

Appendix E. Transportation Impact Study (VMT Analysis)

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TO: Kristin Blackson, Senior Environmental Planner; Harris & Associates
FROM: Phuong Nguyen, PE; CR Associates
DATE: September 2, 2022
RE: City of Victorville General Plan Update – Transportation Impact Study (VMT Analysis)

The purpose of this technical memorandum is to document potential transportation impacts associated with the City of Victorville General Plan Update (the “Proposed Project”) and recommend mitigation measures, as appropriate.

Project Description

The Project proposes to update the City of Victorville’s (City or Victorville) Land Use Element and Safety Element and create a new Environmental Justice Element as part of the Victorville General Plan, which was last updated in 2008. The Land Use Element would be updated to guide and accommodate future growth in the City in a manner that achieves the community’s vision, enhances the community’s quality of life, and provides a mix of land uses that promote sustainability and economic vitality. The Safety Element Update would emphasize hazard reduction, accident prevention, and responses for human-made hazards and it would follow the City’s update to its Local Hazard Mitigation Plan along with the inclusion of climate change adaptation and resiliency plans. The Environmental Justice Element, a new state requirement for disadvantaged communities, would aim to reduce pollution exposure; improve access to public facilities; promote food access, safe and sanitary housing, physical activity, and civic engagement; and prioritize improvements and programs to address the needs of disadvantaged communities in the City.

The analysis focuses on the Base Year, Currently Adopted General Plan (2008) and Proposed Project scenarios. Descriptions and land uses associated with each of the scenarios are provided below. Note that because the City of Victorville adopted the Housing Element on January 28, 2022, the land uses in both the Adopted General Plan and the Proposed Project include the sites identified within the Housing Element.

Base Year

This scenario establishes the baseline VMT within the project study area (City of Victorville and its region, San Bernardino County). The Base Year from the San Bernardino Transportation Analysis Model (SBTAM) was utilized as a starting-point and validated for the City of Victorville. Additional adjustments were made to reflect the Base Year land uses provided by the project team from Urban Footprint, Geographical Information System (GIS) database, and information from the US Census Bureau. Because the City of Victorville compares a project’s VMT to the City’s General Plan Buildout, this scenario is provided for informational purpose only.

No Project (2008 General Plan Alternative)

This scenario represents buildout of the City of Victorville’s currently Adopted General Plan Land Use and Mobility Elements. The No Project/Existing 2008 General Plan Alternative would leave the existing 2008 General Plan Land Use Element in place and assumes development would occur as designated in the 2008 General Plan land use map (Figure 5-1, No Project/Existing 2008 General Plan Alternative)

Proposed Project

This scenario represents buildout of the Project’s proposed land uses. The Proposed Project’s zoning overrides the sites identified in the City’s Adopted General Plan. The Proposed Project would include

changes to the existing land use designations, which establish the general pattern of land uses in the Planning Area and would identify maximum permitted land use densities and intensities. The Land Use Element Update would establish 16 land use designations (14 primary land use designations and two overlay designations) that govern land uses in the Planning Area as shown in Table 2-1 of the PEIR.

Table 1 displays a comparison of the land uses between the Existing, No Project, and Proposed Project scenarios.

Table 1 – Land Uses Comparison

Location	Base Year		No Project		Proposed Project	
	Number of Dwelling Units	Non-Residential Square Feet	Number of Dwelling Units	Non-Residential Square Feet	Number of Dwelling Units	Non-Residential Square Feet
City of Victorville	36,195	27,991,000	84,746	17,730,215	63,395	36,183,124
Sphere of Influence	5,137	596,000	23,411	33,628,525	10,413	6,209,914

Notes:

The number of dwelling units for future land uses is based on average density at buildout, not maximum density.

Analysis Methodology

Under Section 15064.3, vehicle miles traveled (VMT), which includes the amount and distance of automobile traffic attributable to a project, is identified as the “most appropriate measure of transportation impacts.” Accordingly, the City of Victorville adopted Resolution Number 20-031 on June 23, 2020 with an effective date of July 1st, 2020. The resolution identifies VMT as the metric for determining transportation related impacts in the City of Victorville. The analysis presented herein is based on the City of Victorville VMT Analysis Guidelines (VMT Guidelines). Methodologies and thresholds utilized to evaluate potential VMT impacts for future alternatives are described below.

Determination of VMT Significant Impacts

VMT is positively correlated with growth and as the region is expected to grow, VMT is also expected to increase. However, where the growth occurs plays a significant role to determine how much the VMT will increase. Growth in areas with access to high-quality transit, a complete active transportation network, and/or complementary land use mixes are projected to be more VMT efficient.

Per the City of Victorville VMT Analysis Guidelines, the VMT efficiency for the City of Victorville is the average VMT per service population. The VMT per service population is described as the daily trips originating from or ended within the study area divided by the total service population (residents + employees).

The VMT Guidelines also established the following thresholds in determining transportation related impacts:

“Thresholds shall be consistent with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) future year VMT projections for the City’s General Plan buildout. A project’s VMT generation per service population shall be less than the City’s VMT General Plan Buildout per service population. However, feasible mitigation measures may be identified to reduce the project VMT below the thresholds.” (VMT Guidelines, P. 4)

For the purposes of this transportation impact study, a Plan-to-Plan analysis was conducted by comparing the Proposed Project to the No Project Alternative.

Transportation Impact Analysis – Proposed Project

This section focuses on whether the Proposed Project would have a significant impact and if the proposed new residential land uses would in aggregate exceed the VMT/Service Population threshold previously identified.

To establish a baseline understanding, **Table 2** displays both San Bernardino County (Region) and City of Victorville VMT per Service population for both the currently Adopted General Plan and Proposed Project.

Table 2 - Victorville & Region VMT Metrics for Transportation Impact Analysis

VMT Metric	Base Year		No Project (Adopted General Plan)		Proposed Project	
	Region	Victorville	Region	Victorville	Region	Victorville
VMT/Service Population	15.2	13.2	16.1	17.9	15.1	17.0

Source: SBTAM, Iteris (2022). CR Associates (2022).

As shown in Table 2, with the implementation of the Proposed Project land uses, including buildout of Proposed Project land uses and the SOI area, the study area VMT per service population is reduced from 17.9 under the Currently Adopted General Plan (No Build) scenario to 17.0 under the Proposed Project scenario.

Based on the VMT Guidelines, the Proposed Project VMT per service population is less than those of the Currently Adopted General Plan (No Build). Therefore, impacts related to VMT per service population is less than significant. Note that individual projects would still need to follow applicable California Environmental Quality Act (CEQA) regulations at the time of Notice of Preparation.

Table 3 displays the Region wide and City wide total VMT. The total VMT is provided for informational purposes only and is not required to determine transportation related impact.

Table 3 - Victorville & Region Total VMT

Scenario	Total VMT	
	Region	Victorville
Base Year	82,279,029.85	4,417,049.196
No Project (Adopted General Plan)	108,728,429.12	7,267,290.524
Proposed Project	102,396,403.61	6,953,635.289

Source: SBTAM, Iteris (2022). CR Associates (2022).

As shown in Table 5, the Proposed Project would results in a reduction of the regional wide and city wide total VMT, when compared to the No Project (Adopted General Plan) scenario.

Conclusion

Since the Proposed Project VMT related impact is less than significant, no additional mitigation is required for this programmatic level Project. Individual projects may still need to conduct additional analyses and propose mitigation measures, as appropriate.



Attachment A - Modeling Results



Base Year

San Bernardino			
ID	Purpose	Productions	Attractions
1	Home-based Work	18,678,251	15,273,376
2	Home-based School	654,764	643,974
3	Home-based University	875,893	380,312
4	Home-based Shopping	1,983,879	1,462,138
5	Home-based Social-Recreational	5,951,495	5,556,226
6	Home-based Serve Passenger	2,079,877	1,783,729
7	Home-based Other	5,867,503	5,338,540
8	Work-Based Other	2,132,860	1,801,136
9	Other Based Other	6,385,361	5,429,717
Total VMT		44,609,883	37,669,147
Total Home-based VMT		36,091,661	
Total Work-based VMT		17,406,236	
Total Population		2,140,539	
Total Employees		790,400	
Total Home-based VMT/Capita		16.86	
Total Work-based VMT/Employee		22.02	
Total VMT/Service Population		15.22	

Victorville			
ID	Purpose	Productions	Attractions
1	Home-based Work	1,066,468	557,065
2	Home-based School	36,260	52,114
3	Home-based University	58,131	59,973
4	Home-based Shopping	80,238	120,840
5	Home-based Social-Recreational	292,668	349,726
6	Home-based Serve Passenger	93,460	128,448
7	Home-based Other	259,187	374,593
8	Work-Based Other	123,944	73,190
9	Other Based Other	381,208	309,537
Total VMT		2,391,564	2,025,486
Total Home-based VMT		1,886,411	
Total Work-based VMT		681,009	
Total Population		137,888	
Total Employees		42,685	
Total Home-based VMT/Capita		13.68	
Total Work-based VMT/Employee		15.95	
Total VMT/Service Population		13.24	

No Project

San Bernardino			
ID	Purpose	Productions	Attractions
1	Home-based Work	27,111,271	18,956,968
2	Home-based School	806,023	800,402
3	Home-based University	998,246	503,850
4	Home-based Shopping	2,438,706	1,825,578
5	Home-based Social-Recreational	7,663,507	7,258,105
6	Home-based Serve Passenger	2,499,374	2,260,836
7	Home-based Other	7,440,933	6,992,017
8	Work-Based Other	2,935,623	2,517,811
9	Other Based Other	8,489,518	7,229,659
Total VMT		60,383,203	48,345,226
Total Home-based VMT		48,958,062	
Total Work-based VMT		21,892,591	
Total Population		2,721,775	
Total Employees		1,027,872	
Total Home-based VMT/Capita		17.99	
Total Work-based VMT/Employee		21.30	
Total VMT/Service Population		16.10	

Victorville			
ID	Purpose	Productions	Attractions
1	Home-based Work	2,401,415	720,265
2	Home-based School	43,094	78,347
3	Home-based University	81,875	60,055
4	Home-based Shopping	145,724	129,873
5	Home-based Social-Recreational	499,597	477,472
6	Home-based Serve Passenger	164,491	168,524
7	Home-based Other	483,586	482,507
8	Work-Based Other	215,011	112,362
9	Other Based Other	570,889	432,202
Total VMT		4,605,684	2,661,607
Total Home-based VMT		3,819,783	
Total Work-based VMT		935,277	
Total Population		199,681	
Total Employees		57,261	
Total Home-based VMT/Capita		19.13	
Total Work-based VMT/Employee		16.33	
Total VMT/Service Population		17.92	



Proposed Project

San Bernardino			
ID	Purpose	Productions	Attractions
1	Home-based Work	26,098,515	18,689,847
2	Home-based School	712,227	706,748
3	Home-based University	928,111	484,126
4	Home-based Shopping	2,125,485	1,628,056
5	Home-based Social-Recreational	7,063,411	6,750,349
6	Home-based Serve Passenger	2,305,775	2,120,174
7	Home-based Other	6,900,027	6,556,894
8	Work-Based Other	2,797,800	2,445,497
9	Other Based Other	7,555,979	6,527,383
Total VMT		56,487,330	45,909,074
Total Home-based VMT		46,133,551	
Total Work-based VMT		21,487,647	
Total Population		2,721,775	
Total Employees		1,027,872	
Total Home-based VMT/Capita		16.95	
Total Work-based VMT/Employee		20.90	
Total VMT/Service Population		15.06	

Victorville			
ID	Purpose	Productions	Attractions
1	Home-based Work	2,310,248	749,924
2	Home-based School	39,020	74,487
3	Home-based University	76,899	58,147
4	Home-based Shopping	129,641	121,071
5	Home-based Social-Recreational	470,208	446,419
6	Home-based Serve Passenger	153,953	161,777
7	Home-based Other	457,431	457,226
8	Work-Based Other	203,330	113,080
9	Other Based Other	520,383	410,390
Total VMT		4,361,114	2,592,522
Total Home-based VMT		3,637,400	
Total Work-based VMT		953,255	
Total Population		199,681	
Total Employees		57,261	
Total Home-based VMT/Capita		18.22	
Total Work-based VMT/Employee		16.65	
Total VMT/Service Population		16.97	

