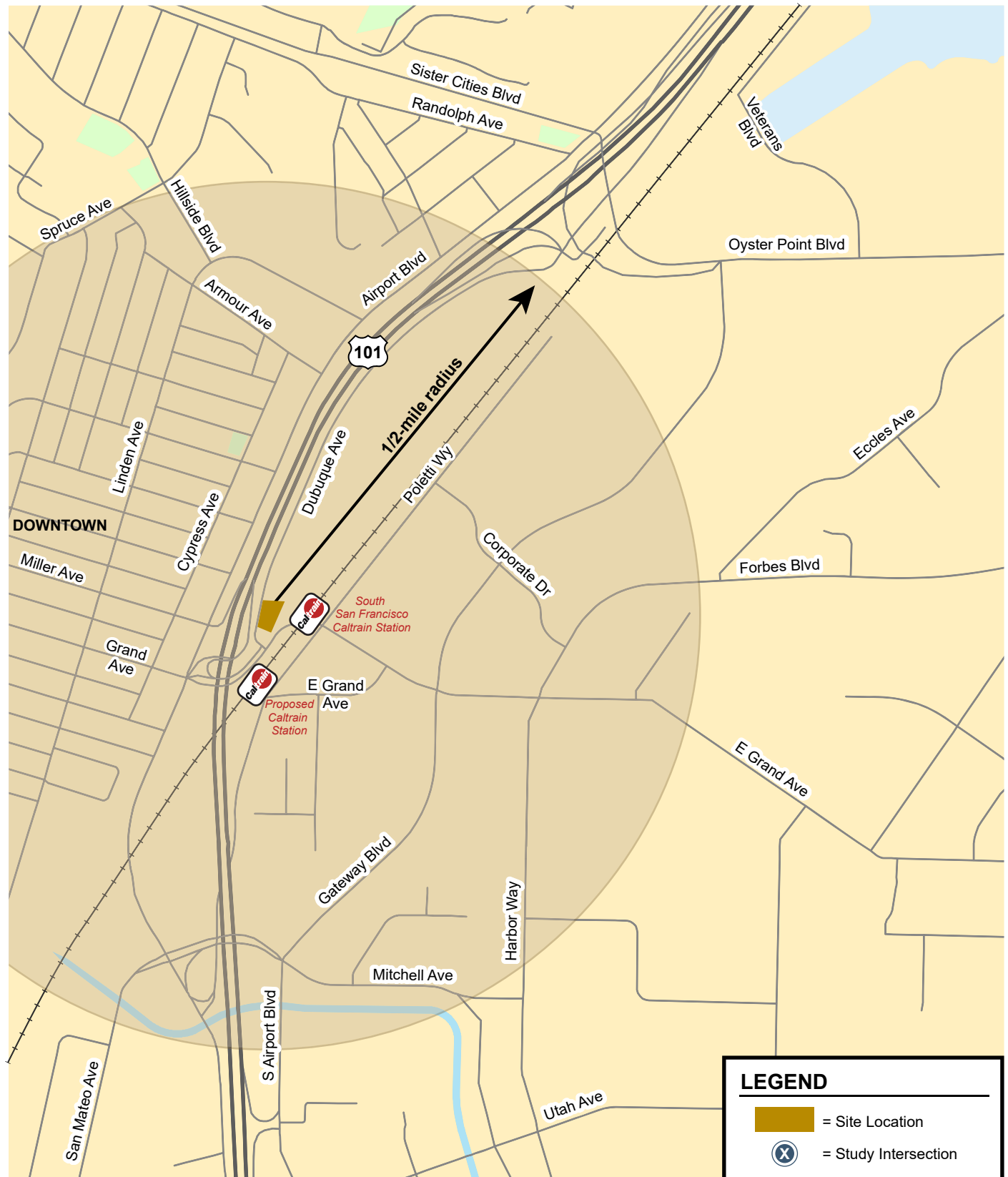
## Project Description

The project proposes to construct approximately 281,234 square feet (s.f.) of Lab/Research & Development (R&D) and office space adjacent to the new South San Francisco Caltrain station (see Figure 1) with an FAR of 3.19. This is consistent with the proposed 2040 General Plan update, which plans for higher-density, transit-oriented uses at and around the project site. The project site is currently vacant. Vehicular access to the project would be provided via the existing full access driveway on Dubuque Avenue. The project would provide a total of 346 on-site vehicular parking spaces within four underground parking levels, at the ratio of approximately 1.26 parking spaces per 1,000 s.f. As previously mentioned, TDM programs support alternative mode use and would reduce parking demand. The Level 01 and P1 project floor plans are shown on Figures 2 and 3.

The project would provide a clear walkway between the existing sidewalk on Dubuque Avenue and the main building entrance that would be provided on the north side of the building. A pedestrian walkway with landscaping and lighting would be constructed along the western edge of the property along the access road that would run parallel to Dubuque Avenue. There is an existing Caltrain parking facility located directly south of the project. The project would coordinate with Caltrain/Joint Powers Board (JPB) who currently own the parcels to the south and east of the project site to provide pedestrian access between the project site and the Caltrain station in a permittable and accessible manner.

## Downtown Location and Proximity to Transit

The Project site is located adjacent to the Caltrain station (within 500 feet) and within walking distance of the downtown area (approximately ¼ -mile away), which offers an array of high-density residential developments, dining, and retail activities. SamTrans provides bus service on the west side of US 101, with bus stops located approximately ¼ - mile from the project site, and commute.org provides shuttle service from the Caltrain station to the BART and WETA ferry stations. The proximity of the project to the South San Francisco downtown and the Caltrain station is shown on Figure 4. The location of the project within or adjacent to a central business district and a transit station promotes transit, pedestrian, and bicycle travel in a high-density area of complementary land uses. Chapter 2 describes the existing transit services that are approximately a ¼ - mile of walking distance from the project.



**Figure 1**  
Site Location and Study Intersections



**Figure 2**  
**Site Plan - Level 1 Floor Plan**

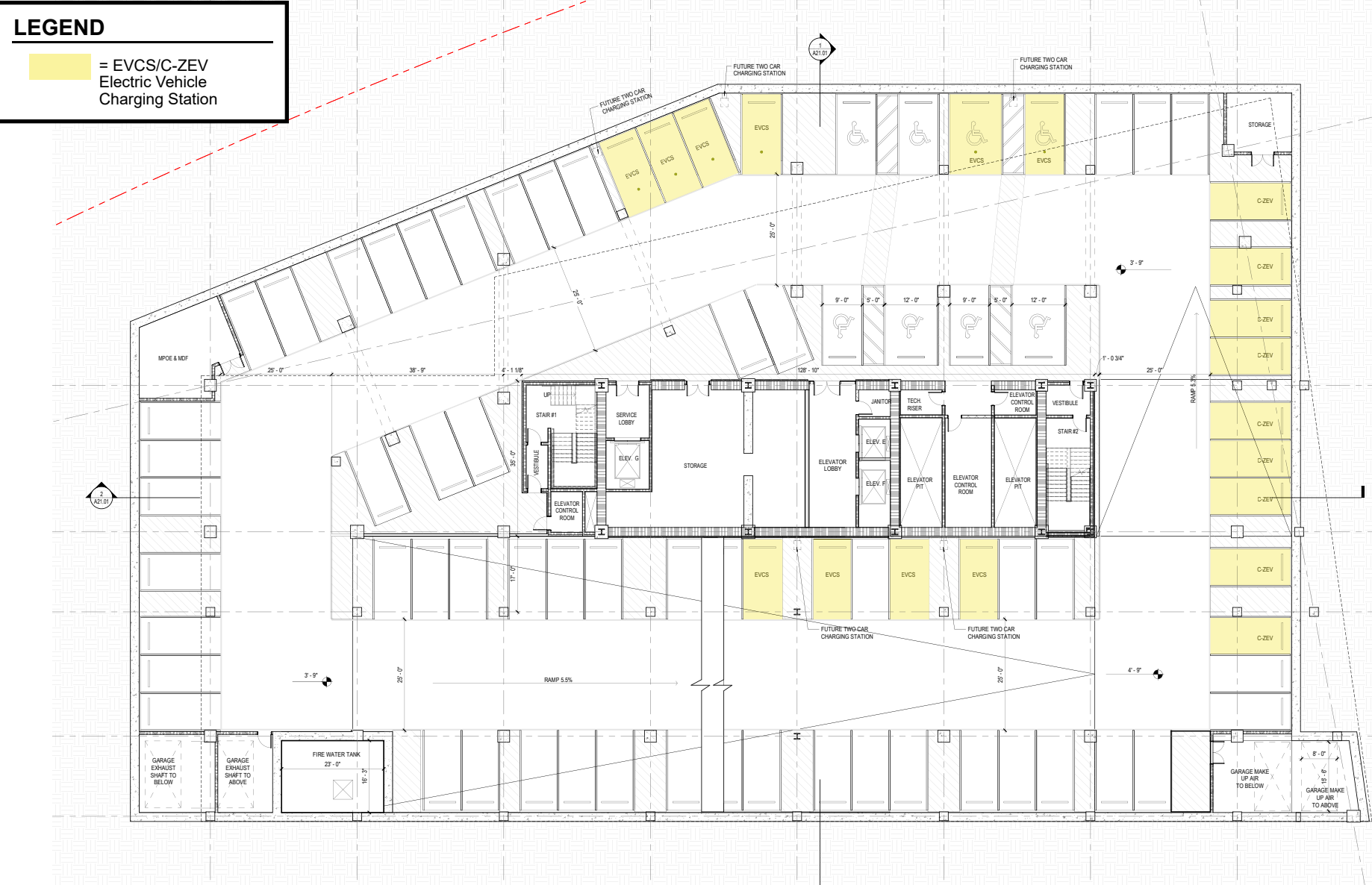


Figure 3  
Site Plan - Level P1 Floor Plan





Figure 4  
Project's Proximity to Downtown



## 2. Existing Transportation Facilities

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Transportation facilities and services that support sustainable modes of transportation include buses and shuttle buses, commuter rail, and bicycle and pedestrian facilities. This chapter describes existing facilities and services near the project site. Information on the nearby roadway network is also included in order to provide a more comprehensive description of the nearby transportation network.

### Roadway Network

Regional access to the project study area is provided by US 101.

*US 101* is a north-south major freeway through eastern San Mateo County between San Francisco and San Jose. It is the primary north/south route connection to I-280 and I-80 north of South San Francisco. US-101 is typically congested in both directions during both peak periods as people commute to and from San Francisco and the Silicon Valley. Access to the freeway from the project site is provided via interchanges at Airport Boulevard, Grand Avenue, Miller Avenue and Dubuque Avenue.

The following roadways provide local access to the site:

- **Airport Boulevard** is a major north/south four- to six-lane arterial route through South San Francisco parallel to US-101 that transitions into Bayshore Boulevard in the north and to Produce Avenue in the south. Sidewalks are generally present on both sides of the road, south of Grand Avenue. North of Grand Avenue, a sidewalk is provided only on the west side of the road. The posted speed limit on Airport Boulevard is 35 MPH near the project vicinity. Airport Boulevard provides access to the site via Grand Avenue and Dubuque Avenue.
- **Grand Avenue** is a two- to six-lane roadway that extends from Mission Road to the west to its termination point at Point San Bruno Park in the Genentech campus. West of Airport Boulevard, Grand Avenue has one travel lane in each direction with on-street angled parking on both sides of the street. The posted speed limit on Grand Avenue is 35 MPH near the project vicinity. Grand Avenue provides access to the site via Dubuque Avenue.
- **Dubuque Avenue** is a two-to-three-lane local roadway that extends from Oyster Point Boulevard in the north to Grand Avenue in the south. The posted speed limit on Dubuque Avenue is 30 MPH. Sidewalks are present on the east side of the road. Dubuque Avenue provides direct access to the project site via an existing driveway that provides access to the South San Francisco Caltrain station.

## Pedestrian Facilities

Sidewalks and crosswalks are provided on most streets in the immediate vicinity of the proposed project. Sidewalks exist along the east side of Dubuque Avenue, on Grand Avenue and Airport Boulevard. A metal staircase on the northeast corner and a crosswalk across the east leg of the signalized Dubuque Avenue/E Grand Avenue intersection currently provide connections for pedestrians from areas east of the Caltrain tracks and downtown areas to the Caltrain station.



*Crosswalk at the E. Grand Avenue/Dubuque Avenue Intersection*

Pedestrian access improvements are proposed in the area covered under the South San Francisco Downtown Station Area Specific Plan. The plan calls for area-wide improvements, such as establishing a Downtown pedestrian-priority zone, making pedestrian-friendly alley improvements to Downtown lanes, and completing the street grid to reduce block lengths immediately surrounding the Caltrain station. As part of the South San Francisco Caltrain Reconstruction Project that is currently in progress, an underpass is being constructed that would provide a direct connection for pedestrians and bicyclists between areas to the west and east of the Caltrain tracks. This underpass would also provide a connection to the new Caltrain station platform. As the project is located adjacent to the Caltrain station, the new underpass would provide an alternative pedestrian connection between the project, downtown destinations, and areas to the east of the Caltrain tracks.

These facilities would allow project employees to access downtown restaurants, retail, and many services without an automobile. The project is well situated to take advantage of the existing and planned pedestrian facilities in the immediate vicinity. Overall, the existing network of sidewalks and crosswalks has good connectivity and provides pedestrians with safe routes to transit services and other points of interest in the downtown area.



*Planned US 101/Caltrain Underpass*

## Bicycle Facilities

Bicycle facilities include bike paths, bike lanes, and bike routes. Bike paths (Class I facilities) are pathways, separate from roadways, which are designated for use by bicycles. Often, these pathways also allow pedestrian access. Bike lanes (Class II facilities) are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes (Class III) are existing rights-of-way that accommodate bicycles but are not separate from the existing travel lanes. Routes are typically designated only with signs.

The city has 48.3 miles of existing bikeways, though most of them are not signed (see Figure 5). Transit stations, schools, parks and retail centers are all accessible by these bikeways. The City of South San Francisco adopted its citywide Bicycle Master Plan in 2011, the goal of which is to expand the bicycle network to make it easier and safer for people to bicycle through the city. Also, the Downtown Station Area Specific Plan (DSASP) would enhance bicycle operations through new and improved bicycle access at the Grand Avenue/Airport Boulevard intersection.

The existing and planned bicycle facilities (based on the South San Francisco Bicycle Master Plan, 2011 and DSASP) in the project study area are discussed below.

- **Airport Boulevard** has Class II bike lanes in both directions that begin north of Miller Avenue and connect to the Class III bike routes on Miller Avenue and Linden Avenue. New Class II bike lanes are planned in both directions on Airport Boulevard between Miller Avenue and San Mateo Avenue.
- **Sister Cities Boulevard** has Class II bike lanes in both directions between Hillside Boulevard and Airport Boulevard.
- **Oyster Point Boulevard** has Class II bike lanes between Gateway Boulevard and Gull Drive. Class II bike lanes are planned for the remainder of Oyster Point Boulevard to connect to existing Class II bike lanes on Sister Cities Boulevard and Airport Boulevard.

- **East Grand Avenue** has intermittent Class II bike lanes in the East of 101 Area. A Class I trail is planned on E Grand Avenue and will connect the new Caltrain station with planned trails near Forbes Boulevard. Class II bike lanes are present between Gateway Boulevard and Haskins Way.
- **Gateway Boulevard** has Class II bike lanes in both directions that begin south of E Grand Avenue and extend to South Airport Boulevard. Class II bike lanes are proposed on Gateway Boulevard between Oyster Point Boulevard and E Grand Avenue.
- **Dubuque Avenue** is planned to have a Class III bike route between E Grand Avenue and Oyster Point Boulevard.
- **Poletti Way** has a short Class I mixed-use trail connection that begins approximately 500 feet to the north of E Grand Avenue and extends to the Oyster Point Boulevard/Gateway Boulevard intersection. An extension of the trail is planned to the new Caltrain station to the south and the Bay Trail to the north (under the Oyster Point Boulevard overpass).
- **The San Francisco Bay Trail (Bay Trail)** is a Class I mixed-use trail along the Oyster Point shoreline and Point San Bruno, part of a planned 400-mile regional trail system encircling the San Francisco Bay shoreline.



*Class II Bike Lane on Airport Boulevard*





**Figure 5**  
Existing and Proposed Pedestrian Bicycle Facilities

## Transit Services

Existing transit service to the study area is provided by Caltrain, San Mateo County Transit District (SamTrans), Bay Area Rapid Transit (BART), Water Emergency Transit (WETA), and commuter shuttles. The project site is located adjacent to the Caltrain station. SamTrans, BART, and ferry service (WETA) is provided in the greater vicinity of the project site. The transit services are shown on Figure 6.

### Caltrain

Caltrain provides commuter rail service between San Francisco and Gilroy. The project is located adjacent to the South San Francisco Caltrain station, which is located at 590 Dubuque Avenue. The South San Francisco Caltrain Station serves local trains, with 23 northbound and 23 southbound weekday trains. The South San Francisco Caltrain Station provides weekday service from 5:40 AM to 12:00 AM, with 60-minute headways.

Currently, the only access to the South San Francisco Downtown is from the west side of the train tracks, via the Grand Avenue overpass. This overpass requires a long and circuitous detour for people walking and bicycling, who have to cross Grand Avenue and descend either a tall metal staircase or use Dubuque Avenue. The city in partnership with Caltrain is currently working on the South San Francisco Caltrain Station Reconstruction project to improve safety and connectivity to nearby businesses, which is expected to be completed by November 2021. The station reconstruction will include widening the center platform and building a pedestrian tunnel to connect the station directly to the east end of downtown's Grand Avenue. Passengers will be able to get to the Downtown from the station's center platform via ramps connecting to a tunnel underneath the tracks. The tunnel will connect to a pedestrian plaza at Grand Avenue and Airport Boulevard on the west side of the tracks and a transit plaza at the intersection of Grand Avenue and Poletti Way on the east side of the tracks. Buses and shuttles will pick up and drop off Caltrain passengers from the new east-side plaza instead of the parking lot on the west side of the station, which would result in time savings for passengers commuting to the City's biotech job center on the east side of the tracks.



*Rendering of the New Widened Central Platform at the South San Francisco Caltrain Station*

## SamTrans

Existing bus service to the study area is provided by San Mateo County Transit District (SamTrans). Bus services to the study area are described in Table 1.

SamTrans provides bus service on the west side of US 101. The closest bus stops to the project site are approximately 0.25 mile to the west at the intersection of Airport Boulevard and Grand Avenue and are served by Routes 292 and 397. The bus stops at the intersection of Linden Avenue and Miller Avenue are located approximately 0.5 mile from the project and are served by Routes 130 and 141.

- *Route 292* operates along Airport Boulevard in the study area and provides service through the cities of Brisbane and San Francisco to the north and Burlingame and San Mateo to the south. Route 292 provides connections to the AC Transit M Line, Hillsdale Caltrain station and SamTrans Routes ECR, 38, 130, 140, 250, 251, 256, 294, 295 and 398.
- *Route 397* operates along Airport Boulevard in the study area and provides service through the cities of Brisbane and San Francisco to the north and Burlingame, San Carlos, Redwood City and Palo Alto to the south. Route 397 provides connections to AC Transit, Golden Gate Transit, Caltrain and VTA Route 22.
- *Route 130* operates along Airport Boulevard, Linden Avenue and Grand Avenue in the study area and provides connections to the South San Francisco BART station, Colma BART station, Daly City BART station and SamTrans Routes ECR, 37, 141, 292, 28, 112, 120, 121 and 122.
- *Route 141* operates along Airport Boulevard, Linden Avenue, Grand Avenue, and Spruce Avenue in the study area and provides connections to the San Bruno BART station and SamTrans Routes ECR, 130, 292, 140 and 398.

**Table 1**  
**SamTrans Services**

Route <sup>1</sup>	Route Description	Weekday Hours of Operation <sup>2</sup>	Headways <sup>2</sup> (minutes)
Express, SFO and Multi-City Route 397	San Francisco – Palo Alto Transit Center (Limited Overnight Service) - Serves SF Airport	12:45 AM - 6:30 AM	60
Express, SFO and Multi-City Route 292	San Francisco – Hillsdale Mall - Serves SF Airport	3:55 AM - 2:45 AM	55-75
North County Route 38	Safe Harbour <sup>3</sup>	5:50 AM - 8:20 AM 5:30 PM - 8:35 PM	
North County Route 130	Daly City BART - Airport/Linden	5:00 AM - 12:00 AM	15
North County Route 141	Airport/Linden – Shelter Creek	6:10 AM - 8:00 PM	30
<b>Notes:</b> Source: SamTrans Service Schedule and Map, August 2020 1. Closest bus stop to bus routes 397 and 292 is located at Airport Boulevard and Grand Avenue (0.3 mile from the project location) and all others are at Airport Boulevard and Linden Avenue (0.8 mile from the project location). 2. Approximate weekday operation hours and headways during peak periods in the project area, as of August 2020. 3. Route 38 continues as route 130 and route 141 between 6:00 AM to 7:00 AM and 5:30 PM to 7:45 PM.			

## BART

Bay Area Rapid Transit (BART) operates regional rail service in the Bay Area, connecting between San Francisco International Airport and the Millbrae Intermodal Station to the south, San Francisco to the north, and cities in the East Bay. The BART stations closest to the project area are the San Bruno Station, located near Huntington Avenue east of El Camino Real, and the South San Francisco Station, located on Mission Road and McLellan Drive. Both stations are located within 3 miles of the project site. BART trains operate on 15-minute headways during peak hours and 20-minute headways during off-peak hours.

## WETA

WETA provides weekday commuter ferry service between Oakland/Alameda ferry terminals and the South San Francisco Ferry Terminal at Oyster Point. There are three morning departures from Oakland/Alameda to South San Francisco, and three evening departures from South San Francisco to Oakland/Alameda. The South San Francisco Ferry terminal is located approximately 2.5 miles from the project site. Shuttle service is provided by Commute.org between the South San Francisco ferry terminal and the Caltrain station.

## Commuter Shuttles

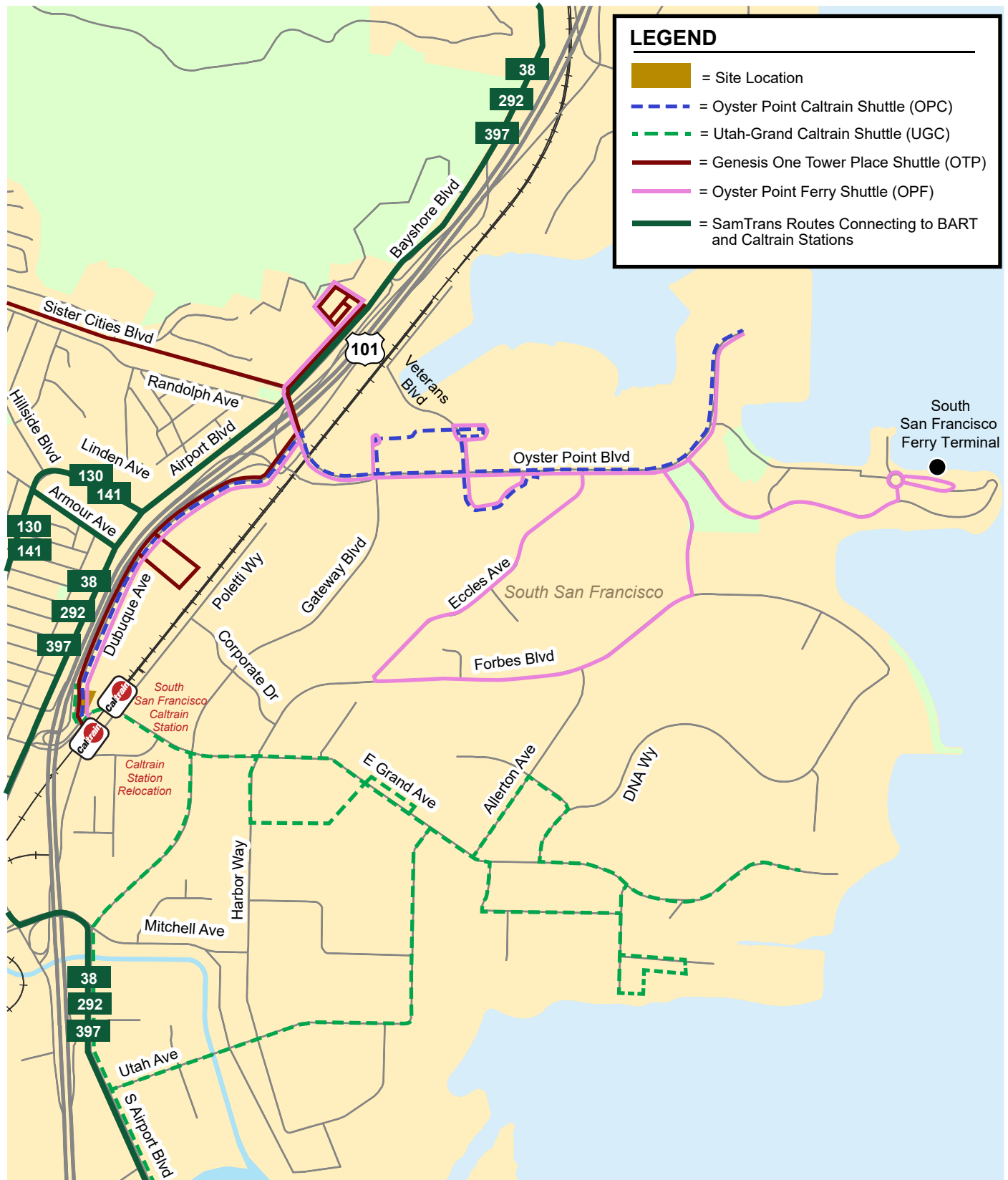
Commuter shuttle service is provided in the East of 101 Area by the Peninsula Traffic Congestion Relief Alliance (Commute.org). The shuttles provide weekday commute period first/last mile



connections between BART and the Caltrain stations, the WETA ferry terminal, and local employers in the East of 101 Area.

These shuttles are free for all passengers and are open to the general public. All shuttles are wheelchair-accessible and equipped with a bicycle rack on the front of the vehicle. Service is provided from Monday through Friday during morning and afternoon commute hours. The following shuttle services can be accessed within walking distance of the South San Francisco Caltrain station and the project site. As part of the South San Francisco Caltrain Station Reconstruction project, shuttle stops would be relocated from the Caltrain station parking lot on the west side of the tracks to the east of the tracks along Poletti Way. Employees and visitors to the project would access the new shuttle stops via the Caltrain station platform which would connect to the Grand Avenue underpass that would connect to Poletti Way.

- **The Genesis One Tower Place (OTP) Shuttle** connects the South San Francisco Caltrain and South San Francisco BART stations and provides service to the Genesis Towers (a bio tech hub located on the west side of Airport Boulevard approximately 1,000 feet north of Sister Cities Boulevard) and the Dubuque Innovation Center in South San Francisco. This line provides service during peak commute hours, between 6:50 AM and 10:10 AM, and between 4:00 PM and 6:35 PM with 60-minute headways during the AM peak hour and 30-to-60-minute headways during the PM peak hour.
- **The Oyster Point Caltrain shuttle (OPC)** operates from the South San Francisco Caltrain Station and provides service to offices and businesses along Oyster Point Boulevard. This line provides service during peak commute hours, between 6:30 AM and 10:00 AM, and between 2:50 PM and 6:30 PM with 20 to 45-minute headways during the AM peak hour and 30 minutes headways during the PM peak hour.
- **The Utah-Grand Caltrain shuttle (UGC)** operates from the South San Francisco Caltrain Station and provides service to businesses along E. Grand Avenue on the east side of Highway 101 in South San Francisco. This line provides service during peak commute hours, between 6:30 AM and 10:00 AM, and between 2:45 PM and 6:10 PM with 60-minute headways.
- **The Oyster Point Ferry shuttle (OPF)** connects riders from the South San Francisco Ferry Terminal to the South San Francisco Caltrain station and provides service to Oyster Point Boulevard, Genesis Towers, and the Dubuque Innovation Center. Currently service is suspended due to COVID-19, but service is expected to resume in October 2021.



**Figure 6**  
**Existing Transit Services**

### 3.

## Recommended TDM Program

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The TDM measures for the project are developed to be consistent with the City of South San Francisco Municipal Code and the City's Downtown Station Area Specific Plan (DSASP) goals to "provide for a balanced mix of travel modes – including pedestrians, bicyclists, transit and automobiles."

The project site is well suited to have a successful TDM Program based on its access to bicycle, pedestrian, and transit facilities in the study area as discussed in Chapter 2.

The TDM measures recommended for the project include planning and design measures related to the attributes of the site location, the site design, and on-site amenities. Such measures, described below, encourage walking, biking, and use of transit.

Because the project is a speculative development with a yet unknown tenant(s), specific TDM plan components should be included in lease agreements or other instruments to ensure their implementation. The TDM plan also is designed to allow for a certain degree of flexibility so that the ultimate tenant(s) can ensure the plan can be tailored to best suit the commute needs of their work force.

### Required TDM Measures

The following TDM measures, all of which are required by Section 20.400.004 of the City's zoning ordinance, should be implemented as soon as the project is constructed and occupied.

All of the required measures should be implemented as a comprehensive program and are expected to achieve the required 40% alternative mode use goal among employees of the proposed Office/R&D building. Research regarding TDM programs suggests that it is difficult to predict how much of a mode shift is likely to be produced by an individual measure. Instead, successful programs include many measures that mutually reinforce each other and produce a culture of using sustainable modes of transportation. Many employers have found that a whole TDM program can be greater than the sum of the individual parts when a comprehensive TDM program is consistently and effectively promoted to employees. Accordingly, this plan in total is expected to achieve at least a 40% mode shift, but the specific percentage contribution of each measure to that shift has not been estimated.

- **TDM Measure 1 - Carpool and Vanpool Ridematching Services and Incentive Programs.** Carpooling offers the comfort of a car ride, the efficiency of carpool lanes, free travel in express lanes, and shared commute costs. The Transportation Coordinator would

be responsible for matching potential carpoolers and vanpoolers by administering a carpool/vanpool matching application. The application would match employees who work onsite who may be able to carpool or vanpool together.

In addition, the Transportation Coordinator should promote the 511 RideMatch service, which may assist employees in finding ridesharing partners who work nearby. The 511 Ridematch service is an interactive, on-demand system that helps commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential ZIP code, along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute. The service also provides a list of existing carpools and vanpools in their residential area that may have vacancies.

Commute.org offers carpool and vanpool incentive programs. Commute.org rewards commuters who use Scoop and Waze Carpool to carpool to and from work. When their carpool trips are logged for auto-tracking, commuters can earn rewards up to \$100 (in installments of \$25 e-gift card). The alliance's vanpool incentive program will reimburse each passenger up to \$300 in cash or pay the driver \$500 (for driving a vanpool of seven or more passengers for a minimum of six months). The 511 Regional Rideshare Program also offers a variety of rewards to encourage non-solo driving options. The Transportation Coordinator should publicize these incentive programs.

- **TDM Measure 2 - Transportation Coordinator.** Experience with other TDM programs indicate that having a Transportation Coordinator who focuses on transportation issues and who is responsible for implementing and managing the TDM program is a key to its success. The building owner or management will need to appoint an individual as the Transportation Coordinator or TDM contact person, and that person's name and contact information should be provided to the city. The Transportation Coordinator's responsibilities will include organizing and implementing the promotional programs, updating information on the online information board/kiosk, providing trip planning assistance and/or ride-matching assistance to employees who are considering an alternative mode for their commute, and administering the employee survey. The Transportation Coordinator should maintain up-to-date transit schedules and route maps for SamTrans, BART, Caltrain and community shuttles and be knowledgeable enough to answer employee's TDM program-related questions.
- **TDM Measure 3 - Direct Route to Transit.** This measure is satisfied by the site location. The project is located adjacent to the South San Francisco Caltrain station. A pedestrian walkway with landscaping and lighting would be constructed along the western edge of the property along the access road that would run parallel to Dubuque Avenue. The project would coordinate with Caltrain/Joint Powers Board (JPB) who currently own the parcels to the south and east of the project site to provide pedestrian access between the project site and the Caltrain station in a permissible and accessible manner. The Caltrain station is also serviced by commute.org shuttles which provide service between the Caltrain station, the BART station and the WETA ferry terminal. With the completion of the Caltrain station reconstruction, the shuttle drop-off area will be relocated to the east side of the track on Poletti Way. Employees and visitors to the project would access the new shuttle drop-off area via the new center boarding platform that would connect to the pedestrian underpass. The nearest SamTrans bus stop is located 0.3 miles from the project, at the intersection of Airport Boulevard and Grand Avenue. The project would provide a clear walkway between the existing sidewalk on Dubuque Avenue and the main building entrance that would be



provided on the north side of the building. Continuous sidewalks are present between the proposed project and all the nearest bus stops.

- **TDM Measure 4 - Guaranteed Ride Home.** The purpose of an emergency ride home program is to guarantee that employees need not worry about being stranded at work without a car in the event of illness, family emergency, or unexpected overtime if they use transit, carpool/vanpool, biking/walking as their commute mode. By reassuring commuters who do not drive alone that they can have timely and paid transportation in the event of an emergency, this program removes one of the largest concerns expressed by most employees about using alternative modes of transportation.

Future tenant(s) should reimburse their employees who use alternative modes of transportation for taxi, Lyft, or Uber rides home in the event of an emergency. The transportation coordinator should administer the program and provide the reimbursement. Employees would need to provide an explanation of the emergency and the receipt from the taxi service or on-demand ride service for reimbursement. A limit on the number of rides that would be provided per employee per year would be reasonable.

If an employer implements the Caltrain Go Pass or SamTrans's Way2Go program as a means of subsidizing employees' transit expenses, that program includes an emergency ride home program as one of its benefits, and the employer would not need to reimburse transit users' separately for such rides.

- **TDM Measure 5 - Information Board/Kiosk.** TDM plans use to include a requirement for a kiosk or bulletin board to be created in the workplace for posting information related to alternative travel modes. However, few employees look at these kiosks after an initial period of interest. This TDM plan proposes to establish an "online kiosk" with similar information that an employee could access from their home, their desk at work, or anywhere else.

The website should include information about all the measures, services, and facilities discussed in this plan, including:

- A summary of SamTrans buses, BART and Caltrain services and links to further information about their routes and schedules.
- A local bikeways map and information about the bike lockers/secure bike storage areas on site.
- Information about ridematching services (e.g., 511.org, and Scoop) and the incentive programs available to carpools and vanpools.
- Information about peer-to-peer rideshare services such as Scoop and Waze Carpool, that utilize mobile apps to match commuters
- Information about the emergency ride home program and how to use it. Information about services such as Uber, Lyft, and other on-demand transportation services should also be included.
- A link to the many other resources available in the Bay Area, such as Dadnab, the 511 Carpool Calculator, the 511 Transit Trip Planner, real-time traffic conditions, etc.

The building developer should have responsibility for contracting with someone to initially create the website so that it is up and running as soon as tenants move in. If, however, the

building is occupied by a single tenant, responsibility for establishing the website could be shifted to that tenant. More specific information can be added later to reflect any programs specific to certain employers. The transportation coordinator should be responsible for maintaining and adding new information to the website (or providing it to the website designer) so that the “online kiosk” remains current and informative.

- **TDM Measure 6 - Passenger Loading Zone.** Passenger loading zones for carpool and vanpool drop-off are proposed along the main entry to the building located on the west portion of the north facade. This drop-off and pick-up area would provide greater convenience for employees who rideshare with people who work at other nearby work locations, as well as those who use on-demand ride services such as Lyft and Uber.
- **TDM Measure 7 - Pedestrian Connections.** The project would provide a clear walkway between the existing sidewalk on Dubuque Avenue and the main building entrance that would be provided on the north side of the building. From Dubuque Avenue, pedestrian connections exist to bus stops and downtown South San Francisco. Additionally, the project would coordinate with the Caltrain/Joint Powers Board (JPB) to provide pedestrian access between the project site and the Caltrain station in a permissible and accessible manner.
- **TDM Measure 8 - Promotional Programs.** The Transportation Coordinator should undertake additional marketing activities to encourage employees to try an alternative mode to get to work. Although some marketing, such as the online kiosk and distributing information welcome packets to new employees, should be conducted immediately, additional promotional activities might include email blasts of flyers, brochures or other materials on commute alternatives, ridesharing incentive programs, and transit benefits. SamTrans.com and 511.org can help provide some useful marketing materials.
- **TDM Measure 9 - Showers and Clothes Lockers.** The project would provide three showers and lockers each in the men’s and women’s restrooms on the first floor of the building. Having the option to shower and change clothes in the building encourages employees to bike and walk to work.
- **TDM Measure 10 - Shuttle Program.** Since the project is located adjacent to the Caltrain station, the project could use the shuttle services provided by commute.org which provides connections between the Caltrain, BART and Ferry stations.
- **TDM Measure 11 - Transportation Management Association (TMA).** The project should participate in Commute.org, an alliance of 17 cities and the county of San Mateo, which provides comprehensive and ongoing support for alternative commute programs in San Mateo County. By joining Commute.org, the Transportation Coordinator need not “re-invent the wheel” to develop an effective TDM program. All employers in San Mateo County can utilize the resources, incentive programs, and services provided by the Commute.org to promote commute alternatives. The website at [www.commute.org](http://www.commute.org) provides detailed information on their programs.
- **TDM Measure 12 - Long-Term Bicycle Parking.** Providing secure bicycle parking encourages bicycle commuting and increases the parking supply available to employees. According to City Municipal Code (section 20.330.008), the project would be required to provide long term bicycle parking at a ratio of 1 space for each 25 required parking spaces for any establishment with 25 or more employees. This calculates to 22 long-term bicycle

parking spaces, and the site plan shows that the project would provide 35 long-term bicycle parking spaces. Therefore, the project would provide 59% more than the required number of spaces.

- **TDM Measure 13 - Short-Term Bicycle Parking.** Short-term bicycle parking allows visitors to also bike to the site. The site plan shows that the project would provide 36 short-term bicycle parking spaces on site.
- **TDM Measure 14 – Free Parking for Carpools and Vanpools.** The TDM ordinance requires that 10% of all vehicle parking spaces should be reserved for carpools or vanpools with a minimum of one space. These spaces are to be in premium and convenient locations. The project would provide 35 parking spaces designated for use by carpools, vanpools, and clean air/electric vehicles, which equates to 10% of all vehicle parking spaces (35 out of 346).

## Additional TDM Measures

The City's municipal code lists 10 additional measures through which the minimum alternative mode use can be achieved. Although the project would meet the minimum alternative mode use because of its location (adjacent to the Caltrain station) and the implementation of all 14 required TDM measures, the project would implement the following additional measures in order to encourage employees to use an alternative mode of transportation and to decrease the demand for on-site parking.

- **Onsite Amenities.** The project site plan shows a café, a fitness room and outdoor seating on the first floor of the building. Providing an on-site cafeteria allows employees to avoid taking additional trips off-site on their lunch break, and convenient access to a gym means employees don't have to drive to a distant site to work out.
- **Reduced Parking.** According to the municipal code, reduced parking, consistent with projected trip reduction identified in the preliminary TDM plan, may be permitted subject to approval of the Planning Commission. TDM programs often reduce parking demand, and many parking reduction strategies help reduce vehicle trip generation. Based on the City's zoning code, the project would be required to provide 554 parking spaces. The project proposes to provide 346 on-site parking spaces, which is 37% fewer than the required number of parking spaces.
- **Commuter Benefits Options.** Bay Area employers with 50 or more full-time employees within the Bay Area Air Quality Management District (BAAQMD) boundaries (includes all of San Mateo County) are required to register and offer commuter benefits to their employees in order to comply with Air District Regulation 14, also known as the Bay Area Commuter Benefits Program. This program requires employers to provide at least one of the following commuter benefit options to all covered employees.
  - **Option 1 (Pre-tax commuter benefits)** - Pre-tax commuter benefits allow employees to exclude up to \$270 per month from their paycheck to pay for commute costs (transit or vanpool) on a pre-tax basis. Pre-tax commuter benefits can save employees up to 40% of their commute costs and save employers an average of 7.65% in payroll taxes. To start this program, employers are encouraged to select a

- third-party commuter benefits vendor (511.org/commuterbenefits.com) to implement the program.
- **Option 2 (Employer-paid benefit)** - The employer may offer employees a subsidy to offset the monthly cost of commuting via transit or by vanpool. An employer may also elect to provide a subsidy for bicycle commuting costs in addition to subsidies for transit and vanpool costs. Monthly or annual transit passes are good incentives for commutes that are convenient on public transit. Paying for employees' transit passes provides an even greater financial incentive for using transit than the pre-tax benefit measure. There are several ways for an employer to provide subsidies for their employees' transit expenses: a reimbursement program requiring monthly receipts, an online reimbursement program through Clipper Direct, Caltrain's Go Pass program, or SamTrans's Way2Go program. Since it is anticipated that many project employees would use Caltrain, the employer must reimburse all Caltrain parking expenses. This measure would provide additional financial incentive for employees to use public transportation and could be administered through the program that requires employees to present appropriate documentation of their parking permit expenses for reimbursement.
  - **Option 3 (Employer-provided transit)** – The employer may furnish at no cost, or low cost, to employees a vanpool or bus, or similar multi-passenger vehicle operated by or for the employer.
- **Compressed Work Week/Flextime/Telecommuting.** Flexible working schedules whereby employees work a 40-hour week in 4 days or 80 hours in 9 days are another way of reducing trips and VMT. Although it is not known what work schedules would be required or allowed by the future tenants of the development, the building infrastructure would support alternative work schedules.



## TDM Plan Checklist Summary

As required by the City of South San Francisco Municipal Code (Section 20.400.004.A), a checklist of the trip reduction measures for the proposed project is summarized in Table 2.

**Table 2**  
**TDM Plan Checklist Summary**

TDM Program	X = Included in the Proposed Project's TDM Plan
<b>Trip Reduction Measures from South San Francisco Municipal Code (Section 20.400.004)</b>	
1. Carpool and Vanpool Ridematching Services	X
2. Designated Employer Contact	X
3. Direct Route to Transit	X
4. Guaranteed Ride Home	X
5. Information Boards/Kiosks	X
6. Passenger Loading Zones	X
7. Pedestrian Connections	X
8. Promotional Programs	X
9. Showers/Clothes Lockers	X
10. Shuttle Program	X
11. Transportation Management Association (TMA)	X
12. Long-Term Bicycle Parking	X
13. Short-Term Bicycle Parking	X
14. Free Parking for Carpools and Vanpools	X
<b>Additional TDM Measures</b>	
1. Onsite Amenities (Café and Fitness Center)	X
2. Reduced Parking	X
3. Commuter Benefit Options	X
4. Compressed Work Week/Flextime/Telecommuting	X

## 4.

# C/CAG Transportation Demand Management

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All City/County Association of Governments (C/CAG) member jurisdictions will be subject to the updated TDM policy. This includes a new requirement that local jurisdictions notify C/CAG of any new development project under their purview that is estimated to generate at least 100 average daily trips. The C/CAG requires that all new non-residential developments that would generate over 100 average daily trips limit their impact on regional roadway facilities. This chapter describes Transportation Demand Management (TDM) strategies that are applicable to the proposed Research & Development project as scored by C/CAG. To accomplish this, C/CAG provides a list of potential TDM measures that developments may use to reduce their trip generation. The percent trip reduction for each TDM measure is quantified by C/CAG depending on a project's location relative to a high-quality transit station.

C/CAG categorizes new developments as small projects and large projects. Non-residential office, R&D, industrial, and institutional projects larger than 50,000 s.f. are considered to be large projects. Since the project is located within 0.5-mile of the South San Francisco Caltrain Station, the project would be considered a Transit Oriented Development (TOD) and would be required to reduce trip generation by a minimum of 25 percent for non-residential uses.

Table 3 provides a summary of the measures in the proposed 580 Dubuque Avenue R&D development TDM program for which the project can receive credit in accordance with the C/CAG TDM guidelines. The analysis only included TDM measures as discussed in Chapter 3. The table shows that the TDM measures proposed by the 580 Dubuque Avenue development would reduce trips taken by up to 45%. A summary of the measures provided as well as the rationale for applying them, is provided below.

- **Preferential Parking for Carpools.** Per City of South San Francisco Zoning Code (20.400.004), ten percent of vehicle spaces should be reserved for carpools or vanpools, with a minimum of one space required. Upon project completion, the project would designate 35 parking spaces out of 346 proposed parking spaces at desirable locations as carpool/vanpool parking spaces. This initiative will provide exposure of the carpool/vanpool program and provide an incentive for employees to try ridesharing. C/CAG estimates trip reduction for providing preferential parking for carpools to be a 1% trip reduction.

**Table 3**  
**Summary of C/CAG Trip Credits**

Category	Measure	Estimated Trip Reduction Percentage
<b>TDM Measures (Transit Oriented Development)</b>		
Parking Management for Ridesharing	Free/Preferential Parking for Carpools	1.0%
TDM Management and Admin	TDM Coordinator/Contact Person	0.5%
	Actively Participate in Commute.org, or Transportation Management Association (TMA) Equivalent <sup>1</sup>	6.5%
Shuttles, Transit, and Ridesharing	Carpool or Vanpool Program	2.0%
	Transit or Ridesharing Passes/Subsidies	10.0%
	Pre-tax Transportation Benefits	1.0%
Active Transportation	Secure Bicycle Storage	1.0%
	Showers, Lockers, and Changing Rooms for Cyclists	2.0%
Site Design Initiatives	Design Streets to Encourage Bike/Pedestrian Access	1.0%
<b>TDM Measures Total (Transit Oriented Development)</b>		<b>25%</b>
<b>Additional Measures (Transit Oriented Development)</b>		
Employee Programs	Flex Time, Compressed Work Week, Telecommute	5.0%
Transit, Shuttles & Ridesharing	Transportation Network Company (TNC) Loading Zone	2.0%
	Visual Improvements (well lighted path to the Caltrain station)	2.0%
Active Transportation	Gap Closure	7.0%
	Bike Repair Station	0.5%
Site Design Initiatives	Pedestrian Oriented Uses & Amenities on Ground Floor	3.0%
<b>Additional Measures Total (Transit Oriented Development)</b>		<b>20%</b>
<b>Required &amp; Additional Measures Total</b>		<b>45%</b>
<b>Notes:</b>		
<sup>1</sup> Actively Participate in Commute.org or TMA includes certified participation in Commute.org, or equivalent, commute assistance and ride-matching, guaranteed ride home, and orientation, education, promotional programs, and/or materials.		

- **TDM Marketing and Administration.** The 580 Dubuque Avenue development will designate a transportation coordinator to market and administrate all TDM programs. One of the transportation coordinator's tasks is to set up and maintain an online website containing all relevant TDM programs and information. C/CAG estimates trip reduction for providing a TDM coordinator to be a 0.5% trip reduction.
- **Actively Participate in Commute.org or Transportation Management Association (TMA).** The project is required to join the commute.org (formerly the Peninsula Traffic Congestion Relief Alliance (also known as simply "The Alliance"), which is a joint powers agency (JPA) located in San Mateo County. The JPA is comprised of 17 cities and towns as well as the County of San Mateo to provide general TDM services. As a member of the TMA, the project would have the option to provide many of the TDM services to its employees and employees of its tenants. Actively participating in Commute.org or TMA includes certified participation in Commute.org, or equivalent, commute assistance and ride-matching, guaranteed ride home, and orientation, education, promotional programs, and/or materials. C/CAG estimates trip reduction for participating in Commute.org or TMA to be a 6.5% trip reduction.
- **Carpool or Vanpool Program.** The Transportation Coordinator would be responsible for matching potential carpoolers and vanpoolers by administering a carpool/vanpool matching application. The application would match employees who work onsite who may be able to carpool or vanpool together. C/CAG estimates trip reduction for providing a carpool program to be a 2% trip reduction.
- **Subsidized Transit Passes.** According to the South San Francisco General Plan Update (November 2019), which includes *2013-2017 American Community Survey 5-Year estimates*, approximately 14% of the existing employees in South San Francisco take public transit to commute to work. As the project is located adjacent to the Caltrain station, it is expected that a higher number of employees will use public transportation. By providing a transit pass or subsidy, it would further incentivize employees to utilize transit to commute to work. For employment uses, C/CAG estimates providing transit passes or subsidies to be a 10% trip reduction.
- **Pre-Tax Transportation Benefits.** Pre-tax commuter benefits allow employees to exclude up to \$270 per month from their paycheck to pay for commute costs (transit or vanpool) on a pre-tax basis. Pre-tax commuter benefits can save employees up to 40% of their commute costs and save employers an average of 7.65% in payroll taxes. To start this program, employers are encouraged to select a third-party commuter benefits vendor ([511.org/commuterbenefits.com](http://511.org/commuterbenefits.com)) to implement the program. C/CAG estimates pre-tax transportation benefits to be a 1% trip reduction.
- **Secure Bicycle Storage.** The proposed project would provide a total of 71 on-site bicycle parking spaces (36 bike racks and 35 secured bike lockers). For employment uses, C/CAG estimates secure bicycle storage to be a 1% trip reduction.
- **Showers and Changing Rooms.** The project proposes shower/changing rooms and lockers on the ground floor for office employees. These showers/changing rooms would encourage employees to bike or walk to work early and prepare for the day without hygienic concern. For employment uses, C/CAG estimates showers/changing rooms to be a 2% trip reduction.



- **Pedestrian and Bike Improvements.** The project proposed improvements include enhanced connection to Caltrain, sidewalks, landscaping, and lighting along the access road that runs parallel to Dubuque Avenue. C/CAG estimates projects which make road and street improvements to provide more pedestrian and bike friendly to be a 1% trip reduction.
- **Flex Time.** Based on a review of TDM Programs and employee travel surveys for comparable sites in South San Francisco, the TDM Program assumes 2.5% of employees would be working with a staggered work schedule and/or a telecommuting program that reduces the number of employees required to show up during the peak commute hour. For employment uses, C/CAG estimates flex time or compressed workweek schedules to be a 5% trip reduction.
- **Land Dedication for Transit.** The project would provide a loading zone for Transportation Network Company (TNC) along its northern frontage and a well-lighted pedestrian connection to the South San Francisco Caltrain Station. C/CAG estimates that each improvement is worth 1% trip reduction. Since the project would provide 2 improvements, a total of 2% trip reduction was assumed.
- **Gap Closure.** The project would create a pedestrian path along the west side of the building, which would provide access from Dubuque Avenue to the South San Francisco Caltrain Station. C/CAG estimates gap closure to be a 7% trip reduction.
- **Bike Repair Station.** The project would offer a bicycle repair station or toolkit, within the bicycle storage room, to encourage bicycling and support employees who cycle.
- **On-Site Amenities on the Ground Floor.** Providing on-site amenities will make it easier for workers to leave their automobiles at home. The proposed project will include a café and exercise facility/yoga center for employee use. For employment uses, C/CAG estimates on-site amenities/accommodations that encourage people to stay on site during the workday to be a 3% trip reduction.

The project will comply with the following requirement of C/CAG for large non-residential projects

- Monitor and report for 20 years post-occupancy,
- Complete a TDM self-certification status form biennially for 18 years post occupancy
- Complete a travel survey of employees/occupants biennially, beginning in the third-year post-occupancy for a period of 6 years and then triennially for the remaining 12 years.

## 5.

# TDM Implementation and Monitoring

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The purpose of the TDM Plan is to reduce vehicle trips, parking demand, traffic congestion, and vehicle emissions generated by the proposed project. Per Section 20.400.008 of the City of South San Francisco municipal code, regular monitoring will be necessary to ensure that the implemented TDM measures are effective and achieve the required 40 percent trip reduction. The program should be evaluated annually to assess the actual level of trip reduction achieved at the site. It should also be noted that a Final TDM Plan will be prepared during the building permit process and will be adjusted for individual tenant programs.

### Implementation

The project applicant will be responsible for ensuring that the trip reduction measures are implemented. This will require that the recommended trip reduction measures be incorporated into the project. The project applicant should designate a TDM coordinator who will oversee the implementation and maintain the TDM program. If the contact person changes for any other reason, the city should be notified of the name and phone number of the designated TDM coordinator.

### Monitoring and Enforcement

According to the South San Francisco Municipal Code, all projects are subject to an annual survey and projects seeking an FAR bonus are also subject to a triennial report and penalties for noncompliance.

#### Annual Survey

An annual survey is required for all projects subject to the requirements of *Chapter 20.400 Transportation Demand Management* of the South San Francisco Municipal Code. Because the TDM Plan is performance-based, an annual commute program evaluation will be conducted over a week-long period (five-day, weekday commute survey) by an independent consultant, which will allow the tenant and the city to assess the effectiveness of the TDM program. The commute survey will be critical to the monitoring process to evaluate and ensure the success of the TDM program. Employees who do not participate in the commute survey will be counted as drive-alone or SOV commuters by default. If the 40% alternative transportation mode-use rate is not achieved, the report will explain how and why the goal was not reached and specify additional measures that will be implemented in the coming year to improve the mode-use rate.

## Triennial Report

A triennial report is required for all projects that receive an FAR bonus. The purpose of the triennial report is to document the effectiveness of the final trip reduction plan in achieving the required alternative mode-use and mitigation of net new peak-hour vehicle trips. Driveway hoses will be placed during a one-week period to track all trips and peak-hour trips. The five-day peak-hour average will be calculated. Peak period includes 6:00 a.m. to 10:00 a.m. and 3:00 p.m. to 7:00 p.m. Peak hour is defined as the hour when the heaviest daily traffic volume occurs and generally occurs during morning and afternoon commute times. Traffic counts will be obtained during AM and PM peak periods, and the volume from the heaviest hour of AM or PM traffic will be used to define peak hours for those periods. The highest number of net trips resulting from AM or PM peak hour will be used. The triennial report will be prepared by an independent consultant, retained by City and paid for by the Project.

Annual reports and triennial reports will be submitted to the city to monitor and document the effectiveness of the TDM plan in achieving the goal of 40% percent alternative mode use. If after the initial triennial report, the subsequent triennial report indicates that, in spite of the changes in the final trip reduction plan, the required alternative mode use is still not being achieved, or if an applicant fails to submit a triennial report at the times described above, the City may assess applicant a penalty. The penalty shall be established by City Council resolution on the basis of project size and actual percentage alternative mode use as compared to the percent alternative mode use established in the trip reduction plan. In determining whether a financial penalty is appropriate, the City may consider whether the applicant has made a good faith effort to achieve the required alternative mode use. If a penalty is imposed, such penalty sums shall be used by the City toward the implementation of the final trip reduction plan.