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# **Appendix G-1**

## Traffic Scoping Report



January 13, 2022

Mr. Michael Diaz  
City of Montclair  
5111 Benito Street  
Montclair, CA 91763

**SUBJECT: 5006 & 5010 MISSION BOULEVARD WAREHOUSE SCOPING AGREEMENT**

Dear Mr. Michael Diaz:

We are pleased to submit the following scoping agreement for the proposed 5006 & 5010 Mission Boulevard Warehouse (referred to as “Project”), which is located in the City of Montclair. It is our understanding that the Project is to consist of a 114,875-square foot warehouse use in a single building. A preliminary site plan is shown on Exhibit 1.

## **PROJECT DESCRIPTION**

The Project is proposed to construct a new 115,350 square foot warehouse use in a single building. There are two driveways proposed on Mission Boulevard, both 40-feet in width. Both driveways will provide access to both passenger cars and trucks. Note that there is an existing raised landscaped median on Mission Boulevard that will restrict access at these driveways to right-in/right-out only. The Project’s anticipated Opening Year is 2023.

## **PROJECT TRIP GENERATION**

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

Trip generation rates used to estimate Project traffic are shown in Table 1 for actual vehicles and passenger car equivalent (PCE). Note that in an effort to derive a conservative trip generation estimate for the proposed Project, the trip generation calculations are based on 34,605 square feet of General Light Industrial (ITE Land Use Code 110) and 80,745 square feet of Warehousing (ITE Land Use Code 150) land uses (total of 115,350 square feet). The trip generation rates used for this analysis are based upon information collected by the ITE as provided in their latest Trip Generation Manual, 11<sup>th</sup> Edition, 2021.

**TABLE 1: TRIP GENERATION RATES**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Actual Vehicle Trip Generation Rates</b>									
General Light Industrial <sup>3</sup>	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 <sup>3</sup>	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
<b>Passenger Car Equivalent (PCE) Trip Generation Rates<sup>4</sup></b>									
General Light Industrial <sup>3</sup>	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 (PCE = 1.5)			0.002	0.001	0.003	0.002	0.001	0.003	0.063
3-Axle Trucks (PCE = 2.0)			0.002	0.002	0.004	0.002	0.002	0.004	0.104
4+-Axle Trucks (PCE = 3.0)			0.012	0.007	0.019	0.009	0.010	0.019	0.470
Warehousing <sup>3</sup>	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 (PCE = 1.5)			0.003	0.002	0.005	0.005	0.003	0.008	0.150
3-Axle Trucks (PCE = 2.0)			0.004	0.004	0.008	0.006	0.006	0.012	0.248
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127

<sup>1</sup> Trip Generation and Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> 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.

<sup>4</sup> PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

For purposes of this scoping agreement, the following ITE land use codes and vehicle mixes will be utilized for the Project:

- ITE land use code 110 (General Light Industrial) has been used to derive site specific trip generation estimates for up to 34,605 square feet of the proposed Project. A light industrial facility is a free-standing facility devoted to a single use that has an emphasis on activities other than manufacturing. Typically, there is minimum office space. The vehicle mix has also been obtained from the ITE’s Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 80,745 square feet of the proposed Project. A warehouse is primarily devoted to the storage of materials but may also include office and maintenance areas. The vehicle mix has also been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

As noted on Table 1, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. In order to accurately reflect the impact that heavy trucks would have on the street system, Project trips have been further broken down between passenger cars and trucks for each of the peak hours and weekday daily trip generation. The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. For the purposes of this analysis, the truck mix has been obtained from the South Coast Air Quality Management District (SCAQMD) Warehouse Truck Trip Study Data Results and Usage (2014) for non-cold storage warehouse buildings. Lastly, PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in Appendix B of the San Bernardino County CMP 2016 Update. Trip generation rates for actual vehicles and with PCE factors are shown on Table 2 and Table 3, respectively.

As shown on Table 3, the proposed Project is anticipated to generate a net total of 396 two-way PCE trips per day, 40 PCE AM peak hour trips and 39 PCE PM peak hour trips. In comparison, the proposed Project is anticipated to generate a total of 308 two-way trips per day with 38 AM peak hour trips and 36 PM peak hour trips in actual vehicles (see Table 2).

**TABLE 2: PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)**

Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Actual Vehicles:</b>								
General Light Industrial	34.605 TSF							
Passenger Cars:		22	3	25	3	19	22	160
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	6
Total Truck Trips (Actual Vehicles):		0	0	0	0	0	0	10
<b>Total Trips (Actual Vehicles)<sup>2</sup></b>		<b>22</b>	<b>3</b>	<b>25</b>	<b>3</b>	<b>19</b>	<b>22</b>	<b>170</b>
Warehousing	80.745 TSF							
Passenger Cars:		9	3	12	3	9	12	90
2-axle Trucks:		0	0	0	0	0	0	8
3-axle Trucks:		0	0	0	0	0	0	10
4+-axle Trucks:		1	0	1	1	1	2	30
Total Truck Trips (Actual Vehicles):		1	0	1	1	1	2	48
<b>Total Trips (Actual Vehicles)<sup>2</sup></b>		<b>10</b>	<b>3</b>	<b>13</b>	<b>4</b>	<b>10</b>	<b>14</b>	<b>138</b>
Total Passenger Cars		31	6	37	6	28	34	250
Total Trucks		1	0	1	1	1	2	58
<b>Project Total (Actual Vehicles)</b>		<b>32</b>	<b>6</b>	<b>38</b>	<b>7</b>	<b>29</b>	<b>36</b>	<b>308</b>

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> Total Trips = Passenger Cars + Truck Trips.

**TABLE 3: PROJECT TRIP GENERATION SUMMARY (PCE)**

Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Passenger Car Equivalent (PCE):</b>								
General Light Industrial	34.605 TSF							
Passenger Cars:		22	3	25	3	19	22	160
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	4
4+-axle Trucks:		0	0	1	0	0	1	16
Total Truck Trips (PCE):		0	0	0	0	0	0	22
<b>Total Trips (PCE)<sup>2</sup></b>		<b>22</b>	<b>3</b>	<b>25</b>	<b>3</b>	<b>19</b>	<b>22</b>	<b>182</b>
Warehousing	80.745 TSF							
Passenger Cars:		9	3	12	3	9	12	90
2-axle Trucks:		0	0	0	0	0	0	12
3-axle Trucks:		0	0	0	0	1	1	20
4+-axle Trucks:		2	1	3	2	2	4	92
Total Truck Trips (PCE):		2	1	3	2	3	5	124
<b>Total Trips (PCE)<sup>2</sup></b>		<b>11</b>	<b>4</b>	<b>15</b>	<b>5</b>	<b>12</b>	<b>17</b>	<b>214</b>
Total Passenger Cars		31	6	37	6	28	34	250
Total Trucks		2	1	3	2	3	5	146
<b>Project Total (PCE)</b>		<b>33</b>	<b>7</b>	<b>40</b>	<b>8</b>	<b>31</b>	<b>39</b>	<b>396</b>

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> Total Trips = Passenger Cars + Truck Trips.

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## CONCLUSIONS

As the City of Montclair does not have specific traffic study guidelines, this analysis has been prepared in accordance with the County of San Bernardino Transportation Impact Study Guidelines (dated July 9, 2019, referred to as "Traffic Study Guidelines"). It is our understanding that the City accepts the County of San Bernardino traffic study guidelines and outlined methodologies. The County's traffic study guidelines indicate that if a project generates fewer than 100 peak hour trips and contributes less than 50 peak hour trips to any intersection, a formal traffic study is typically not required as off-site improvements are assumed to be nominal for low traffic generating uses.

As discussed previously, the proposed Project is anticipated to generate approximately 40 PCE trips during the AM and 39 PCE trips during the PM peak hours. Based on County of San Bernardino Traffic Study Guidelines, a traffic analysis, beyond this trip generation evaluation, is not required as the Project is anticipated to generate less than 100 peak hour trips and would contribute less than 50 peak hour trips to any off-site study area intersection.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE  
Associate Principal

