



## MEMORANDUM

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**Date:** December 5, 2022 **GTS:** 220912.01

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**To:** James M. Daisa, DEA

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**From:** Rawad Hani, GTS

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**Subject:** **Vehicle Miles Traveled (VMT) Analysis – Mojave 68 Warehouse, Victorville, CA**

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This memorandum describes the development of vehicle miles traveled (VMT) analysis for the proposed Mojave 68 Warehouse in the City of Victorville (City), CA. The project is located at the northeast corner of the intersection of Mojave Drive and Mesa Linda Avenue in the City of Victorville. The project proposes construction of a 1,097,300 square foot (SF) warehouse. The warehouse building will include an 877,800 SF of high-cube transload warehouse and 219,500 SF of high-cube cold storage warehouse. This VMT analysis evaluated the project using the 2016 and 2040 model years obtained from the San Bernardino County Transportation Authority (SBCTA).

### Background

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled (VMT).

### Methodology

The project VMT analysis was conducted using the City of Victorville Resolution "Resolution P-20-010 PLAN 20-00011, ATTACHMENT 'A', Exhibit '1' – City of Victorville Vehicle Miles Traveled (VMT) Analysis Guidelines", dated May 27, 2020. The guidelines included project screening criteria which was reviewed for the project evaluation. The project doesn't qualify for VMT screening under any of the established screening criteria. Hence, a full VMT analysis was conducted using San Bernardino County Transportation Analysis Model (SBTAM) as recommended in the City's guidelines.

SBTAM model is a socioeconomic data-based model and so the project land uses were converted into model employment categories using conversion factors from SCAG's "Employment Density Study Summary Report – dated October 31, 2001". The land use conversion yielded a total of 520 employees as shown in Table 1 which was used as input for the model runs.

**Table 1: Mojave 68 Warehouse – Employment Estimates**

Land Use Type	Square Footage (SF)	SF/Employee *	Total Employees
High Cube Transload	877,800	2,111	416
High Cube Cold Storage	219,500	2,111	104
<b>Total</b>	<b>1,097,300</b>		<b>520</b>

*Source: SCAG Employment Density Study Summary Report, October 31, 2001*

### VMT Analysis

Both baseline (2016) and horizon year (2040) model runs were used to estimate project’s VMT impacts. SBTAM socioeconomic databases for the scenarios were updated with the project land use to calculate project VMT. Typically, project VMT is calculated by isolating the project in a new TAZ or multiple TAZs depending on the diversity of project land uses and project size. Since, SBTAM does not allow addition of new TAZs, one TAZ was borrowed for this project. The project TAZ was utilized to calculate project specific VMT per service population.

No project specific network modifications were conducted for the model scenarios. Full model runs with feedback loops were conducted for all of the project scenarios. It should be noted that the project land use was included in the model as additional land use in the cumulative (2040) scenario and no shifting of land use from other TAZs was used. In that regard, the cumulative VMT analysis can be considered as a conservative estimate.

Project’s Origin/Destination (OD) VMT per service population can be used to evaluate project impact according to the guidelines. Origin-destination matrix outputs were used as trips and the trip lengths were derived from the skimming step to estimate OD VMT as recommended in the guidelines. OD matrix outputs include vehicle trips and hence no conversion for auto occupancy was applied. The trip length or distance was obtained using the model outputs from the “Skimming” step. The model skim outputs include peak and off-peak skim matrices by mode, similar to trip outputs from the model. OD VMT was estimated for both peak and off-peak and added together to estimate the total daily VMT for the project.

According to the guidelines, the project would constitute a significant impact if the project OD VMT per service population for base and cumulative scenarios is greater than City of Victorville General Plan Buildout OD VMT per service population. The City of Victorville General Plan Buildout OD VMT per service population was obtained from GTS “No project” model runs.

Table 2 below shows the project VMT metrics for both baseline (2016) and cumulative (2040) conditions along with the regional VMT thresholds.

**Table 2: Project VMT analysis**

<b>2016</b>	<b>Mojave 68 Warehouse (project)</b>	<b>City of Victorville General Plan Buildout (Threshold)*</b>
Population	0	174,718
Employment	520	50,493
Service Population	520	225,211
OD VMT	12,241	6,546,499
OD VMT per service population	23.5	29.1

  

<b>2040</b>	<b>Mojave 68 Warehouse (project)</b>	<b>City of Victorville General Plan Buildout (Threshold)*</b>
Population	0	174,718
Employment	520	50,493
Service Population	520	225,211
OD VMT	12,996	6,546,499
OD VMT per service population	25.0	29.1

\* Threshold value estimated using GTS No Project model runs

Table 3 illustrates the project’s effect on VMT. The project’s effect on VMT is a comparison of roadway VMT within City of Victorville for both “With project” and “Without project” conditions.

**Table 3: Roadway VMT within City of Victorville**

<b>2016</b>	<b>With Project</b>	<b>Without Project</b>
Roadway VMT	2,258,954	2,252,678
Service population	161,475	160,955
VMT per service population	14.0	14.0

  

<b>2040</b>	<b>With Project</b>	<b>Without Project</b>
Roadway VMT	3,627,875	3,654,954
Service population	225,731	225,211
VMT per service population	16.1	16.2

**Conclusion**

Based on the VMT analysis as shown in above Tables 2 and 3, the project doesn’t constitute a significant impact for both “project generated VMT” and “project’s effect on VMT.”