February 25, 2022

Mr. Charly Ray
Applied Planning, Inc.
11762 De Palma Road, 1-C 310
Corona, CA 92883

SUBJECT: PACIFIC POINTE WEST VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Mr. Charly Ray:

The following Vehicle Miles Traveled (VMT) Analysis has been prepared for the proposed Pacific Pointe West industrial development (**Project**), which is located on the southeast corner of Paramount Boulevard and Cover Street in the City of Lakewood.

PROJECT OVERVIEW

It is our understanding that the Project is to consist of up to 37,500 square feet of high-cube cold storage warehouse use (10 percent of the total square footage), 18,750 square feet of general light industrial use (5 percent of the total square footage), and 318,750 square feet of warehousing use (85 percent of the total square footage) for a total of 375,000 square feet within two buildings (Buildings 26 and 27). (See Attachment A)

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**). (1) Through consultation with the City of Lakewood staff and based on the proximity to the City of Long Beach, it is recommended that this analysis utilizes the adopted City of Long Beach Traffic Impact Analysis Guidelines (June of 2020) (**City Guidelines**) (2). The City of Long Beach Guidelines have been utilized to prepare VMT analysis.

PROJECT SCREENING EVALUATION

The City Guidelines provides details on appropriate screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed analysis. Land development projects that have one or more of the following attributes may be presumed to create a less than significant impact:

- Small Projects - Low Trip Generator
- Low VMT Area
- Transit Priority Area
- Other Land Uses

A land use project need only satisfy one of the above screening criteria to be considered less than significant.

SMALL PROJECTS - LOW TRIP GENERATOR

The City Guidelines identifies small projects that generate fewer than 500 ADT would generate GHG emissions below applicable thresholds and would therefore be considered less than significant. The trip generation rates used for this analysis are based on the trip generation statistics published in the Institute of Transportation Engineer (ITE) Trip Generation Manual (11th Edition, 2021) (3). The Project is estimated to generate a total 772 vehicle trip ends per day, which exceeds the identified City threshold. (See Attachment B)

Low Trip Generator criteria is not met.

LOW VMT AREAS

City Guidelines state that residential and office projects located within a low VMT-generating area, as identified in the map-based screening, may be presumed to have a less than significant impact. The City Guidelines provide a map of VMT per employee throughout Long Beach. The data contained within the map was obtained from the 2016 SCAG RTP/SCS travel demand model and are compared to the regional average VMT per employee for Los Angeles County to identify VMT-efficient areas for future office development where average VMT per employee is lower than the County average by 15 percent or more and projects with similar characteristics would be presumed to have a less than significant transportation impact. Yellow areas indicate a VMT per employee between 15 percent below and 15 percent above the County average, where project design features or mitigation may result in a less than significant impact. Red areas indicate a VMT per employee higher than 15 percent above the County average. In these areas, VMT impacts are likely to remain significant. The proposed Project's located in the City of Lakewood and the screening maps available for the City of Long Beach does not identify low areas of

VMT outside of its jurisdiction. Therefore, an appropriate determination of Low Area VMT cannot be made for this Project.

Low VMT Area Screening criteria is not met.

TRANSIT PRIORITY AREA

Consistent with guidance identified in the Technical Advisory, City Guidelines note that projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The Project site is located along a high-quality transit corridor. However, the Project as designed does not meet the secondary requirement of having a FAR exceeding 0.75. (See Attachment C)

TPA Screening criteria is not met.

OTHER LAND USES

The City Guidelines state that projects consisting of the following specific uses are eligible for screening.

Retail development that is 50,000 square feet (sf) or less is likely to be local-serving and tends to shorten trips within Long Beach. Therefore, any retail project 50,000 sf or less will be presumed to have a less than significant transportation impact related to CEQA Guidelines Section 15064.3, subdivision (b).

Affordable residential development in areas with inadequate affordable housing has the potential to shorten commute distances and/or increase the proportion of residents using transit, which would reduce VMT.

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").
[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

The development of institutional/government and public service uses that support community health, safety, and welfare will be presumed to have a less than significant transportation impact related to CEQA Guidelines Section 15064.3, subdivision (b). These facilities (e.g., police stations, fire stations, community centers, refuse stations) are already part of the community and, as public service uses, their VMT is accounted for in the existing regional average. Project does not intend to develop any of the other uses listed above.

Other Land Uses Screening criteria is not met.

Based on a more detailed review of the applicable VMT screening methods, it was determined that the Project is not eligible for screening and VMT analysis should be performed.

MODERATE (SIZED) PROJECT VMT ANALYSIS

VMT METHODOLOGY

As stated in section 2.3.3 City Guidelines identifies moderately sized project VMT analysis generating between 500 and 1,000 ADT or those with one predominant use, the determination of project VMT may be identified manually as the product of the daily trip generation (i.e., land use density/intensity multiplied by agency-approved trip generation rate) and trip length in miles for that specific land use. City Guidelines also identify CalEEMod as an appropriate tool to obtain project trip lengths. Therefore, the Project vehicle trips will be retrieved from the ITE Trip Generation and Project trip lengths will be obtained from CalEEMod output files (See Attachment D) from the Greenhouse Gas Analysis prepared by Urban Crossroads (January 2022).

VMT METRIC AND SIGNIFICANCE THRESHOLD

The City Guidelines state for land use projects shall use the VMT metric of Total VMT as the appropriate measure in a VMT analysis. The City Guidelines have identified following recommended threshold:

- **Industrial** - No net change in total VMT if consistent with the General Plan Land Use Element; 15 percent below the existing regional average VMT per employee (21.2) if inconsistent with the General Plan Land Use Element.

Within this analysis, the “15 percent below the existing regional average VMT per employee” threshold has been applied, as it more accurately evaluates potential VMT impacts of the Project. In this regard, it is specifically noted that the “no net change in total VMT if consistent with the General Plan Land Use Element” refers to the City of Long Beach General Plan Land Use Plan Element, and is therefore not directly applicable to the Project considered herein, which is located in the City of Lakewood. Moreover, the “15 percent below the existing regional average VMT per employee” threshold is consistent with and supports broad-based regional VMT analysis methodologies and protocols articulated in the Technical Advisory. In this regard, the Technical Advisory recommends a threshold for [residential and office]

development that is 15 percent below existing conditions, measured against a regional average. The "15 percent below the existing regional average VMT per employee threshold" applied here directly corresponds to the OPR Technical Advisory recommendations. Additionally, CalEEMod does not provide a trip length change in the "with project" as compared to the "no project" conditions.

PROJECT EMPLOYEES

In order to evaluate Project VMT, standard land use information must first be converted into Project employees as shown in Table 1. It should be noted that the employment estimates are consistent with the employment density factors identified in the Southern California Association of Governments (SCAG) Employment Density Study (October 2001) (4).

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Quantity (SF)	Employment Density Factor[3]	Estimated Employees
Warehouse	356,250	1 employee per 1,094 SF	326
General Light Industrial	18,750	1 employee per 1,040 SF	18

PROJECT VMT CALCULATION

Trip lengths obtained from the GHG Analysis shows that the Project is estimated to have a passenger car trip length of 16.60 (See Attachment D). As identified in the Technical Advisory, for employment generating projects the focus should be on home-based work trips[4] (HBW). CalEEMod applies 59% of the total trips to be dedicated to HBW trips. The Project's ITE trip generation is estimated to have an average daily passenger car trip-ends per day of 504. Resulting in the Project's HBW trips to be estimated at 298 HBW passenger vehicle trips. The product of the trip length and daily vehicle trips results in a VMT value of 4,936, as shown in Table 2.

TABLE 2: PROJECT VMT

	Project
CalEEMod Trip Length	16.6 Miles
Passenger Cars Home-Based-Work Trips	298
VMT	4,936

For ease of comparison, the Project's VMT is normalized by dividing the Project's employees. Resulting in a 14.35 VMT per employee.

[3] SCAG Employment Density Study; Table 4-A
[4] Technical Advisory; Page 5

TABLE 3: PROJECT VMT PER EMPLOYEE

	Project
Employment	344
VMT	4,936
VMT / Employee	14.35

PROJECT COMPARISON TO SIGNIFICANCE THRESHOLD

Table 3 illustrates the comparison between Project generated VMT per employee to the City's adopted threshold of 15% below the regional average of 21.2 VMT per employee or 18.02 VMT per employee. As shown, the Project would not exceed the City's adopted significance threshold. Though, the Project is consistent with the General Plan land use assumptions, the results of the analysis provides more conservative results in accordance with a project that is not consistent with the general plan land use assumptions. The Project VMT impact is therefore considered less than significant.

TABLE 3: PROJECT VMT PER EMPLOYEE COMPARISON

Impact Threshold	18.02
Project	14.35
Percent Change	-20.37%
Potentially Significant?	No

CONCLUSION

Based on our review of applicable VMT screening thresholds, the Project was found to not meet any of the available VMT screening criteria. A moderate (sized) project VMT analysis was performed. The findings show that the Project would not exceed the City's impact threshold and the Project would therefore be considered less than significant.

If you have any questions, please contact me directly at aso@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.

Alexander So
Senior Analyst

REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **City of Long Beach.** *Traffic Impact Analysis Guidelines.* June 2020.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **Southern California Association of Governments.** *Employment Density Study.* October 2001.

ATTACHMENT A
PRELIMINARY SITE PLAN


Paramount Blvd
Cover St
Union Pacific RR
Union Pacific RR
Cover St
Cov
Driveway 1
(Passenger Cars and Trucks)
BLDG 26 - 36' CUB
549,274 SF (12.61 AC)
40.4 % FAR
210k + 12k = 222k
Ratio = 1.50
R = 333 stalls (1.5/1000)
P = 400 stalls
767'
285'-5"
355'
12k OFF.
34 DH
2 GR
155'
40'
Driveway 2
(Passenger Cars and Trucks)
Driveway 3
(Passenger Cars Only)
BLDG 27
42.5% FAR
143k + 6k = 149K
Ratio = 1.64
R = 224 stalls (1.5/1000)
P = 244 stalls
596'
226'-7"
12k OFF.
25 DH
2 GR
135'
40'
40'
Driveway 4
(Passenger Cars and Trucks)
N

ATTACHMENT B:
PROJECT TRIP GENERATION

TABLE 1: TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
General Light Industrial[3]	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.642	0.088	0.730	0.090	0.550	0.640	4.620
2-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.042
3-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.052
4+-Axle Trucks			0.004	0.002	0.006	0.003	0.003	0.006	0.157
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.065	0.090	1.665
2-Axle Trucks			0.003	0.007	0.010	0.005	0.005	0.010	0.260
3-Axle Trucks			0.001	0.002	0.003	0.002	0.001	0.003	0.083
4+-Axle Trucks			0.005	0.011	0.016	0.008	0.008	0.016	0.113

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

[2] TSF = thousand square feet

[3] Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.
Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

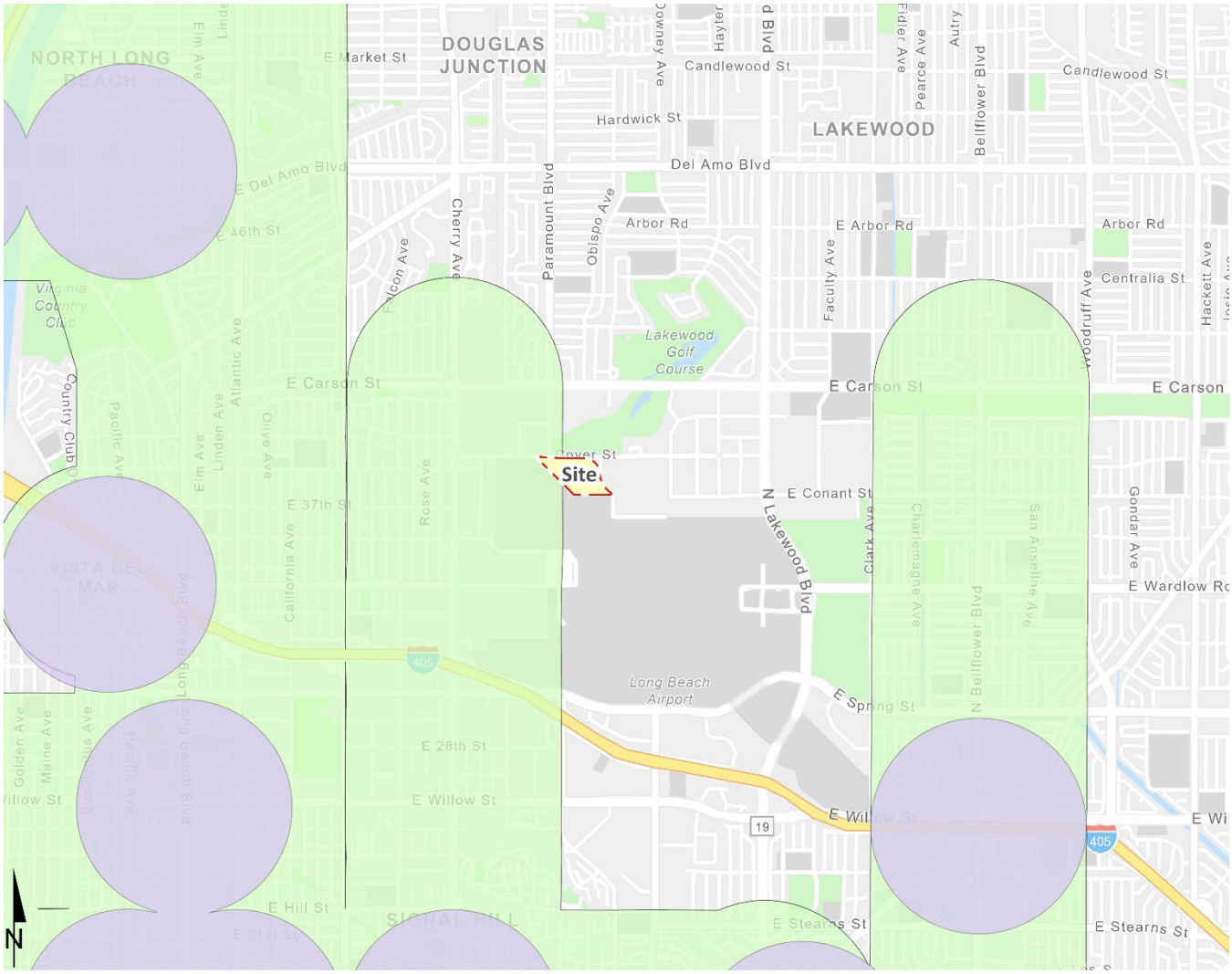
TABLE 3: PROPOSED PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Actual Vehicles:								
General Light Industrial (5%)	18.750 TSF							
Passenger Cars:		12	2	14	2	10	12	88
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	2
4+-axle Trucks:		0	0	0	0	0	0	4
Total Truck Trips (Actual Vehicles):		0	0	0	0	0	0	8
Total Trips (Actual Vehicles)[2]		**12**	**2**	**14**	**2**	**10**	**12**	**96**
Warehousing (85%)	318.750 TSF							
Passenger Cars:		37	11	48	13	34	47	354
2-axle Trucks:		1	0	1	1	1	2	32
3-axle Trucks:		1	1	2	1	1	2	40
4+-axle Trucks:		2	2	4	3	3	6	120
Total Truck Trips (Actual Vehicles):		4	3	7	5	5	10	192
Total Trips (Actual Vehicles)[2]		**41**	**14**	**55**	**18**	**39**	**57**	**546**
High-Cube Cold Storage Warehouse (10%)	37.500 TSF							
Passenger Cars:		2	1	3	1	2	3	62
2-axle Trucks:		0	0	0	0	0	0	10
3-axle Trucks:		0	0	0	0	0	0	4
4+-axle Trucks:		0	0	0	0	0	0	4
Total Truck Trips (Actual Vehicles):		0	0	0	0	0	0	18
Total Trips (Actual Vehicles)[2]		**2**	**1**	**3**	**1**	**2**	**3**	**80**
Project Total Passenger Cars		51	14	65	16	46	62	504
Project Total Trucks (Actual Vehicles)		4	3	7	5	5	10	218
Project Total (Actual Vehicles)		**55**	**17**	**72**	**21**	**51**	**72**	**722**

[1] TSF = thousand square feet

[2] Total Trips = Passenger Cars + Truck Trips.

ATTACHMENT C:
TRANSIT PRIORITY AREA MAP


NORTH LONG BEACH
DOUGLAS JUNCTION
LAKEWOOD
Site
E Market St
Candlewood St
Hardwick St
Del Amo Blvd
E Del Amo Blvd
E 46th St
Arbor Rd
E Arbor Rd
Centralia St
Virginia Country Club
Lakewood Golf Course
E Carson St
Country Club Dr
Pacific Ave
Elm Ave
Linden Ave
Atlantic Ave
Olive Ave
Rose Ave
E 37th St
N Lakewood Blvd
E Conant St
Clark Ave
Charlemagne Ave
San Anselmo Ave
Gondar Ave
E Wardlow Rd
VISTA DEL MAR
California Ave
Long Beach Blvd
405
Long Beach Airport
E Spring St
N Bellflower Blvd
E 28th St
E Willow St
19
E Hill St
SIGNAL HILL
E Stearns St
Golden Ave
Maine Ave
Cherry Ave
Paramount Blvd
Obispo Ave
Falcon Ave
Faculty Ave
Woodruff Ave
Hackett Ave
Bellflower Blvd
Pearce Ave
Autry
Hayter
Downey Ave
N
Transit Priority Area (TPA) in the SCAG Region for plan year 2040
High Quality Transit Areas(HQTA) in the SCAG Region for plan year (2045)

ATTACHMENT D:
CALEEMOD OUTPUT DATA

Pacific Pointe West (General Light Industrial Operations) - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0439	0.1274	0.4967	1.4200e-003	0.1231	1.1900e-003	0.1243	0.0330	1.1200e-003	0.0341	0.0000	133.1871	133.1871	7.0400e-003	9.4500e-003	136.1799
Unmitigated	0.0439	0.1274	0.4967	1.4200e-003	0.1231	1.1900e-003	0.1243	0.0330	1.1200e-003	0.0341	0.0000	133.1871	133.1871	7.0400e-003	9.4500e-003	136.1799

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	87.94	7.69	3.00	284,912	284,912
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	8.06	0.75	0.19	38,825	38,825
Total	96.00	8.44	3.19	323,737	323,737

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
User Defined Industrial	18.10	8.40	6.90	100.00	0.00	0.00	100	0	0

Pacific Pointe West (High-Cube Cold Storage Operations) - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0339	0.1494	0.3775	1.4800e-003	0.1103	1.3300e-003	0.1116	0.0300	1.2600e-003	0.0313	0.0000	139.0511	139.0511	5.4700e-003	0.0109	142.4431
Unmitigated	0.0339	0.1494	0.3775	1.4800e-003	0.1103	1.3300e-003	0.1116	0.0300	1.2600e-003	0.0313	0.0000	139.0511	139.0511	5.4700e-003	0.0109	142.4431

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Refrigerated Warehouse-No Rail	61.88	4.50	1.88	193,316	193,316
User Defined Industrial	18.00	2.63	1.13	88,238	88,238
Total	79.88	7.13	3.00	281,554	281,554

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Refrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	18.10	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Refrigerated Warehouse-No Rail	0.575400	0.066400	0.198000	0.134400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.025800	0.000000	0.000000

Pacific Pointe West (Warehousing Operations) - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2131	2.4785	2.5386	0.0152	0.8166	0.0167	0.8333	0.2233	0.0159	0.2392	0.0000	1,470.8081	1,470.8081	0.0679	0.1742	1,524.4127
Unmitigated	0.2131	2.4785	2.5386	0.0152	0.8166	0.0167	0.8333	0.2233	0.0159	0.2392	0.0000	1,470.8081	1,470.8081	0.0679	0.1742	1,524.4127

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	353.81	31.88	12.75	1,110,422	1,110,422
User Defined Industrial	191.25	15.94	6.38	921,023	921,023
Total	545.06	47.81	19.13	2,031,445	2,031,445

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
User Defined Industrial	18.10	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.575400	0.066400	0.198000	0.134400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.025800	0.000000	0.000000