

MEMORANDUM

DATE: January 24, 2024

To: Whitney Jackson, Senior Planner; McIntosh & Associates

FROM: Dean Arizabal; Principal, LSA

SUBJECT: Maple Ridge Residential Development Project Vehicle Miles Traveled Analysis (LSA Project Number 20231147)

LSA has prepared this Vehicle Miles Traveled (VMT) Analysis for the proposed Maple Ridge Residential Development (project) in the City of Bakersfield (City). The proposed project includes 250 multi-family residential units. The project site (Assessor's Parcel Number 386-050-38) is east of Alfred Harrell Highway, north of Raphael Avenue, and south of Old Walker Pass Road-Allegheny Court. The proposed project includes a General Plan Amendment and Zone Change (GPA/ZC) of 37.43 gross acres from C-2/GC (Commercial) to R-2/HMR (Multi-Family). Due to the existing site topography, only 9.54 acres are developable. Figure 1 (all figures attached) illustrates the regional and project location. Figure 2 illustrates a conceptual site plan for the project.

BACKGROUND

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

The City has not yet adopted VMT guidelines. Therefore, this VMT analysis is based upon the methodology and significant threshold criteria in the California Governor's Office of Research and Planning (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA (TA)*¹, dated December 2018. The OPR TA recommends using VMT per capita as the metric for residential uses. Therefore, this metric has been used for the proposed project. Following is a detailed description of the VMT analysis.

METHODOLOGY

As per the OPR TA, a region should be defined based on where a majority of the trips start or end within that particular area. Typically, it is the City or county boundary within which the majority of those trips are contained. Based on the location of the proposed project, a significant number of trips are estimated to travel beyond the City boundary but mostly be contained within the Kern County (County) boundary. Therefore, for purposes of this analysis, the County has been considered as the region.

¹ Governor's Office of Planning and Research (OPR). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December. p. 12.

The home-based (HB) VMT per capita was used as the VMT metric to determine the impact of the proposed project. Based on the OPR TA recommendations, the threshold for determining VMT impacts is 15 percent below the region’s current baseline VMT per capita.

The Kern Council of Governments’ (Kern COG’s) San Joaquin Valley Model Improvement Program Phase 3 (VMIP III) Travel Demand Model (Kern COG TDM) was used to evaluate the project. The model’s socioeconomic database under baseline (2020) conditions was updated with the project land uses. As such, the regional and project HB VMT per capita, were calculated from the model runs described below.

Regional VMT per Capita Under Without Project Conditions

The baseline (2020) regional HB VMT per capita was calculated using the Kern COG VMIP III TDM under without project conditions. The regional HB VMT per capita was calculated to be 17.6.

Project Traffic Analysis Zone Update

The traffic analysis zones (TAZs) in the Kern COG TDM that include the project area were updated to calculate the HB VMT per capita of the proposed project. The proposed project was isolated to estimate its VMT impact. The Kern COG TDM includes the capability to split or add TAZs. Therefore, a new TAZ was created to incorporate the project land uses. The total household number was obtained from the project site plan and the project population was estimated from the average household size of multi-family residences in the project and surrounding TAZs. The Kern COG TDM socioeconomic database for the baseline (2020) scenario was updated with the project socioeconomic data within the project TAZ. The updated Kern COG TDM was run and the outputs were used to estimate the project HB VMT per capita.

VMT ANALYSIS

As previously mentioned, the baseline (2020) regional VMT per capita was obtained from the Kern COG TDM “without project” run. The regional HB VMT per capita is 17.6. Further, as stated above, 15 percent below the baseline regional VMT per capita, or 14.96, was considered as the VMT threshold. The detailed VMT calculation worksheet is included in Appendix A. Table A shows the regional threshold and project VMT per capita. As shown in Table A, the project HB VMT per capita is 19.68, which is higher than the VMT threshold by 31.55 percent. As such, based on the OPR TA and the methodology described above, the proposed project would have a significant VMT impact.

Table A: Baseline (2020) Regional and Project VMT per Capita Comparison

Regional VMT Per Capita	VMT Threshold (15% Below Regional Average)	Project VMT per Capita	Percentage Difference	Significant Impact?
17.6	14.96	19.68	31.55%	Yes

Source: Kern COG VMIP III Travel Demand Model
 VMT = Vehicle Miles Traveled

ATTACHMENTS

- Figure 1: Regional and Project Location
- Figure 2: Conceptual Site Plan
- Appendix A: VMT Calculation Worksheet

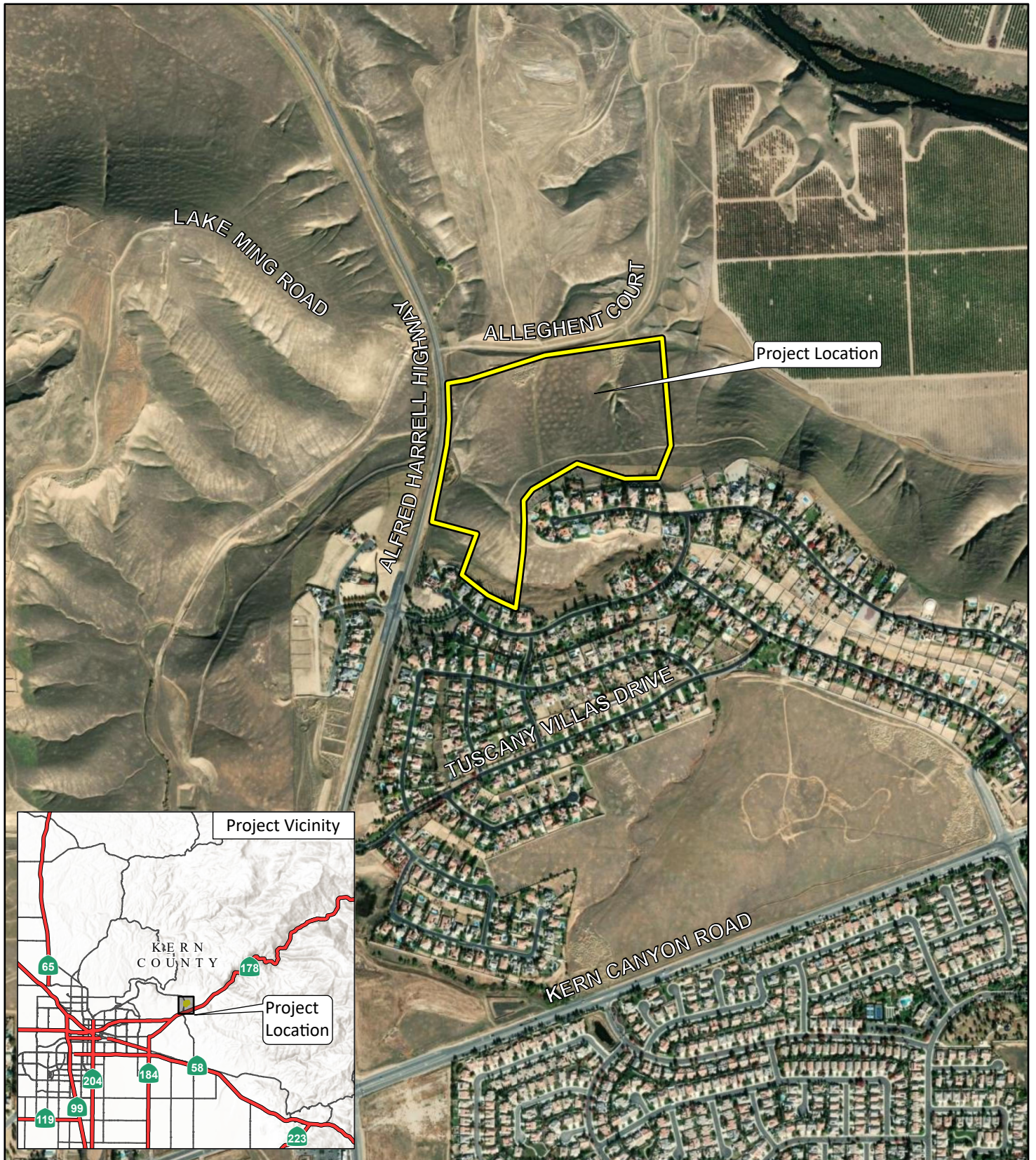
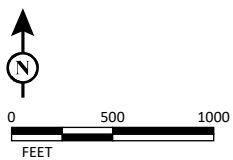


FIGURE 1

LSA

LEGEND

 Project Location



SOURCE: Google Earth, 2022.

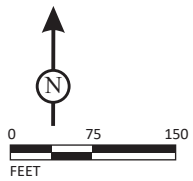
P:\20231147 Maple Ridge Residential\Traffic\GIS and Google Earth\Site_Locn.aprx (10/27/2023)

Maple Ridge Residential Project
 Vehicle Miles Traveled Analysis Memorandum
 Regional and Project Location



FIGURE 2

LSA



SOURCE: McIntosh & Associates Engineering Inc., March 2022

P:\20231147 Maple Ridge Residential\Traffic\fig2_Site_Plan.ai (10/27/2023)

Maple Ridge Residential Project
 Vehicle Miles Traveled Analysis Memorandum
 Conceptual Site Plan



Appendix A - VMT Calculation Worksheet
Mapleridge Apartments, Bakersfield - VMT Analysis

2020	Mapleridge Apartments (project)	Kern County*
Total households	250	280,600
Total population	603	888,166
Homebased (HB) VMT	11,873	15,635,985
HB VMT per capita	19.68	17.60

** Estimated using "no project" base year (2020) VMIP III model run*