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E. STATE STREET WAREHOUSE (TPM NO. 20531) VEHICLE MILES TRAVELED (VMT) ANALYSIS

Ms. Tracy Zinn,

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the E. State Street Warehouse (TPM No. 20531) development (**Project**) generally located at the northeast corner of Campus Avenue and State Street in the City of Ontario (See Attachment A).

PROJECT OVERVIEW

It is our understanding that the project is to consist of a 336,390 square foot warehouse.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require 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). Based on the Technical Advisory, the City of Ontario has developed and adopted their own VMT methodologies and thresholds, which were adopted by City Council in June 2020 (**City Guidelines**) (2). This VMT analysis has been developed based on the adopted City Guidelines.

VMT SCREENING

City Guidelines identify Projects that meet certain VMT screening criteria may be presumed to result in a less than significant transportation impact. It is our understanding the City of Ontario utilizes the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool (**Screening Tool**). The Screening Tool allows users to select an assessor's parcel number (APN) to determine if a project's location meets one or more of the screening thresholds for land use projects identified in the City Guidelines. The City Guidelines lists the following VMT screening criteria:

- Transit Priority Area (TPA) Screening

- Low VMT Area Screening
- Project Type Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

STEP 1: TPA SCREENING

Consistent with guidance identified in the City Guidelines, 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 Screening Tool was utilized to locate the Project site and its proximity to a TPA. Results as shown in Attachment B, identifies the Project Site is located within ½ mile of an existing major transit stop, or along a high-quality transit corridor. However, the Project does not meet the secondary criteria.

TPA screening criteria is not met.

STEP 2: LOW VMT AREA SCREENING

As noted in the Technical Advisory, "Residential and office projects that locate in areas with low VMT and that incorporate similar features (density, mix of uses, and transit accessibility) will tend to exhibit similarly low VMT."

The City Guidelines state that projects may be presumed to have a less than significant VMT impact if located in an already low VMT generating traffic analysis zones (TAZs) that generates a VMT per service population (SP) that is 15% below County of San Bernardino Baseline VMT per SP. The Screening Tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual TAZ's within the region. The Project's physical location based on parcel number is selected in the Screening Tool to determine the TAZ

[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.").

in which the Project will reside. The Project's TAZs VMT per service population was compared to 15% below County of San Bernardino Baseline VMT per SP. The parcel containing the proposed Project was selected and the Screening Tool was run for production-attraction (PA) VMT per service population, the Project is not located within a low VMT generating zone (See Attachment B).

Low VMT Area screening criteria is not met.

STEP 3: PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, medical/dental office buildings, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The Project as intended does not contain any local serving uses.

Additionally, the City Guidelines state that small projects generating fewer than 110 daily vehicle trips or less may be presumed to have a less than significant impact, subject to discretionary approval by the City. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021 (3). The Project is anticipated to generate 698 daily vehicle trip-ends per day. Therefore, the Project generates daily vehicle trips exceeding the 110 daily vehicle trip threshold (See Attachment C).

Project Type screening criteria is not met.

As the Project was not found to meet any of the aforementioned VMT screening criteria, a project level VMT analysis is prepared to assess the Project's potential impact to VMT.

VMT ANALYSIS

VMT MODELING

The City Guidelines identifies SBTAM as the appropriate tool for conducting VMT analysis for land use projects in the City of Ontario, as it considers interaction between different land uses based on socio-economic data, such as population, households, and employment. The calculation of VMT for land use projects is based on the total number of trips generated and the average trip length of each vehicle. SBTAM is also consistent with the model used to develop the City's VMT impact thresholds listed by the City Guidelines. Therefore, the vehicle trips and average daily trip length for project-related vehicle trips are model derived from SBTAM.

VMT METRIC AND SIGNIFICANCE THRESHOLD

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

- A significant impact would occur if the project VMT per Service Population exceeds the Citywide average for Service Population under General Plan Buildout Conditions.

SBCTA provides VMT calculations for each of its member agencies and for the City of Ontario's average for Service Population under General Plan Buildout Conditions. Urban Crossroads has obtained this published data from SBCTA, which for the **City of Ontario's General Plan Buildout is 36.2 VMT per SP**.

PROJECT LAND USE CONVERSION

In order to evaluate Project VMT, standard land use information must first be converted into a SBTAM compatible dataset. The SBTAM model utilizes socio-economic data (SED) (e.g., population, households, employment, etc.) instead of land use information for the purposes of vehicle trip estimation. Project land use information such as building square footage must first be converted to SED for input into SBTAM. Adjustments in SED have been made to the appropriate TAZ within the SBTAM model to reflect the Project's proposed land uses (i.e., warehouse). Table 1 summarizes the employment estimates for the Project. 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	336,390	1 employee per 1,195 SF	282

PROJECT TOTAL VMT CALCULATION

Consistent with City Guidelines and standard VMT calculation methods, total VMT is calculated from SBTAM's OD trip matrices and then divided by a project's SP to derive the VMT efficiency metric VMT per SP.

Table 2 presents project-generated total VMT calculated as the total of passenger car, light-duty, medium-duty, and heavy-duty truck trips. Total trips by vehicle type are then multiplied by the average trip length for each vehicle type. The average trip length for heavy, medium, and light duty trucks used for this analysis was obtained from the South Coast Air Quality Management District (SCAQMD) documents for the implementation of the Facility-Based Mobile Source Measures (FBMSMs) adopted in the 2016 Air Quality Management Plan (AQMP). SCAQMD's "Preliminary Warehouse Emission Calculations" cites 39.9-mile trip length for heavy-duty trucks and 14.2-mile trip length for medium and light duty trucks based on SCAG 2016 Regional Transportation Plan (RTP).

TABLE 2: TOTAL VMT

	Base Year (2016)	Cumulative Year (2040)	Baseline (2022)
Automobile VMT	5,966	5,579	5,869
Truck VMT	4,260	4,260	4,260
Total VMT	10,227	9,840	10,130

[3] SCAG Employment Density Study; Table II-B

Table 3 presents the calculation of VMT per SP, which is simply the product of total VMT for the Project divided by the Project's SP or in this case the number of Project employees.

TABLE 3: PROJECT VMT PER SP

	Base Year (2016)	Cumulative Year (2040)	Baseline (2022)
Employment[4]	282	282	282
VMT	10,227	9,840	10,130
VMT / SP	36.26	34.89	35.92

Table 4 identifies the comparison between Project's baseline and cumulative VMT per SP to the City's impact threshold. As noted previously, the City of Ontario has identified a VMT per SP significance threshold of 36.2, which is the City of Ontario's General Plan Buildout. As the proposed Project's baseline is 2022, the City's impact threshold has been interpolated to reflect the correct baseline year. As shown below, the Project would not exceed the City's VMT per SP impact threshold for both the baseline and cumulative conditions by 1.08% - 3.92%, respectively. The Project VMT impact is therefore considered less than significant.

TABLE 4: PROJECT COMPARISON TO CITY OF ONTARIO VMT PER SP THRESHOLD

	Baseline	Cumulative
Impact Threshold	36.2	36.2
Project	35.92	34.89
Percent Change	-0.77%	-3.61%
Potentially Significant?	No	No

PROJECT'S CUMULATIVE EFFECT ON VMT

The City Guidelines consistent with the Technical Advisory states that cumulative impacts on VMT "… metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impact that utilize plan compliance as a threshold of significance."[5] As the Project is consistent with the RTP/SCS and is found to have a less than significant impact at the project level. The Project is also considered to have a less than significant cumulative impact as well.

[4] Since the Project does not have a residential component, the service population consists entirely of employment.
[5] OPR's Technical Advisory; Page 6

CONCLUSION

In summary, the Project was not found to meet any of the City's described screening criteria and a project level VMT analysis was performed. The Project's VMT analysis findings for project generated VMT per service population was found to not exceed the City's threshold, the Project's impact on VMT is presumed to be less than significant.

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

Respectfully submitted,

URBAN CROSSROADS, INC.

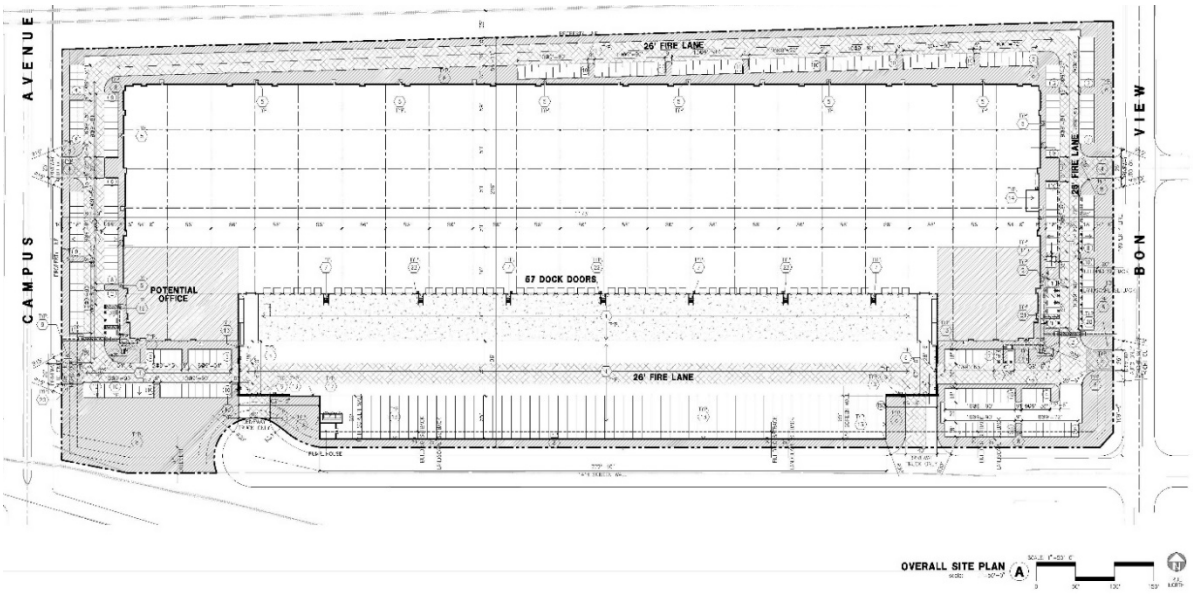
Alexander So
Senior Associate

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 Ontario.** *SB 743 VMT Thresholds.* City of Ontario : s.n., June 2020.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **Southern California Association of Governments.** *Employment Density Study.* October 2001.

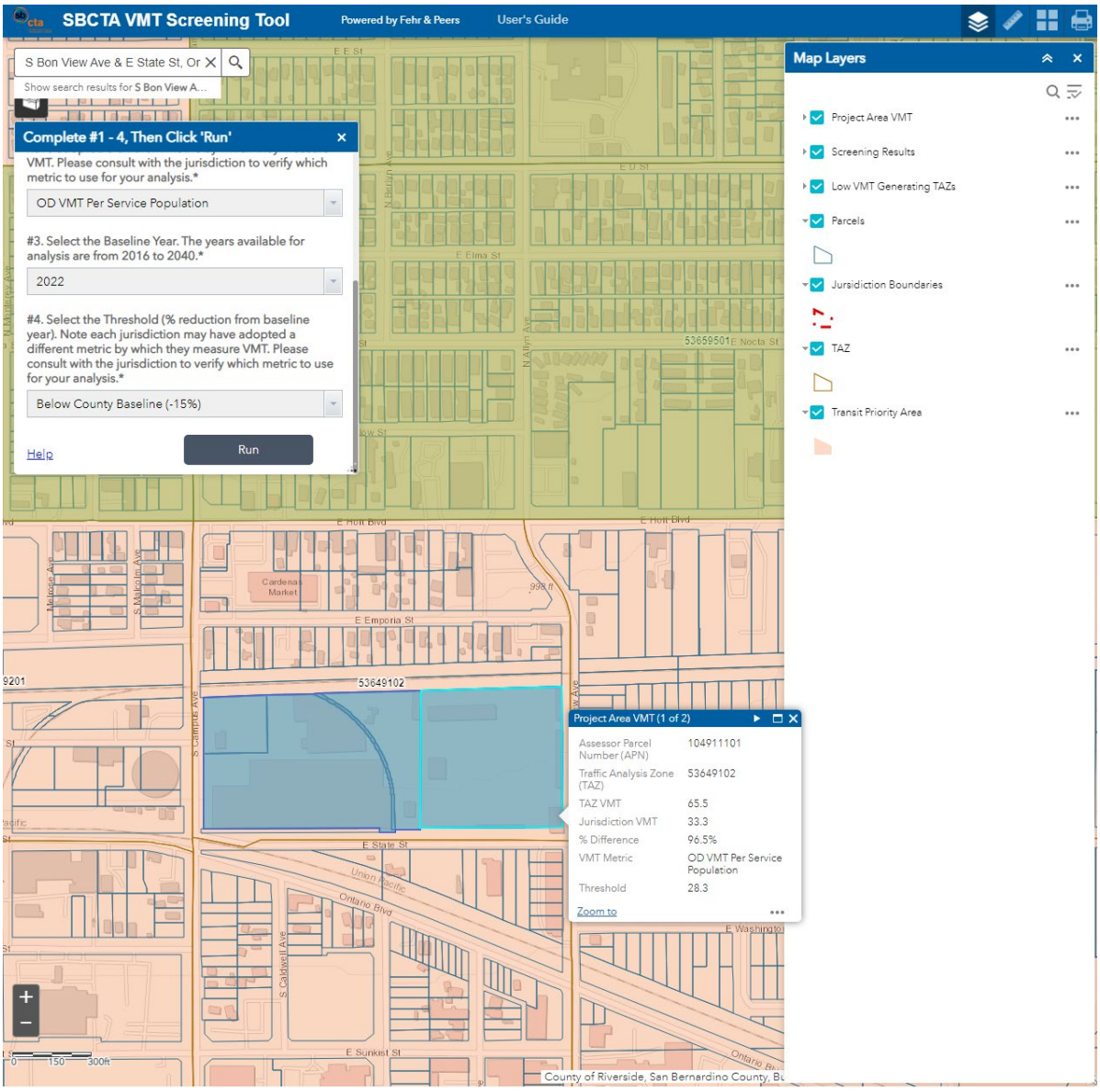
ATTACHMENT A

PRELIMINARY SITE PLAN


CAMPUS AVENUE
BON VIEW
26' FIRE LANE
26' FIRE LANE
POTENTIAL OFFICE
67 DOCK DOORS
26' FIRE LANE
OVERALL SITE PLAN
A

ATTACHMENT B

SBCTA SCREENING TOOL


SBCTA VMT Screening Tool
Powered by Fehr & Peers
User's Guide
S Bon View Ave & E State St, Or
Show search results for S Bon View A...
Complete #1 - 4, Then Click 'Run'
VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
OD VMT Per Service Population
#3. Select the Baseline Year. The years available for analysis are from 2016 to 2040.*
2022
#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Below County Baseline (-15%)
Help
Run
Map Layers
Project Area VMT
Screening Results
Low VMT Generating TAZs
Parcels
Jurisdiction Boundaries
TAZ
Transit Priority Area
Project Area VMT (1 of 2)
Assessor Parcel Number (APN) 104911101
Traffic Analysis Zone (TAZ) 53649102
TAZ VMT 65.5
Jurisdiction VMT 33.3
% Difference 96.5%
VMT Metric OD VMT Per Service Population
Threshold 28.3
Zoom to
53649102
E Holt Blvd
E Emporia St
E State St
E Sunkist St
Ontario Blvd
Union Pacific
Cardenas Market
S Campus Ave
S Caldwell Ave
N Allyn Ave
E Elma St
E D St
E E St
53659501
E Nocta St
County of Riverside, San Bernardino County, Bu

ATTACHMENT C

PROJECT TRIP GENERATION

TABLE 1: TRIP GENERATION RATES

Land Use[1]	Units[2]	ITE LU Code	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 Vehicle Trip Generation Rates:									
High-Cube Fulfillment Center Warehouse	TSF	--[4]	0.089	0.033	0.122	0.050	0.115	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks			0.004	0.004	0.008	0.005	0.006	0.011	0.162
5+-Axle Trucks			0.005	0.006	0.011	0.005	0.005	0.010	0.217
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.076	0.004	0.080	0.019	0.071	0.090	1.370
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	0.407

[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 % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

[4] Vehicle Mix Source: High Cube Warehouse Trip Generation Study, WSP, January 29, 2019.

Inbound and outbound split source: ITE Trip Generation Manual, Eleventh Edition (2021) for ITE Land Use Code 154.

TABLE 2: 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
Trip Generation Summary (Actual Vehicles):									
High-Cube Cold Storage (15%)	50.459	TSF							
Passenger Cars:			4	0	4	1	4	5	70
2-axle Trucks:			0	0	0	0	0	0	14
3-axle Trucks:			0	0	0	0	0	0	4
4+-axle Trucks:			0	1	1	0	0	0	22
Total Trucks:			0	1	1	0	0	0	40
High-Cube Cold Storage Total Trips (Actual Vehicles)[2]			4	1	5	1	4	5	110
High-Cube Fulfillment (85%)	285.932	TSF							
Passenger Cars:			23	7	30	12	30	42	500
2-4 axle Trucks:			1	1	2	1	2	3	46
5+-axle Trucks:			2	2	4	1	2	3	62
Total Trucks:			3	3	6	2	4	6	108
High-Cube Fulfillment Total Trips (Actual Vehicles)[2]			26	10	36	14	34	48	608
Total Trips (Actual Vehicles)[2]			30	11	41	15	38	53	718

[1] TSF = thousand square feet

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