MEMORANDUM

URBAN | CROSSROADS

DATE: October 31, 2024
TO: Nicole Morse, T&B Planning, Inc.
FROM: Alex So, Urban Crossroads, Inc.
JOB NO: 15341-01 VMT

LAKE CREEK LOGISTICS CENTER VEHICLE MILES TRAVELED (VMT) ANALYSIS

Urban Crossroads, Inc. has completed the following Vehicle Miles Traveled (VMT) Analysis for the Lake Creek Logistics Center (**Project**) which is bound by Gustine Street to the north, Central Road to the east, Corwin Road to the south, and the Apple Valley Airport to the west in the Town of Apple Valley.

PROJECT OVERVIEW

The Project consists of the development of three industrial warehouse and distribution buildings totaling 3,480,736 square feet. A Project site plan is provided in Attachment A.

BACKGROUND

The California Environmental Quality Act (CEQA) requires all lead agencies to adopt VMT as the measure for identifying transportation impacts for land use projects. To comply with CEQA, the Town of Apple Valley adopted Resolution No. 2021-08 A Resolution of the City Council of the Town of Apple Valley, California, Adopting Thresholds of Significance for Vehicle Miles Traveled (VMT) Under the California Environmental Quality Act (CEQA) (May 11, 2021) (1) (**VMT Guidelines**), which documents the Town's adopted VMT methodology and impact thresholds based on guidance as provide by the San Bernardino County Transportation Authority's (SBCTA) Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (February 2020) (2). This VMT analysis has been prepared based on the adopted City Guidelines.

VMT ANALYSIS

TRAFFIC MODELING METHODOLOGY

Although the adopted VMT Guidelines do not specify the preferred modeling tool to be used to conduct VMT analyses within the Town of Apple Valley, the SBCTA recommends the San Bernardino Transportation Analysis Model (SBTAM) for conducting VMT analysis for land use projects within the region as it considers

interaction between different land uses based on socio-economic data, such as population, households, and employment.

SBTAM is a travel forecasting model that represents a sub-area (San Bernardino County) of the Southern California Association of Governments (SCAG) regional traffic model and was designed to provide a greater level of detail and sensitivity in the San Bernardino County area as compared to the regional SCAG model. The SBTAM model was therefore chosen as the appropriate modeling tool to prepare VMT estimates for the Project.

VMT ANALYSIS METHODOLOGY

Consistent with the Town's adopted VMT Guidelines, the Origin/Destination (OD) method has been utilized to estimate project-generated VMT and is presented as total VMT per Service Population (SP). Total VMT provides an estimate of the total vehicle travel (inclusive of both cars and trucks), while VMT per person/employee measures the efficiency of travel. Total VMT per SP is an efficiency metric that represents all VMT generated on a typical weekday per person who lives and/or works in a given area (e.g., Project Boundary or Town of Apple Valley). As the Project proposes only industrial land uses, its SP would be comprised solely of employees.

ORIGIN/DESTINATION (OD) VMT

The OD method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area 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 vehicle trips that end in a specific TAZ.

BOUNDARY VMT METHOD

The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (e.g., Town 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 the Town's VMT Guidelines, the Town of Apple Valley was used as the boundary for this assessment.

VMT METRIC AND SIGNIFICANCE THRESHOLD

VMT Guidelines, adopted by the Town, state that for purposes of determining a potentially significant impact to transportation pursuant to CEQA:

> A project would result in a significant project-generated impact if either of the following conditions are satisfied:
>
> 1. The baseline project generated VMT per SP exceeds the Town of Apple Valley General Plan Buildout VMT per SP, or
> 2. The cumulative project generated VMT per SP exceeds the Town of Apple Valley General Plan Buildout VMT per SP.
>
> The project's effect on VMT would be considered significant if it results in either of the following conditions to be satisfied:

3. The baseline link-level boundary Town-wide VMT per SP increases under the plus project condition compared to the no project condition, or
4. The cumulative link-level boundary Town-wide VMT per SP increases under the plus project condition compared to the no project condition.

The Town of Apple Valley's VMT per capita was calculated utilizing the SBTAM's horizon year (2040) traffic model. All TAZs located within Town of Apple Valley were selected and the Total VMT was calculated from SBTAM. For ease of comparison, the VMT for the Town was then divided by the Town's service population. Resulting in the Town of Apple Valley's General Plan Buildout average of 33.2 VMT per service population, as presented in Table 1.

TABLE 1: TOWN OF APPLE VALLEY GENERAL PLAN BUILDOUT VMT PER SP

	GP Buildout
Total VMT	4,212,258
SP	126,806
VMT per SP	33.2

PROJECT VMT ESTIMATES

To estimate Project-generated VMT, land use information such as building square footage must first be converted into a SBTAM compatible dataset. The SBTAM model utilizes socio-economic data (SED) (e.g., population, households, and employment) for the purposes of vehicle trip estimation. The Project's SED is then isolated within the Project's TAZ. Table 2 summarizes the SED inputs used to represent the Project.

TABLE 2: LAND USE DATA SUMMARY

Land Use	Quantity (SF)	Employment Density Factor[1]	Employees
Industrial	3,480,736	1 employee per 1,195 sf	2,913

Project VMT estimates were extracted from SBTAM using the OD trip matrices, which includes Project-generated VMT for all vehicle trips (both passenger cars and trucks) and trip purposes.

The VMT estimates performed for the Project along with a comparison to the Town's impact threshold are presented in Table 3. Project-generated VMT was found to exceed the Town's adopted impact threshold by 10% and is therefore considered to have a potentially significant VMT impact.

[1] SCAG Employment Density Study; Table II-B

TABLE 3: PROJECT-GENERATED VMT

	Baseline	Cumulative
SP	2,913	2,913
Total OD VMT	106,200	106,191
OD VMT per SP	36.5	36.5
Town Threshold	33.2	33.2
Potentially Significant?	Yes	Yes

Table 4 presents an assessment of the Project's effect on VMT using the boundary method. The Project's effect on VMT is measured by comparing Town-wide VMT per service population without and with the proposed Project for both baseline and cumulative traffic conditions. As presented in Table 4, the Project is not forecast to cause Town-wide VMT per SP to increase for either baseline or cumulative conditions. The Project's effect on VMT is considered less than significant.

TABLE 4: BOUNDARY VMT

	Baseline		Cumulative	
Scenario	No Project	With Project	No Project	With Project
SP	103,011	105,923	126,806	129,718
Boundary VMT	912,359	939,288	1,206,225	1,233,765
VMT per SP	8.9	8.9	9.5	9.5
Change in VMT per SP	0.0		0.0	
Potentially Significant?	No		No	

VMT REDUCTION STRATEGIES

The California Air Pollution Control Officers Association (**CAPCOA**) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (December 2021) (**Handbook**) (2) has been utilized to determine trip reduction measures that may be applicable to the Project. The Handbook describes methods to quantify reductions in greenhouse gas emissions and in the case of Transportation measures, the associated reductions to VMT. This evaluation will focus on a review of the Handbook's Transportation measures that are determined to be applicable to the Project.

SELECTING MEASURES

To determine which Transportation measures should be considered from the Handbook, land use type, scale and locational context are each identified as key factors for determining an individual measure's applicability to a project. The Handbook contains a factsheet for each measure that describes the measure, locational context, scale of application, implementation requirements, and other considerations that should be reviewed to determine a measure's applicability.

PROJECT TYPE

Project type is an important consideration when determining which measures are applicable for consideration. For example, measures associated with neighborhood design are not applicable to an office project, whereas trip reduction programs intended to reduce employee commute VMT would not be applicable to an apartment project.

SCALE

The Handbook identifies that measures can be applied at different scales or geographic levels, however, "some measures may only be applicable at the project-level, whereas others may be more appropriate within a broader planning context such as for a general plan or climate action plan." The geographic levels considered in the Handbook include Project/Site and Plan/Community. Project/Site applies to measures that can reduce VMT at the scale of an individual development project or employer. Plan/Community refers to measures that reduce VMT at the scale of a specific plan, general plan or climate action plan. Transportation measures can be quantified at either the Project/Site scale or the Plan/Community scale, but never both.[2]

LOCATIONAL CONTEXT

The Handbook describes locational context as "used to identify trip reduction measures within the transportation sector that are appropriate in certain types of neighborhoods differentiated by transportation characteristics and level of development (e.g., rural, suburban, and urban)." More specifically, rural, suburban, and urban are defined as follows:

Rural: An area characterized by little development. Compared to urban and suburban areas, rural areas have a lower density of residences, higher numbers of single-family residences, and higher numbers of vehicle dependent land use patterns. Where applicable, the Handbook provides three land use distinctions within the rural locational context category—R_a, R_b, and R_c. R_a refers to rural areas within a master-planned community. These rural areas often include a broad offering of amenities and services, which may be accessed by walking or other alternative forms of transportation. R_b refers to rural areas adjacent to a commuter rail station with convenient rail service to a major employment center. As the name implies, these rural areas have greater access to commuter rail as an alternative mode of transportation. R_c refers to rural areas with transit service and that are near jobs/services.

Suburban: An area characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside of the central city. Also known as a suburb.

Urban: An area located within the central city with higher density land uses than in the suburbs. Often characterized by multi-family housing, tall office buildings, and dense retail.

TOWN OF APPLE VALLEY'S LOCATIONAL CONTEXT

The Town of Apple Valley is often considered rural due to its surroundings. Apple Valley has a significant amount of open space, undeveloped land and natural landscapes that contribute to a

[2] Handbook, Page 37

more rural atmosphere. In addition, compared to more urbanized areas of San Bernardino County, Apple Valley has a lower population density[3].

The Project is located within an area of the Town that is still developing and includes both paved and unimproved roads that in some cases lack sidewalks, curbs and gutters. There is a lack of diverse land uses within a reasonable walking distance (i.e., quarter mile), which tends to limit non-auto modes of transportation such as walking and biking. High quality transit options in the vicinity are also limited, with the closest bus stop over two miles walk to the northwest. For these reasons, the Project's locational context is determined to be characteristically rural and borderline suburban. in an effort to explore all available mitigation measures applicable to the Project, the applicable suburban-related VMT mitigation measures were also conservatively evaluated.

TRANSPORTATION MEASURES

As noted in the Handbook, Transportation measures "promote transit and alternative transportation, support use of alternatively fueled vehicles, or encourage land use planning practices that reduce vehicle trips and vehicle miles traveled (VMT). Measures within the transportation sector are separated into six subsectors: Land Use, Neighborhood Design, Parking or Road Pricing Management, Transit, Trip Reduction Programs, and Clean Vehicles and Fuels."[4] For the purposes of this evaluation, the measures listed within the Trip Reduction Programs subsector that are focused on reducing employee commute VMT would be most applicable to the Project's industrial land use.

TRIP REDUCTION PROGRAMS SUBSECTOR

Each factsheet within the Trip Reduction Programs subsector was reviewed to determine each measure's applicability to the Project. Attachment B lists each of the reviewed measures (i.e., T-5 through T-13 and T-23) along with a determination of each measure's applicability to the Project. As indicated in Attachment B, many of the measures in this subsector are not appliable in a rural context due to the limited availability of transit and other non-auto dependent travel modes. Measure **T-11 Provide Employer-Sponsored Vanpool** is only applicable in a rural context. As noted in the Handbook, "vanpool programs are more appropriate for the building occupant or tenant (i.e., employer) to implement and monitor than the building owner or developer." The quantification below assumes that a potential future tenant implements this measure using default values supplied by the Handbook's calculation factsheet. However, any VMT reductions are purely speculative, as the Project does not have a known tenant.

T-11 PROVIDE EMPLOYER-SPONSORED VANPOOL

This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting. The mode shift from long-distance, single-occupied

[3] U.S. Census Bureau; https://www.census.gov/quickfacts/fact/table/ontariocitycalifornia,applevalleytowncalifornia/PST045222
[4] Handbook, Page 30

vehicles to shared vehicles reduces overall commute VMT. Calculation variables and formula are as follows in Table 5.

TABLE 5: T-11 VMT REDUCTION CALCULATION VARIABLES

ID	Variable	Value	Unit	Source
A	Percent reduction in GHG emissions from Project/Site employee commute VMT	3.4-20.4	%	calculated
User Inputs				
	None			
Constants, Assumptions, and Available Defaults				
B	Percent Employees that participate in vanpool program	2.7	%	SANDAG 2019
C	Average length of one-way vehicle commute trip in region	18.62	miles per trip	FHWA 2017
D	Average length of one-way vanpool commute trip	42	miles per trip	SANDAG 2019
E	Average vanpool occupancy (including driver)	6.25	occupants	SANDAG 2019

$$A = \frac{\left((1-B)\times C\right) + \left(B \times \frac{D}{E}\right)}{\left((1-B)\times C\right) + (B \times D)} \times -1$$

As calculated in Table 5, if the Project's potential future tenant implements T-11, the Project can expect a 1.73% reduction in the Project's VMT impact. However, even with the implementation and inclusion of T-11, the Project would not be able to reduce its VMT impact to a level of less than significant. As noted previously, the implementation results are not guaranteed as a potential future tenant is currently unknown.

However, as previously stated, in an effort to explore all available mitigation measures, any mitigation measures applicable to a project located in a suburban area were also considered. The quantification below assumes that a potential future tenant implements this measure using default values supplied by the Handbook's calculation factsheet. However, any VMT reductions are purely speculative, as the Project does not have a known tenant.

T-7 Commute Trip Reduction Marketing

The Project will include a marketing strategy to promote the Project site employer's CTR program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing VMT. The following features (or similar alternatives) of the marketing strategy are essential for effectiveness.

- Onsite or online commuter information services.
- Employee transportation coordinators.
- Onsite or online transit pass sales.
- Guaranteed ride home service.

TABLE 6: T-7 VMT REDUCTION CALCULATION VARIABLES

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from project/site employee commute VMT	0-4.0	%	calculated
User Inputs				
B	Percent of employees eligible for program	0-100	%	user input
Constants, Assumptions, and Available Defaults				
C	Percent reduction in employee commute vehicle trips	-4	%	TRB 2010
D	Adjustment from vehicle trips to VMT	1	unitless	assumed

$$A = B \times C \times D$$

The Project will provide tenant's employees material and online resources as a means to promote the commute trip reduction program. As calculated for the Project, with proper implementation and 90%[5] of the Project's employees eligible, this design feature is expected to reduce VMT by 3.6%.

T-8: RIDESHARING PROGRAM

The Project will provide a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips and VMT. Ridesharing must be promoted through a multifaceted approach. Examples include the following.

- Designating a certain percentage of desirable parking spaces for ridesharing vehicles.
- Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles.
- Providing an app or website for coordinating rides.

TABLE 7: T-8 VMT REDUCTION CALCULATION VARIABLES

ID	Variable	Value	Unit	Source
Output				
A	Percent reduction in GHG emissions from project/site employee commute VMT	0-8.0	%	calculated
User Inputs				
B	Percent of employees eligible for program	0-100	%	user input
Constants, Assumptions, and Available Defaults				
C	Percent reduction in employee commute VMT	4	%	SANDAG 2019

$$A = B \times C$$

[5] Employees who might not be able to participate could include those who work nighttime hours when transit and rideshare services are not available or employees who are required to drive to work as part of their job duties.

The Project could be designed to provide carpool/vanpool/EV parking designated spaces in locations of easy and convenient accessibility to the Project building. As calculated for the Project, with proper implementation and 90%[6] of the Project's employees eligible, the Project is expected to reduce VMT by 3.6%.

T-10 END-OF-TRIP BICYCLE FACILITIES

Measure T-10 Provide End-of-Trip Bicycle Facilities is listed in the Handbook as available to projects in a suburban setting. As described in the Handbook, "the measure will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing VMT and GHG emissions."[7] The Fact Sheet for T-10 Provide End-of-Trip Bicycle Facilities was utilized to calculate the Project's potential VMT reduction.

TABLE 8: T-10 VMT REDUCTION CALCULATION VARIABLES

ID	Variable	Value	Unit	Source
A	Percent reduction in GHG emissions from project/site employee commute VMT	0.1-4.4	%	calculated
User Inputs				
	None			
Constants, Assumptions, and Available Defaults				
B	Bike mode adjustment factor	1.78 or 4.86[1]	unitless	Buehler 2012
C	Existing bicycle trip length for all trips in region	2.2	miles	FHWA 2017a
D	Existing vehicle trip length for all trips in region	11.7	miles	FHWA 2017a
E	Existing bicycle mode share for work trips in region	0.4	%	FHWA 2017b
F	Existing vehicle mode share for work trips in region	95.3	%	FHWA 2017b

[1]The bike mode adjustment factor should be provided by the user based on type of bike facility. A study found that commuters with showers, lockers, and bike parking at work are associated with 4.86 times greater likelihood to commute by bicycle when compared to individuals without any bicycle facilities at work. Individuals with bike parking, but no showers and lockers at the workplace, are associated with 1.78 times greater likelihood to cycle to work than those without trip-end facilities.

$$A = \frac{C \times \left(E - (B \times E)\right)}{D \times F}$$

The Project can include building elements for bicycle trip end facilities (i.e., parking) for commuters that choose to bicycle as a mode of travel. This will promote an alternative mode choice of commuting for employees. As calculated, the Project will reduce VMT by 0.1%.

TOTAL VMT REDUCTIONS

The Handbook states that effectiveness levels for multiple measures within a subsector may be multiplied to determine a combined effectiveness level. Because the combination of measures and independence of measures are complicated, the Handbook recommends that measure reductions within a subsector be multiplied unless the user can provide substantial evidence indicating that emission reductions are independent of one another and that they should

[6] Employees who might not be able to participate could include those who work nighttime hours when transit and rideshare services are not available or employees who are required to drive to work as part of their job duties.
[7] Handbook, Page 133

therefore be added. Each subsector has a maximum allowable reduction. These were derived by combining the maximum allowable reduction of each individual non-mutually-exclusive measure within the subsector. As all the Project Design Features above fall under the Subsector of "Trip Reduction Programs", the Handbook states that the "Trip Reduction Subsector" has a maximum reduction of 45%. Therefore, a project cannot exceed the maximum allowable reduction. The Handbook provides the following equation for combining Subsector reductions:

$$Reduction_{Subsector} = 1 - [(1 - A) \times (1 - B) \times (1 - C) \dots]$$

Project's VMT reduction are as follows:

$$9.0\% = 1 - [(1 - 1.73\%) \times (1 - 3.6\%) \times (1 - 3.6\%) \times (1 - 0.1\%)]$$

As outlined through the VMT reduction calculations presented above, with the inclusion of the VMT mitigation measures, the Project is estimated to reduce its VMT impact by 9.0%. The Project as evaluated exceeds the Town's impact threshold by 10% and would be required to reduce its VMT impact by 8.9%[8]. With the implementation of feasible mitigation measures, the Project could mitigate its VMT impact to a level of less than significant. However, as the Project is a speculative industrial building, any feasible VMT mitigation measures cannot be guaranteed.

CONCLUSION

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

- Project-generated VMT was found to exceed the Town's VMT per SP impact threshold and would result in a potentially significant VMT impact.
- The Project's effect on VMT was found to remain unchanged in the With Project scenario as compared to the No Project scenario for both the baseline and cumulative conditions. The Project's effect on VMT was found to be less than significant.
- Implementation of feasible mitigation is expected to reduce a portion of the Project's VMT impact. However, even with the inclusion of any feasible mitigation measure, the Project will not be able to mitigate its VMT impact to a level of less than significant. In addition, as the Project is a speculative industrial building, any feasible VMT mitigation measures cannot be guaranteed.
- The Project VMT impact is therefore considered **significant and unavoidable.**

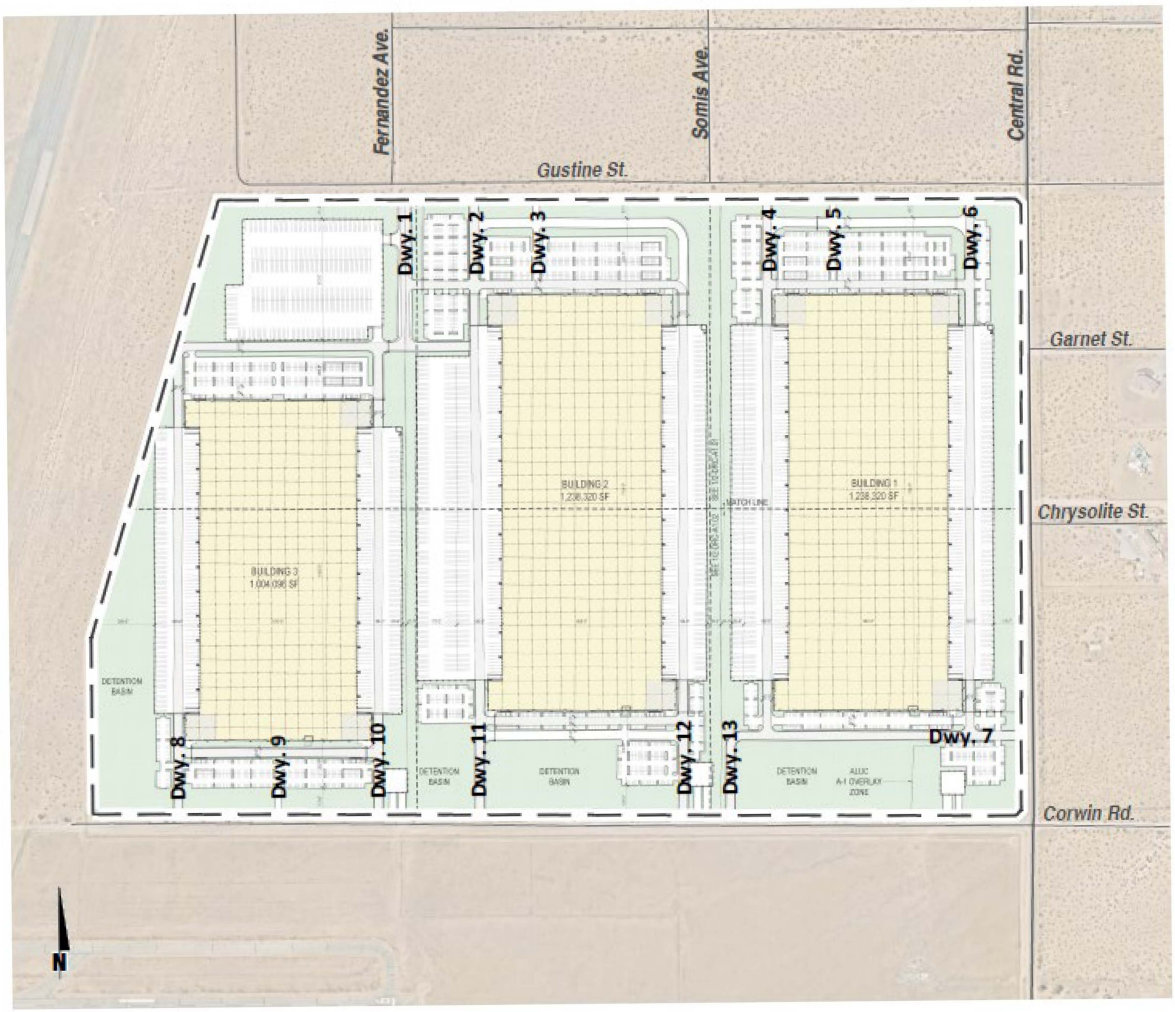
If you have any questions, please contact me directly at aso@urbanxroads.com.

[8] ($106.200_{ProjectVMT}$ - ($33.2_{Threshold}$*$2{,}913_{ProjectEmployees}$)/$106{,}200_{ProjectVMT}$) * 100=8.9%

REFERENCES

1. **Town of Apple Valley.** *Resolution of the City Council of the Town of Apple Valley, California, Adopting Thresholds of Significance for Vehicle Miles Traveled (VMT) Under the California Environmental Quality Act.* May 2021.
2. **CAPCOA.** *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity .* December 2021.

ATTACHMENT A
PROJECT SITE PLAN


Fernandez Ave.
Somis Ave.
Central Rd.
Gustine St.
Garnet St.
Chrysolite St.
Corwin Rd.
Dwy. 1
Dwy. 2
Dwy. 3
Dwy. 4
Dwy. 5
Dwy. 6
Dwy. 7
Dwy. 8
Dwy. 9
Dwy. 10
Dwy. 11
Dwy. 12
Dwy. 13
BUILDING 3
1,004,096 SF
BUILDING 2
1,236,320 SF
BUILDING 1
1,236,320 SF
MATCH LINE
DETENTION BASIN
DETENTION BASIN
DETENTION BASIN
DETENTION BASIN
ALUC A-1 OVERLAY ZONE
N

ATTACHEMENT B
TRIP REDUCTION PROGRAM

TABLE A-1: TRIP REDUCTION PROGRAMS SUBSECTOR

Subsector	Measure	Scale of Application	Applicable Locational Context	Applicability to Project
Trip Reduction Programs	**T-5 Implement Commute Trip Reduction Program (Voluntary)** This measure will implement a voluntary commute trip reduction (CTR) program with employers.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-6 Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring) This measure will implement a mandatory CTR program with employers. CTR programs discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking, thereby reducing VMT and GHG emissions.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-7 Implement Commute Trip Reduction Marketing This measure will implement a marketing strategy to promote the project site employer's CTR program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing VMT and GHG emissions.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-8 Provide Ridesharing Program This measure will implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-9 Implement Subsidized or Discounted Transit Program This measure will provide subsidized or discounted, or free transit passes for employees and/or residents.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-10 Provide End-of-Trip Bicycle Facilities This measure will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-11 Provide Employer-Sponsored Vanpool This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting.	Project/ Site	Urban, Suburban, Rural	Applicable.
	T-12 Price Workplace Parking This measure will price onsite parking at workplaces. Because free employee parking is a common benefit, charging employees to park onsite increases the cost of choosing to drive to work	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-13 Implement Employee Parking Cash-Out This measure will require project employers to offer employee parking cash-out. Cash-out is when employers provide employees with a choice of forgoing their current subsidized/free parking for a cash payment equivalent to or greater than the cost of the parking space. This encourages employees to use other modes of travel instead of single occupancy vehicles.	Project/ Site	Urban, Suburban	Reduction is not quantifiable nor enforceable due to a speculative building with an unknown employer.
	T-23 Provide Community-Based Travel Planning This measure will target residences in the plan/community with community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles.	Plan/ Community	Urban, Suburban	Does not apply at the Project/Site scale.

Source: Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity , California Air Pollution Control Officers Association (CAPCOA), December 2021.

Notes:

1. Per CAPCOA Handbook, the combined maximum for each subsector or total across subsectors is calculated as:
1 - ((1-A)*(1-B)*(1-C)*(1-D)…); where, A, B, C, and D… represent the percent reduction for individual measures or subsectors.