15th Street W and W Avenue H Storage Facility Project Vehicle Miles Traveled Screening Assessment

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1.0 PROJECT INTRODUCTION

The purpose of this report is to evaluate the 15th Street W and W Avenue H Storage Facility Project's (Project) VMT analysis requirements and compliance with Senate Bill 743 (SB 743) and the California Environmental Quality Act (CEQA).

1.1 PROJECT DESCRIPTION

The project is located at the northwest corner of 15th Street West and West Avenue H intersection within the City of Lancaster, California. The Project will be developed on a vacant 5.04-acre lot with 101,237 square foot (SF) storage facility (mini warehouse) including 1,575 SF office area, 1,008 SF living unit, and 441 SF garage. Access to the Project site will be provided via one (1) right-in/right-out only driveway along W Avenue H.

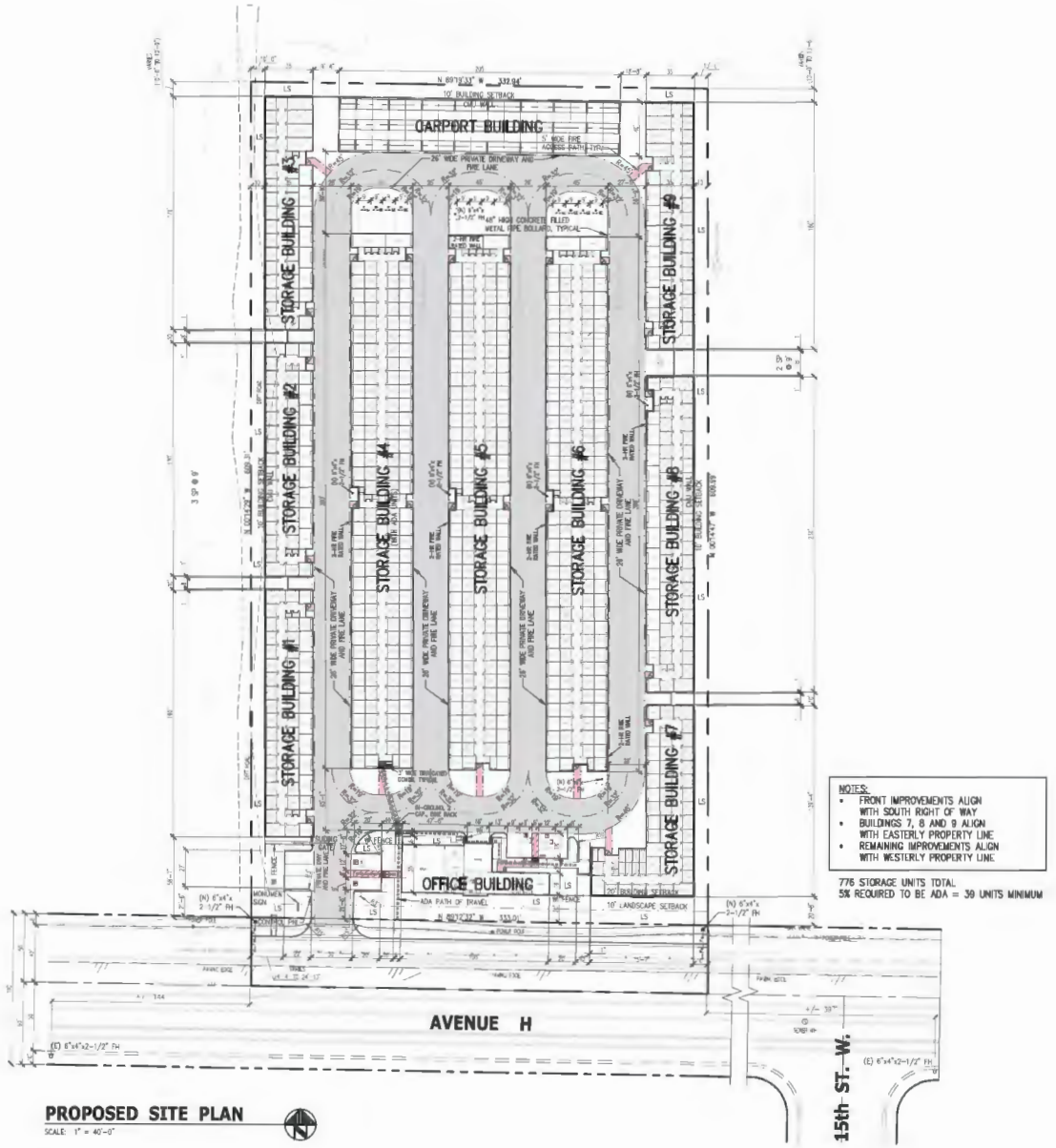
Figure 1 shows the Project site plan.

1.2 SENATE BILL 743

On September 27, 2013, SB 743 was signed into State law and started a process intended to fundamentally change transportation impact analysis as part of the CEQA compliance. The California Natural Resource Agency updated the CEQA transportation analysis guidelines in 2018. In this update automobile delay and LOS metrics are no longer to be used in determining transportation impacts. Instead VMT metrics will serve as the basis in determining impacts. Furthermore, the guidelines stated that after July 1, 2020, transportation analysis under CEQA must use VMT to determine impacts for land use projects.

1.3 GUIDANCE DOCUMENTS

The project is within the jurisdiction of the City of Lancaster. The City has adopted guidance on evaluating VMT for transportation impacts under CEQA, consistent with the Governor's Office of Planning and Research (OPR), *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018. For this project, the *City of Lancaster Department of Public Works Local Transportation Assessment Guidelines*, January 5, 2021, hereafter referred to as "Guidelines", will be used for this assessment.



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15th Street W and W Avenue H Storage Facility Project

Site Plan

Figure 1

2.0 ANALYSIS METHODOLGY

2.1 SCREENING CRITERIA ASSESMENT

2.1.1 Guidelines

The Guidelines detail the requirements for the project's VMT analysis consistent with CEQA including five (5) screening categories to determine if a development project could be screened out from conducting a project level VMT analysis based on their size, location, or accessibility to transit.

- Project Size – A project that generates 110 or fewer daily trips
- Locally Serving Retail – A project that has locally serving retail uses that are 50,000 square feet or less, including specialty retail, shopping center, grocery store, pharmacy, financial services/banks, fitness center or health club, restaurant, and café. If the project contains other land uses, those uses need to be considered under other applicable screening criteria
- Project Located in a Low VMT Area – A residential or office project located in a Traffic Analysis Zone (TAZ) that is already 15% below the Antelope Valley Planning Area (AVPA) Baseline VMT
- Transit Proximity – A multifamily residential project providing higher density housing or a commercial project in an area already zoned for commercial use that is located within a ½ mile of the Metrolink station or within a ½ mile of a bus stop with service frequency of 15 minutes or less during commute periods.
- Affordable Housing – A residential project that provides affordable housing units; if part of a larger development, only those units that meet the definition of affordable housing satisfy the screening criteria.

2.2 VMT ASSESSMENT FOR NON-SCREENED DEVELOPMENT

Per the Guidelines, projects that do not meet any of the screening criteria identified would need to perform a VMT analysis. The project would need to evaluate the appropriate VMT metrics and compare them to the identified thresholds to determine the level of significance as defined per the Guidelines.

Project level VMT analysis should consider the potential impacts of the project under both existing and future/cumulative conditions as follows:

- Existing/Baseline Conditions: Project-generated VMT should be estimated for the proposed land uses under existing/baseline conditions. VMT can be estimated using the SCAG regional travel demand model and should be reported as Home-Based VMT per capita (residential projects), Home- Based Work VMT per employee (office or employment-generating projects), or Total VMT per service population (all other land uses). For land use plans, Total VMT per service population or Total VMT can be used to determine potential impacts.

- Cumulative Conditions: A less than significant impact under Existing/Baseline conditions would also result in a less than significant cumulative impact as long as the project is consistent with the SCAG RTP/SCS.

The VMT thresholds for projects and plans in the City of Lancaster are summarized in the table below.

Project Type	Threshold for Determination of Significant VMT Impact
Residential Project	Project exceeds 15% below AVPA Baseline VMT for home-based VMT per capita
Employment Commercial or Industrial) Project	Project exceeds 15% below AVPA Baseline VMT for home-based work VMT per employee
Regional Retail Project[1]	Project results in a net increase in total VMT per service population in comparison to the AVPA Baseline VMT
Mixed-Use Projects	Evaluate each project land use component separately using the criteria above
Land Use Plans	Plan exceeds 15% below AVPA Baseline VMT for Total VMT per service population
Other land use types	Project exceeds 15% below AVPA Baseline VMT. For land use types not listed above, the City can determine the appropriate VMT metric depending on the project characteristics. For projects that are generally producing job- related travel, the employment generating VMT (home-based work VMT per employee) can be compared to the baseline. For other projects, the total VMT per service population can be compared to the AVPA baseline, or the net change in Total VMT can be estimated.
Transportation Projects	Project results in an increase in VMT in the study area in comparison to baseline conditions

Per the Guidelines, project VMT impacts are required to be mitigated through the implementation of strategies described in the tables below that are a sample of the options most effective in areas like the City of Lancaster, some of which are already being implemented in the City pursuant to the City's TDM ordinance.

Strategy	Description	VMT Impact	CAPCOA VMT Reduction
Land Use & Location			
Increase Density	Designing a Project with increased densities, where allowed by the General Plan and/or Zoning Ordinance reduces GHG emissions associated with traffic in several ways.	Minimizes number and length of vehicle trips and provides greater options for use of alternative modes.	0.8% - 30%
Increase Diversity of Urban and Suburban Developments (Mixed Use)	Includes mixed uses within Projects or in consideration of surrounding area.	Minimizes number and length of vehicle trips.	9% - 30%
Increase Destination Accessibility	Destination accessibility is measured in terms of the number of jobs or other attractions reachable within a given travel time, which tends to be highest at central locations and lowest at peripheral ones.	Minimizes number and length of vehicle trips.	6.7% - 20%
Increase Transit Accessibility	Locating a project with high density near transit will facilitate the use of transit by people traveling to or from the Project site. The use of transit results in a mode shift and therefore reduced VMT.	Encourages transit use to replace vehicle trips.	0.5% - 24.6%

Strategy	Description	VMT Impact	CAPCOA VMT Reduction
Neighborhood/Site Enhancement			
Provide Pedestrian Network Improvements	Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive. This mode shift results in people driving less and thus a reduction in VMT.	Encourages people to walk within and to a Project	0% - 2%
Implement a Neighborhood Electric Vehicle (NEV) Network	NEVs offer an alternative to traditional vehicle trips and can legally be used on roadways with speed limits of 35 MPH or less. They are ideal for short trips up to 30 miles in length.	Minimizes length of vehicle trips; electrification reduces GHG emissions.	0.5% - 12.7%
Provide Traffic Calming Measures	Providing traffic calming measures encourages people to walk or bike instead of using a vehicle. This mode shift will result in a decrease in VMT. Project design will include pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements.	Encourages people to walk or bicycle, especially for shorter trips.	0.25% - 1%

Strategy	Description	VMT Impact	CAPCOA VMT Reduction
Commute Trip Reduction			
Implement Car-Sharing Program	Projects can implement a car- sharing program to allow people to have on-demand access to a shared fleet of vehicles on an as-needed basis. Car-sharing programs may be grouped into three general categories: residential- or citywide- based, employer-based, and transit station-based.	Reduces need to own a vehicle or the number of household vehicles.	0.4% - 0.7%
Encourage telecommuting and Alternative Work Schedules	Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered start times, flexible schedules, or compressed work weeks.	Reduces the number of days employees need to work and/or shifts commute time outside of peak periods to avoid adding congestion.	0.07% - 5.5%
Commute Trip Reduction Programs	Projects can implement a voluntary Commute Trip Reduction program with employers to discourage single-occupancy vehicle trips and encourage alternative modes of transportation. Alternatively, a jurisdiction can implement a Commute Trip Reduction Ordinance with the intent of reducing drive-alone travel mode share.	Encourages alternatives to commuting in single-occupancy vehicles.	1% - 6.2%

Strategy	Description	VMT Impact	CAPCOA VMT Reduction
Parking Policy/Pricing			
Limit Parking Supply	Projects can change parking requirements and types of supply within the Project site to encourage "smart growth" development and alternative transportation choices by project residents and employees.	Encourages alternatives to the use of single-occupancy vehicles.	5% - 12.5%
Unbundle Parking Costs from Property Cost	Unbundling separates parking from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost from the property cost.	Encourages alternatives to the use of single-occupancy vehicles.	2.6% - 13%
Implement Market-Price Public Parking	Price all central business district/employment center/retail center on-street parking to encourage "park once" behavior. This deters parking spillover from project-supplied parking to other public parking nearby to avoid undermining the VMT benefits of pricing project-supplied parking.	Encourages people to park once and walk between destinations instead of driving.	2.8% - 5.5%

3.0 PROJECT VMT ASSESSMENT

The Project is proposing the construction of 101,237 square foot (SF) storage facility (mini warehouse) including 1,575 SF office area, 1,008 SF living unit, and 441 SF garage.

3.1 SCREENING CRITERIA ASSESSMENT

Project Size – Per the Guidelines, project vehicular traffic generation characteristics can be estimated based on established rates contained in the Trip Generation, 11th Edition, published by ITE. Project ITE average trip generation rates are presented in ***Table 1****. The proposed Project trip generation calculation summary is presented in* ***Table 2****.*

Table 1
Project Trip Generation Rate

Land Use[1]	*Units[2]*	*ITE LU Code*	*AM Peak Hour*			*PM Peak Hour*			*Daily*
			In	*Out*	*Total*	*In*	*Out*	*Total*	
Mini Warehouse (Self-Storage)	*TSF*	*151*	*0.05*	*0.04*	*0.09*	*0.07*	*0.08*	*0.15*	*1.45*

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet

Table 2
Project Trip Generation

Land Use[1]	*Intensity*	*Units[2]*	*AM Peak Hour*			*PM Peak Hour*			*Daily*
			In	*Out*	*Total*	*In*	*Out*	*Total*	
Mini Warehouse (Self-Storage)	*101.237*	*TSF*	*5*	*4*	*9*	*7*	*8*	*15*	*147*
		Total	***5***	***4***	***9***	***7***	***8***	***15***	***147***

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).
[2] TSF = Thousand Square Feet

As shown, the Project is anticipated to generate approximately 147 total daily trips, which is more than 110 daily trips. ***Therefore, the project does not qualify for this screening criterion.***

Locally Serving Retail *– The proposed mini warehouse use is not a retail use. However, the OPR Technical Advisory describes retail uses as "redistributing [existing] shopping trips rather than creating new trips." Similarly, mini warehouse uses supplement residential uses, and wouldn't add new trips, but instead shorten existing trips to storage facilities from residential uses. Residential uses exist to the south and west of the Project site, as well as 4 storage facility locations within*

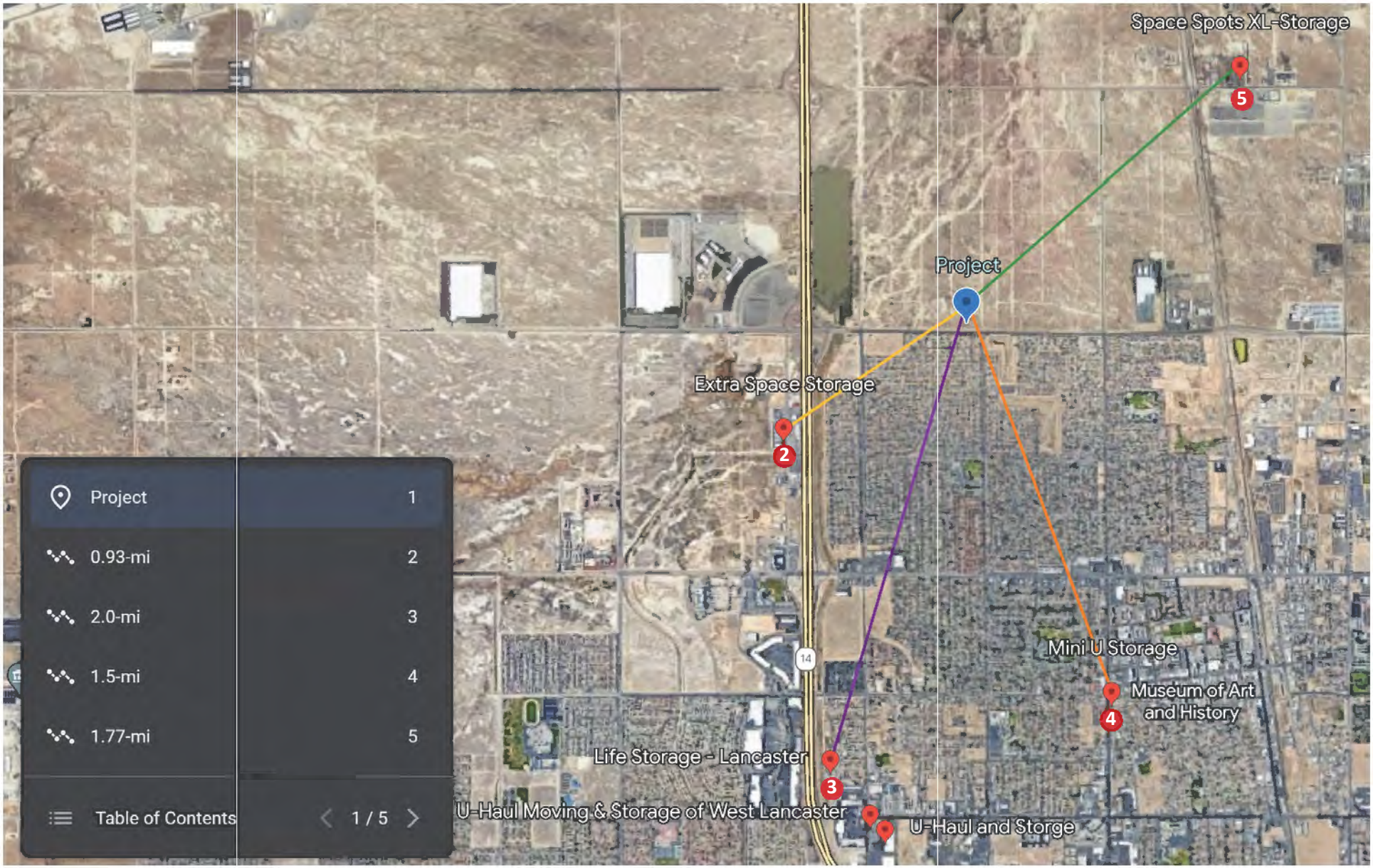
*2.0-mile radius, as shown in **Figure 2**. The Project's market capture area would overlap with these competing storage facilities, resulting in redistribution of existing trips and reduction of VMT for those redistributed trips.* However, the project exceeds the allowed 50k square feet allowed threshold; ***therefore, the project does not qualify for this screening criterion.***

Project Located in a Low VMT Area *– The proposed mini warehouse is a non-residential use; therefore, office screening criteria is used where the project is determined to be located in a TAZ in which there currently no employment sources. As such, A VMT analysis is required to determine if the project would exceed the City's threshold*; ***therefore, the project does not qualify for this screening criterion.***

Transit Proximity *– The proposed mini warehouse use is not a residential or commercial project;* ***therefore, does not qualify for this screening criterion****.*

Affordable Housing *– The proposed mini warehouse use is not a residential project;* ***therefore, does not qualify for this screening criterion****.*

As described above, the project doesn't meet any of the screening criteria identified in the guidelines and therefore a detailed VMT analysis was conducted to evaluate the project using the "SCAG RTP/SCS Travel Demand Forecast Model" as suggested in the guidelines.



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15th Street W and W Avenue H Storage Facility Project

Storage Facility Locations

Figure 2

3.2 VMT ASSESSMENT FOR NON-SCREENED DEVELOPMENT

METHODOLOGY

GTS has been retained to run the VMT model where Transportation Analysis Updates in Lancaster - dated May 27, 2020" (guidelines) was used as a guide for the VMT analysis of this project. The City has updated these guidelines to "Local Transportation Assessment Guidelines – dated January 5, 2021". However, while VMT evaluation methodologies are same in both the guidelines, the most recent version of the guidelines does not include the VMT thresholds. Therefore, guidelines from 2020 were used for evaluation of the project.

The SCAG RTP model is a socioeconomic data based model and so the project land uses were converted into model employment categories using conversion factors that were developed using Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th edition. ITE Trip Generation Manual includes trip rates by square footage and employees for different land uses which were used to develop project land use conversion factors Project land use was converted into employment as shown in **Table 3** below.

Table 3
Project Employment Estimates

Land Use	Square Footage (SF)	ITE Code	Daily Trips/KSF	Daily Trips/Employee	Employee/KSF	Total Employees
Self-Storage	101,237	150	1.71	5.05	0.339	34

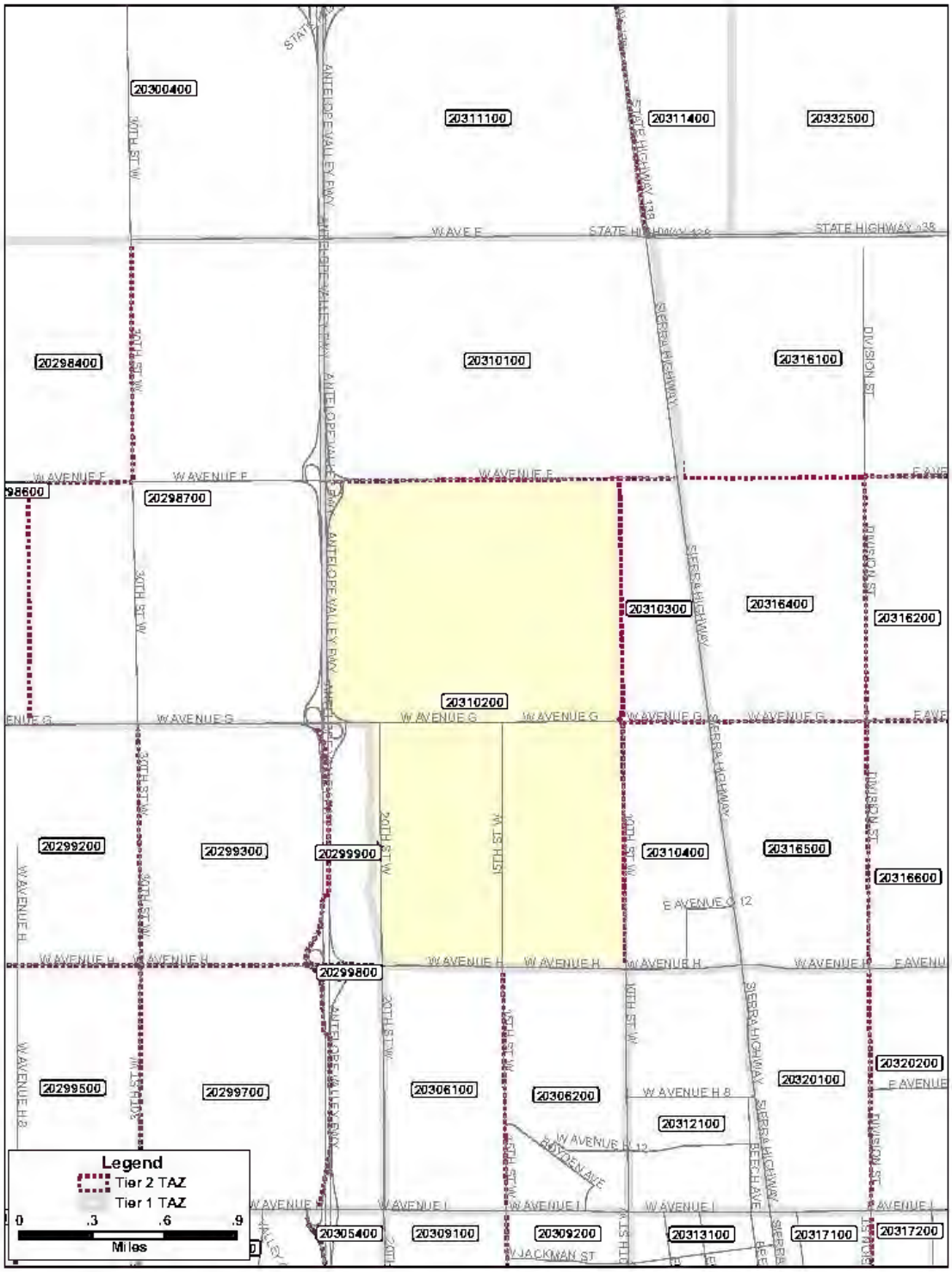
The SCAG RTP model uses a two tier TAZ system – Tier 1 zones and Tier 2 zones. Two or more Tier 2 zones make up a Tier 1 zone. The model utilizes Tier 2 zone system for modeling steps such as trip generation, trip distribution, and mode choice while it uses Tier 1 zone system for assignment purposes.

The project area is contained inside Tier 2 zone. Given the inability to perform zone splits in the SCAG RTP model, GTS modified the socioeconomic data for Tier 2 zones to isolate the project within its own zone. One Tier 2 zone was used to isolate the project. The project is located in Tier2 TAZ 20310200 as shown in **Figure 2**.

VMT ANALYSIS

The guidelines suggest use of VMT per employee as the metric to evaluate office and industrial land uses (Table 6: VMT Thresholds of Significance on page 24). The project land use (self-storage) can be considered as industrial land use and therefore VMT employee metric was used to evaluate the project. The project VMT metric should be less than the appropriate regional baseline metric to show no significant impact. The "Antelope Valley Planning Area (AVPA)" is identified as the region for the City of Lancaster and the 15% is identified as the threshold. The project will have a significant VMT impact if the project VMT per employee is greater than 85% of baseline AVPA VMT per employee. The baseline AVPA VMT per employee was obtained from the guidelines (Table 4B: SCAG Model Outputs for Antelope Planning Area and City of Lancaster (Home Based Work VMT) – page 17). According to the guidelines the numerical value of the regional (AVPA) baseline VMT per employee is 9.4 and the threshold would be 8.0 (85% of 9.4)

Figure 3
Tier 1 and Tier 2 TAZs in the project area



Model socioeconomic database for base and future scenarios was updated with the project land use to calculate project VMT. Project VMT for was estimated using outputs from the model runs. No project specific network modifications were conducted for the model scenarios. Full model runs with 5 feedback loops were conducted for the project scenario.

The travel model doesn't retain trip purposes during the final step (traffic assignment) of the model that produces traffic volumes. In order to estimate VMT by trip purpose, outputs from mode choice step were used as trips and the trip lengths were derived from the skimming step.

Mode choice outputs include person trips by trip purpose and mode. Only auto modes were considered for VMT estimation purposes. The person trip tables were appropriately converted to vehicle trips by using average auto occupancy factors from the model.

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.

Different trip purposes in the model are used in the estimation of different VMT metrics. VMT per employee estimates include VMT from the home-based work trip purpose. VMT per employee for the project was estimated using the Tier 2 zone system. Homebased Work VMT for the project zone was divided by the total project employment to derive the VMT per employee for the project.

The following **Table 4** summarizes the project VMT and compares it to the thresholds identified in the guidelines and **Table 5** shows the detailed VMT calculations for the project. As illustrated in **Table 5**, the project does not have a significant impact for the baseline scenario (2020) and horizon year scenario (2040).

Table 4
Comparison of Project and Regional VMT per Employee

VMT per Employee Threshold *	15th St and E Ave. H Storage (project)	City of Lancaster
2020	6.3	8.0
2040	4.8	8.0

** City of Lancaster Threshold is 85% of 2020 Antelope Valley Planning Area (AVPA) VMT per employee (9.4) Obtained from Transportation Analysis Updates in Lancaster, May 27, 2020*

Table 5
2020 and 2040 Project VMT Calculations

2020	**15th St and E Ave. H Storage (project)**	**City of Lancaster Threshold ***
Employment	34	
Homebased Work (HBW) VMT	217	
VMT per employee	6.3	8.0

2040	**15th St and E Ave. H Storage (project)**	**City of Lancaster Threshold ***
Employment	34	
Homebased Work (HBW) VMT	166	
VMT per employee	4.8	8.0

** City of Lancaster Threshold is 85% of 2020 Antelope Valley Planning Area (AVPA) VMT per employee (9.4) Obtained from Transportation Analysis Updates in Lancaster, May 27, 2020*

CONCLUSION

Based on the VMT analysis as shown in above **Tables 4 and 5**, the project doesn't constitute a significant impact for "project generated VMT".