VEHICLE MILES TRAVELLED (VMT) ANALYSIS
WEST LANCASTER MIXED USE DEVELOPMENT
SEC OF 15TH STREET WEST & AVENUE L
LANCASTER, CALIFORNIA

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LANC 002

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APPENDICES (UNDER A SEPARATE COVER)

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1. OVERVIEW OF THIS REPORT

The purpose of this report is to provide a vehicle miles travelled (VMT) analysis for a proposed mixed use development within a 10.1-acre site. The proposed project would consist of a hotel with 235 guest rooms and a 3,800 square-foot clubhouse, three restaurants/retail buildings totaling 12,800 square feet of floor area, and two multi-story residential buildings that would contain a total of 181 units. The proposed project site is located on the southeast corner (SEC) of 15th Street West and West Avenue L. The site is also located on the southwest corner of the CA-15 and West Avenue L freeway interchange. The proposed new mixed-use development would have a total floor area of 340,230 square feet.

2. PROJECT LOCATION

The proposed project site that is the subject of this study is located in the south-central portion of the City of Lancaster. The City of Lancaster is located within the Antelope Valley, in North Los Angeles County, approximately 70 miles north of downtown Los Angeles. Regional access to the City is provided by State Highway 14 (the Antelope Freeway) that bisects the central portion of the City in a north/south orientation. The project site is located to the west of the CA-14 Freeway. The site is also located on the southwest corner of the CA-15 and West Avenue L freeway interchange. The project site is located on the southeast corner (SEC) of 15th Street West and West Avenue L. Access to the project site would be provided by two driveway connections with the east side of 15th Street West. The site's latitude/longitude is 34°39'34.20"N and -118°09'19.12"W. A regional location map is provided in Exhibit 1. The site's location in Lancaster is shown in Exhibit 2. A local map is provided in Exhibit 3.

3. ENVIRONMENTAL SETTING

The proposed project site is currently vacant and undeveloped. The site was previously developed though all of the structural improvements have been demolished. The project site is currently zoned as Rural Residential (RR 2.5). The West Avenue L right-of-way (ROW) extends along the project site's north side and the 15th Street West ROW extends along the project site's west side. The section of 15th St West south of West Avenue L is currently unpaved with no improvements while Avenue L is paved. As indicated previously, the CA-15 Freeway is located on the site's east side. An aerial photograph of the site and the surrounding area is shown in Exhibit 4.

4. PROJECT DESCRIPTION

The proposed project would consist of a hotel with 235 guest rooms and clubhouse, three restaurant/retail buildings totaling 12,800 square feet of floor area, and two multi-story residential buildings that would contain a total of 181 units. The proposed project site is located on the southeast corner (SEC) of 15th Street West and West Avenue L. The site is located on the southwest corner of the CA-15 and West Avenue L freeway interchange. A site plan is provided in Exhibit 5. Key elements of the proposed project are summarized below:

- *Site Plan*. The project site would consist of 10.126 acres and the future development would total 340,230 square feet of floor area. The development would consist of two residential buildings that would contain a total of 181 units, a hotel that would contain 235 guest rooms, and three restaurants/retail pads.
- *Residential Building A*. This building would contain 90 residential units and would have a total floor area of 81,348 square feet. The maximum building height would be 58 feet, 8-inches.

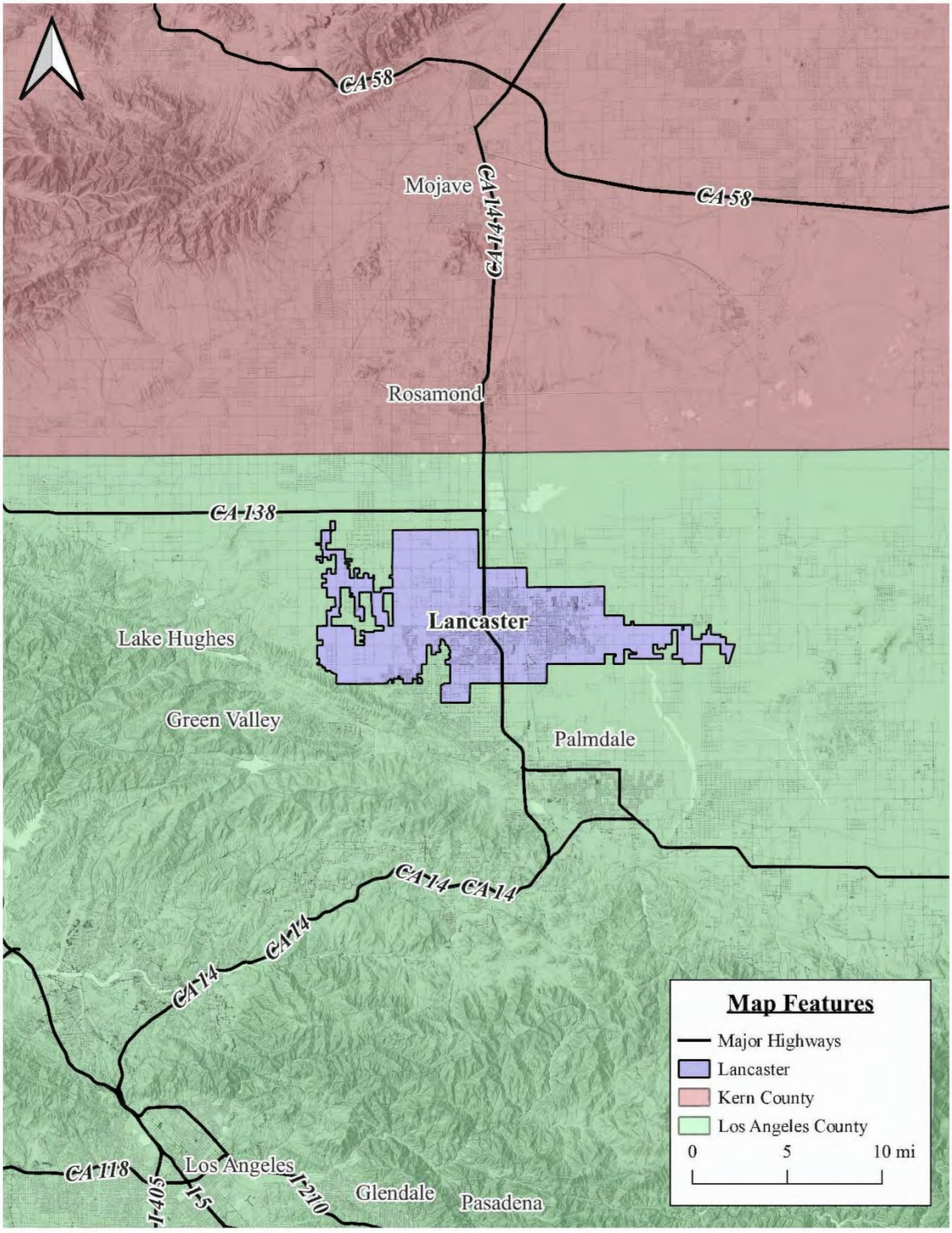

EXHIBIT 1 REGIONAL LOCATION MAP

SOURCE: Q GIS

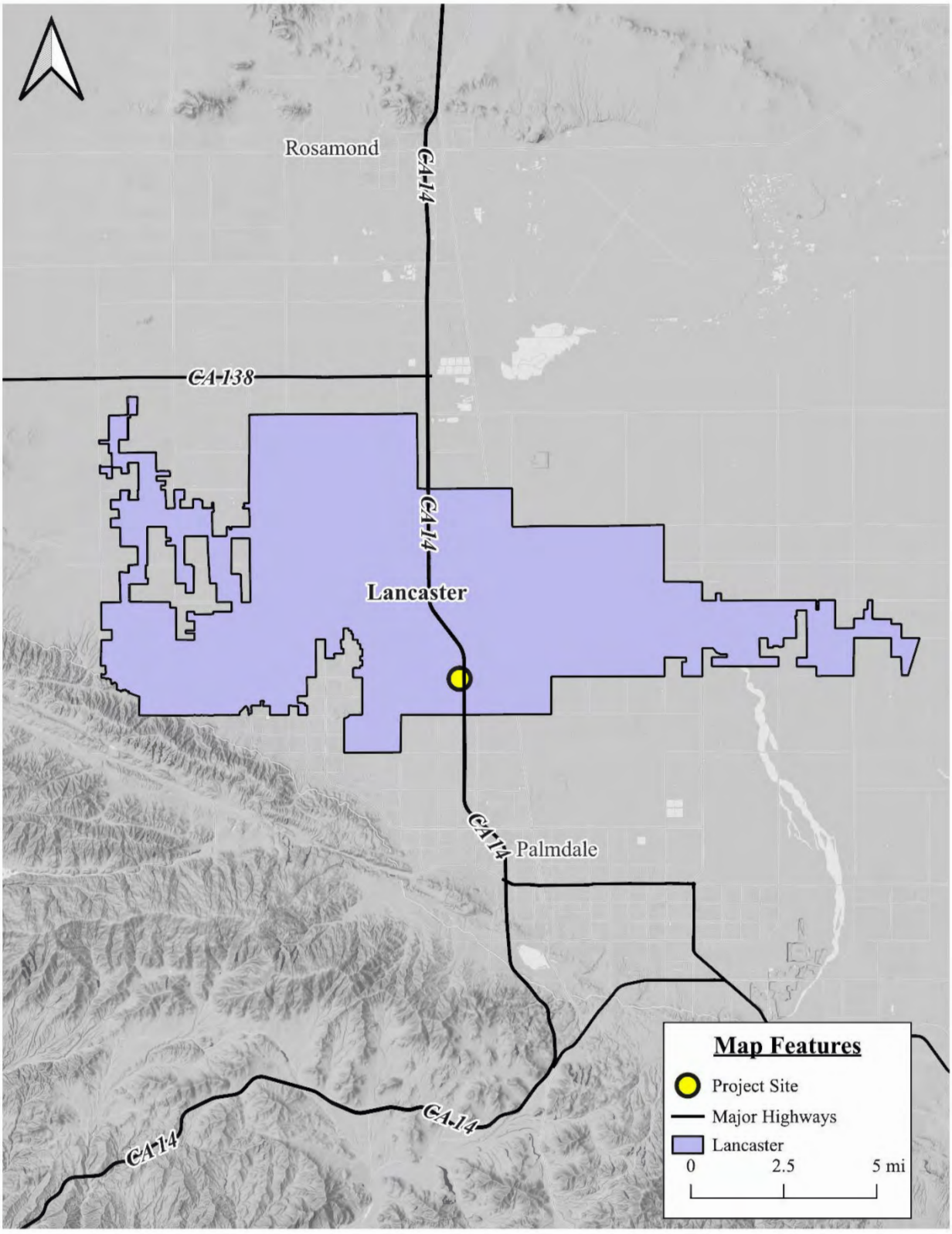

EXHIBIT 2 CITYWIDE MAP

SOURCE: Q GIS

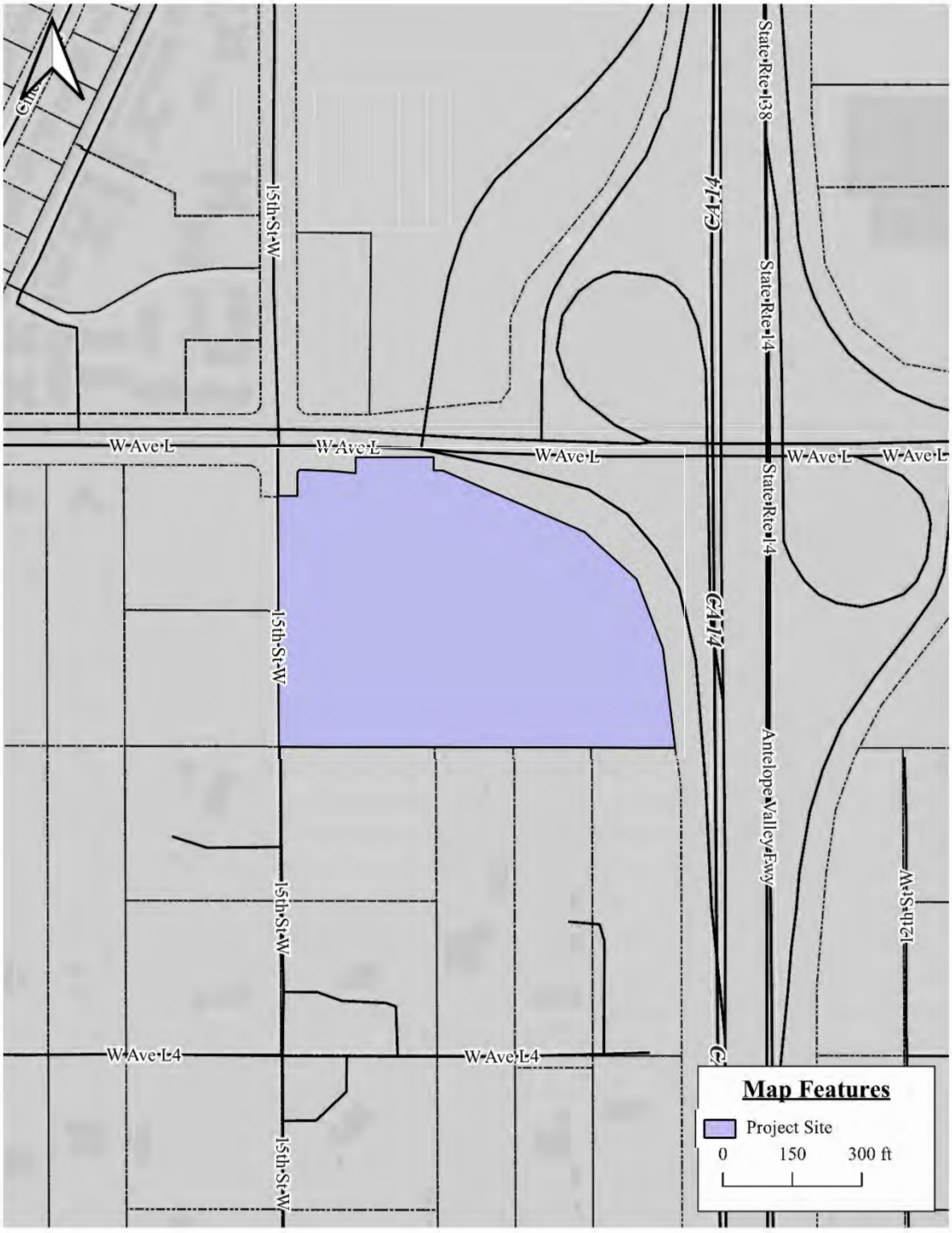

EXHIBIT 3 VICINITY MAP

SOURCE: Q GIS

EXHIBIT 4 AERIAL PHOTOGRAPH

SOURCE: Q GIS

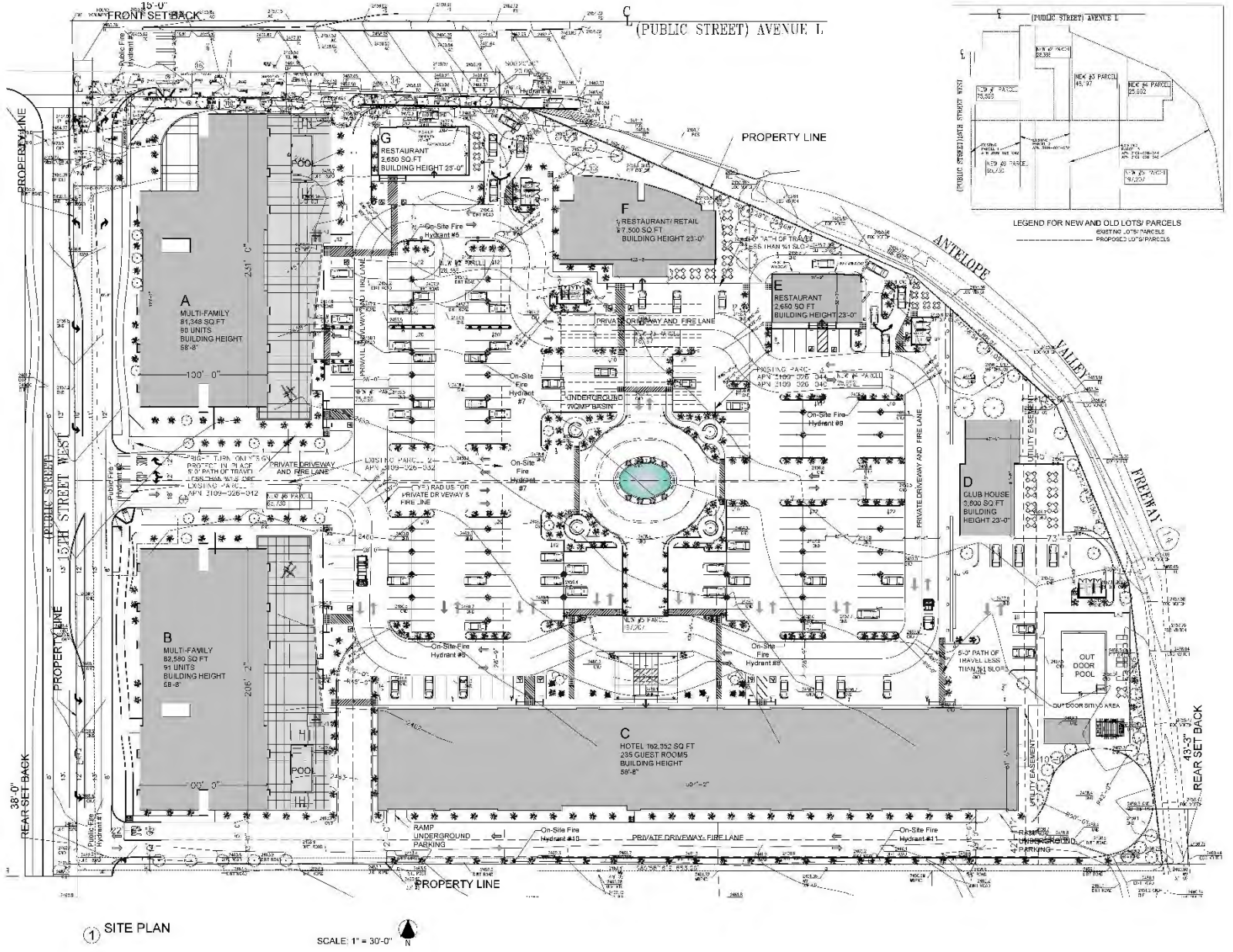

EXHIBIT 5 SITE PLAN

SOURCE: ATABAK YOUSSEFZADEH

- *Residential Building B.* This building would contain 91 residential units and would have a total floor area of 82,580 square feet. The maximum building height would be 58 feet, 8-inches.
- *Hotel Building C.* This building would contain 235 guest rooms and would have a total floor area of 162,352 square feet. The maximum building height would be 58 feet, 8-inches. In addition, an accessory clubhouse totaling 3,800 square feet would be located north of the hotel.
- *Restaurant Building E.* This single level restaurant building would have a total floor area of 2,650 square feet. The maximum building height would be 23 feet.
- *Restaurant/Retail Building F.* This single level restaurant and retail building would have a total floor area of 7,500 square feet. The maximum building height would be 23 feet.
- *Restaurant Building G.* This single level restaurant building would have a total floor area of 2,650 square feet. The maximum building height would be 23 feet.

5. TRIP GENERATION

Trip generation represents the amount of traffic attracted and produced by the project development. Based upon the recommendations from "Trip Generation, 11th Edition," published by the Institute of Transportation Engineers (ITE), applicable trip generation rates are shown in Table 1.

Table 1 Project Trip Generation

Land Use Trip Type	Unit	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Trip Generation Rates								
Multi-Family Housing (ITE Code 221)	Unit	4.54	0.37	23%	77%	0.39	61%	39%
Hotel (ITE Code 310)	Guest Room	7.99	0.46	56%	44%	0.59	51%	49%
Shopping Center (ITE 820)	1,000 sq. ft.	37.01	0.84	62%	38%	3.40	48%	52%
	Pass-by	-30%	--	--	--	-34%	--	--
High Turnover Restaurant (ITE 932)	1,000 sq. ft.	107.20	9.57	55%	45%	9.05	61%	39%
	Pass-by	-40%	--	--	--	-43%	--	--
Fast Food Restaurant (ITE 934)	1,000 sq. ft.	467.48	44.61	51%	49%	33.03	52%	48%
	Pass-by	-50%	-49%	--	--	-50%	--	--
Projected Trip Generation								
Multi-Family Housing (ITE Code 221)	181 Units	822	67	15	52	71	43	28
Hotel (ITE Code 310)	235 Rooms	1,878	108	60	48	139	71	68
Shopping Center (ITE 820)	3,500 sq. Ft.	130	3	2	1	12	6	6
	Pass-by	--	--	--	--	-4	-2	-2
High Turnover Restaurant (ITE 932)	4,000 sq. ft.	429	38	21	17	36	22	14
	Pass-by	-172	--	--	--	-15	-9	-6
Fast Food Restaurant (ITE 934)	5,300 sq. ft.	2,478	236	120	116	175	91	84
	Pass-by	-1,239	-116	-59	-58	-88	-46	-42

Table 1 Project Trip Generation (continued)

Land Use Trip Type	Unit	Daily	AM Peak Hour			PM Peak Hour		
			Total			Total		
Total Gross Trip Generation		5,737	452	218	234	433	233	200
Trip Generation Adjustments								
Internal Trip Deduction		-631	-32	-16	-17	-65	-35	-30
Pass-by Trip Deduction		-1,450	-116	-59	-57	-107	-58	-50
Net Traffic Generation		3,656	304	144	160	260	140	120

Source: Institute of Transportation Engineers, 11th Edition

Internal trip deductions were calculated and applied to the gross trip generation. Based on ITE's "Trip Generation Handbook, 11th Edition," the study has applied pass-by rates for the applicable proposed uses. The project is expected to have a NET trip generation of 144 inbound trips and 160 outbound trips in the AM peak hour, 140 inbound trips and 120 outbound trips in the PM peak hour, and 3,656 daily trips.

6. VMT SCREENING ANALYSIS

In July 2020, the City of Lancaster adopted standards and thresholds for analyzing projects with respect to vehicle miles traveled (VMT). A series of screening criteria were adopted and if a project meets one of these criteria, a VMT analysis is not required. These criteria include the following:

1.) Project site - generates fewer than 110 trips per day;

2.) Locally serving retail - commercial developments of 50,000 square feet or smaller;

3.) Project located in a low VMT area- 15% below baseline;

4.) Transit proximity;

5.) Affordable housing; and

6.) Transportation facilities.

On January 24, 2023, the City of Lancaster City Council adopted the Vehicle Miles Traveled Impact Fee Mitigation Program and certified the accompanying Final Program Environmental Impact Report, findings, and statement of overriding considerations. The VMT mitigation program allows developers to pay $150 per VMT to mitigate their VMT impacts and tier off of the Program EIR. With payment of the fee, the proposed project's VMT impacts would be less than significant.

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA guidelines in November 2017 and an accompanying technical advisory guidance was finalized in December 2018 (OPR Technical Advisory) that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project will result in a substantial increase in Vehicles Miles

Traveled (VMT). *The proposed project will be "screened out from further VMT analysis since no additional floor area will be added to the existing building."* In July 2020, the City of Lancaster adopted standards and thresholds for analyzing projects with respect to vehicle miles traveled (VMT). A series of screening criteria were adopted and if a project meets one of these criteria, a VMT analysis is not required. These criteria are listed below:

- *Screening #1. Low Trip Generating Uses*. The proposed project would not require a VMT analysis if it generates fewer than 110 trips per day. The proposed project would potentially generate 3,656 daily trips. *The proposed project does not meet this criteria*.

- *Screening #2. Locally Serving Uses*. The proposed project would not require a VMT analysis if it is a locally serving retail - commercial development of 50,000 square feet or smaller. The local serving-retail portion of the proposed project, Restaurant E, Restaurant F, and Restaurant G, total up to 12,800 square feet. *The proposed project meets this criteria, however the entirety of the project is not screened out*.

- *Screening #3. Low VMT Area*. The project's location in a low VMT area defined as 15% below baseline will exempt a project from VMT analysis. Pursuant to Figure 4 of the City of Lancaster Guidelines, the project site is located in a zone that is higher than the AVPA average for office uses. *The proposed project does not meet this criteria*.

- *Screening #4. Transit Priority Area Proximity*. Projects located within Transit Priority Areas (TPAs) may also be exempt from VMT analysis. TPAs are defined in the OPR Technical Advisory as a ½ mile radius around an existing or planned major transit stop, or an existing stop along a high-quality transit corridor (HQTC). HQTCs are defined in the technical advisory as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. The project site is not located within ½ mile of a HQTC. *The proposed project is not located within a Transit Priority Area and, as a result, the project does not meet this criteria*.

- *Screening #5. Affordable Housing Development*. Affordable housing projects are exempt from a VMT analysis. The project does not meet this screening criteria since it is not an affordable housing project. *The proposed project does not meet this criteria*.

- *Screening #6. Transportation Facilities*. Transportation facilities are exempt from VMT analysis. The project does not meet this screening criteria since it is not a transportation project. *The proposed project does not meet this criteria*.

The applicable VMT criteria findings are provided in Table 2.

Table 2 VMT Screening Criteria Results

VMT Screening Criteria	Meets VMT Screening		Discussion of Findings
	Yes	No	
Screening #1. Low Trip Generating Uses.		√	The project would generate 3,656 net daily trips.
Screening #2. Locally Serving Uses.	√		The proposed use does not exclusively serve the local market.
Screening #3. Low VMT Area.		√	The project site is not located in a Low VMT area.
Screening #4. Transit Priority Area Proximity.		√	The project is not located in a TPA by definition.
Screening #5. Affordable Housing Development.		√	The project is not an affordable housing development.
Screening #6. Transportation Facilities.		√	The project is not a transportation related project.

Source: Blodgett Baylosis Environmental Planning

Only a portion of the proposed project meets one of the six VMT screening criteria (refer to Table 2). As a result, the project is not fully screened out from the VMT screening and would be subject to further VMT analysis.

7. VMT ANALYSIS AND MITIGATION

This VMT assessment is consistent with the City of Lancaster's VMT guidelines. General assumptions and methodology for the VMT analysis are as follows:

- *Regional Travel Demand Model*. As outlined in the City's guidelines, the Southern California Association of Governments (SCAG) regional travel demand model was used to determine the VMT within the affected Traffic Analysis Zone (TAZ). This travel demand model was used to develop the VMT data needed for this analysis using standard employment densities for the land uses described previously.

- *Geographic Area*. According to the City's guidelines, the City of Lancaster has identified Los Angeles County's Antelope Valley Planning Area (AVPA) as the geographic area for the Baseline VMT. This programmatic assessment compares the VMT per service population without and with the change in land use for the following TAZ in which the project site is located: TAZ 20315300.

- *VMT Metric*. The City guidelines provide recommended thresholds by land use type. For the proposed project, the appropriate VMT metric is Household VMT per Capita and Work VMT per Employee which was used in this analysis using the Production/Attraction (PA) methodology.

- *VMT Threshold*. As outlined in the City's guidelines, a proposed land use plan exceeding a level of 15% below the AVPA baseline may indicate a significant transportation impact. Conversely, land use plans that would generate VMT that is 15% or more below the existing VMT per service population may indicate a less-than-significant transportation impact. However, this programmatic assessment only compares the VMT metrics with the established General Plan against the proposed land use modifications associated with the TAZ in which the project site is located.

The SCAG transportation demand model (TDM) covers the AVPA and includes Lancaster, Palmdale, and portions of LA County. This model uses the year 2012 as the baseline year with the future forecast year of 2040 and was used to determine the Baseline Total VMT per service population for the AVPA region. The SCAG model uses interactions between land uses and socio-economic data including population, employment, and households in addition to growth projections from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to estimate VMT.

According to the City of Lancaster Local Transportation Assessment Guidelines, the impact thresholds for residential and commercial projects is as follows:

- Project exceeds 15% below Los Angeles County's Antelope Valley Planning Area (AVPA) Baseline VMT for Home-based VMT per capita.

- Project exceeds 15% below Los Angeles County's Antelope Valley Planning Area (AVPA) Baseline VMT for Home-based Work VMT per employee.

VMT Calculation and Mitigation

Home-Based VMT per Capita Formula

$$= \frac{Trips * (Home\ Work\ Trip\ Length + Home\ Other\ Trip\ Length) * (Home\ Work + Home\ Other\ Productions)}{Residents}$$

Table 3 Calculation Variables

Variable	Figure	Unit	Source
Residential Trips	822	Trips	Table 1- Institute of Transportation Engineers, 11th Edition
Home-Work Trip Length	14.18	Miles	CalEEMod
Home-Other Trip Length	10.64	Miles	
Home-Work Productions	0.15	Unitless	LA City VMT Calculator Documentation Appendix E /https://ladot.lacity.gov/sites/default/files/documents/vmt_calculator_documentation-2020.05.18.pdf
Home-Other Productions	0.6	Unitless	
Residents	553	Resident	California Department of Finance
Employees	30	Employee	Blodgett Baylosis Environmental Planning

Table 3 summarizes the calculation variables. Trip generation figures were calculated above in Section 5. Trip length was derived from the CalEEMod estimates which uses the SCAG MPO trip length estimations. The trip generation figures in Section 5 contain all project-generated trips. To derive the home-based trips based on production or attraction from all project-generated trips, the Trip Purpose Assumptions by Land Use Table from the City of Los Angeles VMT Calculator Documentation was used since this figure was not available for the City of Lancaster. The project resident estimation was generated by multiplying the amount of housing units by the average household size in the city, 3.06 persons which is found within Table E-5 Population and Housing Estimates for Cities, Counties, and the State, 2020-2024 by the California

Department of Finance. Based on the household size figure, Residential Building A would generate 278 residents and Residential Building B would generate 275 residents which is a total of 553 residents. Employee estimation was generated through linear interpolation from similar hotel environmental studies conducted by Blodgett Baylosis Environmental Planning including an 88-room hotel in Riverside County which employed 11 people. Assuming a ratio of 0.125 employees per room, 235 rooms would generate approximately 30 employees.

Table 4 Proposed Project VMT

Project Elements	Project VMT Estimate	Threshold 15% Below AVPA Baseline	Project Level Over Threshold	VMT Impact
Project Residential VMT	15.8	17.1	N/A	No
Project Hotel VMT	14.18	7.99 (9.4*0.85)	77% (14.18/7.99)	Yes

Source: Blodgett Baylosis Environmental Planning

As shown above in Table 4, the project generates 15.8 home-based work VMT per capita and 14.18 home-based VMT per employee. In comparison to the VMT threshold of 15% below AVPA Baseline VMT, the project is below the adopted threshold for the residential buildings but, 77% above the currently adopted threshold, which results in a potentially significant VMT impact. The reduce the Project's potential VMT impact, the home-based work VMT per employee needs to be reduced by 185.7 VMT. This is calculated in the following equation.

$$185.7\ VMT = (14.18\ VMT\ per\ Employee - 7.99\ VMT\ per\ employee) * 30\ Employees$$

Based on the above calculation, the project will need to contribute a fee of $150 per VMT or $27,855 to reduce the project's impact to a level of less than significant.