

Appendix 4.10-1

Vehicle Miles Traveled Technical Memorandum

Prepared by

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TECHNICAL MEMORANDUM

To: Okina Dor, City of Artesia Community Development Director

From: Mehul Champaneri, Transportation Engineer

Date: October 10, 2022

Subject: Artesia Place Project – Vehicle Miles Traveled Analysis

The technical memorandum documents Vehicle Miles Traveled (VMT) Analysis for the proposed Artesia Place Project (Artesia Boulevard Corridor Specific Plan Amendment) (“Project”) in the City of Artesia (“City”), County of Los Angeles (“County”).

Project Description

The Project site consists of one approximately 3.3-acre parcel (Assessor Parcel Number [APN] 7035-016-064) located at 11709 Artesia Boulevard. The Project site is generally bound by roadways, with Artesia Boulevard on the south, Alburdis Avenue on the east, and Fallon Avenue on the west. Land uses surrounding the Project site include industrial to the north, residential and commercial to the south, residential, commercial, and industrial to the east, and industrial to the west.

The Project site is currently vacant. As shown in **Table 1**, the Project proposes a mixed-use development comprised of two components (commercial and residential), connected by pedestrian walkways. The proposed development includes up to 8,814 gross square feet (GSF) of commercial (restaurant and retail) uses, 2,443 GSF of office uses, and 80 dwelling units (DU). **Exhibit 1** illustrates the Conceptual Site Plan.

Table 1 – Project Development Summary

| Land Use | Residential (DU) | Non-residential (GSF) | | | |
|--|------------------|-----------------------|--------------|--------------|---------------|
| | | Office | Restaurant | Retail | Total |
| Townhomes | 59 | | | | |
| Mixed-Use Carriage Townhomes (Commercial Ground Floor) | 4 | | 1,725 | 1,725 | 3,450 |
| Shopkeeper Units (Commercial Condominiums with Townhomes above) | 8 | | 1,332 | 1,332 | 2,664 |
| Commercial | | | 1,350 | 1,350 | 2,700 |
| Live/Work Townhomes | 9 | 2,443 | | | 2,443 |
| Total | 80 | 2,443 | 4,407 | 4,407 | 11,257 |
| DU = dwelling unit; GSF = gross square feet Source: G3 Urban, Artesia Development Conceptual Site Plan, 2022. | | | | | |

Senate Bill 743 (SB 743)

Senate Bill (SB) 743, approved in 2013, mandated a change in the way transportation impacts are determined according to the California Environmental Quality Act (CEQA). The Governor's Office of Planning and Research (OPR) directed the use of VMT as the replacement for automobile delay-based level of service (LOS) for purposes of determining a significant transportation impact under CEQA. As of December 2018, the Natural Resources Agency finalized updates to the State CEQA Guidelines to incorporate SB 743 (i.e., VMT). To assist in implementation of VMT as the primary measure of a transportation impact under CEQA, the OPR published an updated Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR Technical Advisory) in December 2018. Statewide application of the new guidelines went into effect on July 1, 2020.

The OPR Technical Advisory includes the following main components for assessment of development projects.

- Analysis Methodologies – Identification of potential thresholds that can be considered when establishing thresholds of significance for VMT assessment and recommendations of analysis methodologies for VMT impact screening and analysis
- Mitigation Memorandum – Types of mitigation that can be considered for VMT mitigation

The City has not yet adopted a methodology and significance threshold for use in CEQA compliance. Therefore, the VMT analysis for this Project was based on the Los Angeles County Transportation Impact Analysis Guidelines (TIA Guidelines) (July 23, 2020), which are based on the OPR Technical Advisory, and a recently conducted VMT analysis for a similar project in the City.

VMT Screening

To identify when a project may be presumed to have a less than significant transportation impact concerning VMT without conducting a detailed study, the TIA Guidelines provide screening criteria for land development projects that meet one of the screening criteria below:

1. Non-Retail Project Trip Generation Screening: Does the development project generate a net increase of 110 or more daily vehicle trips?
2. Retail Project Site Plan Screening: Does the project contain retail uses that exceed 50,000 square feet of gross floor area?
3. Proximity to Transit Based Screening: Is the project located near a major transit stop or high-quality transit corridor? If yes, does the project:
 - (1) have a floor area ratio less than 0.75;
 - (2) provide more parking than required by the County Code;
 - (3) have inconsistencies with the Southern California Association of Government (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS); and
 - (4) replace residential units set aside for lower income households with a smaller number of market-rate residential units?
4. Residential Land Use Based Screening: Does the project have 100 percent of the units, excluding manager's units, set aside for lower income households?

A land use project needs to meet only one of the above screening criteria to be presumed to have a less than significant impact on transportation and circulation, under CEQA and pursuant to SB 743. The Project would not be 100 percent affordable; therefore, that criteria is not further discussed. The remaining criteria are further discussed below.

PROJECT TYPE AND SIZE SCREENING

Some project types and sizes have been identified in the TIA Guidelines as having the presumption of a less than significant VMT impact. The uses described below can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local-serving in nature.

- Retail Project Site Plan Screening: Local-serving retail uses less than 50,000 gross SF
- Non-Retail Project Trip Generation Screening: Projects generating less than a net increase of 110 daily vehicle trips

The Project includes one retail component (8,814 SF) and two non-retail components (2,443 SF of office space and 80 DU). Based on the above screening criteria, the Project's retail component would screen out of VMT analysis because it totals 8,814 SF, which is less than 50,000 gross SF screening criterion. Based on the above screening criteria, the Project's office component would screen out of VMT analysis because it generates 35 daily trips, which is less than the 110 daily trip screening criterion. However, the Project's residential component would generate 539 daily trips, which is more than the 110 daily trip screening criterion, thus, would not screen out based on Project Type and Size screening.

PROXIMITY TO TRANSIT-BASED SCREENING

As described in the TIA Guidelines, projects located within one-half mile radius of a major transit stop¹ or an existing stop along a high-quality transit corridor² can be screened out if the project does not meet the four Proximity to Transit Based Screening criteria listed above. City of Cerritos, Orange County Transportation Authority (OCTA), Los Angeles County Metropolitan Transportation Authority (Metro), Norwalk Transit System, and Long Beach Transit are the transit providers serving the Project site. Bus stops located at Artesia Boulevard and Pioneer Boulevard serve the Project site with Metro Line 62 (from 4:20 AM to 11:00 PM) and Norwalk Transit Line 2 (from 6:00 AM to 7:33 PM). Both lines operate along Pioneer Boulevard within one-half mile of the Project site. These bus routes operate with headways varying from 1-hour to 1-hour 15 minute headways. Because these headways are not consistently 15 minutes or less during the peak commute periods, these routes do not meet the criteria to be considered a major transit stop or high-quality transit corridor. Therefore, the Project does not screen out of a VMT analysis based on TPA screening.

SCREENING CONCLUSION

A land use project needs only meet one of the above screening thresholds to be presumed to result in not significant impact under CEQA pursuant to SB 743. As mentioned above, the Project's retail and office components would screen out of further VMT analysis based on Retail Project Site Plan and Non-Retail Project Trip Generation Screening, respectively, thus, are presumed to have a less than significant transportation impact concerning VMT. However, the Project's residential component would not meet any of the screening criteria above. Therefore, a VMT analysis was conducted for the Project's residential component to further analyze the VMT impacts.

¹ The OPR Technical Advisory defines a "major transit stop" as 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 (California Public Resources Code §21064.3).

² The OPR Technical Advisory defines a "high-quality transit corridor" as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours (California Public Resources Code §21155).

VMT Impact Criteria

The County's TIA Guidelines recommend the following impact criteria:

A residential project would result in a potentially significant VMT impact if the project's residential VMT³ per capita would not be 16.8% below the existing residential VMT per capita for the Baseline Area in which the project is located.

VMT Methodology

The VMT analysis was conducted using the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) model with 2020 Socio-Economic Data (SED). The Project site was coded into traffic analysis zone (TAZ) 21822100 and the Arkansas Specific Plan into 21822200. Consistent to standard modeling practice, to isolate Project VMT, the existing land uses in the TAZs were moved to the adjacent TAZ (21816100). The Artesia Place Project's land uses were converted to population based on household sizes in the area. The parent zone has a population of 4,302 and a total of 1,285 households, resulting in an average household size of 3.35. Based on the California Department of Finance Population and Housing Estimate for Artesia for 2022, the average household size in the City is 3.38, resulting in a residential population of approximately 270 residents in 80 residential units.

VMT Analysis

The Citywide threshold values for residential VMT per Capita were computed using the latest available SCAG travel demand model as part of the 11700 Arkansas Mixed Use project (Arkansas Project). As the City has not yet adopted impact thresholds for VMT analysis, the County's adopted threshold of 16.8 percent below existing Citywide or Countywide average was used. It is noted that the City and County's residential VMT per Capita were both the same (13.9 VMT per Capita). For residential projects in the City, considering a threshold of 16.8% below existing Citywide or Countywide average, the following threshold would be applicable:

- 16.8% below City or County: $13.9 \times 0.832 = 11.6$ VMT per Capita

The Artesia Place Project falls within the same TAZ as the Arkansas Specific Plan TAZ (21822200), and the residential component of the Artesia Place Project is similar and slightly lower compared to the Arkansas Specific Plan residential component. Therefore, the residential VMT results for the Artesia Place Project are anticipated to be similar to what was derived for the Arkansas Project, considering the fact that both projects are within the same TAZ of the SCAG model (see **Exhibit 2**). To be consistent between the VMT analysis for both projects, the residential VMT per Capita for the Artesia Place Project was assumed to be the same as the VMT per Capita for the Arkansas Project. The non-residential component of the Artesia Place Project is not significant but is anticipated to slightly reduce the VMT per Capita metric of the project zone. **Table 2** summarizes the demographics and VMT results for both the projects.

³ Residential VMT is the VMT generated by Home-Based Work and Home-Based Other trip productions.

Table 2 – Project Demographics and VMT

| Efficiency Metric | Arkansas Project (Specific Plan Area) | Artesia Place Project |
|----------------------------|--|-----------------------|
| Total Households | 99 | 80 |
| Total Population | 331 | 270 |
| Total Homebased (HB) VMT | 4,011 | 3,332 |
| Residential VMT per Capita | 12.1 | 12.3 |

Out of 80 proposed Project residential units, 9 units are live/work, which would reduce home-based work (HBW) VMT. Additionally, the retail components of the 8 shopkeeper units are expected to be occupied by the shopkeeper unit owner, thus would contribute towards further reduction in HBW VMT for the Project. To account for the VMT reductions from the live/work units, average HBW VMT per Employee for the Project TAZ was used from the Arkansas Project. The average HBW VMT per Employee for the Project TAZ is 16.8 miles per working resident. To account for residents working in the live/work and shopkeeper units, a conservative number of one worker per unit was assumed to work in the live/work space and shopkeeper units, although this number could be higher (for example, a family business where all adult family members are involved). Since there are 9 live/work units and 8 shopkeeper units, it was assumed that 17 workers will work within the Artesia Place Project. Therefore, the Project's VMT would decrease by at least 286 miles (17 x 16.8). **Table 3** shows calculations for live-work adjustments.

Table 3 – Project VMT Summary

| Efficiency Metric | Artesia Place Project |
|---|-----------------------|
| Total Households | 80 |
| Total Population | 270 |
| Total Unadjusted Homebased (HB) VMT | 3,332 |
| HBW Production VMT for 17 Live-Work Units (Reduction) | -286 |
| Total Adjusted Homebased (HB) VMT | 3,042 |
| Project Residential VMT Per Capita | 11.3 |

As shown in the **Table 3**, the Project's VMT per Capita is 11.3, which is less than the County's threshold of 16.8% below existing Citywide or Countywide VMT (or 11.6 VMT per Capita); therefore, the Project's residential component would be presumed to result in a less than significant transportation impact concerning VMT.

Findings

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

- The Project's retail and office components would screen out of further VMT analysis based on Retail Project Site Plan and Non-Retail Project Trip Generation Screening, respectively, thus, are presumed to have a less than significant transportation impact concerning VMT.

- Based on the VMT calculation methodology described herein, the Countywide average VMT per capita for residential projects is 13.9. Therefore, the threshold of significance for new residential project development is 16.8-percent below the Countywide average, or 11.6 VMT per capita
- The Artesia Place Project is anticipated to result in an average residential VMT per Capita of 11.3. Therefore, **the Project is not expected to have a significant VMT impact.**

Exhibit 1: Conceptual Site Plan

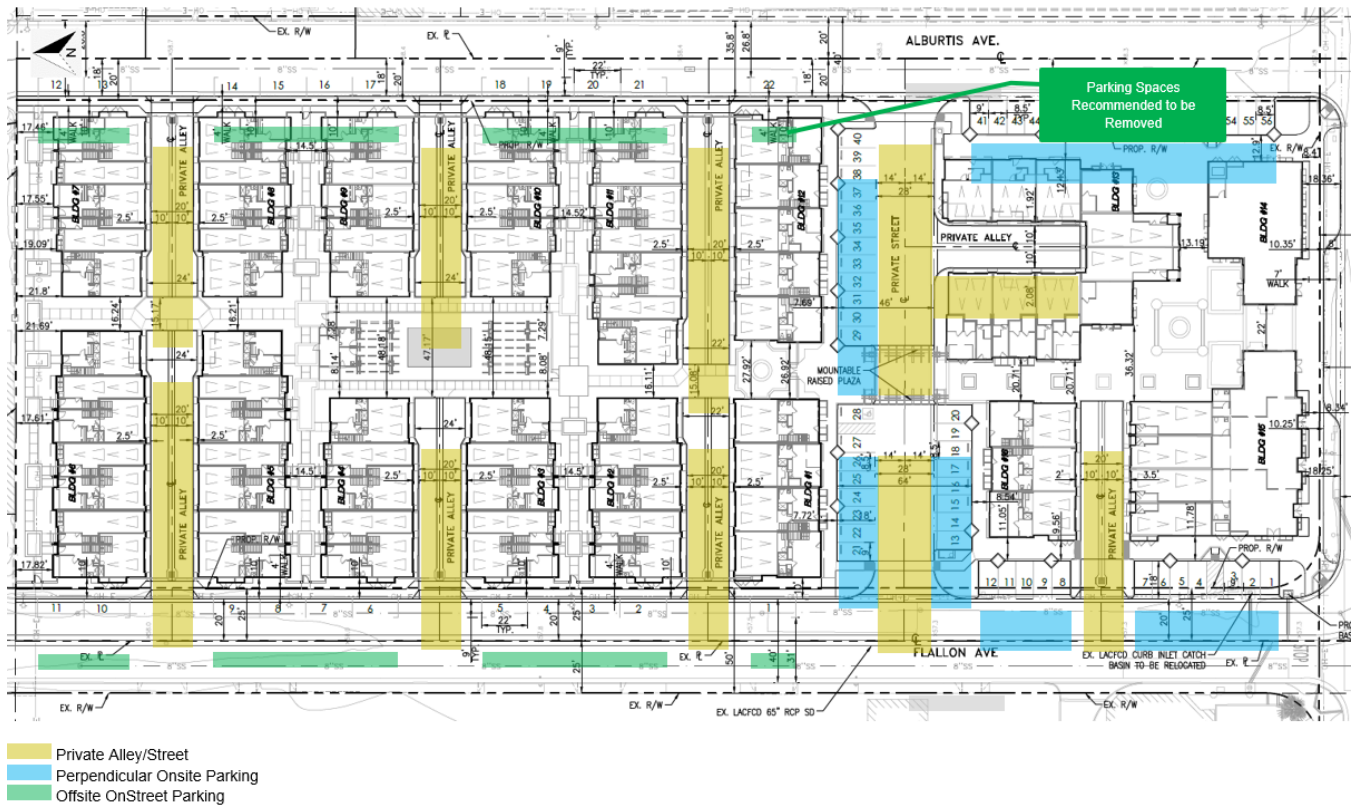


Exhibit 2: SCAG Model Network and Project TAZ Map

