EMERYVILLE PUBLIC MARKET

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

PREPARED BY:

Kimley»Horn

PREPARED FOR:

The PUBLIC MARKET

EMERYVILLE

Attachment 3A

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P
PARKING

1. INTRODUCTION

This document presents a Transportation Demand Management ("TDM") plan for Parcel B of the Emeryville Public Market Project ("Project"), which is a proposed research and development (R&D) site located in Emeryville ("City"), California.

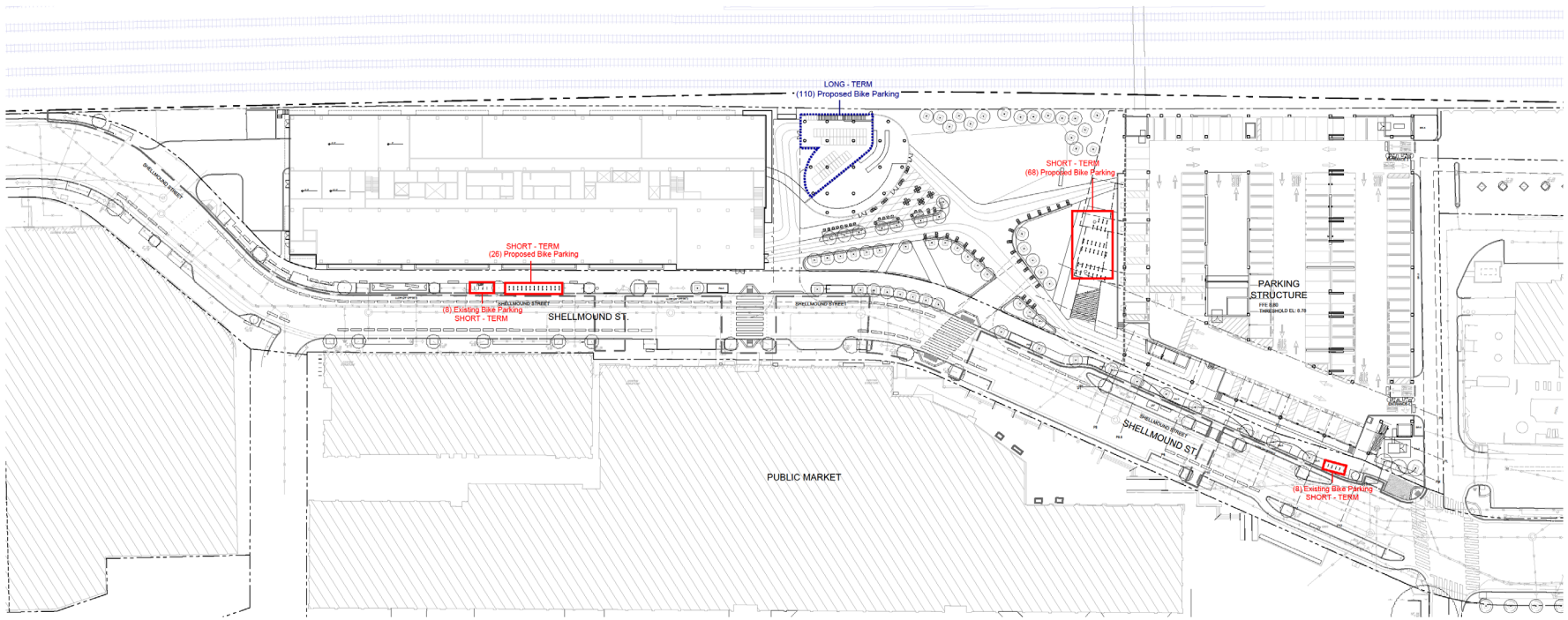
1.1. PROJECT DESCRIPTION

The Project is located at 5959 Shellmound Street, **FIGURE 1**, in Emeryville, California. The Project site is approximately 1.65-acres and is bounded by Shellmound Street to the north and west, Amtrak by the east, and a proposed parking garage to the south. The zoning for the Project is Mixed-Use with Residential.

FIGURE 1 illustrates the site plan for the Project. The development will consist of constructing a 431,060-square foot R&D center.

FIGURE 1: PROJECT VICINITY

FIGURE 2: PROJECT SITE PLAN



Short-Term Bicycle Parking

Minimum Required: 72
Proposed in FDP: 92

Current Proposal: 110
- Existing Off-site: 16
- New Off-site: 26
- New On-site: 68

PARKING STALL SUMMATION

LEVEL	ACCESSIBLE (9'-0"x18'-0")	VAN ACCESSIBLE (9'-0"x18'-0")	UNISTALL (8'-6"x18'-0")	EVCS ACCESSIBLE (9'-0"x18'-0")	EVCS VAN ACCESSIBLE (12'-0"x18'-0")	EVCS AMBULATORY (10'-0"x18'-0")	STANDARD EV DAY 1 (8'-6"x18'-0")	CLEAN AIR EV (8'-6"x18'-0")	TOTAL	SQ. FOOTAGE	SQ. FT./STALL
LEVEL 06	-	-	80	-	-	-	30	10	120	43,400	356
LEVEL 05	-	-	66	-	-	-	30	15	111	45,200	407
LEVEL 04	-	-	68	-	-	-	30	14	112	49,750	444
LEVEL 03	-	-	85	-	-	-	30	14	129	49,300	394
LEVEL 02	-	-	101	-	-	-	13	14	128	49,050	396
LEVEL 01	9	2	66	4	2	4	10	14	111	53,000	495
SUB-TOTAL	9	2	466	4	2	4	143	81	711	289,700	413

oxford HDR

SITE PLAN
EMERYVILLE PUBLIC MARKET DEVELOPMENT

1" = 20'-0"
JULY 25, 2022

bionic

1.1.1. PARKING

Vehicle parking spaces will be located in the proposed parking garage in Parcel A to the south of this project. The Project will provide a total of 711 vehicle parking spaces, which includes 81 spaces for clean air vehicles and 143 spaces for electric vehicles (EV). The breakdown of the parking spaces is summarized in **Table 1.**

The latest site plan shows 110 long-term bicycle parking spaces and 110 short-term bicycle parking spaces. Long-term bicycle parking will be located in the plaza area to the south of the Project and short-term bicycle parking will be located along Shellmound Street and in the plaza area.

TABLE 1: PROVIDED VEHICLE PARKING SUMMARY

PARKING SPACE TYPE	# PARKING SPACES
Standard	466
Accessible Standard Van	11 9 2
Clean Air EV Charging Station - Accessible EV Charging Station – Accessible Van EV Charging Station – Ambulatory Standard EV Day 1 Clean Air EV	234 4 2 4 143 81
TOTAL	**711**

1.1.2. PROJECT TRIP GENERATION

Trip generation for the Project was determined based on data from the Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual, 11th Edition*. Table 2 presents the overall trip generation for the proposed Project. For a typical weekday, the Project will generate 4,776 daily trips, 444 trips in the AM peak hour, and 442 trips in the PM peak hour.

TABLE 2: PROJECT TRIP GENERATION

LAND USE	ITE CODE	SIZE	UNIT	RATE/EQN?	DAILY	AM PEAK HOUR			PM PEAK HOUR		
						Total	In	Out	Total	In	Out
Trip Generation											
Research and Development	760	431.06	KSF	Rate	4,776	444	364	80	422	68	354

2. EXISTING CONDITIONS

This section provides additional information on the existing transit services, bicycle facilities, and pedestrian facilities near the Project site, as well as existing commuting trends.

2.1. EXISTING TRANSIT SERVICE

Table 3 summarizes the transit services near the vicinity of the Project.

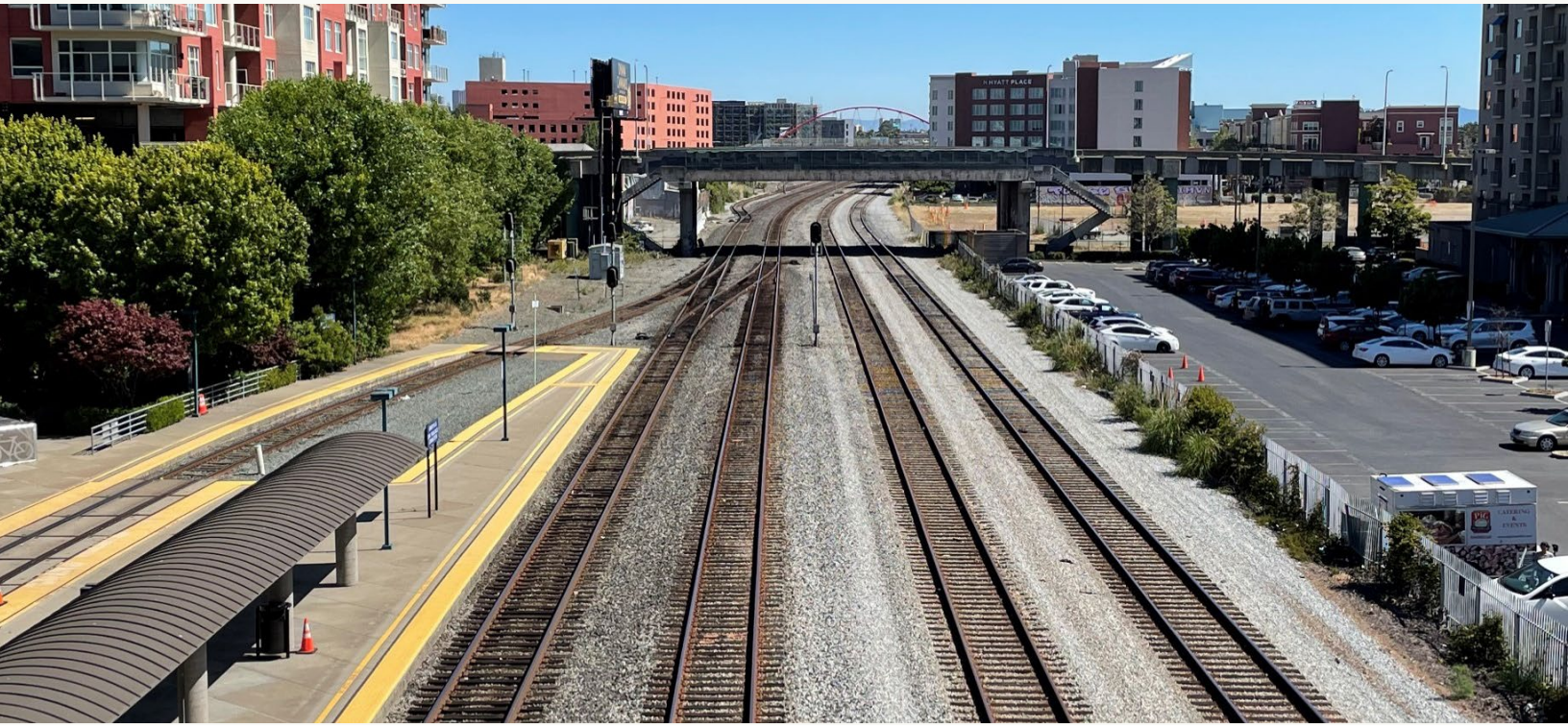
2.1.1. AC TRANSIT

Alameda-Contra Costa Transit (AC Transit) provides multiple bus routes throughout Alameda County. Bus routes 29, 36, 57, F, and J service the surrounding area. Employees and visitors may access these bus stops at the following intersections:

- Shellmound Street & Shellmound Way (350 feet)
- Christie Avenue at Public Market (0.2 miles)
- Christie Avenue & Pacific Park Plaza (0.2 miles)
- Christie Avenue & 59th Street (0.2 miles)
- Shellmound Street & Christie Avenue (0.2 miles)
- Christie Avenue & 64th Street (0.3 feet)

2.1.2. BART

Bay Area Rapid Transit (BART) is a heavy elevated rail and subway public transportation system that connects the East Bay with other cities in the Bay Area such as San Francisco and San Jose. The two closest BART stations are the MacArthur (2.1 miles) and West Oakland (2.8 miles) stations. The Yellow, Blue, Orange, Green, and Red Lines all stop at either or both stations. Riders may take the Emery Go-Round from MacArthur Station or AC Transit from West Oakland Station to the nearest bus stop and walk to the Project site.



2.1.3. EMERY GO-ROUND

Emery Go-Round is a last-mile shuttle service provided by the Emeryville Transportation Management Association that runs from the MacArthur BART station to various Emeryville locations. This service is provided at no cost to individuals. The Shellmound/Powell (SP) route services the area closest to the project site. The closest bus stops are Stop 25, Shellmound at Public Market Northbound, and Stop 29, Shellmound at Public Market Southbound.

2.1.4. AMTRAK

Amtrak is a passenger railroad service that provides medium- and long-distance inter-city rail service in the contiguous United States. The closest Amtrak station is at 5885 Horton St, Emeryville, CA 94608, directly to the east of the project site.

TABLE 3: EXISTING TRANSIT SERVICE

ROUTE	DESCRIPTION	WEEKDAY			WEEKEND	
		OPERATING HOURS[1]	Headway[2] (minutes)		OPERATING HOURS[1]	HEADWAY[2] (minutes)
			Peak	Off-Peak		
AC Transit						
29	Hollis – Peralta – Lakeshore	6:00 AM – 10:40 PM	30 minutes	30 minutes	No weekend service	
36	Dwight – Shellmound – Adeline	5:50 AM – 12:35 AM (next day)	30 minutes	30 minutes	5:50 AM – 12:35 AM (next day)	30 minutes
57	40th St – MacArthur	4:35 AM – 1:15 AM (next day)	15 minutes	17 minutes	4:35 AM – 1:15 AM (next day)	18 minutes
F	Adeline – Market Transbay	5:10 AM – 1:30 AM (next day)	30 minutes	30 minutes	5:10 AM – 1:00 AM (next day)	30 minutes
J	Sacramento – Christie Transbay	7:10 AM – 10:10 AM 4:45 PM – 7:05 PM	30 minutes	60 minutes	No weekend service	
BART						
Yellow Line	Antioch – SFO+Millbrae	4:45 AM – 1:50 AM (next day)	15 minutes	30 minutes	5:45 AM – 1:50 AM (next day)	15-30 minutes
Blue Line	Dublin – Pleasanton – Daly City	5:05 AM – 1:15 AM (next day)	15 minutes	30-45 minutes	5:45 AM – 1:35 AM (next day)	30 minutes
Orange Line	Berryessa/North San Jose – Richmond	5:00 AM – 1:55 AM (next day)	15 minutes	30 minutes	6:15 AM – 1:55 AM (next day)	30 minutes
Green Line	Berryessa/North San Jose – Daly City	4:40 AM – 8:30 PM	15 minutes	15 minutes	5:40 AM – 8:00 PM	30 minutes
Red Line	Richmond – Millbrae+ SFO	5:00 AM – 9:25 PM	15 minutes	15 minutes	6:00 AM – 8:15 PM	30 minutes
Emery Go-Round						
Shellmound / Powell	MacArthur – Shellmound - Powell	6:00 AM – 10:25 PM	15 minutes	15 minutes	8:20 AM – 10:20 PM	20 minutes
Amtrak						
Coast Starlight	Seattle – Portland – Sacramento – Los Angeles	24 hours	-	-	24 hours	-
Capitol Corridor	Auburn – Sacramento – Emeryville/SF – Oakland - San Jose	4:10 AM – 10:20 PM	60 minutes	120 minutes	5:55 AM – 11:15 PM	60 – 120 minutes

Notes: [1] Operating Hours rounded to the nearest 5 minutes for weekdays. Sunday may have reduced operating hours.
[2] Headways are defined as the time between transit vehicles on the same route.

2.2. EXISTING BICYCLE AND PEDESTRIAN FACILITIES

2.2.1. BICYCLE FACILITIES

Bicyclists may access the Project through the existing bikeway facilities throughout Emeryville. The City designates Class I bicycle facilities as bicycle paths or trails, Class II bicycle facilities as bicycle lanes, Class III bicycle facilities as bicycle routes, and Class IV bicycle facilities as separated bikeways. An existing Class II bicycle lane located along Shellmound Street, adjacent to the project site, is proposed to be a Class IV separated bikeway. **Table 4** lists the existing and proposed bicycle facilities near the Project site.

TABLE 4: EXISTING AND PLANNED BICYCLE FACILITIES

ROAD	EXISTING	PROPOSED
Shellmound Street	Class II Bicycle Lane	Class IV Separated Bikeway
Christie Avenue	Class IV Separated Bikeway	Class IV Separated Bikeway
Horton Street	Class II Bicycle Lane	Class II Bicycle Lane
59th Street	Class II Bicycle Lane	Class II Bicycle Lane

The latest site plan shows provide 110 long-term and 110 short-term bicycle parking spaces. Long-term bicycle parking will be located in the plaza area to the south of the Project and short-term bicycle parking will be located along Shellmound Street and in the plaza area.

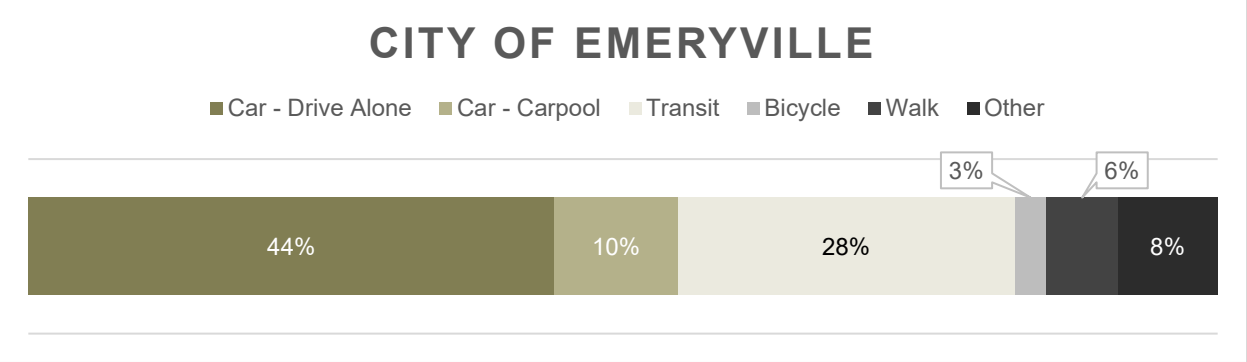
2.2.2. PEDESTRIAN FACILITIES

There are currently continuous sidewalks along Shellmound Street, Powell Street, Christie Avenue, 63rd Street, Market Drive, 62nd Street, Shellmound Way, and 64th Street which connect to transit stops and other uses. There are sidewalks and marked crosswalks along the project frontage, as well as a pedestrian bridge to access the Amtrak station.

2.3. EXISTING MODE SPLIT

Figure 3 illustrates the City's work commute transportation mode split based on the 2018 American Community Survey. The 2018 data was used instead of the most recent 2020 data since the COVID-19 pandemic may have affected mode spilt. The most common mode is automobile where 44% drive alone in cars and 28% use transit. Other modes include carpool (10%), bicycle (3%), walking (6%), and other (8%).

FIGURE 3: CITY OF FREMONT COMMUTE WORK MODE SPLITS



Note: Total sum may be off due to margin of error for the data set.
Source: *American Community Survey – B08301 Means of Transportation to Work (2018)*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3. TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM

3.1. TRANSPORTATION DEMAND MANAGEMENT (TDM) REQUIREMENTS

This TDM plan was developed to meet County and City requirements. Neither the Alameda County Transportation Commission (ACTC) nor City of Emeryville have adopted VMT guidelines or thresholds; therefore, the California Governor's Office of Planning and Research (OPR) guidelines were used.

Based on the project's location, the existing and proposed project conditions were analyzed using the latest Alameda County travel demand model from ACTC. The ACTC was developed to implement transportation programs and projects across Alameda County. One of its responsibilities is to develop and manage the Countywide travel demand model, which is used for estimating future volumes and VMT based on future land uses and the future roadway network. ACTC has developed maps displaying estimates of VMT per employee based on traffic analysis zone (TAZ) estimates from the Alameda Countywide Travel Demand Model that were used to determine if the project would cause a significant impact. Per guidance provided by the OPR guidelines, the threshold for employment-based VMT uses is set at 15 percent below the regional average. The VMT maps provided by ACTC show a 15 percent below the regional average threshold, which aligns with the thresholds set by OPR.

Based on the VMT per Employee map for the North Planning Area in year 2020 provided by the ACTC, the project is located in an area with a VMT equal to 14.53. The target VMT, which is 15 percent below the average, for North Planning Area, Alameda County, and Bay Area Region is 12.3, 13.5, and 15.4 respectively. Since the proposed project exceeds all VMT thresholds, the project could result in a potentially significant VMT impact. The project will need to reduce VMT by 15 percent to meet the North Planning Area threshold in 2020.

Based on the VMT per Employee table for the North Planning Area in year 2040 provided by the ACTC, the project is located in an area with a VMT equal to 18.79. The target VMT, which is 15 percent below the average, for North Planning Area, Alameda County, and Bay Area Region is 12.7, 13.8, and 15.5 respectively. Since the proposed project exceeds all VMT thresholds, the project could result in a potentially significant VMT impact. The project will need to reduce VMT by 33 percent to meet the North Planning Area threshold in 2040.

Table 5 summarizes the VMT analysis.

TABLE 5: VMT THRESHOLDS

	2020			2040		
	NORTH PLANNING AREA	ALAMEDA COUNTY	BAY AREA REGION	NORTH PLANNING AREA	ALAMEDA COUNTY	BAY AREA REGION
Average VMT per Employee	14.5	15.9	18.1	14.9	16.2	18.2
Threshold VMT per Employee (85% of Average)	12.3	13.5	15.4	12.7	13.8	15.5
Project TAZ Average VMT per Employee		14.53			18.79	
VMT Reduction Percentage Needed	**15%**	7%	-6%	**33%**	27%	18%

3.2. PROGRAM ELEMENTS

The TDM program will implement elements that will promote carpooling, bicycling, walking, and riding transit in place of drive-alone vehicle trips to and from the Project site. These elements may change or be adjusted to adapt to changing transportation trends and to maximize the efficiency and performance of the program.

3.3. TRIP REDUCTION

Chapter 5-26 of the City of Emeryville Municipal Code requires all public and private employers with fifty employees at a work site to conduct an employee transportation survey to establish whether the average vehicle ridership (AVR) and vehicle employee ratio (VER) performance objectives have been met. Survey results are to be submitted to the Trip Reduction Program Advisor (TRPA) within forty-five days if the jurisdiction will be processing the survey forms, or within ninety days if the employer or another entity will be processing the survey forms. Within six months of this initial survey, employers are required to develop and implement an Employer Trip Reduction Program.

3.4. VMT REDUCTION

The Alameda CTC VMT Reduction Calculator was used to estimate the anticipated VMT reduction by implementing the TDM program. VMT reduction was determined based on Project's Transportation Analysis Zone (TAZ) as well information related to each TDM measure being implemented.

Reductions associated with a Voluntary Employer Commute Program (1A) were assumed due to the inclusion of TDM measures such as providing services that encouraging carpooling/vanpooling, encouraging alternative or flexible scheduling, and providing bicycle end-trip facilities for all employees. Details on specific TDM measures are provided in **Table 6.** Based on these factors, the VMT Reduction Calculator resulted in a maximum reduction of 33 percent in employee commute trips. This reduction satisfies the 33 percent required to meet the North Planning Area threshold in 2040. The VMT Reduction Calculator output is included in the **Appendix.**


Emeryville Public Market
Lots of great ways to ride
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baywheels.com
Map Legend
Contact
17228

TABLE 6: TDM PROGRAM ELEMENTS

TDM MEASURE #	TRANSPORTATION DEMAND MANAGEMENT MEASURE	DESCRIPTION
1A	**Voluntary Employer Commute Program**	This measure would implement a voluntary commute trip reduction (CTR) program. CTR programs discourage single-occupancy vehicle trips and encourage alternative modes of transportation. Voluntary CTR programs do not include mandatory trip reduction requirements or monitoring and reporting, The CTR program must include the following: • Carpooling encouragement • Ride-matching assistance • Preferential carpool parking • Flexible work schedules for carpools • Half-time transportation coordinator • Vanpool assistance • Bicycle end-trip facilities (parking, showers, lockers)
2A	**Provide Transit-Oriented Development**	This measure would reduce project VMT in the study area relative to the same project site in a non-transit-oriented development (TOD) location. TOD refers to projects built in compact, walkable areas that have easy access to public transit, ideally in a location with a mix of uses, including housing, retail offices, and community facilities. Project site residents, employees, and visitors would have easy access to high-quality public transit, thereby encouraging transit ridership and reducing the number of single-occupancy vehicle trips and associated GHG emissions.
2B2	**Increase Employment Density**	This strategy accounts for a VMT reduction achieved by a project that is designed with a higher density of jobs compared to the average job density in the United States. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing job density results in shorter and fewer trips by single occupancy vehicles and thus a reduction in GHG emissions.
3A1	**Price Workplace Parking**	This measure will price onsite parking at workplaces. Because free employee parking is a common benefit, charging employees to park onsite increases the cost of choosing to drive to work. This is expected to reduce single-occupancy vehicle commute trips, resulting in decreased VMT, thereby reducing associated GHG emissions.
3D	**Provide Bike Parking**	The strategy will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision of secure bike parking and related facilities encourages commuting by bicycle, thereby reduction VMT and GHG emissions.
Estimated Maximum Trip Reduction		**33.0%**

APPENDIX

MOBILITY MANAGEMENT VMT REDUCTION CALCULATOR TOOL

Return to Main

Project Information

Project Name (optional):	Emeryville Public Market
Project Address (optional):	5959 Shellmound Street
Project Type (optional):	Mixed Use
	Office
Analysis Location (TAZ # from website):	118
Jurisdiction (auto calculated from TAZ #):	Emeryville

TDM Strategy Results

TDM ID	Strategy Name	Strategy Type	VMT Type	Change in VMT	Exclusions
1A	Voluntary Employer Commute Program	Project/Site	Employee commute trips	-4.0%	
1B	Mandatory Employer Commute Program	Project/Site	Employee commute trips		
1C	Employer Carpool Program	Project/Site	Employee commute trips		
1D1	Implement Subsidized or Discounted Transit Program (for Employees)	Project/Site	Employee commute trips		
1D2	Implement Subsidized or Discounted Transit Program (for Residents)	Project/Site	Project-generated trips		
1E	Employer Vanpool Program	Project/Site	Employee commute trips		
1F	Employer Telework Program	Project/Site	Employee commute trips	-14.7%	Excluded from total
2A	Transit Oriented Development	Project/Site	Project-generated trips	-31.0%	
2B1	Increase Residential Density	Project/Site	Project-generated trips		
2B2	Increase Employment Density	Project/Site	Employee commute trips	-12.8%	
2C	Integrate Affordable and Below Market Rate Housing	Neighborhood/City	All neighborhood/city trips		
3A1	Price Workplace Parking	Project/Site	Employee commute trips	-20.0%	
3A2	Unbundle Parking Costs from Property Cost	Project/Site	Project-generated trips		
3B	Parking Cash Out	Project/Site	Employee commute trips		
3C	Limit Parking Supply	Project/Site	Project-generated trips		
3D	Provide Bike Parking	Project/Site	Project-generated trips	-3.7%	
4A	Street Connectivity Improvement	Neighborhood/City	All neighborhood/city trips		
4B	Pedestrian Facility Improvement	Neighborhood/City	All neighborhood/city trips		
4C	Bikeway Network Expansion	Neighborhood/City	All neighborhood/city trips		
4D	Bike Facility Improvement	Neighborhood/City	Trips on roadway with bikeway addition		
4E	Bikeshare	Neighborhood/City	All neighborhood/city trips		
4F	Carshare	Neighborhood/City	All neighborhood/city trips		
4G	Community-Based Travel Planning	Neighborhood/City	All neighborhood/city trips		
4H	Provide Neighborhood Traffic Calming Measures	Neighborhood/City	All neighborhood/city trips		
5A	Transit Service Expansion	Neighborhood/City	All neighborhood/city trips		
5B	Transit Frequency Improvements	Neighborhood/City	All neighborhood/city trips		
5C	Transit-Supportive Treatments	Neighborhood/City	All neighborhood/city trips		
5D	Transit Fare Reduction	Neighborhood/City	All neighborhood/city trips		
5E	Microtransit NEV Shuttle	Neighborhood/City	All neighborhood/city trips		

Employee Commute Trips - Total Change in VMT	-33.0%
Project-Generated Trips - Total Change in VMT	-33.5%
All Neighborhood/City Trips - Total Change in VMT	0.0%
Trips on Roadway Affected by Bikeway Addition - Total Change in VMT	0.0%


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BIKE PARKING
[2ND & 3RD FLOORS]