

**DATE:** December 9, 2024  
**TO:** Wei Sun, City of Moreno Valley  
**FROM:** Alex So, Urban Crossroads, Inc.  
**JOB NO:** 14556-07 VMT

## **TOWN CENTER AT MORENO VALLEY VEHICLE MILES TRAVELED (VMT) ANALYSIS**

Urban Crossroads, Inc. has completed the following Vehicle Miles Traveled (VMT) Analysis for the Town Center at Moreno Valley (**Project**), which is located northwest corner of the intersection of Nason Street & Alessandro Boulevard in the City of Moreno Valley.

### **PROJECT OVERVIEW**

The proposed Project is to consist of the following assumed land uses:

- 800 single family detached residential dwelling units
- 4.8 acres of parks
- 58,409 square foot hotel
- 15,000 square feet of business professional office use
- 30,000 square foot civic center
- 20,160 square feet of high turnover (sit-down) restaurant use
- 105,890 square feet of commercial retail use

A preliminary site plan for the proposed Project is shown on Attachment A.

### **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 new 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 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory and the Western Riverside County Council of Governments (**WRCOG**) SB 743 Implementation Pathway Document Package (2), the City of Moreno Valley has developed their own Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (June 18, 2020) (**City Guidelines**) (3). This VMT analysis has been developed based on these City Guidelines.

## **VMT SCREENING**

The City Guidelines state that a project may have a less than significant impact and screen out of requiring a “project level” VMT analysis if it meets at least one of the City’s VMT screening steps. Consistent with screening thresholds identified in the City Guidelines, the Western Riverside Council of Governments (WRCOG) VMT Screening Tool (Screening Tool) was used to aid in the screening process. The City’s adopted VMT screening steps are described below:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

### **STEP 1: TPA SCREENING**

The Technical Advisory and City Guidelines describe those projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing “major transit stop”<sup>1</sup> or an existing stop along a “high-quality transit corridor”<sup>2</sup>) 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.

Based on the Screening Tool results presented in Attachment B, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

**TPA screening is not met.**

### **STEP 2: LOW VMT AREA SCREENING**

The City Guidelines state that, “residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the

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<sup>1</sup> Pub. Resources Code, § 21064.3 (“‘Major transit stop’ means a site containing any of the following: (a) An existing rail or bus rapid transit station. (b) A ferry terminal served by either a bus or rail transit service. (c) 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.”).

<sup>2</sup> Pub. Resources Code, § 21155(b) (“[...] 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. [...]”).

contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.”<sup>3</sup> The Project’s physical location is selected in the Screening Tool to determine project generated VMT as compared to the City’s impact threshold. The parcels containing the proposed Project were selected within the Screening Tool. Based on the Screening Tool results, the Project resides within TAZ 1236 and was shown to generate 15.7 VMT per employee (for employment generating uses of the Project) and 15.1 VMT per capita (for the residential component of the Project), whereas the City’s impact threshold (i.e., City of Moreno Valley net VMT per employee and VMT per capita) is 16.3 VMT per employee and 13.4 VMT per capita (resident) respectively (See Attachment B). The Project’s employment generating component is located in a low VMT area and the Project’s residential component is not located in a low VMT area. However, the Project’s TAZ was further evaluated in the RIVCOM traffic model, and the proposed employment uses were not found to be consistent with existing socio-economic data found in the Project’s TAZ. The Project is therefore not eligible for low VMT area screening.

**Low VMT area screening is not met.**

### **STEP 3: PROJECT TYPE SCREENING**

The City Guidelines also provides a list of development potentials for typical uses. For office uses, the City Guidelines state 41,000 square feet or below would generate less than 400 daily vehicle trips. The project intends to develop 15,000 square feet of professional business office uses and is therefore below the typical development threshold and meets this screening criteria.

Additionally, local serving retail buildings with less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The Project intends to develop a civic center, which is an essential service that will serve the local community. The Project’s commercial retail and restaurant uses are expected to be below the 50,000 square feet per individual building threshold. The hotel component of the Project is also considered locally serving as it provides lodging for visitors that seek services and activities within the local area. In other words, the hotel component is not a resort nor a destination hotel. Consistent with the City Guidelines these components of the Project meet the screening criteria.

**Project type screening is met for the local essential uses, retail, office, and hotel components of the Project only.**

Based on a more detailed review of the applicable VMT screening steps, it is determined that the Project’s residential component is not eligible for screening and a VMT analysis will be required for this component of the Project, consistent with City Guidelines.

### **TRAFFIC MODELING METHODOLOGY**

City Guidelines identifies the Riverside County Model (RIVCOM), as the appropriate tool for conducting VMT analysis for land use projects in the City of Moreno Valley. RIVCOM was

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<sup>3</sup> City Guidelines; page 23.

developed by the Western Riverside Council of Governments (WRCOG) and initially released in June 2021. The most current release of RIVCOM is version 4.0.1, released in February 2024, representing the most current sub-regional transportation modeling tool for Western Riverside County. RIVCOM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment.

## **VMT ANALYSIS METHODOLOGY**

For the purposes of this analysis, Project-generated VMT has been estimated using the Production/Attraction (PA) method. Consistent with City Guidelines, VMT has been presented as home-based (HB) VMT per capita. HB VMT per capita is an efficiency metric representing VMT generated exclusively from HB trips on a typical weekday per resident. City Guidelines note that VMT per capita should be used to evaluate residential projects (i.e., single family, multi-family housing).

### **PRODUCTION/ATTRACTION VMT**

The Production/Attraction (PA) method for calculating VMT sums all weekday VMT with at least one trip-end in the study area (i.e., Project Traffic Analysis Zone) by trip purpose. Productions are land use types that generate trips (residences), and attractions are land use types that attract trips (employment). The PA method allows Project VMT to be evaluated based on trip purpose, which is consistent with both the Office of Planning and Research (OPR) Technical Advisory and City Guidelines.

### **BOUNDARY VMT**

City Guidelines also acknowledge that the VMT analysis should also contain an evaluation of a project's effect on VMT, which can be performed using the boundary method of calculating VMT. The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (i.e., City boundary or other designated geographic area). The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Consistent with City Guidelines, the City of Moreno Valley's boundary was used as the boundary for this assessment.

## **VMT METRIC AND SIGNIFICANCE THRESHOLD**

The City of Moreno Valley has adopted the following thresholds of significance related to VMT for land use projects. The following thresholds are to be applied to determine potential project-generated VMT impacts<sup>4</sup>:

1. A project would have a significant VMT impact if, in the Existing Plus Project, its net VMT per capita (for residential projects) or per employee (for office and industrial projects) exceeds the per capita or per employee VMT threshold for Moreno Valley. For all other uses, a net increase in VMT would be considered a significant impact.
2. If a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be

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<sup>4</sup> City Guidelines; Page 26

considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, then it would have a significant VMT impact if:

- a. For residential projects its net VMT per capita exceeds the average VMT per capita for Moreno Valley in the RTP/SCS horizon-year.

Although not specified in the City's thresholds, the City Guidelines do indicate an evaluation on a project's cumulative effect on VMT, which uses the boundary method to compare how the project changes VMT on the network looking at Citywide VMT per service population (i.e., population and employees) and comparing it to the no project condition and a **net increase in VMT per service population would result in a cumulative VMT impact.**

**CITY OF MORENO VALLEY VMT PER CAPITA**

The City of Moreno Valley's VMT per capita was calculated utilizing the RIVCOM base year (2018) traffic model and the horizon year (2045) traffic model. All TAZs located within City of Moreno Valley were selected and the HB VMT was calculated from RIVCOM. For ease of comparison, the VMT for the City was then divided by the City's population. Using straight-line interpolation, baseline (2024) VMT per capita is obtained from the base year and horizon year results, which results in the City of Moreno Valley baseline year average VMT per capita of 15.8 and a horizon year average of 15.4 VMT per capita, as presented in Table 4.

**TABLE 4: CITY OF MORENO VALLEY VMT PER CAPITA**

	Baseline Year	Horizon Year
City Population	219,186	268,198
City HB VMT	3,448,907	4,116,081
City VMT per Capita	15.8	15.4

**PROJECT GENERATED VMT**

In order to evaluate Project-generated VMT, standard land use information such as building square footage must first be converted into a RIVCOM-compatible dataset. The RIVCOM model utilizes socio-economic data (SED) (e.g., population and employment) as key inputs for the purposes of vehicle trip estimation. To isolate Project-generated VMT, as recommended by City Guidelines, the existing SED data within the Project's TAZ (TAZ 1236) was moved to an adjacent TAZ (TAZ 1182). Table 5 presents the SED inputs used to represent the Project in the Project's TAZ within RIVCOM.

**TABLE 5: PROJECT LAND USE DATA SUMMARY**

Land Use	Quantity	Conversion Factor	Population
Single Family Residential	800 Dwelling units	3.85 people per household <sup>1</sup>	3,080

<sup>1</sup> City of Moreno Valley 2021-2029 Housing Element

The RIVCOM model was then run inclusive of the Project and VMT estimates were extracted from RIVCOM. As presented in Table 6, the Project is forecast to be below the City's adopted impact threshold for both baseline year and horizon year traffic conditions. RIVCOM outputs can be found in Attachment C.

**TABLE 6: PROJECT GENERATED VMT**

	Baseline	Horizon
HB VMT	17,969	31,234
Population	3,080	3,080
VMT per Capita	5.8	6.9
City Threshold VMT per Capita	15.8	15.4
Exceeds City Threshold?	No	No

As shown in Table 7, the Project’s project-generated VMT is not estimated to exceed the City’s threshold in baseline or horizon year conditions.

**PROJECT’S CUMULATIVE EFFECT ON VMT**

The Project’s cumulative effect on VMT has been calculated using the boundary method. Land use information representing the proposed land use changes contemplated by the Project was coded into the Project TAZ to represent the “With Project” condition. Table 7 summarizes the Boundary VMT under the No Project and With Project for both baseline year and horizon year conditions.

**TABLE 7: PROJECT EFFECT ON VMT**

	Service Population	Boundary VMT	VMT per Service Population	Exceeds City Threshold?
Baseline Year No Project	267,217	2,573,905	9.6	-
<b>Baseline Year With Project</b>	<b>270,661</b>	<b>2,584,816</b>	<b>9.6</b>	<b>No</b>
Horizon Year No Project	333,346	3,409,268	10.2	-
<b>Horizon Year With Project</b>	<b>336,790</b>	<b>3,418,968</b>	<b>10.2</b>	<b>No</b>

The VMT per service population was not found to increase in the With Project using the City’s boundary. Therefore, the Project’s cumulative effect on VMT does not exceed the City’s impact threshold and the Project would result in a less than significant cumulative impact.

**CONCLUSION**

Based on the results of this VMT analysis the following findings are made:

- The Project was evaluated against the City’s applicable VMT screening steps. The screening evaluation found local essential land uses such as the retail, office, and hotel components of the Project were eligible for VMT screening based on the Project Type screening criteria.
- The Project’s residential component did not meet any available screening criteria and a VMT analysis was performed.
- The VMT analysis results in a VMT per capita that was found to not exceed the City’s impact thresholds for either baseline year or horizon year conditions.
- The Project’s cumulative effect on VMT was not found to increase VMT per service population in the baseline year or horizon year conditions.

If you have any questions, please contact me directly at [aso@urbanxroads.com](mailto:aso@urbanxroads.com).

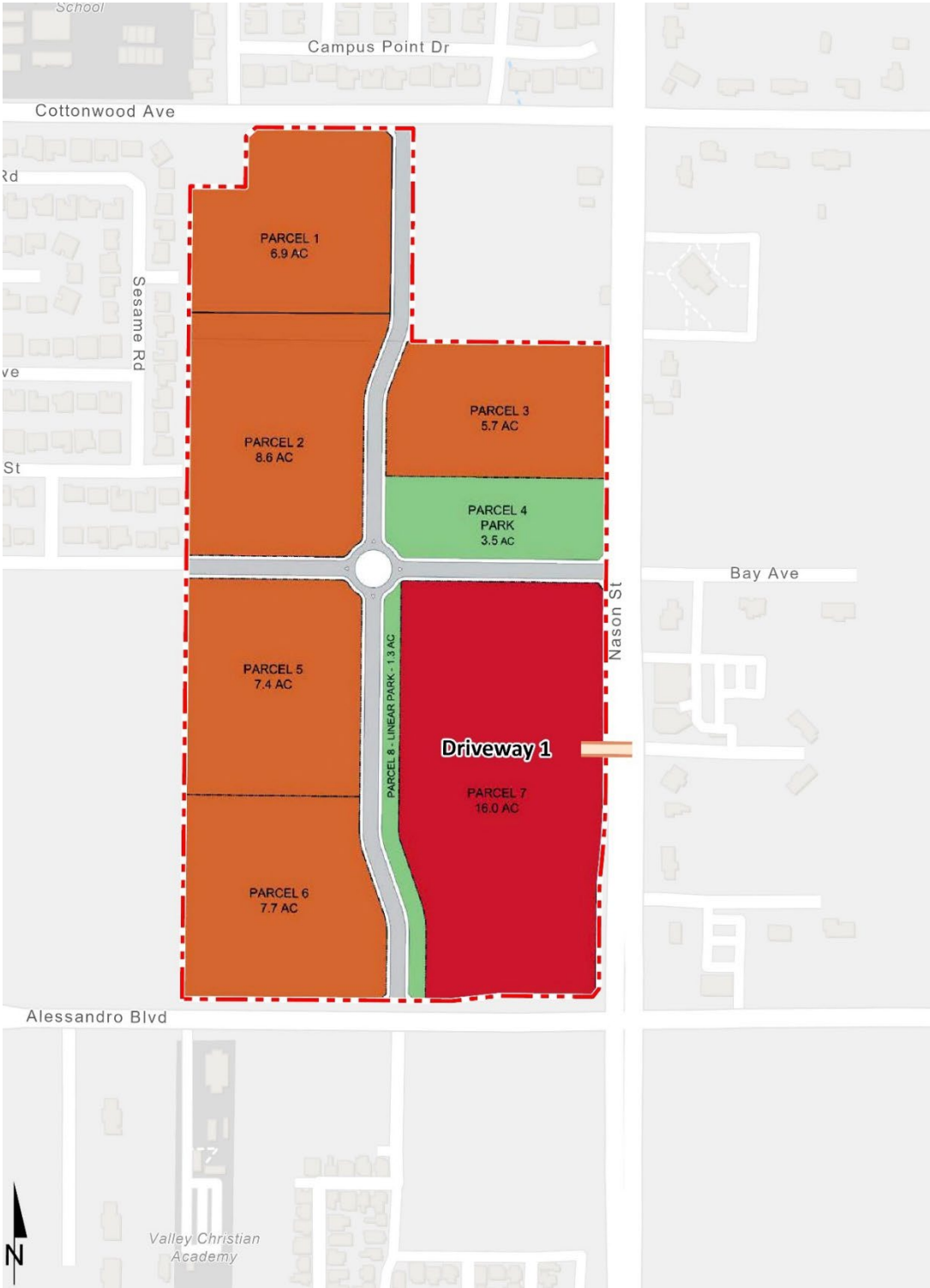
## REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **WRCOG.** *WRCOG SB 743 Implementation Pathway Document Package.* March 2019.
3. **City of Moreno Valley.** *Traffic Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment.* City of Moreno Valley : s.n., June 2020.

**ATTACHMENT A**  
**PROJECT LAND USE MAP**



**EXHIBIT A-1: LAND USE MAP**



**ATTACHMENT B**  
**WRCOG SCREENING TOOL RESULTS**

## EXHIBIT B-1: SCREENING TOOL VMT PER CAPITA RESULTS

**WRCOG VMT Tool** Powered by Fehr & Peers User's Guide

Search: Nason St & Alessandro Blv

Complete #1-4, Then Click "Run"

Input Output

#1. Zoom in on the map to your project location so parcels appear on map. Next, select 'Parcels' from the drop-down. Then click the black square next to the drop-down so you can select the parcel(s) for your project by drawing a simple rectangle over the parcel(s) you need.\*

Parcels (Zoom in to view)

#2. Select the VMT Metric. 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.\*

PA VMT Per Resident

#3. Select the Baseline Year. The year available for analysis are from 2018 to 2045.\*

2024

#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 City Baseline (0%)

Run

Layer List

- Output\_Parcels
- Selected Project Area
- Low VMT Generating TAZs
- TAZ Boundaries (Zoom in to view)
- Parcels (Zoom in to view)
- Transit Priority Area
- WRCOG Cities
- WRCOG Boundary

(2 of 2)

OBJECTID	1
Assessor Parcel Number (APN)	487470031
Traffic Analysis Zone (TAZ)	1236
Community Region	MORENO VALLEY
Inside a Transit Priority Area (TPA)	No
TAZ VMT	15.1
Jurisdiction VMT	13.4
% Difference	12.42%
VMT Metric	PA VMT Per Resident
Threshold	13.4
Community	0
Zoom to	...

## EXHIBIT B-2: SCREENING TOOL VMT PER EMPLOYEE RESULTS

**WRCOG VMT Tool** Powered by Fehr & Peers User's Guide

Search: Nason St & Alessandro Blvd X

Complete #1-4, Then Click "Run"

Input Output

#1. Zoom in on the map to your project location so parcels appear on map. Next, select 'Parcels' from the drop-down. Then click the black square next to the drop-down so you can select the parcel(s) for your project by drawing a simple rectangle over the parcel(s) you need.\*

Parcels (Zoom in to view)

#2. Select the VMT Metric. 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.\*

PA VMT Per Worker

#3. Select the Baseline Year. The year available for analysis are from 2018 to 2045.\*

2024

#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 City Baseline (0%)

Run

Layer List

- Output\_Parcels
- Selected Project Area
- Low VMT Generating TAZs
- TAZ Boundaries (Zoom in to view)
- Parcels (Zoom in to view)
- Transit Priority Area
- WRCOG Cities
- WRCOG Boundary

OBJECTID 1  
 Assessor Parcel Number (APN) 487470031  
 Traffic Analysis Zone (TAZ) 1236  
 Community Region MORENO VALLEY  
 Inside a Transit Priority Area (TPA) No  
 TAZ VMT 15.7  
 Jurisdiction VMT 16.3  
 % Difference -3.53%  
 VMT Metric PA VMT Per Worker  
 Threshold 16.3  
 Community Zoom to

Saved to Z: Drive

**ATTACHMENT C**  
**PROJECT RIVCOM OUTPUTS**

**TABLE B-1: RIVCOM 2018**

Daily_Home-Based (incl. IEHB) Prod VMT	17033.64258
Daily_HBW (incl. EIHBW) Attr VMT	10728.74609
Daily_Total Auto OD From VMT	32746.39063
Daily_Total Auto OD To VMT	35744.70313
Daily_Total Auto OD Intra VMT	73.115311
Daily_Total Truck OD From VMT	1371.684692
Daily_Total Truck OD To VMT	1374.457031
Daily_Total Truck OD Intra VMT	0.665906
Daily_Total OD From VMT	34118.07813
Daily_Total OD To VMT	37119.16016
Daily_Total OD Intra VMT	73.781212
Daily_Total_TripLen	9.239336
Population	3080
Employment	364
Enrollment	0

**TABLE B-2: RIVCOM 2045**

Daily_Home-Based (incl. IEHB) Prod VMT	21244.26563
Daily_HBW (incl. EIHBW) Attr VMT	9989.791016
Daily_Total Auto OD From VMT	34590.45313
Daily_Total Auto OD To VMT	37180.10156
Daily_Total Auto OD Intra VMT	54.407387
Daily_Total Truck OD From VMT	1227.880005
Daily_Total Truck OD To VMT	1233.139526
Daily_Total Truck OD Intra VMT	0.447831
Daily_Total OD From VMT	35818.33203
Daily_Total OD To VMT	38413.24219
Daily_Total OD Intra VMT	54.855217
Daily_Total_TripLen	8.856388
Population	3080
Employment	364
Enrollment	0