TDM Plan
October 2022

222 E 4th Avenue TDM Plan

Image source: KSH Architects

City of San Mateo
24174201

steer

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Contents

Figures

Tables

1 Introduction

A Transportation Demand Management (TDM) Plan is a long-term management strategy for an organization or site that seeks to deliver sustainable transportation objectives. It is articulated in a document that is regularly reviewed by the implementing organization. It involves identifying an appropriate package of measures aimed at promoting sustainable travel, with an emphasis on reducing reliance on single occupancy car journeys and vehicle miles traveled (VMT). It can also assist in meeting other objectives such as increasing accessibility as well as reducing congestion, greenhouse gas and noise pollution.

This TDM Plan was produced on behalf of the City of San Mateo for the 222 E. 4th Ave. project site, which is a planned mixed-used property owned by Lane Partners and developed by KSH Architects.

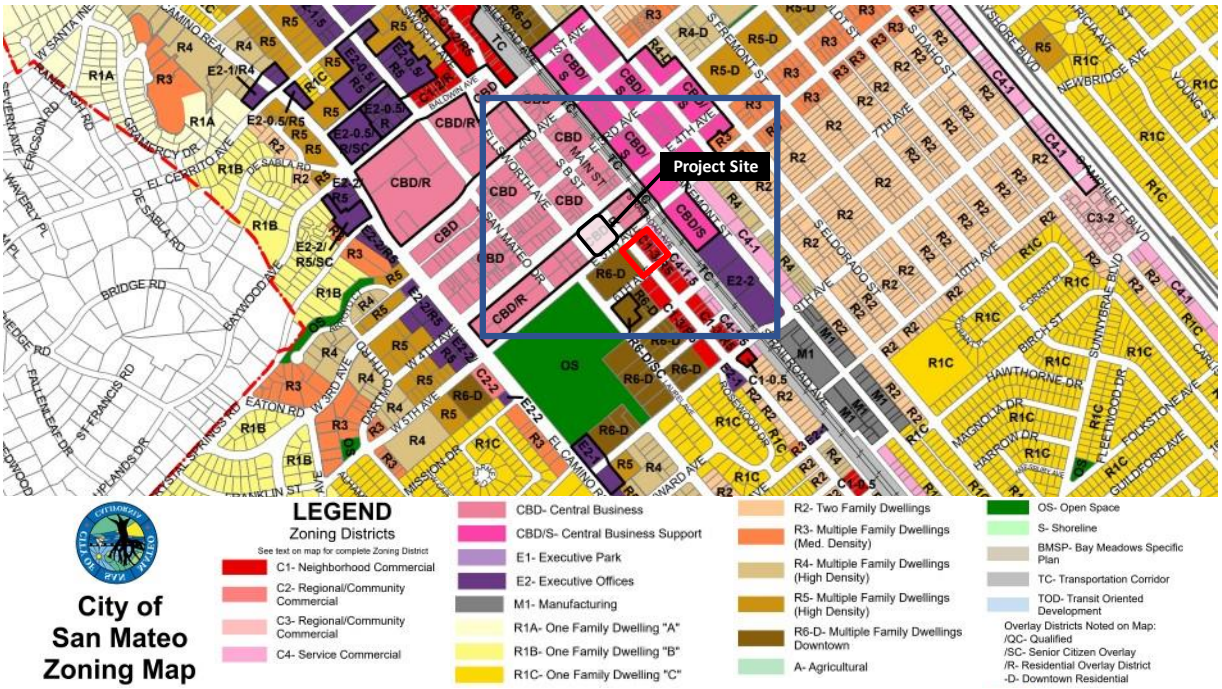
Project Description

The project site is a city block bounded by E. 4th Avenue to the northwest, S. B Street to the northeast, E. 5th Avenue to the southeast, and S. Ellsworth Avenue to the southwest. The project site is currently a grocery store spanning a whole city block. The project proposes demolishing the existing building at 222 E. 4th Avenue to construct a new 5-story mixed use building. The project includes:

1. 8 one-bedroom and 2 studio units (total of 10 units)
2. 104,554 sq. ft of office space
3. 17,658 sq. ft of retail space
4. 221 physical parking spaces, in a 2-level subterranean garage and 12,392 sq. ft of covered parking area.
5. 1,455 sq. ft. open space
6. 1,515 sq. ft. common usable open space.

The project site is zoned as CBD/R – Central Business District with Residential Mixed-Use Overlay. As shown in Figure 1, the lots to the north and south are also zoned as CBD/R. The lots towards the northwest are zoned as CBD – Central Business. The lot to the southwest is zoned as R5 – Multiple Family Dwellings (High Density). There is a large area zoned as Open Space to the southwest of the project site.

Figure 1 Zoning Map



Source: City of San Mateo Planning

The project site zoning allows for a FAR of 3.0; due to a state density bonus waiver the project will have a FAR of 3.1. The project site has an allowable height of 55'-0"; the developer has proposed a height of 74'-3" when measured to top of plate.

Table 1 Proposed Project Attributes

	Current	Proposed
Description	Two story building – grocery store	5 story multi-use building with residential, office, and retail space
Square Footage	49,478 sq. ft building	152,533 sq. ft mixed-use building
Zoning Designation	CBD/R	CBD/R

Demographic Travel Trends

The travel trends described in this section are based on information from the Census Bureau for the project's census tract (6063).

Demographics Insights

The project site is located within Census Tract 6063. The Census Tract has a population of 4,110. The information outlined in Table 2 and **Error! Reference source not found.** below provides the general residents' demographic profiles and travel behavior.

Table 2 Census Tract 6063 Demographics Characteristics

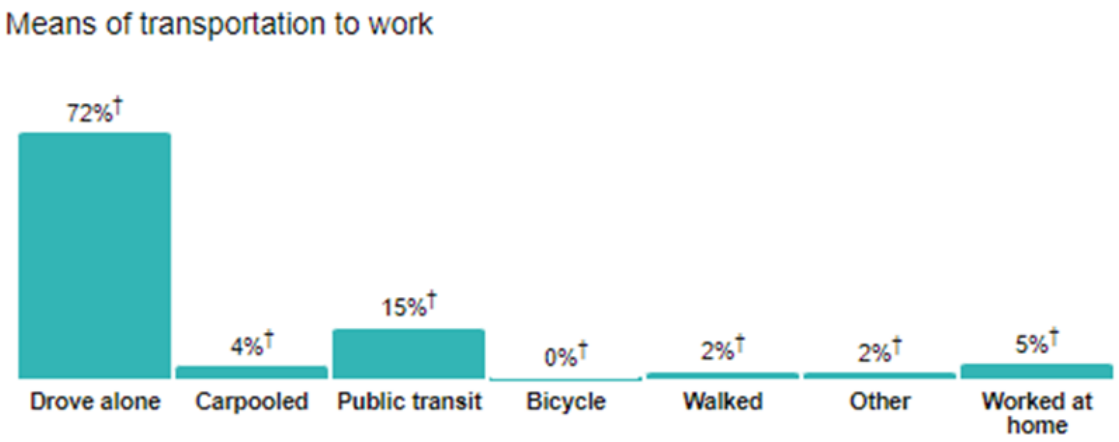
Category	Characteristics	Amount
Age	Under 18	17%
	18 to 64	57%
	Over 65	26%
Education	Bachelor's degree or higher	48.5%
Households	Renter-Occupied Housing Units	49%
	Number of households	1,805
	Persons per household	2.2
	Median household income	$92,007
Race	White alone	62%
	Asian alone	29%
	Hispanic or Latino	24%
	Black or African American	3%
	Mixed	4%
Languages spoken	Speaks English only	53%
	Speaks a language other than English: Spanish	19%
	Speaks a language other than English: Indo-European Languages	7%
	Speaks a language other than English: Asian and Pacific Island Languages	18%

Source: ACS 2019 5-year, Census.gov

Commute Outlook

Census Reporter data from 2019 indicates that majority (72%) of people that live within Census Tract 6063 drive alone to work. The data also reports that 21% of the population use sustainable modes of transportation such as public transit, carpooling and walking to commute to work, while 5% of the population work from home. Of those that commute to work, the mean travel time is 27.6 minutes. Of note, commuting patterns have been impacted by the COVID-19 pandemic and may be in flux for some time as businesses gradually adjust their travel patterns. The post-pandemic reality might result in new commuting patterns as more organizations implement hybrid and flexible working patterns.

Figure 2 Commute mode split for Census Tract 6063



Source: ACS 2019 5-year, Census.gov (Universe: workers 16 and older)

Where people work

According to the ACS and as demonstrated in Table 3, residents in Census Tract 6063 commute to a variety of locations, with a majority commuting out of San Mateo. The City and County of San Francisco is the most common destination for commuters (20.6%) followed by the City of San Mateo (15.4%).

Table 3 Distribution of job locations for residents of Census Tract 6063

Job Location	Count	Share
San Francisco, CA	407	20.6%
San Mateo, CA	305	15.4%
Redwood City, CA	134	6.8%
Palo Alto, CA	115	5.8%
South San Francisco, CA	83	4.2%
Burlingame, CA	69	3.5%
Foster City, CA	62	3.1%
San Jose, CA	53	2.7%
San Carlos, CA	50	2.5%
Menlo Park, CA	47	2.4%
All other locations	650	32.9%
All Places (Cities, CDPs, etc.)	**1,975**	**100%**

Source: ACS 2019 5-year, Census.gov (Universe: workers 16 and older)

Inflow/Outflow analysis of the census tract, as shown in Figure 3, depicts those 1,862 individuals that commute out of the area and 8,091 people commute into the area for work on a daily basis. The high inflow number signifies that the region is dominated by commercial and mixed-use land-

use types, with key employers including medical centers and downtown retail and restaurant establishments. A total of 113 individuals both live and work inside the census tract.

Figure 3 Inflow and Outflow patterns

Source: U.S Census Bureau, Center for Economic Studies

2 Site Assessment

A site assessment was conducted as part of the TDM Plan development process. The site assessment included a description of the site's geography and road network, pedestrian and bicycle infrastructure, transit services, nearby attractions, and existing TDM services. For the complete assessment, please refer to the 222 E 4th Avenue Background Assessment memo in Exhibit B. Key findings from the site assessment are as follows:

Site Geography and Road Network

The project site is located on a city block which currently consists of Draeger's Market, a grocery store. The current structure will be demolished. The block is situated between E. 5th Ave. to the south, E. 4th Ave. to the north, S. Ellsworth Avenue to the West, and S. B Street to the east.

The site is adjacent to E. 4th Avenue, a city-maintained street that feeds directly into two highways: U.S. Highway 101 to the east and the California State Route 82 (El Camino Real) to the west.

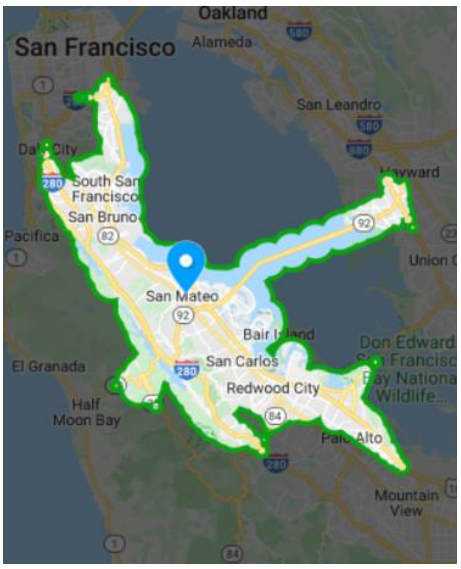
- U.S. Highway 101 is a major federal highway that runs north-south along the entire west coast. It connects several major cities including San Francisco, Los Angeles, and San Jose
- Route 82 connects to Interstate-880 (I-880) in San Jose and Interstate-280 (I-280) in San Francisco

Both the U.S. Highway 101 and Route 82 provide easy access to California State Route 92, which runs east-west and runs over the San Mateo Bridge. This bridge bypasses the San Francisco Bay to connect San Mateo to the East Bay.

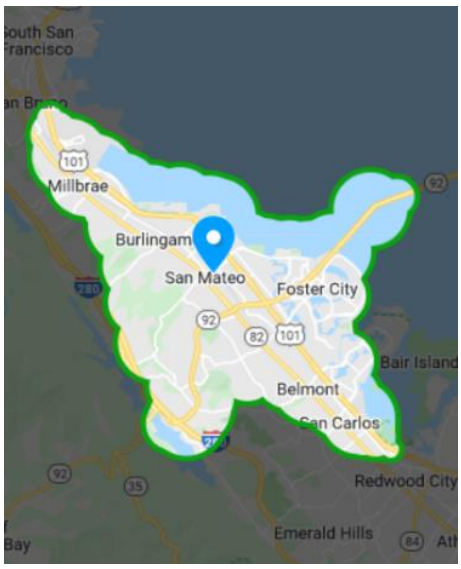
Figure 4 Street Network

Source: City of San Mateo Public Works

Figure 5 Car-sheds from 222 E. 4th Avenue



Free Flow:
20-minute car-shed from 222 E. 4th Avenue



Rush hour:
20-minute car-shed from 222 E. 4th Avenue

Source: Walkscore.com

The intersection at B Street and 4th Avenue was included in the San Mateo Existing Conditions Circulation Report[1]. As recorded in October 2018, the intersection maintains a "B" level of service (LOS) in the AM and PM Peak hours.

Table 4. Levels of Service for 222 E. 4th Avenue

	Signalized Intersection Peak Hour Levels of Service			
	Year 2018 Conditions			
	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
B Street and 4th Avenue	11.0	B	11.3	B

Source: San Mateo Existing Conditions Circulation Report (2018)

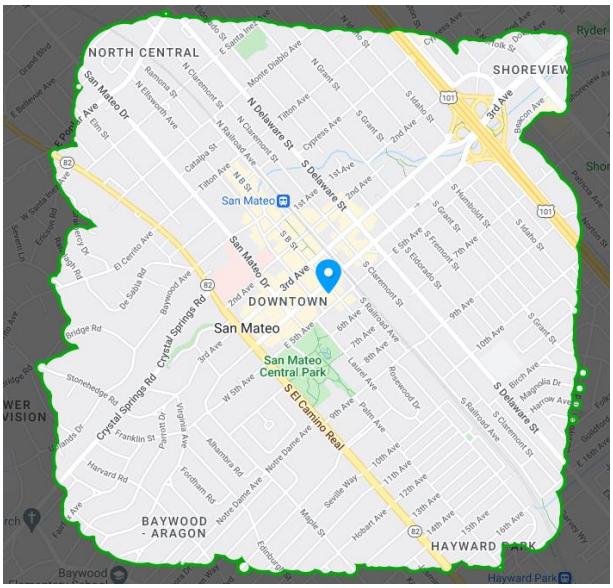
Pedestrian and Bicycle Infrastructure

The site's topography and road access, as well as proximity to other nearby services make this area an appealing pedestrian and cyclist environment. The walkability website Walkscore.com gives the site a 99 out of 100 for walking, "Walker's Paradise – Daily errands do not require a car." The walk shed for the project area is seen in Figure 6.

San Mateo Existing Conditions Report - Circulation

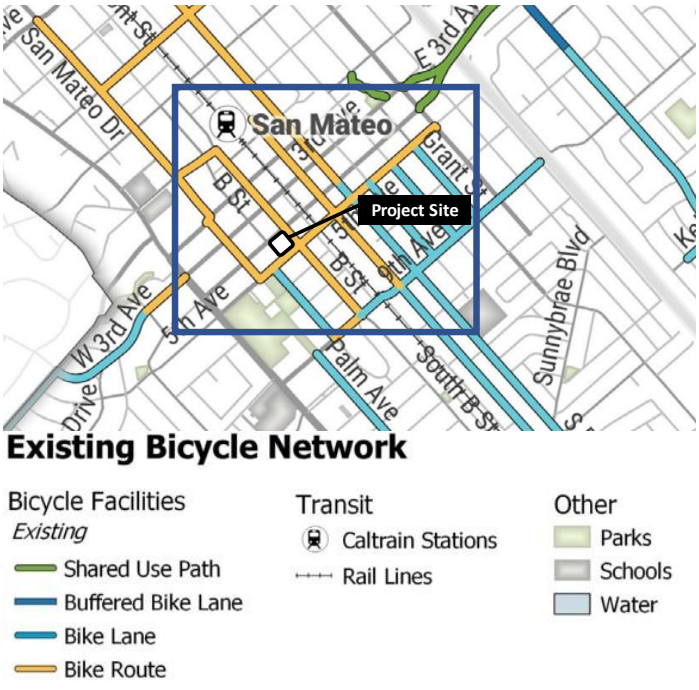
Currently B Street and 5th Avenue both serve as bike routes to the project site. Both bike routes are Class III. The bike route on 5th Avenue connects to the bicycle network to the north and south of the project site. As per recent San Mateo City Council direction, bike facilities along B Street from 5th Avenue to Baldwin Avenue have been removed from the 2020 Bicycle Master Plan.

Figure 6 20-minute Pedestrian-shed for 222 E. 4th Avenue



Source: Walkscore.com

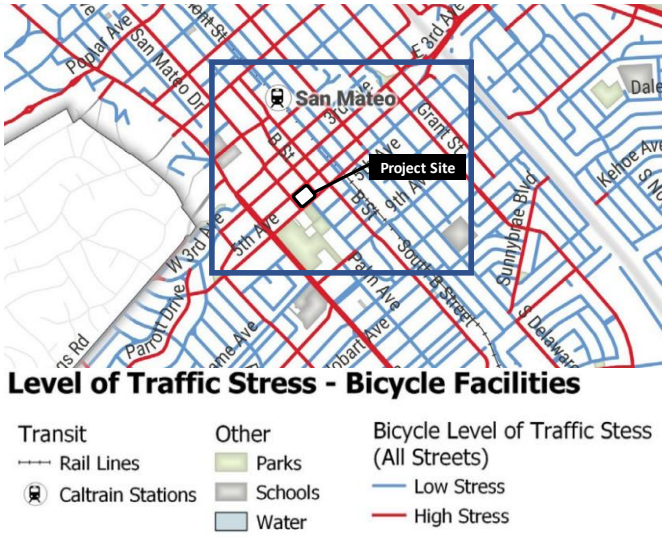
Figure 7 Existing Bicycle Network



Source: San Mateo Bicycle Master Plan

All the streets surrounding the project site are characterized as “High Stress” streets by the April 2020 San Mateo Bicycle Master Plan due to their traffic volumes or lack of cycling facilities. This makes the streets more suited for experienced cyclists. The project site is in a high bicycle connectivity area.

Figure 8 Cycling Level of Stress



Source: San Mateo Bicycle Master Plan

For nearby bicycle amenities, BikeLink operates multiple on-demand bike lockers located at the nearby San Mateo Caltrain Station. BikeLink allows cyclists to securely store their bike in secure lockers using a stored-value card that can be purchased online or at nearby vendors. There are 24 lockers at the San Mateo Caltrain Station. Additionally, there are two free-to-use public bike repair stations are located less than 0.5-mile of the project site. These stations are located at the San Mateo Public Library and the San Mateo Caltrain Station.

Planned Bicycle Projects

The 2020 Bicycle Master Plan was adopted by the San Mateo City Council on April 6, 2020 and serves as a blueprint for expanding and improving the San Mateo bicycle and mobility network in the coming years. The Plan includes two project relevant to the project site:

- 3rd Avenue has proposed improvements to build a separated bike lane. This is a high priority project.
- Bicycle facilities to continue along 5th Avenue, including a Class II bicycle lane from Virginia Avenue to El Camino Real. This is the 16th highest priority project in the 2020 Bicycle Master Plan.

Transit Services

The project site is 0.3 miles from the Caltrain station and is served by two San Mateo County Transit District (SamTrans) routes.

Caltrain

Caltrain connects the project site to San Francisco to the north as well as to San Jose and Gilroy to the south. The station is 0.3-miles, 6 minutes walking, from the site and can be accessed by bike, walk, transit, and car.

Table 5. Caltrain Service

Category	San Mateo Station
Frequency	Approx. 30 minutes
Walking distance to station	0.3 miles (6 minutes)
Access	Park and ride lot, San Mateo BikeLink
Cost	$3.20 - $10+ depending on distance

SamTrans

There are two bus routes with stops adjacent to the project site. The bus stop closest to the project site can be accessed via bike and walk. Additionally, there are other bus stops that are less than a 5 minute walking distance from the site for routes that have higher frequency. Each SamTrans bus is equipped with bike racks that hold up to three bikes. Trips cost $2.25 in cash or via a mobile app, or $2.05 if a Clipper card is being used.

Table 6. SamTrans Service

SamTrans Route #	Hours of Operation	Frequency	Closest Stop	Distance to Stop	Route Details
59	School day service	1 AM bus, 4 PM buses	E. 4th Avenue & S. Ellsworth Avenue	203 ft.	Connects to Borel School
295	6 am – 7 pm	Every 2 hours	E. 4th Avenue & S. Ellsworth Avenue	203 ft.	Connects to Caltrain station
55	School day service	7AM bus, 1 PM bus, 3 PM bus	El Camino Real & E. 5th Ave	1300 ft.	Connects to Borel Middle School
397	Afternoon Service (1 pm – 3 pm)	Every hour	El Camino Real & E. 5th Ave	1300 ft.	Connects San Francisco and Palo Alto Transit Ctr
ECR	24 hours service	Every 15 mins	El Camino Real & E. 5th Ave	1300 ft.	Connects Daly City BART and Palo Alto Transit Ctr
250	6 am – 11 pm	Every 30 mins	S San Mateo Dr & E. 4th Ave	690 ft.	Connects to College of San Mateo

Nearby Attractions

Seven shopping center/grocery store within one mile walk that provide access to a multitude of retail outlets, eateries, grocery stores, dance theatre, etc.
Four childcare centers within a mile walking distance.

Four parks within one-mile radius.
Two universities within a two-mile radius.
Twenty schools within a two-miles radius.

Available TDM Services

Commute.org Incentives

Commmute.org is the San Mateo County Transportation Demand Management Agency. Their resources are available to all residents and employees within San Mateo County. The residents and employees of the project site will have access to the TDM resources provide for commutes within the County and in the surrounding areas. They provide the following services:

- **Try Transit Incentives:** Commute.org provides a free "Try Transit" program that allows individuals to request free tickets for the transit option that works best for them.
- **Carpool Incentives:** Commuters who use Waze carpool or Scoop are eligible to earn gift cards worth up to $100.
- **Vanpool Incentives:** Drivers of a new vanpool can earn a $500 reward, and vanpool riders can be reimbursed $100/month of their costs for up to three months.
- **Bike Education:** Free bike safety workshops and marketing materials on biking are available to residents and commuters. These workshops are scheduled upon request and are available to employers and other development sites, including residential properties within San Mateo County.
- **Bike Incentives:** Commute.org currently provides commuters who live or work in San Mateo County with incentives worth between $25 to $200 for biking to work. To participate in the program, bike commuters must track their work commutes using the Strava app. The rides are then recorded in the STAR platform, Commute.org's incentive delivery platform, where commuters can access their incentives.

3 Project TDM Measures

This chapter outlines the TDM strategies identified for the 222 E. 4th Avenue site. The strategies in this section are effective and appropriate based on the project's size, location, and land use. The narrative below provides guidelines for implementation, cost estimates, expected timelines, and indicates the anticipated responsible party for each recommended measure. It is understood that the property management team will be the 'responsible party' for most TDM measures outlined below.

Each strategy's description also estimates the number of vehicle miles traveled and percentage of trips expected to be reduced through its implementation. It is important to note that many of the TDM strategies in this section are scalable and can easily be expanded by increasing the number of resources allocated.

The trip generation numbers from the traffic impact assessment consider visitor trips to the supermarket in addition to employees and residents at site. However, the project TDM measures are geared primarily to residents and employees as these audiences are more likely to utilize TDM measures to reduce trip. Given this, the percentage of daily vehicle trips reduced by each strategy has been calculated considering both potential audiences.

- **Scenario 1**: Considering a total of 2,904 daily trips which includes visitor trips to the supermarket, in addition to employee and resident trips.
- **Scenario 2:** Considering a total of 1,083 daily trips attributed to the office and housing uses only, which includes an estimation of 70 daily trips for 35 retail employees. ITE estimates about 2 employees per 1,000 sq.ft. for a supermarket (ITE 850). The project is expected to have 17,658 sq. ft. of retail space.

Table 7 Proposed Project Net Trip Generation Calculations (Scenario 1 & 2)

Land Use	Size	Weekday Daily Trips (Scenario 1)	Weekday Daily Trips (Scenario 2)
Proposed Project			
Retail (Supermarket)	17.6 KSF	1,891	70
Office Space	104.7 KSF	1,208	1,208
Affordable Housing	10 DU	38	38
Internal Capture		-233	-233
Pass-by reduction (24% PM only)		0	0
Total Proposed Project Trips		***2,904***	***1,083***

Transportation Management Association (TMA) Membership

The Sustainable Streets Plan recommends new developments within the Downtown Area Plan boundaries to be a part of a future Transportation Management Association (TMA). Membership with the TMA does not have a direct impact on the reduction of trips and VMT reduction. It is, however, a platform to show how developments will meet their TDM requirements and market TDM services and programs. The TMA would serve as a coordinating body to developments within the Rail Corridor and the Downtown Area Plan boundaries.

Once a TMA is formed, the development in the future will be required to be a TMA member.

Estimated timeframe	Annual
Estimated cost	Will be based on membership rate
Responsible party	Property Management
Estimated daily VMT reduced	0
Percent of daily vehicle trips reduced (Scenario 1)	0%
Percent of daily vehicle trips reduced (Scenario 2)	0%

TDM Coordinator

An on-site TDM coordinator would act as a liaison between the developer, City, employees, and the residents. The TDM coordinator would help develop, implement, and report on the various TDM strategies. This person would be responsible for coordinating and marketing the selected TDM strategies as well as maintaining working relationships with the City and nearby developments.

Implementation Guidelines:

Assign the role of TDM Coordinator to an individual on the property management team to plan and implement the TDM program. Allocate at least 5 hours per month for the TDM Coordinator to spend on the following activities:

- **Annual Monitoring:** Survey the residents and employees and compile a monitoring report for submission to the City of San Mateo annually.
- **Commute Assistance:** Provide route planning and transit itineraries for employees and residents who wish to explore their transportation options.
- **TDM Program Coordination and Outreach:** Organize and promote sustainable travel options through building communications such as emails, bulletin boards, and social media. Specific tasks include:
  - Organize and promote the trip reduction and air quality strategies detailed in the following sections.
  - Organize and promote campaigns and challenges that encourage trip reduction
  - Promote the sustainable transportation options available to the residents and employees.

Estimated timeframe	Ongoing
Estimated cost	$2,000 per year
Responsible party	Property Management team
Estimated daily VMT reduced	37 to 73
Percent of daily vehicle trips reduced (Scenario 1)	Spending 5 hours per month organizing TDM programs will lead to a 0.10% to 0.21% decrease in vehicle trips (can be reduced further with an increased commitment in time and TDM strategies)
Percent of daily vehicle trips reduced (Scenario 2)	Spending 5 hours per month organizing TDM programs will lead to a 0.28% to 0.55% decrease in vehicle trips (can be reduced further with an increased commitment in time and TDM strategies)

Institutionalizing TDM

It is important that the TDM program be implemented as the site becomes occupied and when office, retail, and apartment units eventually begin to turn over. It must also be updated as needs change and transportation options and technology evolve. Therefore, the TDM Plan should become 'institutionalized' as part of the property's leasing process to ensure the program remains in place and new residents and employees are aware of its existence.

Implementation Guidelines:

Describe the TDM infrastructure, amenities, and programs available to employers and residents and how they will be made available to the tenants in the lease documents.

Estimated timeframe	During the drafting of lease language and ongoing
Estimated cost	$0 – it is likely that this cost will already be undertaken by the property management in order to establish the details of the lease agreement, so including TDM in this effort will likely come at no additional cost.
Responsible party	Property Management
Estimated daily VMT reduced	0
Percent of daily vehicle trips reduced (Scenario 1)	0%
Percent of daily vehicle trips reduced (Scenario 2)	0%

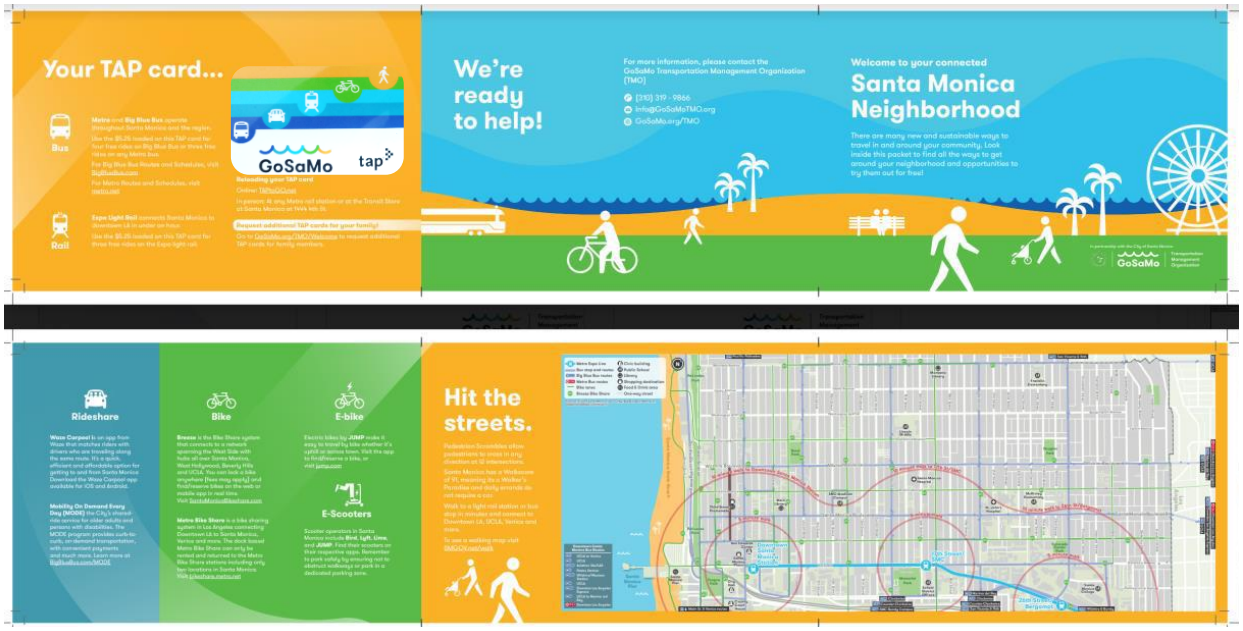
New Resident and Employee Packets

Individuals are most likely to make a change in their transportation behavior alongside other life changes. This means that providing new residents and employees with a packet that offers them information about all their transportation options can increase the likelihood for them to choose options other than driving alone.

New residents and employees would be provided with welcome packets that include a Clipper Card with stored value, customized transportation information about nearby transit routes, bus stops, bike maps, amenities, and routes, and other TDM initiatives undertaken by the property. The welcome packets should also include the contact information of the property's TDM

Coordinator. Figure 9 offers an example of a welcome packet distributed to new residents in Santa Monica, CA.

Figure 9 A New Resident Packet distributed in Santa Monica



Implementation Guidelines:

Design a New Resident and Employee Packet for the property that provides information on all transportation modes available as well as services that may make choosing sustainable travel easier. The TDM Coordinator can work directly with Commute.org, who can assist the property in purchasing Clipper Cards and provide supportive materials, commuter incentives and advice. The packet should include:

- A Clipper Card with stored value ($10 to $20 would be ideal)
- A map depicting a 10- and 20-minute walk and bicycle radius
- Information about the transit options available (SamTrans, Caltrain, and BART) and how to connect to them, including Park and Ride options
- Information about all the transportation related amenities offered by the property
- Information about Commute.org services and resources
- Information about Guaranteed Ride Home and how to register
- Information about bike routes and amenities in the City of San Mateo Parking and Transportation Planning webpage (https://www.cityofsanmateo.org/2125/Parking-Transportation)

Estimated timeframe	Pre-occupancy, ongoing
Estimated cost	$3,000 to develop packet, then up to $3 per packet to print and distribute Approximately $4,000 total (cost of transit subsidies included in that strategy description)

Responsible party	Owner or consultant to develop; Property Management team to maintain and distribute long term
Estimated daily VMT reduced	441 to 490
Percent of daily vehicle trips reduced (Scenario 1)	1.38% to 1.55%
Percent of daily vehicle trips reduced (Scenario 2)	3.69% to 4.16%

Multimodal Wayfinding Signage

Figure 10 Multimodal wayfinding window decals used in Santa Monica

The developer would provide multimodal wayfinding signage at entry and exit points of the property. Wayfinding can help people visualize how close sustainable travel options are and in which direction, as well as familiarize them with nearby modes. Examples of wayfinding window decals used in the City of Santa Monica are shown in Figure 10.

Implementation Guidelines:

Using consistent and legible design guidelines, create and post a network of pedestrian-scale signage at key entry and exit points of the property. The signs should point users to key destinations and give them estimates for how far away they are by walking and/or biking. For example -

- 6 min walk to Downtown San Mateo Caltrain Station
- 1 min walk to E. 4th Avenue & S. Ellsworth Avenue
- 5 min walk to El Camino Real & E. 5th Ave

Be sure to evaluate the signage regularly to take into consideration any infrastructural or service changes that may impact options.

Estimated timeframe	Pre-occupancy
Estimated cost	Under $500
Responsible party	Property Management
Estimated daily VMT reduced	0 to 1
Percent of daily vehicle trips reduced (Scenario 1)	0%
Percent of daily vehicle trips reduced (Scenario 2)	0%

TDM Communications

In order to encourage individuals to choose sustainable travel options, it is critical to provide them with the information needed to do so. Having a communications plan that outlines what information to share and how would set clear expectations for the TDM Coordinator.

Communicating Transportation Information:

- **Website -** Having all transportation-related information and resources available in one virtual location makes it easy and convenient for residents and employees to learn about their travel options. The webpage should provide information about relevant special offers and programs that are offered from outside agencies (such as the Peninsula Clean Energy e-bike subsidy while there is funding), nearby transit routes and schedules, bike and pedestrian paths, services offered by Commute.org and other amenities. This is especially helpful for residents new to the neighborhood or employees coming from outside of the City who are unaware of the transportation options available to them.
- **Bulletin Boards** – Bulletin boards should be set up in high-traffic areas and include TDM messaging to inform and update residents, visitors, and employees of sustainable travel options, upcoming events, and activities. Commute.org sends out regularly scheduled newsletters that are a good reference for up-to-date transportation information. Each newsletter would advertise different TDM measures and events such as commuter promotions and incentives and highlight resources such as 511 and Commute.org.
- **Building Social Media Channels (Facebook, Instagram, etc**.) – The property manager could promote transportation options and updates via the tenant portal website and social media channels such as Facebook, Instagram and Nextdoor.
- **Realtime Transportation Information**- Transportation screens at the lobby and elevators that provide real-time transit departures and arrivals to visitors to 222 E 4th Avenue.

Figure 11 Example Transportation Screen

Transportation Options to Promote:

- All **TDM incentives and services** offered by the property to residents, visitors, and employees, such as bike parking.
- **Resources for trip planning**, including Transit app, Google Maps or Citymapper offer excellent smartphone-based trip planning options.
- **A link to Commute.org** with information about the resources available to residents and employees, especially information regarding the mode-specific resources and subsidies offered.
- Information about the **Guaranteed Ride Home (GRH) or Emergency Ride Home (ERH)** programs offered by the surrounding counties (e.g., Commute.org's GRH program for

commuters who work in San Mateo County, Alameda County's GRH program, Marin County's ERH program, etc.). If an unforeseen emergency occurs, employees that use a sustainable transportation mode are eligible for reimbursement of the cost of their trip home.
- Information about **Safe Routes to School** programs
- **Locally accessible transit information**
  - Caltrain, including Information about bikes on board, secure bike parking, and Park and Ride lots and at the Hayward Park, Hillsdale, and Belmont stations
- Information about **biking,** including links to local bike maps and cycling resources

Implementation Guidelines

Create a webpage that lives on or is linked from the property's tenant facing website and includes all the above listed information, at a minimum, in addition create a social media presence. Commute.org offers a comprehensive transportation resources website free of charge that provides much of the above information.

Develop a regular schedule for newsletters and social media posts and promote relevant transportation information regularly through employee and resident bulletin boards. The social media posts can be utilized for a wider audience that includes not just residents and employees but also retail visitors.

Estimated timeframe	Pre-occupancy, property management (TDM Coordinator) to maintain webpage and newsletter/social media calendar as well as managing all transportation-related information to residents.
Estimated cost	$2,000
Responsible party	Property Management
Estimated daily VMT reduced	26 to 53
Percent of daily vehicle trips reduced (Scenario 1)	0.07% to 0.17%
Percent of daily vehicle trips reduced (Scenario 2)	0.18% to 0.46%

GOPass and Way2GO Pass Provision

Providing subsidized transit passes can help reduce single occupancy trips and increase transit ridership. It also provides increased flexibility for those who might still opt to drive occasionally.

Implementation Guidelines

Partner with Caltrain and SamTrans to provide free or discounted transit options to residents and employees through the following strategies.

<u>Employees (both office and supermarket employees)</u>

- Partner with Caltrain to provide free annual pass Caltrain GO Pass to all employees
- Partner with SamTrans to provide a free annual pass Way2Go Pass to all employees

Residents

- Provide $200 in annual subsidies for the purchase of Caltrain passes to residents
- Provide $20 in annual subsidies for the purchase of SamTrans passes to residents

Estimated timeframe	Pre-occupancy (during the drafting of lease agreements), and ongoing.
Estimated cost	Employees: Approximately $342 per employee for GO Pass, and $75 per employee for Way2GO pass. Based on an estimate of 381 employees, the employee cost estimate is $158,877 annually. Residents: Approximately $200 per resident for Caltrain pass, and $20 per resident for SamTrans pass. Based on an estimate of 11 commuting residents, the resident cost estimate is $2,420 in subsidies annually. Total cost estimate: $161,297 annually.
Responsible party	Property Management
Estimated daily VMT reduced	1245 to 1383
Percent of daily vehicle trips reduced (Scenario 1)	5.10% to 5.68%
Percent of daily vehicle trips reduced (Scenario 2)	13.67% to 15.24%

Preferential Carpool and Vanpool Parking

Reserving space for carpools and vanpools encourages shared travel be ensuring those riders are able to find guaranteed parking easily. If signed in a manner that stands out, it may also generate interest in carpooling and vanpooling from solo drivers.

Implementation Guidelines

Designate at least ten on-site spaces for employees who carpool and vanpool to their worksites. The spaces should be located close to an entrance, and demarcated spaces with signage and/or paint, in line with other signage within the parking facility. While it is not required that property management undertake strong enforcement efforts such as monitoring the spaces on a daily basis and ticketing or towing non-compliant vehicles, they should be prepared to remind single drivers that the spaces are reserved for higher occupancy vehicles.

Estimated timeframe	Ongoing
Estimated cost	$1,000 for sign fabrication
Responsible party	Property Management
Estimated daily VMT reduced	740 to 822
Percent of daily vehicle trips reduced (Scenario 1)	0.96 to 1.10%
Percent of daily vehicle trips reduced (Scenario 2)	2.59% to 2.95%

4 Optional TDM Measures

In addition to the TDM measures identified in the previous Chapter, the following strategies would help to support further vehicle trip and VMT reduction for travel to and from the project site. They are offered as optional recommendations as they are measures that are not required to meet the VMT reduction requirement.

Bike Education / Workshops

Encouraging bike ridership is one of the most effective ways of reducing short range trips by car. About 59.4% of vehicle trips in the United States were less than six miles in 2017.[2] The property could partner with local bike advocacy groups, bike shops or Commute.org to host bike safety workshops to educate residents and employees on the basics of biking and share educational resources such as maps of nearby bike amenities (such as BikeLink lockers at Caltrain stations). Given the size of the project site, if demand for full workshops doesn't exist, it may be more appropriate to support residents and employees in one-on-one support from bike shops.

Implementation Guidelines:

Partner with Commute.org or a local bike advocacy organization to organize a bicycle safety training webinar or workshop annually. Commute.org offers free bike training workshops to employers and residential properties within San Mateo County.

- Promote the workshop or webinar along with additional resources on the property's dedicated website, resident and employee bulletin board, and social media. Some additional resources to share with residents and employees include:
  - Bike Safety and Rules of the Road
  - Family Biking - How to Bike Safely with Adults and Kids of Any Age
  - Biking Maps and Trails

Estimated timeframe	75% occupancy, annually
Estimated cost	$500
Responsible party	Property management to coordinate
Estimated daily VMT reduced	32 to 71

[2] As per data collected from Office of Energy Efficiency and renewable Energy 2017. https://www.energy.gov/eere/vehicles/articles/fotw-1042-august-13-2018-2017-nearly-60-all-vehicle-trips-were-less-six miles#:~:text=Data%20collected%20on%20one%2Dway,distance%20categories%20about%205%25%20each.

Percent of daily vehicle trips reduced (Scenario 1)	0.14% to 0.34%
Percent of daily vehicle trips reduced (Scenario 2)	0.37% to 0.92%

Promotional Programs

Contests, promotions, and prizes can be used as a strategy to provide awareness about transportation options available to employees, residents, and visitors. This can be in the form of short-term or long-term commute challenges and events that encourage the use of a new modes of commuting.

Implementation Guidelines

Promote monthly or quarterly commute challenges that encourage individuals to try new modes of transportation, promotion can be done via the TDM communication's webpage, information boards and TDM coordinator. As incentives, include prizes in the form of gift cards, rewards points and transit subsidies.

Estimated timeframe	Ongoing
Estimated cost	$2,000-10,000 per year depending on the number of participants
Responsible party	Property Management
Estimated daily VMT reduced	6 to 12
Percent of daily vehicle trips reduced (Scenario 1)	0.03%
Percent of daily vehicle trips reduced (Scenario 2)	0.09%

Carshare

The developer could partner with an existing carshare company such as Zipcar, Envoy, or Car2Go to provide those who do not own a vehicle the ability to use a car when needed. Providing occasional access to a vehicle, coupled with incentives to reduce parking needs, can encourage households and employees to forgo vehicle ownership (studies show increased car access decreases use of other modes such as transit)[3].

Implementation Guidelines:

Partner with a shared vehicle provider to provide residents and employees access to a car when needed. The carshare benefit can be made available to other external users. However, each participating household and employee at 222 E. 4th Avenue can be provided with annual credits or subscription discounts.

[3] Jordan, S. (May 2019). Ridership Study Revisited UCLA ITS Scholars 2018 Report on Falling Transit Ridership Gets a Second Look. Retrieved from **https://caltransit.org/news-publications/publications/transit-california/transit-california-archives/2019-editions/may/ridership-study-revisited/**

Estimated timeframe	**Ongoing**
Estimated cost	$4,000 to $8,000 per year depending on number of participants
Responsible party	Property Management
Estimated daily VMT reduced	241 to 278
Percent of daily vehicle trips reduced (Scenario 1)	1.00% to 1.14%
Percent of daily vehicle trips reduced (Scenario 2)	2.68% to 3.05%

5 Impacts of Project TDM Measures

If implemented correctly and consistently, the TDM program outlined within chapters Project TDM Measures and Optional TDM Measures is forecasted to result in a daily VMT reduction of between 2,768 (low estimate) to 3.183 (high estimate) and a reduction of 1071 to 1234 kilograms of carbon dioxide every day.

VMT Reduction Calculations

Estimated VMT and vehicle trip reduction calculations were made using the TDM Return on Investment (ROI) Calculator, a tool owned by Mobility Lab and developed by university and governmental partners. The TDM ROI Calculator helps practitioners and policy makers understand the benefits of their investment in TDM strategies and programs by calculating estimated vehicle trips, VMT, hours of congestion delay, and emissions reduced. More information about the TDM ROI Calculator and assumptions made to calculate estimated impacts are included in Exhibit A.

Program Impacts

TDM Program for 222 E 4th Avenue

Table 8 outlines the total estimated VMT and congestion hours reduced with the recommended and optional TDM program for the project site.

Table 8 Cumulative Program TDM Strategies

222 E 4th Avenue	Annual VMT Reduced		Annual Vehicle Trips Reduced		Annual Congestion Reduced (hours of delay		Carbon dioxide Reduced (kg)	
	Low Est.	High Est.	Low Est.	High Est.	Low Est.	High Est.	Low Est.	High Est.
Recommended Strategies	614,783	697,034	54,587	62,491	85,462	97,318	238,108	270,218
Optional Strategies	70,889	93,366	8,398	10,868	7,410	8,645	26,429	34,580
Recommended and Optional TDM Program	685,672	790,400	62,985	73,359	92,872	105,963	265,278	306,527

Based on Scenario 1, which considers visitor trips to the supermarket, in addition to employee and resident trips, the project is estimated to reduce between 8.78 to 10.23% annual vehicle trips. When considering Scenario 2, which considers just employee and resident trips that are more

receptive to trip reduction measures, the project is expected to reduce between 23.53% to 27.42%.

Table 9 Percentage of Annual Vehicle Trips Reduced

222 E 4th Avenue	% of Annual Vehicle Trips Reduced (Scenario 1)		% of Annual Vehicle Trips Reduced (Scenario 2)	
	Low Est.	**High Est.**	**Low Est.**	**High Est.**
Recommended and Optional TDM Program	8.78%	10.23%	23.55%	27.42%

Table 10 and Table 11 outlines the individual program components and estimated daily VMT reduction ranges for each TDM strategy. This is presented in order to provide an understanding of which strategies are the most impactful.

Table 10 Individual Strategies (Scenario 1)

Strategy	Daily VMT Reduced		Daily Vehicle Trips Reduced		% Daily Trip Reduced		Daily Congestion Reduced (hours of delay)		Daily Carbon Dioxide Reduced (kg)	
	Low Est/	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**
TMA Membership	-	-	-	-	**-**	**-**	-	-	-	-
TDM Coordinator	37	73	3	6	**0.10%**	**0.21%**	6	12	14	28
Institutionalizing TDM at the Property	0	0	0	0	**0.00%**	**0.00%**	0	0	0	0
New Resident + New Employee Packet	441	490	40	45	**1.38%**	**1.55%**	57	64	171	190
Multimodal Wayfinding Signage	0	1	0	0	**0.00%**	**0.00%**	0	0	0	0
TDM Communications	26	53	2	5	**0.07%**	**0.17%**	3	6	10	21
GoPass and Way2Go Pass Provision	1245	1383	148	165	**5.10%**	**5.68%**	162	180	482	536
Preferential Carpool and Vanpool Parking	740	822	28	32	**0.96%**	**1.10%**	118	132	287	319

Bike Education and Promotion	40	88	4	10	**0.14%**	**0.34%**	0	0	15	34
Promotional Program	6	12	1	1	**0.03%**	**0.03%**	0	1	2	5
Carshare (with annual credits or discounts)	241	278	29	33	**1.00%**	**1.14%**	30	34	93	108

Table 11 Individual Strategies (Scenario 2)

Strategy	Daily VMT Reduced		Daily Vehicle Trips Reduced		% Daily Trip Reduced		Daily Congestion Reduced (hours of delay)		Daily Carbon Dioxide Reduced (kg)	
	Low Est/	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**	**Low Est.**	**High Est.**
TMA Membership	-	-	-	-	**-**	**-**	-	-	-	-
TDM Coordinator	37	73	3	6	**0.28%**	**0.55%**	6	12	14	28
Institutionalizing TDM at the Property	0	0	0	0	**0.00%**	**0.00%**	0	0	0	0
New Resident + New Employee Packet	441	490	40	45	**3.69%**	**4.16%**	57	64	171	190
Multimodal Wayfinding Signage	0	1	0	0	**0.00%**	**0.00%**	0	0	0	0
TDM Communications	26	53	2	5	**0.18%**	**0.46%**	3	6	10	21
GoPass and Way2Go Pass Provision	1245	1383	148	165	**13.67%**	**15.24%**	162	180	482	536
Preferential Carpool and Vanpool Parking	740	822	28	32	**2.59%**	**2.95%**	118	132	287	319
Bike Education and Promotion	40	88	4	10	**0.37%**	**0.92%**	0	0	15	34
Promotional Program	6	12	1	1	**0.09%**	**0.09%**	0	1	2	5
Carshare (with annual credits or discounts)	241	278	29	33	**2.68%**	**3.05%**	30	34	93	108

6 Monitoring

Annual monitoring and reporting are required from the site by the City of San Mateo. Ongoing monitoring will help the project site track the impact of their TDM programs as well as provide a regular schedule for evaluating programming and identifying gaps and opportunities. The results will help the building adjust programs to better meet the needs of their residents and employees.

Annual Survey

The City of San Mateo requires an annual letter to the Public Works Director or designee that outlines the TDM measures implemented and information from a mode split survey.

To comply with City requirements, the TDM Coordinator will conduct an annual resident and employee survey to understand commute patterns and the modes by which they commute. During the first year of occupancy, an initial survey should be conducted to establish a baseline to which future surveys will be compared.

The baseline survey and the subsequent annual surveys should ask questions to understand how residents and employees travel for different types of trips and understand barriers to sustainable travel. To gain insight into the resident's and employee's travel characteristics and attitudes, the survey should identify the following key topics:

- Mode of travel by trip purpose (work, school, leisure, etc.)
- Work location
- Business travel requirements, if applicable
- Daycare or school pick-up/drop-off location, if applicable
- Flexible working arrangements, if applicable
- Improvements to the main mode of travel
- Current barriers to walking/biking
- Ideas for how the property could encourage walking, biking, carpooling and transit
- Car ownership
- Level of awareness of the property's TDM amenities
- Feedback on amenities and services currently available to the residents and employees
- Other services or amenities that are not currently offered that would encourage residents and employees to try a different mode of travel

The survey results allow the property to not only track program progress but also identify ways to adjust the program and further shift travel behavior towards more sustainable modes (transit, bike, walk and carpool) over time. The TDM Coordinator could use the data to understand which amenities are popular and should remain, which are not effective and should be adjusted, and identify additional measures to implement at their site.

7 Exhibits

A. TDM ROI Calculator
B. 222 E 4th Ave. Site Assessment

A. TDM ROI Calculator

The Transportation Demand Management (TDM) Return on Investment-(ROI) Calculator is a tool owned by Mobility Lab, an Arlington County, Virginia funded transportation behavior and policy research center. It was developed in partnership with university and governmental partners, with funding from the Federal Highway Administration, to provide TDM program staff, transportation planners, and others involved in implementing TDM services a quantifiable way to estimate the ROI for TDM services.

According to the TDM ROI Calculator User Manual, the model calculates impacts for individual TDM services then combines the individual impacts, with discounts to account for overlap between services, to determine the cumulative impact of all services.[4]

The calculator performs the following functions:

- Estimates TDM travel impacts, defined as reductions in commute vehicle trips and vehicle miles travelled (VMT), from a user-defined package of TDM services
- Converts vehicle trip and VMT reductions into societal benefits, such as reduction in hours of travel time delay and gallons of gasoline saved
- Calculates the societal cost savings from each benefit and the overall cost saving from all benefits combined
- Compares the societal cost saving to the TDM program "investment" cost to estimate ROI

As most TDM programs do not have detailed VMT and trip reduction data, the ROI Calculator instead asks for user participation numbers and program costs as the inputs for its calculations. The model then uses four calculation factors derived from TDM service user surveys along with pre-set regional inputs and national environmental data to estimate the number of participants who will shift behavior and the number of daily vehicle trips, VMT and hours of congestion that their behavior shift will reduce. If more detailed regional and national data are known, they can be input to override the preset data used for calculation.

The inputs used for calculating the VMT and vehicle trip reductions for the 222 E 4th Avenue TDM Plan are outlined below so that the results can be duplicated with ease.

[4] Mobility Lab.(2019).TDM ROI Calculator User Manual Retrieved from https://mobilitylab.org/calculators/

A1 Regional Inputs

At the outset in Section A (Your Region, Service Area Type and Transit Availability), the TDM ROI Calculator asks users to make a series of selections to determine geographic and transit characteristics of the area being examined. The options selected for the 222 E 4th Avenue Plan are displayed in **Table A.1** as follows:

Table Error! No text of specified style in document.**.1: Selections made for region, service area type and transit availability**

Questions in the ROI Calculator	Option Selected for the TDM Plan
Metropolitan Region	San Francisco-Oakland-Hayward, CA
Primary land use density and development pattern	Moderate density, urban or small city/town
Primary focus of TDM program outreach	Primarily to commuters at worksite/through employers
Percentage of commuters within 1/2 mi of bus/train stop in the service area	76% to 100% of commuters are within 1/2 mile of a bus or train stop
Average public transit frequency in the service area in the morning peak period (Select ONLY ONE option)	Moderate-Average rush hour frequency for most routes is 16-30 minutes

With the above inputs selected, the model determines the classifications for the project site as follows in **Table A.2**:

Table Error! No text of specified style in document.**.2: Project site TDM service area and transit availability classifications**

Your TDM Service Area classification is:	Suburban/Small city
Your Transit Availability classification is:	High Transit

A2 Regional Travel, Environmental and Cost Benefit Factors

The final section of the ROI Calculator (Section F - Additional Regional/Service Area Data Environmental Inputs) shows the default numbers used for regional travel, environmental and cost benefit factors. Users have the option to override these defaults by inputting values into the "User Defined" cells if specific local factors are known. Table A.3 shows the defaults assumed by the model and indicates if the defaults were overridden, and which values were used. The inputs defined in Table A.3 remained the same for all calculations for the 222 E 4th Avenue plan.

Table Error! No text of specified style in document.**.3: Travel, vehicle pollutant emission, and benefit cost factor default and user defined values**

Regional Travel Factors	Regional Default	User Defined
Average home-to-work commute miles for the region (one-way distance)	9.6	13.9[1]
Percentage of regional commuters who drive alone to work OR percentage of weekly commute trips made by driving alone	63.2%	72%[2]
Percentage of regional commuters who ride public transit to work OR percentage of weekly commute trips made by transit	17.6%	15%[2]
Regional Vehicle Pollutant Emission Factors	**National Default**	**User Defined**
Oxides of Nitrogen (NOx) emission rate in grams per mile of travel	0.445	0.171[3]
Volatile Organic Compounds (VOC) emission rate in grams per mile of travel	0.075	0.035[4]
Greenhouse gas (Carbon Dioxide Equivalent) emission rate in grams per mile of travel	387.460	342.000[4]
Regional Benefit Cost Factors	**Regional Default**	**User Defined**
Median average wage rate for commuters in the service area or metropolitan region	$24.90	$49.71[1]
Estimated average annualized cost to build/maintain one lane-mile of major roadway (combination of Interstate and limited access roadway)	$165,000	N/A
Average pump price per gallon for regular unleaded gasoline	$3.36	$5.94[3]

[1] Source: San Mateo Economic Development Association's Labor Supply and Commute Patterns in San Mateo County Report, 2012.
[2] Source: ACS 2019 5-year for the Census Tract 6063, Census.gov
[3] Source: AAA Gas Prices
[4] Source: California Air Resources Board Emissions Factors (EMFAC) database

Assumptions

Resident Characteristics Assumptions

To estimate potential participation numbers, some assumptions about the number of individuals living at the property at 100% occupancy were made. These assumptions begin with the knowledge that there will be 111 units for rent. The assumptions and the basis for each are outlined in Table A.4.

Table Error! No text of specified style in document.**.4: 222 E 4th Avenue resident and employee characteristics assumptions**

Category	Assumption and Basis	Number
Total number of people residing at the property at full occupancy	ACS data indicates that there are 2.2 persons per household in the census tract 6063 and there will be 2 studios and 8 one-bedrooms on site.	22
Children under 18	ACS data shows that 17% of the census tract's population is children	4
Adults	Subtracting children from the total population	18
Number of residential commuters	ACS data shows that 39.4% of people residing in the census tract are not in the labor force	11
Number of employee commuters	ITE estimates a space of 303 sq.ft. and 500 sq.ft. for each employee in an office and a supermarket respectively. There will be 104,772 sq.ft. of office space and 17,658 sq.ft. of retail space.	381

ROI Calculator Participation and Calculation Factors Assumptions

In order to use the ROI calculator to calculate estimated impacts for the 222 E 4th Avenue project, assumptions were made to estimate participation rate for each strategy. Additionally, if a strategy was not outlined as a direct input in the model, assumptions were made to estimate the calculation factors associated with it. Table A.5 outlines those assumptions.

Table Error! No text of specified style in document..5 Summary of Assumptions for each strategy

Strategy	ROI Calc Input	Participation Assumption (per year)	Basis for Participation Assumption	Placement rate (%) Assumption	Vehicle Trip Reduction Factor Assumption	One-Way Commute Distance Assumption	Drive-Alone Access % Assumption
TDM Coordinator	Comprehensive commute assistance	20	Assist 5% of residents and employees with questions about transportation including one-on-one assistance when asked and promoting sustainable transportation options (5 hours/month).	40% Pre-set in mode	0.9 Pre-set in model	11.5 miles Pre-set in model	10% Pre-set in model
Institutionalizing TDM at the Property	General marketing	392	All residents and employees at the property would be subjected to the lease conditions.	0% Pre-set in model	0.4 Pre-set in model	11.5 miles Pre-set in model	10% Pre-set in model
New Resident + New Employee Packet	Alternative mode “try it” incentive	78	Each household and new employee on the property would receive a packet. At a minimum, the transit users (15%) would take advantage of the cards and an additional 5% will “try it” based on the transit mode split and ease of accessing the incentive.	60% Pre-set in model	1.2 Pre-set in model	8.6 miles Pre-set in model	10% Pre-set in model
Multimodal Wayfinding Signage	General marketing	392	The decals would be visible to all residents, employees and visitors.	0% Pre-set in model	0.4 Pre-set in model	11.5 miles Pre-set in model	10% Pre-set in model
TDM Communications	Commute program website	137	10% of adults would access webpage for transportation info and incentives	40%	0.3	11.5 miles	10%

			and approximately 25% would see the newsletter and social media communications, especially if they are included with communications regarding other property updates.	Pre-set in model	Pre-set in model	Pre-set in model	Pre-set in model
GoPass and Way2Go Pass Provision	Ongoing transit incentive	392	The transit pass will be distributed to all employees and residents.	35% Pre-set in model	1.2 Pre-set in model	8.6 miles Pre-set in model	10% Pre-set in model
Preferential Carpool and Vanpool Parking	Vanpool formation	35	4% of the population carpool/vanpool and with an additional incentive more people could be motivated to carpool. An additional 5% will try it based on convenience of finding carpool and vanpool partners.	95% Pre-set in model	1.0 Pre-set in model	28.8 miles Pre-set in model	80% Pre-set in model
Bike Education and Promotion	Custom	40	Approximately 21 residents and employees who have access to long term bike parking will attend and an additional 5% will participate based on interest.	25% Pre-set in model (for commute challenges/ events)	1.2 Used the same pre-set for a bike commute program	10 miles Average doable biking distance according to Mobility Lab [5]	40% Pre-set in model
Promotional Program	Commute Challenges/Events	78	Transit users at a minimum will take advantage of promotional programs, and an additional 5% of residents and employee will “try it” based on incentives.	25% Preset in model	0.3 Preset in model	11.5 miles Pre-set in model	10% Preset in model
Carshare	Carshare	72	It would be used by residents and employees who do not have access to parking.	15% Preset in model	0.3 Preset in model	8.6 miles Pre-set in model	0% Preset in model

[5] McLeish, Mike. (February 27,2017). How far is too far to bike to work? Retrieved from **https://mobilitylab.org/2017/02/27/how-far-bike-work/**

B. 222 E 4th Avenue Site Assessment

222 E. 4th Avenue Project Background Assessment Memorandum

Introduction

The City of San Mateo has commissioned Steer to develop a Transportation Demand Management (TDM) Plan for the 222 E. 4th Avenue project site to reduce the ceiling of potential congestion and trips generated by the project. The project is a proposed redevelopment of Draeger's Market at 222 E. 4th Avenue into a single building that would consist of approximately 104,722 sq. ft of office space, 17,658 sq. ft of retail space for a grocer, and 8,971 sq. ft of residential space developed by Lane Partners (referred to as "the developer").

The TDM Plan development begins with a thorough assessment of the site, including existing and planned conditions. A combination of desktop-based research and analysis, review of available site plans and renderings, and study of planned developments was utilized in our understanding of the site conditions.

The document details the following aspects of the site and project:

- Project Description
- Physical Attributes
  - Site Geography and Road Network
  - Pedestrian and Bicycle Infrastructure
  - Transit Services
- Nearby Attractions
- Available TDM Services
- Travel Trends
- TOD Requirements (if applicable)
- Next Steps

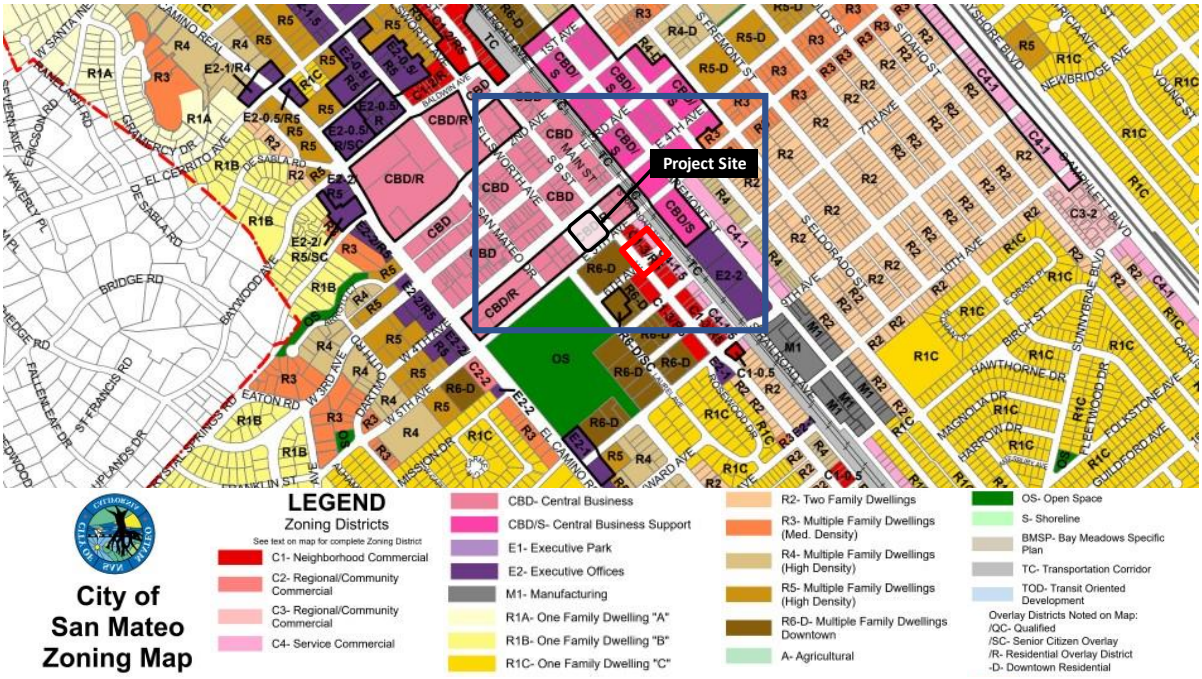
Project Description

The project site is a city block bounded by E. 4th Avenue to the northwest, S. B Street to the northeast, E. 5th Avenue to the southeast, and S. Ellsworth Avenue to the southwest. The project site is currently a grocery store spanning a whole city block. The project proposes demolishing the existing building at 222 E. 4th Avenue to construct a new 5-story mixed used building. The project includes:

1. 8 one-bedroom and 2 studio units (total of 10 units)
2. 104,722 sq. ft of office space
3. 17,658 sq. ft of retail space
4. 239 physical parking spaces as well as 50-60 valet parking spaces, in a 2-level subterranean garage and 12,392 sq. ft of covered parking area.
5. 2,070 sq. ft community open space
6. 1,450 sq. ft outdoor dining space

The project site is zoned as CBD/R – Central Business Residential. As shown in Figure 1, the lots to the north and south are also zoned as CBD/R. The lots towards the northwest are zoned as CBD – Central Business. The lot to the southwest is zoned as R5 – Multiple Family Dwellings (High Density). There is a large area zoned as Open Space to the southwest of the project site.

Figure 1 Zoning Map



Source: City of San Mateo Planning

The project site zoning allows for a FAR of 3.0, due to a state density bonus the project will have a FAR of 3.1. The project site has an allowable height of 55'-0"; the developer has proposed a height of 72'-0".

Table 1 Proposed Project Attributes

	Current	Proposed
Description	Single story building – grocery store	5 story multi-use building with residential, office, and retail space
Square Footage	49,478 sq. ft building	155,052 sq. ft mixed-use building
Zoning Designation	CBD/R	CBD/R

Physical Attributes

Site Geography and Road Network

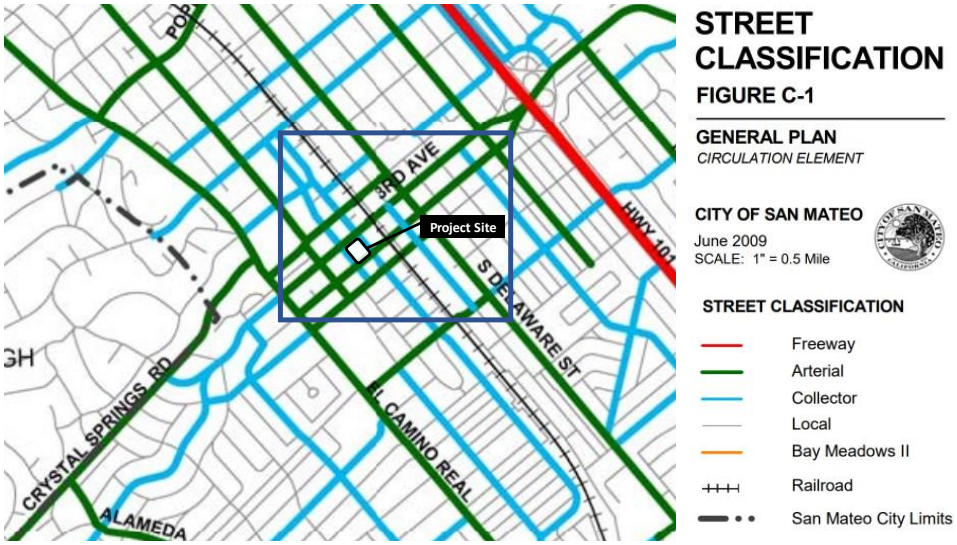
The project site is located on a city block which currently consists of Draeger's Market, a grocery store. The current structure will be demolished. The block is situated between E. 5th Ave. to the south, E. 4th Ave. to the north, S. Ellsworth Avenue to the West, and S. B Street to the east.

The site is adjacent to E. 4th Avenue, a county-maintained street that feeds directly into two highways: U.S. Highway 101 to the east and the California State Route 82 (El Camino Real) to the west.

- U.S. Highway 101 is a major federal highway that runs north-south along the entire west coast. It connects several major cities including San Francisco, Los Angeles, and San Jose
- Route 82 connects to Interstate-880 (I-880) in San Jose and Interstate-280 (I-280) in San Francisco

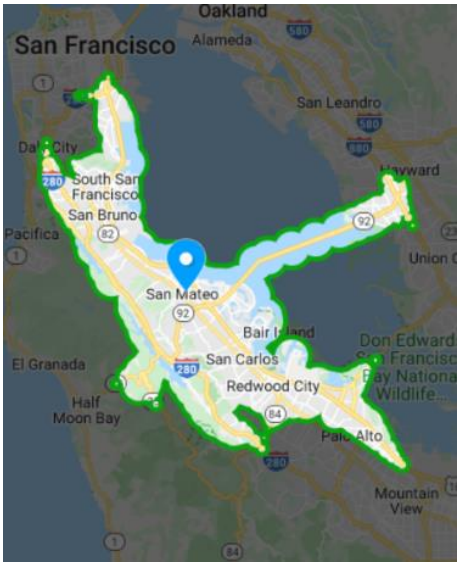
Both the U.S. Highway 101 and Route 82 provide easy access to California State Route 92, which runs east west and runs over the San Mateo Bridge. This bridge bypasses the San Francisco Bay to connect San Mateo to the East Bay.

Figure 2 Street Network

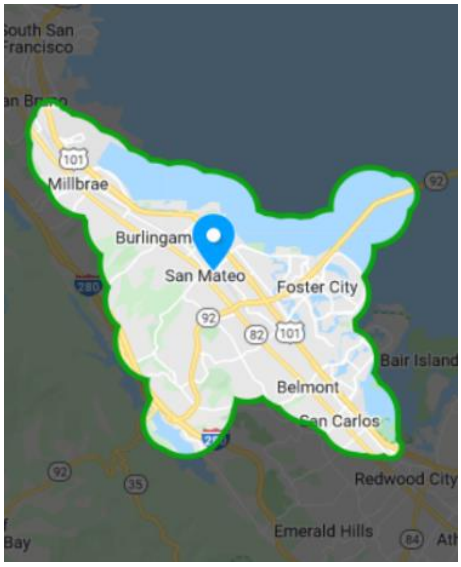


Source: City of San Mateo Public Works

Figure 3 Car-sheds from 222 E. 4th Avenue



Free Flow:
20-minute car-shed from 222 E. 4th Avenue



Rush hour:
20-minute car-shed from 222 E. 4th Avenue

Source: Walkscore.com

The intersection at B Street and 4th Avenue was included in the San Mateo Existing Conditions Circulation Report[6]. As recorded in October 2018, the intersection maintains a "B" level of service (LOS) in the AM and PM Peak hours.

Table 2. Levels of Service for 222 E. 4th Avenue

	Signalized Intersection Peak Hour Levels of Service			
	Year 2018 Conditions			
	AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS
B Street and 4th Avenue	11.0	B	11.3	B

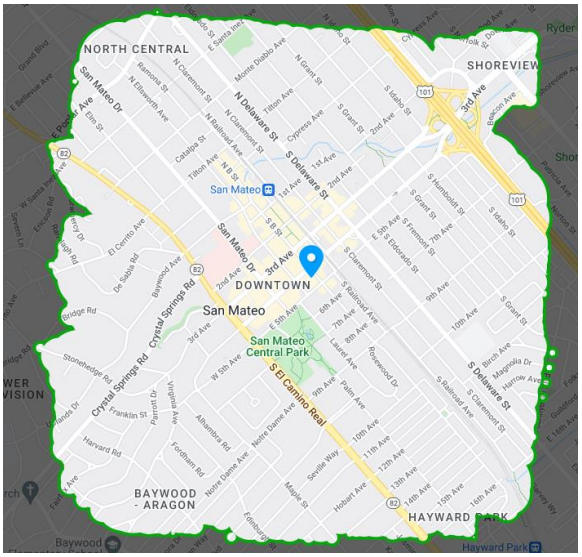
Source: San Mateo Existing Conditions Circulation Report (2018)

Pedestrian and Bicycle Infrastructure

The site's topography and road access, as well as proximity to other nearby services make this area an appealing pedestrian and cyclist environment. The walkability website Walkscore.com gives the site a 99 out of 100 for walking, "Walker's Paradise – Daily errands do not require a car." The walk shed for the project area is seen in Figure 4.

Currently B Street and 5th Avenue both serve as bike routes to the project site. Both bike routes are Class III. The bike route on 5th Avenue connects to the bicycle network to the north and south of the project site. As per recent San Mateo City Council direction, bike facilities along B Street from 5th Avenue to Baldwin Avenue have been removed from the 2020 Bicycle Master Plan.

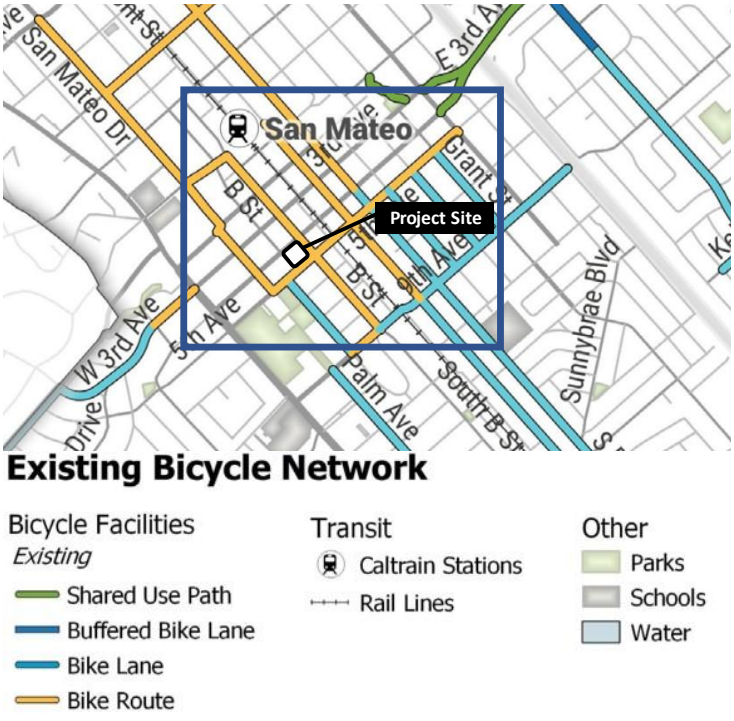
Figure 4 20-minute Pedestrian-shed for 222 E. 4th Avenue



Source: Walkscore.com

[6] San Mateo Existing Conditions Report - Circulation

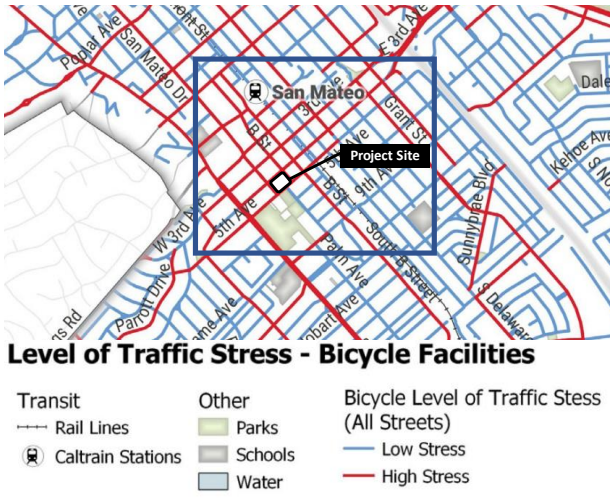
Figure 5 Existing Bicycle Network



Source: San Mateo Bicycle Master Plan

All the streets surrounding the project site are characterized as “High Stress” streets by the April 2020 San Mateo Bicycle Master Plan due to their traffic volumes or lack of cycling facilities. This makes the streets more suited for experienced cyclists. The project site is in a high bicycle connectivity area.

Figure 6 Cycling Level of Stress



Source: San Mateo Bicycle Master Plan

For nearby bicycle amenities, BikeLink operates multiple on-demand bike lockers located at the nearby San Mateo Caltrain Station. BikeLink allows cyclists to securely store their bike in secure lockers using a stored-value card that can be purchased online or at nearby vendors. There are 24 lockers at the San Mateo Caltrain Station. Additionally, there are two free-to-use public bike repair stations are located less than 0.5-mile of the project site. These stations are located at the San Mateo Public Library and the San Mateo Caltrain Station.

Planned Bicycle Projects

The 2020 Bicycle Master Plan was adopted by the San Mateo City Council on April 6, 2020 and serves as a blueprint for expanding and improving the San Mateo bicycle and mobility network in the coming years. The Plan includes one project relevant to the project site:

- 3rd Avenue has proposed improvements to build a separated bike lane. This is a high priority project.
- 5th Avenue has a planned Class II bicycle lanes from Virginia Avenue to El Camino Real. This is the 16th highest priority project in the 2020 Bicycle Master Plan.

Transit Services

The project site is 0.3 miles from the Caltrain station and is served by two San Mateo County Transit District (SamTrans) routes.

Caltrain

Caltrain connects the project site to San Francisco to the north as well as to San Jose and Gilroy to the south. The station is 0.3-miles, 6 minutes walking, from the site and can be accessed by bike, walk, transit, and car.

Table 3. Caltrain Service

Category	San Mateo Station
Frequency	30 minutes
Walking distance to station	0.3 miles (6 minutes)
Access	Park and ride lot, San Mateo BikeLink
Cost	$3.20 - $10+ depending on distance

SamTrans

There are two bus routes with stops adjacent to the project site. The bus stop closest to the project site can be accessed via bike and walk. Additionally, there are other bus stops that are less than a 5 minute walking distance from the site for routes that have higher frequency. Each SamTrans bus is equipped with bike racks that hold up to three bikes. Trips cost $2.25 in cash or via a mobile app, or $2.05 if a Clipper card is being used.

Table 4. SamTrans Service

SamTrans Route #	Hours of Operation	Frequency	Closest Stop	Distance to Stop	Route Details
59	School day service	1 AM bus, 4 PM buses	E. 4th Avenue & S. Ellsworth Avenue	203 ft.	Connects to Borel School
295	6 am – 7 pm	Every 2 hours	E. 4th Avenue & S. Ellsworth Avenue	203 ft.	Connects to Caltrain station
55	School day service	7AM bus, 1 PM bus, 3 PM bus	El Camino Real & E. 5th Ave	1300 ft.	Connects to Borel Middle School
397	Afternoon Service (1 pm – 3 pm)	Every hour	El Camino Real & E. 5th Ave	1300 ft.	Connects San Francisco and Palo Alto Transit Ctr
ECR	24 hours service	Every 15 mins	El Camino Real & E. 5th Ave	1300 ft.	Connects Daly City BART and Palo Alto Transit Ctr
250	6 am – 11 pm	Every 30 mins	S San Mateo Dr & E. 4th Ave	690 ft.	Connects to College of San Mateo

Nearby Attractions

Shopping

The project site is in downtown San Mateo and is close to a variety of retail and shopping options. The project site will include a grocery store and other retail space as well.

- The lot northwest of the project site contains several small retail stores in a strip mall
- The lot southeast of the project site has a bank, a dance theatre, and a restaurant
- A large parking structure with many retailers on the first level of the garage is located east of the site.
- There are several grocery stores located around half a mile walking radius of the project site:
  - Dean's Produce
  - Suruki
  - Golden 9th Deli and Market
- The site is in close proximity to Downtown San Mateo (one block south) which provides a variety of retail options.

Table 5. Shopping Center and Grocery Store Locations and Distances

Shopping Center	Distance	Walk	Transit	Drive
Central Parking Garage (Suruki Supermarket)	500 ft.	2 min	-	2 min
Central Park Plaza (Dean's Produce)	0.2 miles	3 mins	-	4 min
Takahashi Market	0.2 miles	5 min	-	2 min

Byrd's Filling Station	0.2 miles	4 min	-	2 min
Golden 9th Deli & Market	0.4 miles	8 min	-	2 min
Mi Rancho Supermarket	0.4 miles	8 min	-	4 min
Everybody's Market	0.4 miles	9 min	SamTrans Route #250 | 6 min	3 min
Trader Joe's	1.6 miles	30 min	SamTrans Route #292 | 17 min	6 min

Schools and Childcare

About seventeen percent (17%) of the population located in the census tract (residential area) are under the age of 18, with the median age and average household size being 39.2 and 2.2, respectively, according to the American Communities Survey (ACS) 2019. This suggests that this region is populated with young families that may add school or childcare trips into their daily schedule. Since school drop-offs and pickups can lead to significant traffic and congestion twice daily, the TDM Plan will explore synergies with existing Safe Routes to School (SRTS) programs and related trip reduction strategies.

Childcare Centers

There are several childcare and Preschool centers located within the vicinity (2 miles) of the project location. Table 6 lists the childcare centers located close to the project site.

Table 6 Childcare Centers

Childcare	Distance	Walk	Transit	Drive
Safari kid-San Mateo	0.2 miles	4 minutes	-	2 minutes
Shu Academy	0.3 miles	7 minutes	-	3 minutes
Intercommunal Preschool	0.5 miles	9 minutes	8 minutes	4 minutes
Little Panda Home Family Daycare	0.7 miles	11 minutes	10 minutes	4 minutes
Pita, Victoria Daycare	0.9 miles	17 minutes	11 minutes	4 minutes
Amelia L's Family Daycare	1.0 miles	20 minutes	19 minutes	6 minutes
Lucy's Learn and Play Daycare	1.0 miles	20 minutes	13 minutes	5 minutes
Mi Second Casa Preschool and Daycare	1.1 miles	21 minutes	11 minutes	5 minutes
Happy Kids Daycare and Preschool	1.2 miles	24 minutes	12 minutes	6 minutes
Little Scientist Nursey School	1.3 miles	28 minutes	27 minutes	6 minutes
4-KIDS Family Daycare	1.4 miles	27 minutes	16 minutes	6 minutes
My little Mushroom Daycare	1.5 miles	30 minutes	11 minutes	6 minutes
Zena's Home Daycare	1.8 miles	35 minutes	18 minutes	8 minutes
Foster City Preschool and Daycare Center	2.0 miles	41 minutes	15 minutes	8 minutes

Nearby Schools

There are over a dozen schools within two miles of the project site. A comprehensive list of schools located within 2 miles of the project site is provided in Table 7.

Table 7 Nearby Schools

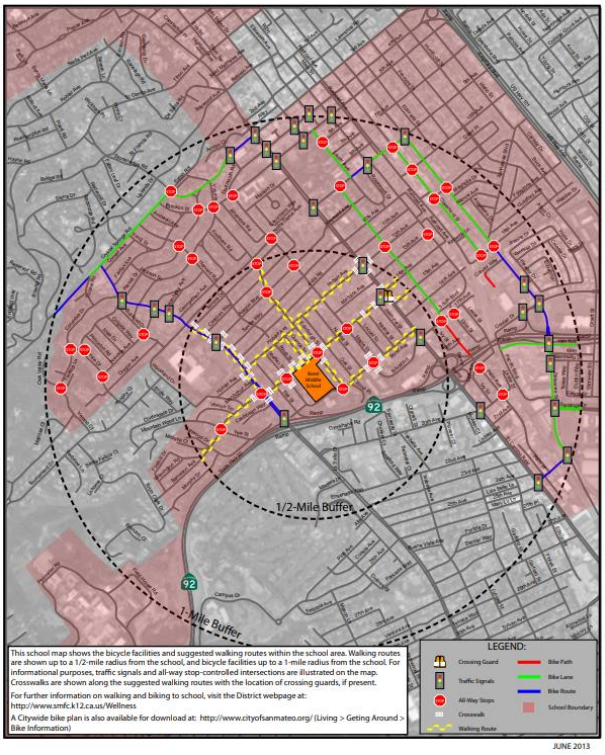
Nearby Schools	Travel distance in miles
Art Academia	0.3
St. Matthew's Episcopal Day School	0.4
St. Matthew Catholic Elementary School	0.6
Centennial Montessori School	0.7
Sunnybrae Elementary School*	0.7
La Escuelita Christian Academy	1.0
Stanbridge Academy	1.0
St. Timothy School	1.0
Baywood Elementary School	1.1
College Park Elementary School	1.1
San Mateo High School*	1.1
South Hillsborough Elementary	1.1
Aragon High School	1.2
Borel Middle School*	1.2
Crystal Springs Uplands School	1.2
North Shoreview Montessori	1.2
San Mateo Adult School	1.2
Pacific Rim International School	1.4
San Mateo Park School	1.6
St. Catherine of Siena School	1.7

**Assigned schools for the project site*

San Mateo Safe Routes to School

San Mateo County Safe Routes to School (SRTS) is a program of San Mateo County that encourages and enables school-age children to walk and bike to school. SRTS is intended to reduce school-travel related congestion and emissions around schools, as well as improve health and wellness through physical activity. The program is led and implemented by volunteers, often parents and PTA members.

The project site is within the San Mateo-Foster School district and has been zoned for Sunnybrae Elementary School and Borel Middle School. These schools are included in the SRTS program. Figure 7 shows the scope of the Safe Routes to School program for Borel Middle School within a half-mile radius, including suggested walking and biking routes.



Source: San Mateo Safe Routes to School

Figure 7 Walking and Biking Routes to Borel School

Safe Route to School Map for Borel Middle School

Other Educational Institutions

There are two universities within a 2-mile driving radius from the site.

- Draper University (0.2 miles) on 3rd Avenue is a private, for-profit school that offers boot camp-style educational programming in collaboration with Arizona State University.
- Samuel Merritt University on S. Amphlett Boulevard (1.9 miles) is the San Francisco Peninsula campus of the Oakland-based Samuel Merritt private university, focused on health sciences.
- Two key educational institutions are outside of a 2-mile radius but may also generate trips to/from the project site
  - San Mateo Community College (3.6 miles)
  - College of San Mateo (3.4 miles)

Parks

There are four parks located with a one-mile walking distance from the project site.

- San Mateo Central Park – 0.2-mile walking distance
  - 16.5-acre park, bounded by 9th Avenue to the south, E. 5th Avenue to the north, N. El Camino Real to the west, and Laurel Avenue to the east. Central Park is one of the most popular parks and attractions in San Mateo, which may need to be considered when determining TDM strategies.
- De Anza Historical Park – 0.5-mile walking distance
  - Small park, located along Arroyo Court.
- Gateway Park – 0.5-mile walking distance
  - Small park surrounded by housing and business that provides a pedestrian path through 2nd Avenue and 3rd Avenue. This park also has access to the San Mateo Creek.
- Martin Luther King Jr. Park – 0.9-mile walking distance
  - The block sized park is bounded by Monte Diablo Avenue to the south, E. Santa Inez Avenue to the north, N. Eldorado Street to the west, and N. Fremont Street to the east. The park has a playground, a pool, and a community center that offers community activities.

Available TDM Services

Commute.org Incentives

Commmute.org is the San Mateo County Transportation Demand Management Agency. Their resources are available to all residents and employees within San Mateo County. The residents and employees of the project site will have access to the TDM resources provide for commutes within the County and in the surrounding areas. They provide the following services:

- **Try Transit Incentives:** Commute.org provides a free "Try Transit" program that allows individuals to request free tickets for the transit option that works best for them.
- **Carpool Incentives:** Commuters who use Waze carpool or Scoop are eligible to earn gift cards worth up to $100.
- **Vanpool Incentives:** Drivers of a new vanpool can earn a $500 reward, and vanpool riders can be reimbursed $100/month of their costs for up to three months.
- **Bike Education:** Free bike safety workshops and marketing materials on biking are available to residents and commuters. These workshops are scheduled upon request and are available to employers and other development sites, including residential properties within San Mateo County.
- **Bike Incentives:** Commute.org currently provides commuters who live or work in San Mateo County with incentives worth between $25 to $200 for biking to work. To participate in the program, bike commuters must track their work commutes using the Strava app. The rides are then recorded in the STAR platform, Commute.org's incentive delivery platform, where commuters can access their incentives.

Travel Trends

The travel trends described in this section are based on information from the Census Bureau for the project's census tract (6063).

Demographics

The project site is located within Census Tract 6063. The Census Tract has a population of 4,110. The information outlined in Table 8 and Figure 8 below provides the general residents' demographic profiles and travel behavior.

Table 8 Census Tract 6063 Demographics Characteristics

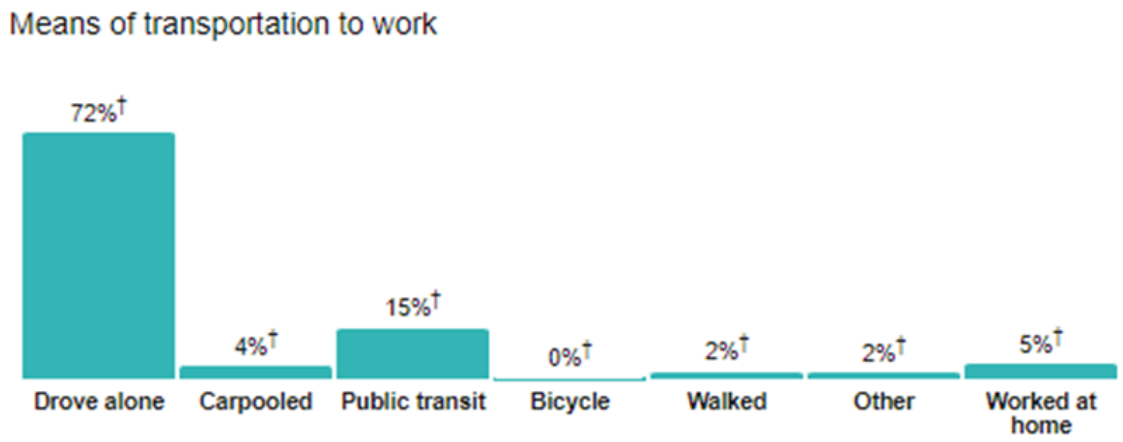
Category	Characteristics	Amount
Age	Under 18	17%
	18 to 64	57%
	Over 65	26%
Education	Bachelor's degree or higher	48.5%
Households	Renter-Occupied Housing Units	49%
	Number of households	1,805
	Persons per household	2.2
	Median household income	$92,007
Race	White alone	62%
	Asian alone	29%
	Hispanic or Latino	24%
	Black or African American	3%
	Mixed	4%
Languages spoken	Speaks English only	53%
	Speaks a language other than English: Spanish	19%
	Speaks a language other than English: Indo-European Languages	7%
	Speaks a language other than English: Asian and Pacific Island Languages	18%

Source: ACS 2019 5-year, Census.gov

Commute Outlook

Census Reporter data from 2019 indicates that majority (72%) of people that live within Census Tract 6063 drive alone to work. The data also reports that 21% of the population use sustainable modes of transportation such as public transit, carpooling and walking to commute to work, while 5% of the population work from home. Of those that commute to work, the mean travel time is 27.6 minutes. Of note, commuting patterns have been impacted by the COVID-19 pandemic and may be in flux for some time as businesses gradually adjust their travel patterns. The post-pandemic reality might result in new commuting patterns as more organizations implement hybrid and flexible working patterns.

Figure 8 Commute mode split for Census Tract 6063



Source: ACS 2019 5-year, Census.gov (Universe: workers 16 and older)

Where people work

According to the ACT and as demonstrated in Table 9, residents in Census Tract 6063 commute to a variety of locations, with a majority commuting out of San Mateo. The City and County of San Francisco is the most common destination for commuters (20.6%) followed by the City of San Mateo (15.4%).

Table 9 Distribution of job locations for residents of Census Tract 6063

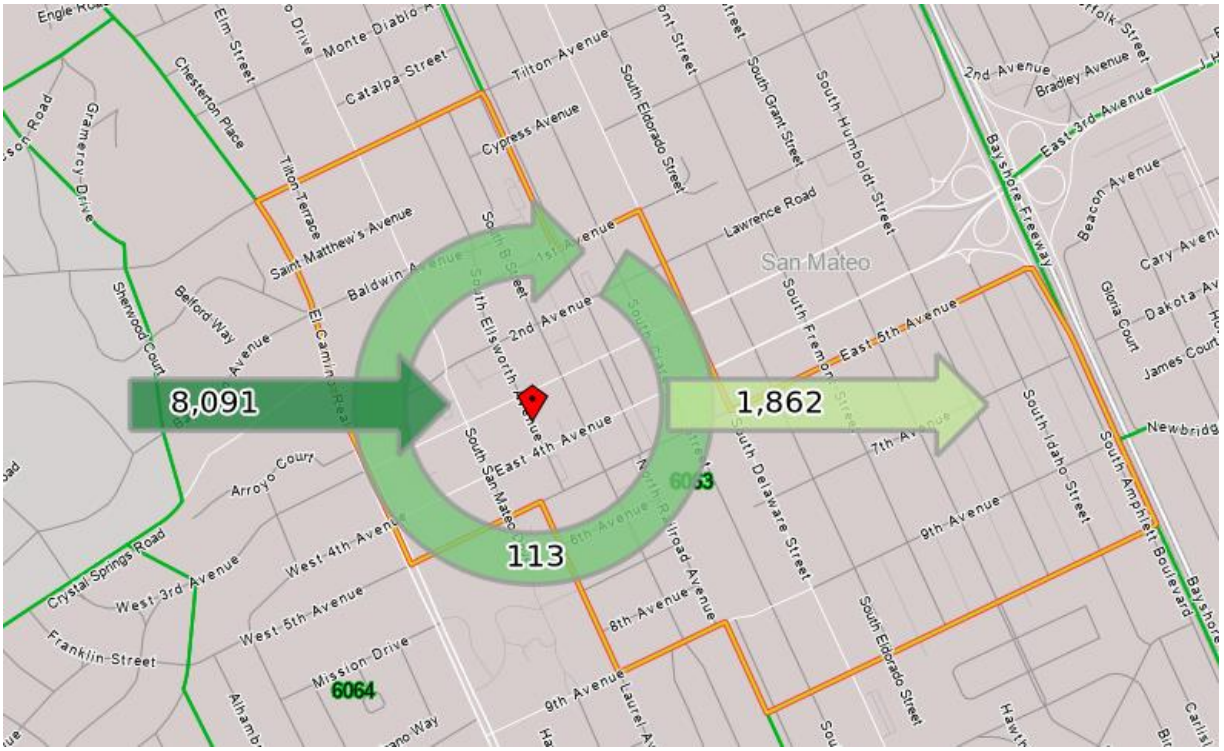
Job Location	Count	Share
San Francisco, CA	407	20.6%
San Mateo, CA	305	15.4%
Redwood City, CA	134	6.8%
Palo Alto, CA	115	5.8%
South San Francisco, CA	83	4.2%
Burlingame, CA	69	3.5%
Foster City, CA	62	3.1%
San Jose, CA	53	2.7%
San Carlos, CA	50	2.5%
Menlo Park, CA	47	2.4%
All other locations	650	32.9%
All Places (Cities, CDPs, etc.)	**1,975**	**100%**

Source: ACS 2019 5-year, Census.gov (Universe: workers 16 and older)

Inflow/Outflow analysis of the census tract, as shown in Figure 9, depicts those 1,862 individuals that commute out of the area and 8,091 people commute into the area for work on a daily basis. The high inflow number signifies that the region is dominated by commercial and mixed-use land-

use types, with key employers including medical centers and downtown retail and restaurant establishments. A total of 113 individuals both live and work inside the census tract.

Figure 9 Inflow and Outflow patterns



Source: U.S Census Bureau, Center for Economic Studies

TOD Requirements

Since the project site is not zoned as TOD, this policy does not apply.

Next Steps

Based on the information gleaned from the Background Assessment, our team will develop a Draft TDM Plan. The TDM Plan will include a list of recommended and optional TDM Strategies for the project site, and will touch on the following types of strategies:

- Site elements
- Education and incentives
- Service provision
- Monitoring and reporting

Based on comments from the City of San Mateo we will edit and submit a finalized TDM Plan and will work with the City to ensure it is approved.

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