MEMORANDUM

URBAN CROSSROADS

DATE: April 2, 2024
TO: Nicole Morse, T&B Planning Inc.
FROM: Alex So, Urban Crossroads
JOB NO: 15459-01 VMT

YORBA LINDA 2021-2029 HOUSING ELEMENT IMPLEMENTATION PROGRAMS (REVISION 1) VEHICLE MILES TRAVELED (VMT) ANALYSIS

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the Yorba Linda 2021-2029 Housing Element Implementation Programs (Revision 1) (**Project**) located in the City of Yorba Linda. The Project Opportunity Sites (2024) locations are shown in Attachment A.

SUMMARY OF FINDINGS

Project generated VMT per service population was found to not exceed the City's adopted impact threshold. In addition, the Project's cumulative effect to Citywide VMT per service population was found to decrease with the inclusion of the proposed housing element changes as compared to the "No Project" condition. **The Project's impact on VMT is presumed to be less than significant**.

The City of Yorba Linda's VMT threshold is consistent with the City of Yorba Linda's General Plan build out. The results of the Project generated VMT per service population not exceeding the adopted City thresholds shows additional growth capacity for the City of Yorba Linda through year 2045. Consistent with Senate Bill 743, the Project's VMT less than significant finding proves that the Project is incentivized by the development of higher density residential to service the job base in Yorba Linda and Orange County. Thus, reducing commute VMT and employee travel distances. There is an unmet need for housing and providing new housing opportunities allows people to reside closer to their jobs, this is evidenced further by the results of this VMT analysis. The VMT analysis results are consistent with Southern California Association of Governments (SCAG) Current Context Demographics and Growth Forecasts (1), as the City of Yorba Linda's employment growth in the City exceeds population growth as shown in Table 1 below.

TABLE 1: SCAG GROWTH FORECAST FOR THE CITY OF YORBA LINDA

City of Yorba Linda[1]	2016	2045	Increase
Population	67,800	70,600	4.13%
Employment	17,400	19,300	10.92%

[1] SCAG Demographics and Growth Forecast; Page 38

PROJECT OVERVIEW

The proposed Addendum to the 2022 Housing Element Program Environmental Impact Report (PEIR) proposes a rezoning program of 18 vacant or underutilized sites for multi-family residential use at densities of 10 to 35 units per acre. The Yorba Linda 2021 – 2029 Housing Element will revise the General Plan land use and development intensities for the identified sites to accommodate approximately 1,747 additional dwelling units for a total of 1,929 dwelling units (including the existing zoning), which is an overall reduction of 481 units from the certified 2022 Housing Element PEIR. The Housing Element sites are listed in Attachment B.

The VMT analysis will evaluate the proposed development intensities expected for the sites and assess the potential VMT impacts that may result from the implementation of the rezoning and changes to land use.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines, adopted in December 2018, 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 2018) (1). Based on OPR's Technical Advisory, the City of Yorba Linda has adopted their own City of Yorba Linda Traffic Impact Analysis (TIA) Guidelines (May 2020) (**City Guidelines**) (2), which documents the City's VMT analysis methodology and approved impact thresholds. This VMT analysis has been developed based on the adopted City Guidelines.

VMT ANALYSIS

TRAFFIC MODELING METHODOLOGY

The City Guidelines identify the Orange County Transportation Analysis Model (OCTAM) as the appropriate tool for conducting VMT analysis for land use projects in the City of Yorba Linda. OCTAM was developed by the Orange County Transportation Authority (OCTA) and initially released in June 2021. The most current release of OCTAM is version 5.0, representing the most current sub-regional transportation modeling tool for Orange County. OCTAM 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. 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 trip.

VMT ANALYSIS METHODOLOGY

For the purposes of this evaluation, VMT has been estimated using the Origin/Destination and Boundary methods. For both methods, VMT is presented as total VMT and VMT per Service Population (population plus employment). Total VMT is an estimate of total vehicle travel and considers all vehicle trips and trip purposes; whereas, VMT per service population is an efficiency metric that represents VMT generated on a typical weekday per person who lives and/or works

in the City of Yorba Linda. Total VMT provides an estimate of the total vehicle travel, while VMT per service population measures the efficiency of travel. Consistent with City Guidelines, VMT per service population is recommended for transportation impact analysis.

ORIGIN/DESTINATION VMT

The Origin/Destination (OD) method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area (i.e., City boundary) and tracks those trips to their estimated origins/destinations. Origins are all vehicle trips that start in a specific traffic analysis zone (TAZ) and destinations are all trips that end in a specific TAZ.

BOUNDARY VMT

The 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). 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 Yorba Linda was used as the boundary for this assessment.

VMT METRIC AND SIGNIFICANCE THRESHOLD

City Guidelines identifies that land use projects in the City of Yorba Linda shall use the efficiency metric VMT per service population for purposes of determining a VMT impact. More specifically, a land use project would result in a potentially significant impact if either of the following conditions is met:

1. The baseline project generated VMT per service population exceeds the City of Yorba Linda General Plan Buildout VMT per service population, or
2. The cumulative project generated VMT per service population exceeds City of Yorba Linda General Plan Buildout VMT per service population

CITY OF YORBA LINDA GENERAL PLAN BUILDOUT VMT PER SERVICE POPULATION

In order to conduct a comparison to the City's City of Yorba Linda General Plan Buildout VMT per service population value, Urban Crossroads has calculated this value using the OCTAM 5.0 travel demand model. Table 2 presents the key inputs and resulting City of Yorba Linda General Plan Buildout VMT per service population value.

TABLE 2: CITY OF YORBA LINDA VMT PER SERVICE POPULATION

	General Plan Buildout
Service Population	85,821
VMT	3,190,101
VMT per SP[1]	37.2

[1]SP refers to Service Population

PROJECT VMT ESTIMATES

PROJECT LAND USE CONVERSION

In order to estimate project generated VMT per service population for the Project, land use information must first be converted into an OCTAM compatible dataset. The OCTAM model utilizes socio-economic data (SED) (e.g., population, households, employment, etc.) instead of land use information for the purposes of vehicle trip estimation. Adjustments in SED have been made to the appropriate TAZs within the City of Yorba Linda to reflect the Project's proposed land uses (i.e., residential). Table 3 summarizes the population estimates for the Project. It should be noted that the population estimates are consistent with the population density factors identified in the California Department of Finance, Table 2: E-5 (January 2023).

TABLE 3: POPULATION ESTIMATES

Land Use	Quantity (DU)	Population Density Factor	Estimated Population
Residential	1,929	2.89 Persons per Household	5,575

Table 4 presents the population changes made within OCTAM by TAZ. The TAZs listed below are all within the City of Yorba Linda's city boundary.

TABLE 4: POPULATION CHANGES BY TAZ

TAZ	Population Added
57	87
167	587
168	780
172	173
175	225
178	116
179	231
180	176
182	116
187	552
197	2,532

BASELINE AND CUMLATIVE "PLUS PROJECT" CONDITIONS VMT CALCULATION

The values as calculated previously for the Project land use conversion are input into the OCTAM model for each of the Project's TAZs and the OCTAM model was run inclusive of the Project's SED changes. Table 5 lists the key inputs used to calculate VMT per service population as extracted from OCTAM for both Baseline plus Project and Cumulative plus Project conditions.

TABLE 5: "PLUS PROJECT" VMT PER SERVICE POPULATION

	Baseline	Cumulative
Service Population	85,341	90,794
Total VMT	3,006,527	3,318,148
VMT per Service Population	35.2	36.6
City Threshold	37.2	37.2
Potentially Significant?	No	No

As shown in Table 5, the Project would not exceed the City's VMT per service population impact threshold for Baseline and Cumulative conditions. The Project's VMT impact is therefore considered less than significant.

PROJECT'S CUMULATIVE EFFECT ON VMT

Consistent with City Guidelines, in addition to evaluating the project VMT per service population (i.e., population and employees), the analysis must also evaluate the cumulative effects of the Project on VMT. To complete this cumulative analysis, the analysis must compare the Citywide VMT per service population for with Project conditions to the no Project condition. This assessment is performed using the Boundary method, which includes all vehicle trips with one or both trip-ends within a specific geographic area of interest within the City of Yorba Linda boundary. Once the areawide VMT value is calculated, it is then normalized by dividing by the City's service population (based on the values contained within the OCTAM model). Baseline and Cumulative link-level boundary VMT per service population (City) has been calculated for both "No Project" and "With Project" conditions. If an increase occurs for the With Project condition as compared to No Project condition, then the impact is considered significant. As shown in Table 6, Citywide VMT per service population was found to decrease under both baseline and cumulative "With Project" conditions. The Project's cumulative impact is considered less than significant.

TABLE 6: CITYWIDE VMT PER SERVICE POPULATION

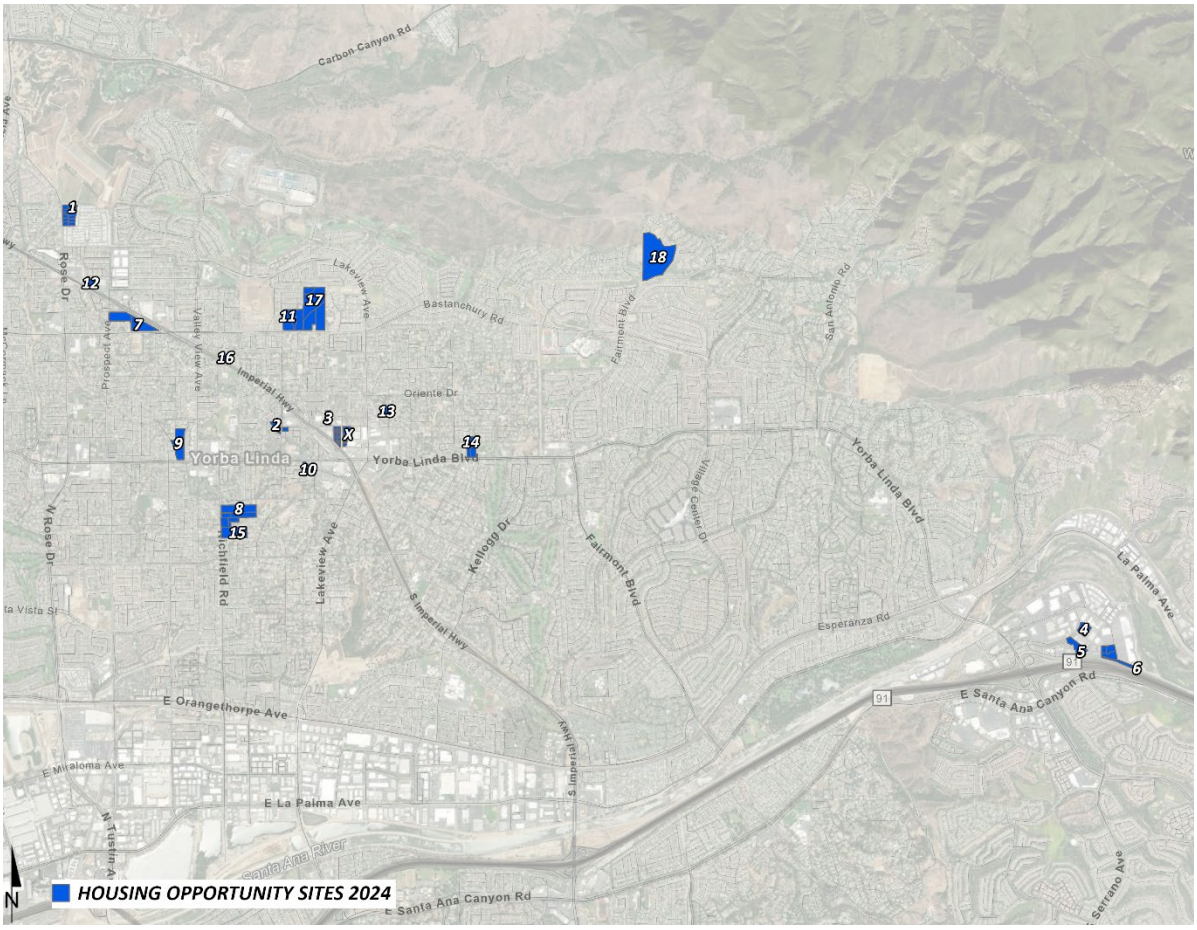
	Baseline No Project	Baseline With Project	Cumulative No Project	Cumulative With Project
Service Population	80,096	85,341	85,821	90,794
VMT	1,475,492	1,494,983	1,701,106	1,699,520
VMT/SP	18.4	17.5	19.8	18.7
Change in VMT	-0.9		-1.1	

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

REFERENCES

1. **Southern California Assocation of Governments.** *Current Context Demographics and Growth Forecast.* September 2020.
2. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
3. **City of Yorba Linda.** *City of Yorba Linda Traffic Impact Analysis (TIA) Guidelines.* May 2020.

ATTACHMENT A
PROJECT HOUSING ELEMENT SITE MAP


Carbon Canyon Rd
Rose Dr
Lakeview Ave
Bastanchury Rd
Fairmont Blvd
San Antonio Rd
Valley View Ave
Imperial Hwy
Oriente Dr
Yorba Linda
Yorba Linda Blvd
Kellogg Dr
Lakeview Ave
Fairmont Blvd
Esperanza Rd
La Palma Ave
E Orangethorpe Ave
E Santa Ana Canyon Rd
E Miraloma Ave
E La Palma Ave
Santa Ana River
N Tustin Ave
Serrano Ave
91
HOUSING OPPORTUNITY SITES 2024
N

ATTACHMENT B
HOUSING ELEMENT SITE LIST

TABLE B-1: SUMMARY OF HOUSING ELEMENT SITES

				Certified 2022 PEIR		Addendum to 2022 PEIR	
HE Site ID	Site	Acres	Existing Current Zoning	2022 PEIR Proposed Zoning	Total Net Unit Potential	Proposed Zoning	Total Net Unit Potential
S1-021	W. of 16951 Imperial Highway	1.76	CG	Commercial Mixed Use Overlay	62	Commercial Mixed Use Overlay	62
S1-200	SEC Rose Dr. & Blake Rd.	5.94	RE	RM-20 w/ Affordable Overlay	208	RM-20 w/ Affordable Overlay	208
S2-008	17151 Bastanchury Rd.	4.92	RE	Congregational Land Overlay	60	Congregational Land Overlay	60
S3-012	5320 Richfield Rd.	9.48	RU	Congregational Land Overlay	55	Congregational Land Overlay	55
S3-207	5300-5392 Richfield Rd.	8.83	RU	RM-20 w/ Affordable Overlay	340	RM-10	88
S2-013	4861 Liverpool St.	6.2	RU	Congregational Land Overlay	40	Congregational Land Overlay	40
S3-074	18132 Yorba Linda Bl.	0.42	CG	RM-20 w/ Affordable Overlay	15	*** Site Removed ***	
S3-024	Friends Church Overflow Parking	17.45	RE	Congregational Land Overlay	48	Congregational Land Overlay	48
S3-033	4382 Eureka Av.	3.88	RS	Congregational Land Overlay	30	*** Site Removed ***	
S3-210	18111 Bastanchury Rd.	9.23	PD-26	Congregational Land Overlay	105	Congregational Land Overlay	105
S3-082	4791 & 4811 Eureka Av.	1.75	CG	RM-20 w/ Affordable Overlay	61	RM-20 w/ Affordable Overlay	61
S4-075	4742 Plumosa Dr.	1.62	CG	RM-20 w/ Affordable Overlay	57	RM-20 w/ Affordable Overlay	57
S6-015	22722 Old Canal Rd.	2.56	PD	Affordable Housing Overlay	89	PD RM-60	154
S6-020	22711 Oak Crest Circle	10.35	PD	RM-20 w/ Affordable Housing Overlay	143	PD RM-60	242
S7-001	Bryant Ranch Shopping Center	9.15	CG	Commercial Mixed Use Overlay	320	*** Site Removed ***	
S3-034	4341 Eureka Av.	2.19	RS	RM	22	*** Site Removed ***	
S3-203	18101-18251 Bastanchury Rd.	19.58	PD	PD	228	PD	98
S3-205A	5225 & 5227 Highland Av.	7.08	RE	RM	71	*** Site Removed ***	
S4-200	18597-18602 Altrudy Ln.	2.0	RS	RM-20	40	RM-20	40
S4-204A	19045 Yorba Linda Bl.	1.85	RE	Congregational Land Overlay	17	*** Site Removed ***	
S4-204B	19081-19111 Yorba Linda Bl.	3.9	RE	RM-20	78	RM-20	78
S3-211	17651 Imperial Highway	2.32	RS	RM	23	RM	23
S4-053	SWC of Kellogg Dr. & Grandview Av.	0.98	RE	RM	10	*** Site Removed ***	
S4-060	5541 S. Ohio St.	0.96	RE	RM	10	*** Site Removed ***	
S4-201	5531 S. Ohio St.	1.82	RE	RM	18	*** Site Removed ***	
S5-008	Fairmont Bl.	9.0	PD	RM	230	PD	30
S7-005	NEC of Camino del Bryant & Meadowland	3.06	RU	RM	30	*** Site Removed ***	
S6-025	Bac Tran Savi Ranch Site	23.0	PD	Not Evaluated		PD RM-60	480
		148.28		**TOTAL**	**2,410**	**TOTAL**	**1,929**