

October 27, 2022

Ms. Johanna Crooker
MLC Holdings, Inc.
5 Peters Canyon Road Suite 310
Irvine, CA 92606

**SUBJECT: GRISWOLD RESIDENTIAL (RPPL2020004447) VEHICLE MILES TRAVELED (VMT)
ANALYSIS**

Dear Ms. Johanna Crooker:

The following Vehicle Miles Traveled (VMT) Analysis has been prepared for the Griswold Residential development (referred to as “Project”), which is located at 16209 West San Bernardino Road in unincorporated County of Los Angeles (Accessor’s Parcel Number 8435-006-900).

SUMMARY OF FINDINGS

- The Project is proposed to consist of 68 single family residential units on an infill site zoned for residential development at the maximum density permitted by the General Plan, Zoning, and Los Angeles County Community Plan.
- The neighboring homes surrounding the Project site have a vehicle mile traveled (VMT) per capita that is 23.8% above the regional average, which would apply to the Project.
- Previous reports used by the State (i.e., California Air Pollution Control Officers Association [CAPCOA] Quantifying Greenhouse Gas Mitigation Measures) to calculate VMT and greenhouse gas (GHG) emissions reductions.
- The Project would generate 3,966 VMT per day, which is 1,284 VMT above the County’s significance threshold.
- CAPCOA related VMT reduction and additional strategies can be implemented by the Project applicant beyond what is described in CAPCOA would achieve maximum VMT reduction of 854.1 VMT.
- As the Project’s VMT impact will not be fully mitigatable, the Project's EIR shall appropriately describe this significant and unavoidable transportation impact.

PROJECT OVERVIEW

The Project is a single-family residential development consisting of 68 dwelling units on 9.54 net acres. Southern Pacific Railroad abuts the northern boundary of the Project site. Single-family residential surrounds the Project site as well as north of the railroad. The Project fronts San Bernardino Ave and is the sole access to the Project site.

Los Angeles County zoned the Project site A-1 Agricultural, which also allows for residential development. The proposed 68 units on 9.54 net acres provides a density of 7.13 dwelling units per acre, which is consistent with the zoning and land use regulations. Existing land use appears to be a now vacant public elementary school (Use Code 8833).

The Los Angeles County Public Works Transportation Impact Analysis Guidelines (County Guidelines) (2) have established a significance threshold of 16.8% below the existing baseline. For the South County Baseline Area, the existing average is 12.2 VMT per capita,¹ and the threshold after applying the 16.8% reduction is 10.2 VMT per capita.² The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) traffic model shows that the existing residential development surrounding the Griswold site generates 15.1 VMT per capita, which is 23.8% above the regional average. Applied to the Project site, that results in the need for a 32.5% project generated VMT reduction to be below the County's significance threshold.

The Project is 68 units and includes a new neighborhood-scale park. Although the Project is at the maximum density permitted by zoning, it is an infill project, and VMT reduction strategies that can reduce VMT generated by larger sites (e.g., adding employment/retail use mixes) are not available for the Project.

Along with the Transportation Demand Management (TDM) strategies identified as potential mitigation in the County Guidelines³, the mitigation discussion in the Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**)(1)⁴. Some of the measures identified to reduce VMT are not applicable to infill residential projects, but many of the measures are applicable and have been considered as part of the program of project design features, TDM strategies, and off-site improvements that offset the VMT of the Project.

The CAPCOA Manual states that various strategies to reduce VMT can interact, and that combining multiple strategies is subject to a global maximum project VMT reduction. For projects in suburban areas, the global maximum project reduction is 15%.⁵ With a global maximum project VMT reduction of 15%, it would not be possible for any infill project in an average or above average VMT-generating portion of the South County Baseline Area to be below the County's significance threshold (16.8% below average) when only accounting for on-site VMT reduction. To achieve the County threshold, the Project (needing a 32.5% VMT reduction) must employ strategies based on substantial evidence beyond CAPCOA's VMT

¹ Los Angeles County Public Works. 2020. Transportation Impact Analysis Guidelines. July 23. Table 3.1.3-1.

² Los Angeles County Public Works. 2020. Transportation Impact Analysis Guidelines. July 23. Table 3.1.3-2.

³ Los Angeles County Public Works. 2020. Transportation Impact Analysis Guidelines. July 23. Table 3.1.5-1.

⁴ Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December. Page 10.

⁵ California Air Pollution Control Officers Association (CAPCOA). 2010. Quantifying Greenhouse Gas Mitigation Measures. Page 61.

reduction limitations.

PROJECT VMT SCREENING

Consistent with County Guidelines, projects that meet certain screening criteria based on their location and project type may be presumed to result in a less than significant transportation impact. Consistent with the screening criteria recommended in County Guidelines, the County of Los Angeles will utilize the following project screening thresholds that may be applicable to the Project:

- Non-Retail Project Trip Generation Screening
- Proximity to Transit Based Screening
- Residential Land Use Based Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

NON-RETAIL PROJECT TRIP GENERATION SCREENING

The County Guidelines identify that small projects anticipated to generate low traffic volumes (i.e., fewer than 110 daily trips) are presumed to have a less than significant impact absent substantial evidence to the contrary. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (3) The Project is anticipated to generate a total of 642 vehicle trip-ends per day (see Attachment A). The County's trip generation threshold of 110 daily vehicle trips would be exceeded by the Project's trip generation.

The Non-Retail Project Trip Generation screening threshold is not met.

PROXIMITY TO TRANSIT BASED SCREENING

Consistent with guidance identified in the County Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"⁶ or an existing stop along a "high-quality transit corridor"⁷) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

⁶ Pub. Resources Code, § 21064.3 ("Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

⁷ Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

The study area is currently being served by Metro Route 190/194. However, the peak headways are greater than 15 minutes during peak commute hours. The Project is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

The Proximity to Transit Based screening threshold is not met.

RESIDENTIAL LAND USE BASED SCREENING

As noted in the County Guidelines, “certain projects that further the State’s affordable housing goals are presumed to have less than significant impact on VMT.” Projects that set aside 100 percent of the units, excluding manager’s units, as lower income are presumed to have a less than significant impact.⁸ The Project is not anticipated to include affordable housing. As such, this screening criteria is not applicable.

The Residential Land Use Based screening threshold is not met.

Consistent with County Guidelines, projects that do not meet screening criteria are required to prepare a project level VMT analysis.

PROJECT VMT

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model 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 County Guidelines identifies the SCAG model as the appropriate tool for conducting VMT analysis for land use projects in Los Angeles County.

Urban Crossroads obtained project generated VMT calculations for Baseline conditions from Fehr and Peers, who has the SCAG model in-house and can provide project level model runs and VMT by individual traffic analysis zones (TAZ). The SCAG model was reviewed to obtain the socio-economic data (SED) assumptions for the TAZ that encompasses the project site. Given the project size and the fact that the project TAZ already includes residential uses, a new SCAG model run was determined to not be required for the project. Rather, the SCAG model can be used to estimate the Daily VMT and Daily Residential VMT per capita for the project based on

⁸ County Guidelines; Page 8.

the VMT characteristics of the TAZ that contains the Project. The Residential VMT data was obtained from both the 2012 and 2040 versions of the model and the data was interpolated to provide a current year (2020) VMT estimate for the Project. The VMT data is provided in Attachment B.

TABLE 1: POPULATION ESTIMATES

	Project 2012	Project 2040	Project 2020
Dwelling Units	68	68	68
Population ⁹	263	259	262

Project-generated Home-Based (HB) VMT was then calculated for both the base year (2012) model and cumulative year (2040) model and linear interpolation was used to determine the Project's Baseline 2020 HB VMT. As shown in Table 2, the Project baseline (2020) total VMT is 3,966 and HB VMT per capita is 15.1.

TABLE 2: PROJECT HB VMT PER CAPITA

	Year 2012	Year 2040	Year 2020
Population	263	259	262
HB VMT	4,094	3,661	3,966
HB VMT / Capita	15.6	14.1	15.1

COUNTY OF LOS ANGELES VMT

The County Guidelines provides VMT calculations for baseline (2020) conditions in South County. the South County's HB VMT per capita for baseline (2020) conditions is 12.2 and the South County's HB VMT per capita for baseline (2020) conditions with a 16.8% reduction is 10.2¹⁰.

PROJECT LEVEL VMT ASSESSMENT

Table 3 illustrates the comparison between the Project generated HB VMT per capita to the South County's baseline HB VMT per capita. The Project's baseline HB VMT per capita of 15.1 is 48.04% above the County's current baseline HB VMT per capita of 10.2.

⁹ Population numbers obtained from existing SCAG model from the existing residential data from zone and applying to the Project characteristics; Attachment B, Appendix A

¹⁰ County Guidelines; Page 11.

TABLE 3: HB VMT PER CAPITA COMPARISON

	Baseline HB VMT/Capita
South County	10.2
Project	15.1
Percent Above Threshold	+48.04%
Potentially Significant?	Yes

PROJECT’S CUMULATIVE EFFECT ON VMT

The County Guidelines are consistent with the Technical Advisory that states cumulative impacts on VMT “... metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impact that utilize plan compliance as a threshold of significance.” The Project site is zoned as A-1 Agricultural, which, under Title 22 allows for low density residential development. As such, the Project would be compliant with the County’s General Plan and the Project’s cumulative impact would be presumed to be less than significant.

POTENTIAL VMT REDUCTION MEASURES

Transportation demand management (TDM) strategies have been evaluated for reducing VMT impacts determined to be potentially significant. The effectiveness of TDM strategies to reduce VMT has been determined based on the CAPCOA. As noted previously, baseline project generated VMT exceeds the County’s baseline VMT threshold by 1,284 VMT¹¹ or 32.5%¹². The applicant team reviewed the TDM Strategies identified in the County Guidelines and the Transportation Strategies identified in the CAPCOA Manual and conducted additional research, which is supported by substantial evidence to determine which could be applied to the Project. The effectiveness of each of these features is described below based on guidance presented in the CAPCOA Manual, which provides substantial evidence of each PDF’s effectiveness. For CAPCOA directly related PDFs, the CAPCOA Manual provides a range of effectiveness. Combined, the following PDFs are anticipated to reduce the VMT generated by the Project by 15% in comparison to the surrounding existing neighborhood average VMT. In addition, market-based research and data were collected and calculated to provide VMT reduction strategies beyond what is realized within CAPCOA. A table detailing whether each strategy is

¹¹ $(15.1 \text{ VMT/Capita}_{\text{Project}} \times 262 \text{ Residents}) - (10.2 \text{ VMT/Capita}_{\text{Threshold}} \times 262 \text{ Residents}) = 1,284 \text{ VMT}$

¹² $1,284 \text{ VMT} / 3,966 \text{ VMT} \times 100 = 32.5\%$

applicable is provided in Attachment D. The measures identified as feasible and proposed by the Project applicant are:

- Pedestrian network improvement through the Project site
- On-site parks
- Car-sharing program
- Ride-sharing program

ON-SITE VMT REDUCTION STRATEGIES

Project design features (PDF), which will be required to be implemented by the Project applicant, will support on-site parks, on-site bicycle parking, enhanced remote work and telework, and preferential parking permit program.

CAPCOA Mitigation Measures

- Provide Pedestrian Network Improvements (CAPCOA SDT-1). 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.

Remarks: Sidewalks currently exist along the Project's frontage of San Bernardino Road and connections extend both east and west from the site to surrounding land uses. (See Attachment C) The Project's implementation of this measure through the construction of on-site connections to the existing sidewalks off-site could provide for a reduction in Project VMT. As noted by CAPCOA (Quantifying Greenhouse Gas Mitigation Measures, p. 187), provision of sidewalks on-site that connect to off-site pedestrian walkways linking to other complementary land uses within an urban or suburban context can result in a maximum VMT reduction of 2.0%.

- On-Site Bicycle Parking (CAPCOA SDT-7). Long-term bicycle parking will be provided at apartment complexes or condominiums without garages.

Remarks: The Project will provide bicycle parking in common areas in addition to private garages. This is a grouped strategy and does not have an independent VMT reduction associated with it.

CAPCOA Inspired Mitigation Measures

- On-Site Parks (Inspired by CAPCOA LUT-3¹³). During the County's development review process, the Parks and Recreation Department emphasized that Project area suffers from a lack of park space. Based on the recommendations of the Parks and Recreation Department, the Griswold site design incorporates 2 on-site park/open space areas (See Exhibit 1) that are to be open to the residents and the public for recreation activities. This PDF will have the effect of reducing VMT from Project residents.

¹³ Measure descriptions are provided by CAPCOA. However, calculations are based on market research and data and may not be directly reflected in CAPCOA but are substantially evidenced to be true.

Remarks: Surveys of park use previously identified in the County of Los Angeles¹⁴ identify an average of 7.4%¹⁵ daily visits per resident. Each visitation from an area dwelling unit would replace a vehicle trip. For the 68 dwelling units, it is estimated that approximately 5 daily trips would travel to the park ($68 \times 0.074 = 5.03$) for a savings of 10 VMT daily ($5.03 \times 2 \text{ miles} = 10.1$). Providing an on-site park would therefore reduce project VMT by 0.25 percent ($10.1 / 3,966 = 0.0025$).

EXHIBIT 1: PROJECT PARK DESIGN



OFF-SITE VMT REDUCTION STRATEGIES

The Project will implement the following TDM PDFs to further reduce VMT from off-site sources to reduce VMT for the surrounding community.

CAPCOA Inspired Mitigation Measures

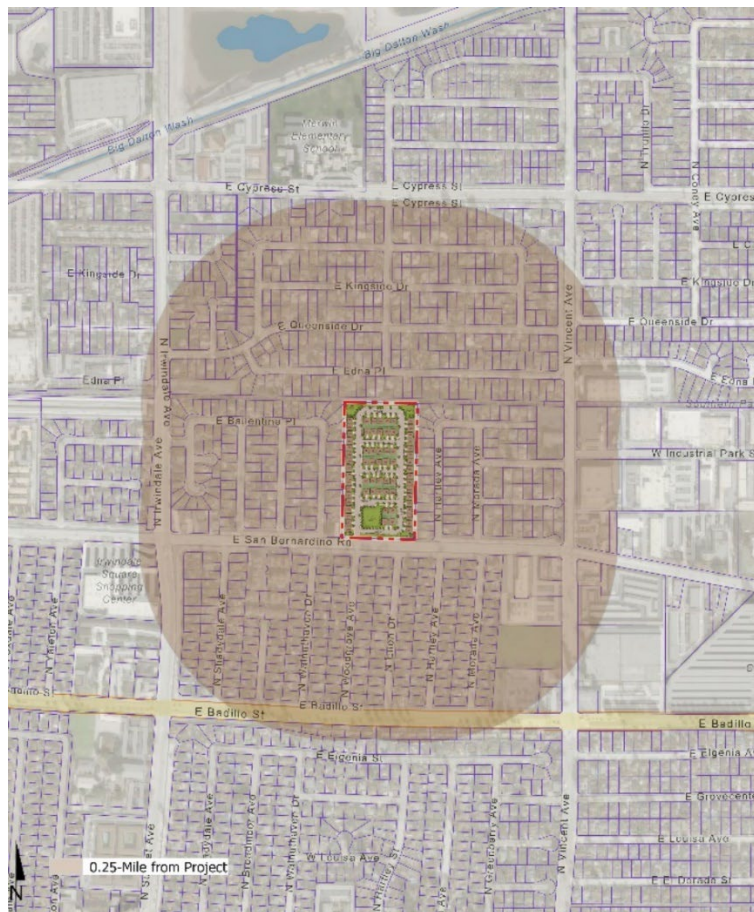
¹⁴ Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. *Social science & medicine* (1982), 75(12), 2317–2325. <https://doi.org/10.1016/j.socscimed.2012.08.036>

¹⁵ Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. *Social science & medicine* (1982), 75(12), 2317–2325. <https://doi.org/10.1016/j.socscimed.2012.08.036>; Table 1.

- On-Site Parks (Inspired by CAPCOA LUT-3¹⁶). Previously, this Analysis described the effect of the on-site parks on VMT generated by the Project itself. Additionally, the on-site public parks will have an effect to the surrounding area not contemplated by the CAPCOA. The parks will also be within a 0.25-mile walk of approximately 800 homes in the surrounding neighborhood see Exhibit 2.

Remarks: As described previously, data collected on park use in Los Angeles County¹⁷ indicates daily park visits estimated at 7.4 percent¹⁸ of homes. Therefore, an average of 59.2 of the adjacent homes ($800 \times 0.074 = 59.2$) would walk to the new parks rather than drive to the next nearest park (Palm View Park). This would save 2 miles per round trip for the 59.2 daily park visits for a 118 VMT reduction to the surrounding community.

EXHIBIT 2: 0.25-MILE OF PROJECT SITE



¹⁶ Measure descriptions are provided by CAPCOA. However, calculations are based on market research and data and may not be directly reflected in CAPCOA.

¹⁷ Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. *Social science & medicine* (1982), 75(12), 2317–2325. <https://doi.org/10.1016/j.socscimed.2012.08.036>

¹⁸ Cohen, D. A., Han, B., Derose, K. P., Williamson, S., Marsh, T., Rudick, J., & McKenzie, T. L. (2012). Neighborhood poverty, park use, and park-based physical activity in a Southern California city. *Social science & medicine* (1982), 75(12), 2317–2325. <https://doi.org/10.1016/j.socscimed.2012.08.036>; Table 1.

- Provide Ride Share Program (CAPCOA TRT-3¹⁹). The Project would create a website in multiple languages describing and coordinating the following three programs for the Project site that would be available to the greater community. The website will function as a resource for encouraging and implementing these VMT reduction measures by providing one consolidated location for people to connect with others within the community. The website will be managed and maintained by the property management company for the Project. Because the costs may be shared with an additional HOA in the future, this analysis applies conservatively to half of the potential reduction to the Project. The Website would encourage and facilitate ridesharing. Although Metro offers commute rideshare matching through ridematch.info, the community-specific program established by the Project may appeal to members of the community, who would be matched with other members of the community and would include matches for midday trips for shopping and medical appointments. The Project will also provide carpool/vanpool loading/unloading area and parking spaces to discourage the use of single occupancy automobiles.

Remarks: The CAPCOA Manual suggests that a car-sharing program could result in a 0.4 to 0.7% VMT reduction, and that a ridesharing program could result in a 1 to 15% VMT reduction. Because these programs are similarly aimed at reducing private vehicle ownership, Urban Crossroads anticipates that the programs will have a combined effect. Car-sharing and ridesharing programs in Los Angeles County are not entirely new, but the focus on a specific community and inclusion of midday ridesharing will have an additional effect. Urban Crossroads conservatively estimates that the combined effect would be a 0.1% VMT reduction. This analysis then conservatively applies only half of the potential reduction to the Project or 0.05%. The car sharing and ridesharing programs would be available to the entire community. The unincorporated community (i.e., unincorporated Covina) area was used based on its proximity to the Project location to calculate potential reductions. The SCAG RTP/SCS traffic model shows that the average VMT per capita for the unincorporated community area is 26.64. Census data show that the population (2016) is 48,539. Total VMT in the unincorporated community area is 1,293,079 ($26.64 \times 48,539 = 1,293,079$) per day. The VMT reduction credited to the Project is therefore 647 VMT ($1,293,079 \times 0.0005 = 647$). In total, the TDM VMT reduction measures, which facilitate and encourage people to reduce VMT on multiple levels, would reduce the 1,293,079 daily VMT by 647 VMT.

TOTAL VMT REDUCTION

In addition to CAPCOA related VMT reduction, the Project applicant pursued other potential VMT reducing programs and actions. Other regional transportation measures that may reduce VMT include but are not limited to subsidizing transit to students, providing transit stop shelters, or contributing to the County's shuttle service program. These regional transportation measures were discussed with agency representatives and the additional measures were determined infeasible at the project level, as programs are currently not available in the Project's area but will generally be implemented as the surrounding communities develop.

Table 4 summarizes the VMT reduced by implementing required on-site PDFs and off-site TDM strategies. The Project could reduce 79 VMT from the Project site under CAPCOA's

¹⁹ Measure descriptions are provided by CAPCOA. However, calculations are based on market research and data and may not be directly reflected in CAPCOA.

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recommended measures and an additional 775.1 VMT from market derived data beyond CAPCOA. In total the 854.1 VMT reduction does not reduce the project VMT below the County's significance threshold. Therefore, the Project would have a significant and unavoidable impact on VMT.

TABLE 4: CAPCOA AND CAPCOA INSPIRED REDUCTIONS

	Measure #	Description	VMT Reduced
Reduction Outlined within CAPCOA			
3.2.1	SDT-1	Provide Pedestrian Network Improvements	79
3.2.7	SDT-7	Provide Bike Parking with Multi-Unit Residential Projects	Grouped Strategy
Subtotal			79
Reduction Outside of CAPOCA (Data and Calculations Derived From Market Based Research and Market Based Data)			
3.1.3	LUT-3	Increase Diversity of Urban and Suburban Developments (On-Site Parks)	128.1
3.4.3	TRT-3	Provide Ride-Sharing Programs	647
Subtotal			775.1
Total			854.1

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

Respectfully submitted,

URBAN CROSSROADS, INC.



Alex So
 Senior Associate



Charlene So, PE
 Principal

REFERENCES

1. **County of Los Angeles.** *Transportation Impact Analysis.* County of Los Angeles : s.n., July 2020.
2. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.
4. **Los Angeles County.** *Los Angeles County General Plan.* Los Angeles County : s.n., Adopted October 6, 2015.
5. **Metropolitan Transportation Authority (Metro).** *2010 Congestion Management Program.* Los Angeles County : s.n., 2010.

**ATTACHMENT A:
PROJECT TRIP GENERATION**

Land Use	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates:¹									
Single Family Detached Residential	DU	210	0.19	0.56	0.74	0.62	0.37	0.99	9.44

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

² DU = Dwelling Units

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Project Trip Generation Summary:								
Griswold Residential	68 DU	13	38	51	42	25	67	642

¹ DU = Dwelling Units

**ATTACHMENT B:
VMT TECHNICAL MEMORANDUM**

Technical Memorandum

Date: September 17, 2020
To: Aric Evatt, Urban Crossroads, Inc.
From: Biling Liu and Sarah Brandenberg
Subject: 16209 West San Bernardino Road Housing Project VMT Analysis

LA20-3221

This technical memorandum documents the Vehicle Miles Traveled (VMT) analysis for the proposed 68-unit housing project located at 16209 West San Bernardino Road in unincorporated Los Angeles County. The State Office of Planning and Research (OPR) finalized the revisions to the CEQA Guidelines in accordance with Senate Bill (SB) 743 in late 2018, and in response, Los Angeles County Public Works recently published their *Transportation Impact Analysis Guidelines* dated July 23, 2020. The VMT analysis completed for the project is based on the County's new guidance for transportation impacts.

The VMT analysis begins with a review of the County's baseline VMT metrics and VMT impact thresholds. The proposed project's VMT is then estimated and compared to County baseline levels. The results of the VMT analysis are provided below.

Baseline VMT & VMT Threshold

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand model with socioeconomic and transportation network inputs, such as population, employment and the regional and local roadway network. The model outputs several travel behavior metrics, such as vehicle trips and trip lengths, that can be used to calculate VMT. The SCAG RTP/SCS model was used to estimate the baseline VMT for Los Angeles County.

For residential projects, the baseline VMT is defined as the Home-Based VMT per capita. All home-based auto vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of home-based VMT per capita (or per resident).

For the proposed project area, the baseline VMT is defined as the South County Baseline VMT. The current 2016 SCAG model has 2012 as the base year and 2040 as the forecast year. Therefore, the current South County Baseline VMT is estimated by interpolating between the two model horizon years. The 2020 South County Baseline VMT for residential uses is 12.2 per capita.



Los Angeles County guidelines state that a project should generate VMT at a rate of at least 16.8% below baseline conditions to avoid a potential VMT impact. Applying a 16.8% reduction to the South County Baseline VMT for residential uses results in a VMT threshold of 10.2. The South County Baseline VMT and VMT threshold are presented in Table 1.

Table 1: South County Baseline VMT – Residential Uses

South County VMT Metrics		Year 2020
Baseline VMT	Home-Based VMT per Capita	12.2
16.8% Reduction from Baseline VMT	Home-Based VMT per Capita	10.2

Project VMT

LA County guidelines request the following information for residential projects:

- Daily vehicle trips
- Daily VMT
- Daily Residential VMT per capita

The SCAG model was reviewed to obtain the socio-economic data (SED) assumptions for the traffic analysis zone (TAZ) that encompasses the project site. Given the project size and the fact that the project TAZ already includes residential uses, a new SCAG model run is not required for the project. Rather, the SCAG model can be used to estimate the Daily VMT and Daily Residential VMT per capita for the project based on the VMT characteristics of the project TAZ. The Residential VMT data was obtained from both the 2012 and 2040 versions of the model and the data was interpolated to provide a current year (2020) VMT estimate for the proposed project.

Table 2 summarizes the estimated Residential VMT for the project. Both the overall VMT and VMT per capita are reported as requested in the County’s guidelines. In addition, an estimate of the project’s daily trip generation is provided. The daily trip rate is derived from the SCAG model data that is used to generate the VMT estimates in the project vicinity. **Appendix A** contains the detailed SED and VMT data for the project TAZ and the VMT estimates for the project.



Table 2: Project VMT Estimate in Comparison to South County Baseline VMT

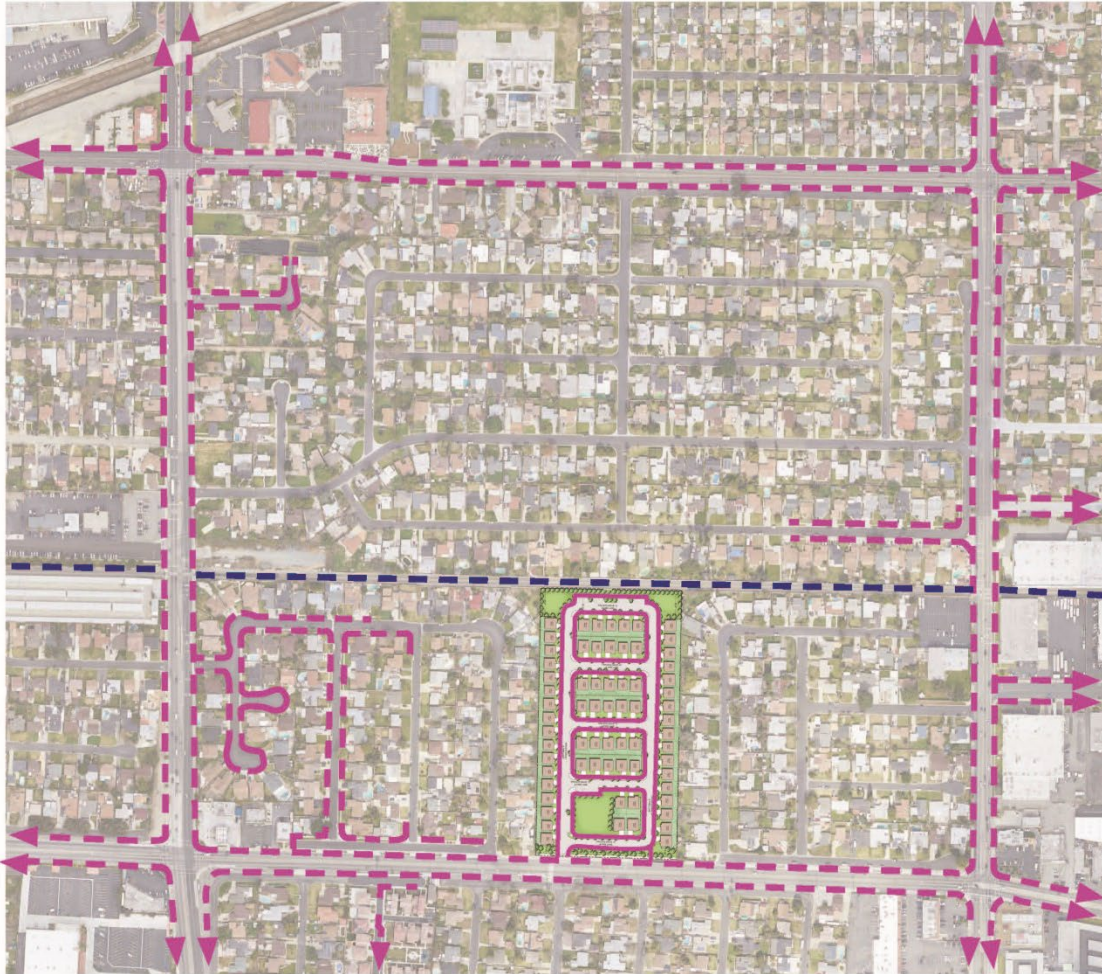
Residential VMT Metrics	Year 2020
Total External Daily Vehicle Trips	470
Total VMT	3,966
Total VMT per Capita	15.1
South County Baseline VMT per Capita	12.2
16.8% Reduction from Baseline VMT per Capita	10.2

Table 2 also shows the estimated Residential VMT for the project in comparison to the South County Baseline VMT and the 16.8% reduction from the Baseline VMT. As shown, the project estimated Residential VMT exceeds the South County Baseline VMT.




Conclusions

Based on the estimated Residential VMT per capita for the proposed housing project, the project may result in a VMT impact based on the County's guidelines. Mitigation strategies can be explored to reduce the VMT generated by the project. Coordination with Los Angeles County Public Works staff is recommended to explore possible mitigation options.

ATTACHMENT C
PROJECT SITE PLAN WALKABILITY



Legend

-  Metrolink Tracks
-  Existing Sidewalks
-  Proposed Sidewalks

ATTACHMENT D
CAPCOA MITIGATION TABLE

Land Use/Location									
	Measure #	Category	VTM Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.1	3.1.1	LUT-1	Increase Density	Infeasible	N/A	-	N/A	-	This measure involves increasing densities, "...where allowed by the General Plan and/or zoning Ordinance..." The zoning designation for the site is A-1-6000, which has a minimum required area of 6,000 SF per lot. The project proposes the maximum number of units permitted to comply with the minimum required area per lot. The project is not eligible for any concessions or waivers and no plan amendment or zone change is being sought; therefore, the number of units/density cannot be increased. Although the project is a small infill project surrounded on all sides by existing single-family development and the proposed density is modestly greater than the existing surrounding neighborhoods, the surrounding neighborhood and the project do not include densities or the necessary infrastructure to qualify for reductions in VMT.
	3.1.2	LUT-2	Increase Location Efficiency	Infeasible	N/A	-	N/A	-	Suburban Center: 10% (representing VMT reductions for the average suburban center in California versus the statewide average VMT)
	3.1.3	LUT-3	Increase Diversity of Urban and Suburban Developments (Mixed Use)	9%-30%	N/A	-	Yes	128.1	The project site does not have the traffic or visibility for commercial uses. However, the Project has included park space as an alternative use that is not available to the public in the surrounding area.
	3.1.4	LUT-4	Increase Destination Accessibility	Infeasible	N/A	-	N/A	-	This measure is largely a function of, or dependent upon, site location and the surrounding neighborhood's existing conditions. Although the project is an infill site, it is not located in an area with high accessibility to destinations. The project location is set and cannot be relocated.
	3.1.5	LUT-5	Increase Transit Accessibility	Infeasible	N/A	-	N/A	-	Transit is available via a bus stop located immediately in front of the property, but transit service is not frequent enough to significantly reduce VMT. Increased transit would require a significant increase in ridership, beyond the scope or potential of this project alone. Since the surrounding area is already built-out, additional new development with a significant enough scale to increase ridership and transit service in the area is not anticipated to occur.
	3.1.6	LUT-6	Integrate Affordable and Below Market Rate Housing	Infeasible	N/A	-	N/A	-	The county's Inclusionary Housing Ordinance (IHO) is inapplicable to the housing project, because the applicant's SB 330 preliminary application was submitted to and deemed complete by the County before the effective date of the IHO. As so vested, SB 330 precludes the County from imposing affordable housing requirements on the housing project.
	3.1.7	LUT-7	Orient Project Toward Non-Auto Corridor	Infeasible	N/A	-	N/A	-	This measure is largely a function of, or dependent upon, site location and the surrounding neighborhood's existing conditions. Although the surrounding area does include sidewalks and bus service, there are no planned or existing transit or bicycle facilities that are significant enough to qualify for VMT reductions. The project location is set and cannot be relocated to a non-auto corridor.
	3.1.8	LUT-8	Locate Project near Bike Path/Bike Lane	Infeasible	N/A	-	N/A	-	Internal streets are low volume and low speed streets that can accommodate shared bike and vehicle use; however, there are no existing bike lanes on San Bernardino Road. Installing new bike lanes on San Bernardino Road is infeasible since the area is built out and there is not enough right-of-way on adjacent properties to accommodate such facilities.
	3.1.9	LUT-9	Improve Design of Development	Infeasible	N/A	-	N/A	-	Streets include sidewalks that connect to the existing sidewalk network and common open space areas. The rail line to the north and existing neighborhood patterns to the east and west limit connectivity potential to the southerly boundary; however, sidewalk connections are provided where feasible to encourage walking. Street trees will shade sidewalks to provide pedestrian comfort along these sidewalks.

Improve Design of Development									
	Measure #	Category	VTM Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.2	3.2.1	SDT-1	Provide Pedestrian Network Improvements	0%-2%	Yes	79	Yes	-	Sidewalks currently exist along the Project's frontage of San Bernardino Road and connections extend both east and west from the site to surrounding land uses. The Project's implementation of this measure through the construction of on-site connections to the existing sidewalks off-site could provide for a reduction in Project VMT.
	3.2.2	SDT-2	Provide Traffic Calming Measures	Infeasible	N/A	-	N/A	-	Internal streets consist of low-speed streets designed with the minimum curb-to-curb widths permitted by the County. Parking bays have also been designed to minimize curb-to-curb widths at intersections and other locations where feasible. Narrower streets encourage slower speeds internal to the project but have a limited effect on VMT unless connected to a larger network of low-speed streets. The project fronts onto San Bernardino Road, a Secondary Highway, and is surrounded by a neighborhood that is completely built-out. It is not feasible for a small project to effectively reduce speeds along the small segment of frontage along San Bernardino Road. Since the size and scale of the project limits the feasibility of providing improvements significant enough to impact VMT, the project does not qualify for VMT reductions.
	3.2.3	SDT-3	Implement a Neighborhood Electric Vehicle (NEV) Network	Not Applicable	N/A	-	N/A	-	CAPCOA states this measure is for low-speed EV vehicles under 35mph. Internal streets can accommodate these vehicles, but the scale of the project is small and would require connections to a larger network to make sense. As the project fronts San Bernardino Road, a 40mph roadway, a low speed NEV network is not feasible for the proposed Project.
	3.2.4	SDT-4	Create Urban Non-Motorized Zones	Not Applicable	N/A	-	N/A	-	This measure is described as effective in an urban area. As the Project is located in a suburban context, this measure does not apply.
	3.2.5	SDT-5	Incorporate Bike Lane Street Design (on-site)	Infeasible	N/A	-	N/A	-	Internal streets consist of low-speed streets that can accommodate both bicycles and vehicles. The scale of the project is small and would require connections to a larger network for bike trails to be effective. As the project fronts San Bernardino Road, which does not include bike lanes or trails, this measure is not feasible. Furthermore, the surrounding neighborhood is built-out and San Bernardino Road does not have enough existing right-of-way width to accommodate these facilities. The site plan demonstrates there is no space for on-site bike lane street design given the lot orientations and street geometry/widths. The size and scale of the project limits the feasibility of providing improvements significant enough to impact VMT; therefore the project does not qualify for VMT reductions.
	3.2.6	SDT-6	Provide Bike Parking in Non-Residential Projects	Not Applicable	N/A	-	N/A	-	This measure does not apply to a residential land use project.
	3.2.7	SDT-7	Provide Bike Parking with Multi-Unit Residential Projects	Grouped Strategy	Yes	-	N/A	-	The project will provide bicycle parking in common areas in addition to private garages.
	3.2.8	SDT-8	Provide Electric Vehicle Parking	Not Applicable	N/A	-	N/A	-	Grouped strategy with SDT-3 and does not have a measure of reduction.
	3.2.9	SDT-9	Dedicate Land for Bike Trails	Infeasible	N/A	-	N/A	-	Internal streets consist of low-speed streets that can accommodate both bicycles and vehicles. The scale of the project is small and would require connections to a larger network for bike trails to be effective. As the project fronts San Bernardino Road, which does not include bike lanes or trails, this measure is not feasible. The surrounding neighborhood is built-out and San Bernardino Road does not have enough existing right-of-way width to accommodate these facilities.
Parking Policy/Pricing									
	Measure #	Category	VTM Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.3	3.3.1	PDT-1	Limit Parking Supply	Infeasible	N/A	-	N/A	-	Reducing parking will only impact guest parking since each dwelling unit has an included driveway. Reducing guest parking is not desirable in this case since it will only push guest parking onto adjacent residential street, which will negatively impact the surrounding neighborhood. Additionally, parking requirements are regulated by the County's Zoning Code.
	3.3.2	PDT-2	Unbundle Parking Costs from Property Cost	Infeasible	N/A	-	N/A	-	Monetizing parking affects the affordability of housing, which is not desirable in this context.
	3.3.3	PDT-3	Implement Market Price Public Parking (On-Street)	Not Applicable	N/A	-	N/A	-	Does not apply to a residential subdivision. Additionally, monetizing parking affects the affordability of housing, which is not desirable in this context. Furthermore, monetizing parking in this context will only push parking out into the adjacent neighborhood, which will not result in any VMT reductions but will serve to upset the project's residential neighbors.
	3.3.4	PDT-4	Require Residential Area Parking Permits	Infeasible	N/A	-	N/A	-	Requiring parking permits will only constrain parking within the site, which will push parking into the adjacent neighborhood where permits are not currently required. This approach is not feasible since it will not result in a reduction in the number of cars but will only displace them, thereby negatively impacting the surrounding neighborhood.

Commute Trip Reduction Programs									
	Measure #	Category	VMT Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
	3.4.1	TRT-1	Implement Commute Trip Reduction Program	Not Applicable	N/A	-	N/A	-	Applies to non-residential projects.
	3.4.2	TRT-2	Implement Commute Trip Reduction Program	Not Applicable	N/A	-	N/A	-	Mandatory programs can be implemented through employment arrangement. Not applicable to residential subdivisions.
	3.4.3	TRT-3	Provide Ride-Sharing Programs	1%-15%	Yes	-	Yes	647	As part of the Home Buyer's Package, the Project will provide information regarding nearby transit, bike facilities, as well as available ridesharing, car sharing, and school pool programs. The Home Buyer's Package would encourage and facilitate ridesharing. Although Metro offers commute rideshare matching through ridematch.info, the community-specific program established by the project may appeal to members of the community, who would be matched with other members of the community and would include matches for midday trips for shopping and medical appointments.
	3.4.4	TRT-4	Implement Subsidized or Discounted Transit Program	Infeasible	N/A	-	N/A	-	The Covina Unified School District does not participate in a transit subsidy program that the Project can contribute to.
	3.4.5	TRT-5	Provide End of Trip Facilities	Not Applicable	N/A	-	N/A	-	Applies to non-residential projects.
	3.4.6	TRT-6	Encourage Telecommuting and Alternative Work Schedules	Not Applicable	N/A	-	N/A	-	This measure is for employment generating uses and do not apply to the Project.
3.4	3.4.7	TRT-7	Implement Commute Trip Reduction Marketing	0.8%-4.0%	N/A	-	N/A	-	As part of the Home Buyer's Package, the Project will provide information regarding nearby transit, bike facilities, as well as available ridesharing, car sharing, and school pool programs. This Home Buyer's Package would encourage and facilitate car sharing by those individuals who wish to offer their car for sharing.
	3.4.8	TRT-8	Implement Preferential Parking Permit Program	Not Applicable	N/A	-	N/A	-	Applies to non-residential projects.
	3.4.9	TRT-9	Implement Car-Sharing Program	Not Applicable	N/A	-	N/A	-	Applies to non-residential projects.
	3.4.10	TRT-10	Implement a School Pool Program	Not Applicable	N/A	-	N/A	-	School District does not have a program in place.
	3.4.11	TRT-11	Provide Employer-Sponsored Vanpool/Shuttle	Not Applicable	N/A	-	N/A	-	This measure is for employment generating uses and do not apply to the Project.
	3.4.12	TRT-12	Implement Bike-Sharing Programs	Infeasible	N/A	-	N/A	-	This type of program requires administration. Since this is a small for-sale housing project, consisting of a limited number of individual homeowners, administration of this type of program is not feasible.
	3.4.13	TRT-13	Implement School Bus Program	Not Applicable	N/A	-	N/A	-	CAPCOA: "The project will work with the school district to restore or expand school bus services in the project area and local community." The project will encourage the school district to provide bus service.
	3.4.14	TRT-14	Price Workplace Parking	Infeasible	N/A	-	N/A	-	This measure is a complementary strategy with Residential parking permits (PDT-3) and market rate public on-street parking (PDT-4) - to prevent on street parking. However, as noted previously in PDT-3 and PDT-4 is not infeasible to this Project. Thus, would make this measure is infeasible to the Project as well.
	3.4.15	TRT-15	Implement Employee Parking "Cash-Out"	Infeasible	N/A	-	N/A	-	Does not apply to a residential subdivision.

Transit System Improvements									
	Measure #	Category	VMT Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.5	3.5.1	TST-1	Provide a Bus Rapid Transit System	Not Applicable	N/A	-	N/A	-	The Project is not specific plan or general plan. Therefore, this measure is not applicable.
	3.5.2	TST-2	Implement Transit Access Improvements	Infeasible	N/A	-	N/A	-	Transit is available via a bus stop located immediately in front of the property, but transit service is not frequent enough to significantly reduce VMT. Increased transit would require a significant increase in ridership, beyond the scope or potential of this project alone. Since the surrounding area is already built-out, additional new development with a significant enough scale to increase ridership and transit service in the area is not anticipated to occur.
	3.5.3	TST-3	Expand Transit Network	Not Applicable	N/A	-	N/A	-	The Project is not specific plan or general plan. Therefore, this measure is not applicable.
	3.5.4	TST-4	Increase Transit Service Frequency/Speed	Not Applicable	N/A	-	N/A	-	The Project is not specific plan or general plan. Therefore, this measure is not applicable.
	3.5.5	TST-5	Provide Bike Parking Near Transit	Grouped Strategy with TST-3 and TST-4	N/A	-	N/A	-	Bike racks have been provided in the common open space area near the bus stop
	3.5.6	TST-6	Provide Local Shuttles	Grouped Strategy with TST-4 and TST-5	N/A	-	N/A	-	The project is not large enough to support shuttle service.
Road Pricing/Management									
	Measure #	Category	VMT Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.6	3.6.1	RPT-1	Implement Area or Cordon Pricing	Not Applicable	N/A	-	N/A	-	Cordon (toll) pricing applies to central business districts, urban centers, or substantial development projects with limited access, not small residential infill projects such as this one.
	3.6.2	RPT-2	Improve Traffic Flow	Not Applicable	N/A	-	N/A	-	A Focused Transportation Analysis was conducted, and no traffic flow improvements are warranted. Additionally, this is not a measure to reduce VMT.
	3.6.3	RPT-3	Required Project Contributions to Transportation Infrastructure	Infeasible	N/A	-	N/A	-	The project is also not large enough to contribute significant impacts to the regional transit system. Additionally, this is not a measure to reduce VMT.
	3.6.4	RPT-4	Install Park-and-Ride Lots	Infeasible	N/A	-	N/A	-	The site is not appropriately located or well suited for a Park-and-Ride Lot. Additionally, does not apply to a residential land use project.
Vehicles									
	Measure #	Category	VMT Reduction	Applicability to Project Level	Reduction Value	Applicability at Regional Level	Reduction Value	Evaluation	
3.7	3.7.1	VT-1	Electrify Loading Docks and/or Require Idling-Reduction Systems	Not Applicable	N/A	-	N/A	-	This measure does not apply to a residential land use project.
	3.7.2	VT-2	Utilize Alternative Fueled Vehicles	Not Applicable	N/A	-	N/A	-	This measure does not apply to a residential land use project.
	3.7.3	VT-3	Utilize Electric or Hybrid Vehicles	Not Applicable	N/A	-	N/A	-	This measure does not apply to a residential land use project.