

Technical Memorandum

Date: May 3, 2023
To: Kris Pinero, Rodeo Credit Enterprises, LLC
From: Sarah Brandenberg, Biling Liu
Subject: Lancaster TTM 67329 VMT Analysis

LA21-3339

Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Tentative Tract Map No. 67329 (TTM 67329) housing project (the Project) in the City of Lancaster. This assessment compares Home-based VMT per capita generated by the Project to the City's adopted threshold of 15% below Baseline VMT of the Antelope Valley. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR's) Technical Advisory, and the *City of Lancaster Department of Public Works Local Transportation Assessment Guidelines* (January 2021).

The remainder of this memorandum is divided into four sections: Project Introduction, Modeling Methodology, VMT Analysis, and Conclusions.

1. Project Introduction

The Project Proposes a total of 32 single family residential units on vacant land located at the northwest corner of Avenue M-8 and 35th Street West in the City of Lancaster, California. **Attachment 1** presents the Project site plan.

2. Modeling Methodology

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand forecasting model with socioeconomic and transportation network inputs, such as population, employment, and the regional and local roadway network, that estimates current travel behavior and forecasts future changes in travel demand. The current SCAG model has 2012 as the base year and 2040 as the forecast year and can be used to estimate VMT for existing year 2022 conditions. The 2040 model contains the planned transportation improvements in the RTP and the growth projections in the SCS.

Table 1 presents the socioeconomic inputs for the Project. The Project population was estimated by referring to population per household ratio of the Project TAZ in SCAG 2012 base year model.



Table 1: SCAG Model Land Uses Inputs

Project TAZ SED	Households	Population
Proposed Project	32	112

When calculating VMT for a project site, the VMT methodology should match the methodology used to establish the Baseline VMT metrics and impact thresholds. For residential projects in the City of Lancaster, Baseline VMT is defined as a measurement of Home-based VMT per capita, which reflects all trips that begin or end at a residential unit within the Los Angeles County Antelope Valley Planning Area (Antelope Valley). 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.

Following the VMT analysis, the Home-based VMT per capita of the Project was then compared to the Antelope Valley Baseline VMT to determine if it exceeds the City's impact threshold.

3. VMT Assessment

The Home-based VMT per capita of the Project was calculated for existing year (2022) using the SCAG travel demand model. While the Project will be built over time, the Year 2022 analysis shows how the VMT generated by the Project compares to current travel and VMT characteristics in the area. **Table 2** shows the Home-based VMT per capita of the Project.

Table 2: Project VMT and VMT Threshold for Residential Projects in Lancaster

VMT Metrics for Housing Projects	Home-Based VMT per capita
Project VMT Estimates (2022)	22.0
Antelope Valley Planning Area (AVPA) Baseline VMT (2022)	20.0
Threshold: 15% Below AVPA Baseline VMT	17.0
Percent Lower than VMT Threshold	29%
VMT Exceeds Threshold?	Yes

As shown above, the Project generates 22 Home-based VMT per capita. In comparison to the City's threshold of 15% below Baseline VMT of the Antelope Valley, the Project is 5 Home-based VMT per capita higher and will result in a VMT impact. The higher VMT results is due to the location of the Project in the western area of Lancaster with lower development densities that can result in longer travel distance in comparison to the broader Antelope Valley area.

To mitigate the Project's Home-based VMT per capita impact, Home-based VMT per capita needs to be reduced by 29% as shown above in Table 2. To determine the total amount of VMT that exceeds the City's VMT threshold for residential projects, the Project Home-Based VMT per capita



was multiplied by the estimated population of the Project (22.0 Home-Based VMT per capita as shown in Table 2 multiplied by 112 people as shown in Table 1 which equates to 2,464 VMT as shown in Table 3). The City’s VMT threshold for residential projects was then applied to the Project population to determine the maximum amount of VMT that the Project would be allowed to generate without exceeding the City’s threshold (17.0 VMT per capita as shown in Table 2 multiplied by 112 people as shown in Table 1 which equates to 1,904 as shown in Table 3). The Project VMT is then compared to the maximum allowable VMT based on the City’s threshold and the excess VMT generated by the Project is used to determine the required VMT reduction. The VMT reduction required equates to 560 total VMT as shown in **Table 3**. Given the size and location of the Project, on-site mitigation strategies are limited and would not reduce VMT to a level needed to eliminate the VMT impact. The City recently adopted \$150 per VMT mitigation fee for the VMT impact fee program. Therefore, the Project’s VMT impacts will be reduced by contributing \$2,625 per unit to the City’s VMT impact fee program.

Table 3: VMT Reduction Required and Mitigation Fee

Home-Based VMT for Residential	Project VMT Estimate	VMT Threshold (15% below Baseline, Maximum Allowable VMT)	VMT Reduction Required
VMT / capita	22.0	17.0	4.0
Total VMT	2,464	1,904	560
Mitigation Fee per VMT			\$150
Total Mitigation Fee			\$84,000
Total Number of Units			32
Fee/Unit			\$2,625

4. Conclusions

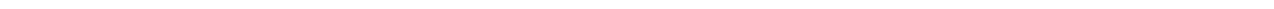
This technical memorandum documents the process to determine the potential VMT impacts of the proposed residential development in the City of Lancaster. The following summarizes the results of the VMT analysis:

- The VMT analysis for the Project is based on the City’s new guidance for transportation impacts. The VMT analysis methodology for the Project is consistent with the methodology used to establish the Baseline VMT metrics and impact thresholds for projects in the City of Lancaster.
- For residential projects in the City of Lancaster, the Home-based VMT per capita is analyzed to determine the VMT impact. The Home-based VMT per capita generated by the Project under base year (2022) is then compared to the Antelope Valley Baseline VMT.
- The Project generates 22 Home-based VMT per capita in the base year (2022) which is 29% higher than the City’s threshold. Therefore, the Project will result in a VMT impact.



- The Project's VMT impacts will be reduced by contributing to the City's recently adopted VMT impact fee program.
- The VMT reduction required by the Project results in a total VMT impact fee of \$84,000 for the proposed 32 units, which equates to \$2,625 per unit.

Attachment A - Project Site Plan



OWNER/DEVELOPER:

RODEO CREDIT ENTERPRISES
9595 WILSHIRE BLVD, SUITE 708
BEVERLY HILLS, CA 90212
ATTN: KRIS PINERO

ENGINEER:

D&D ENGINEERING INC.
119 W HYDE PARK BLVD
INGLEWOOD, CA 90302
ATTN: HENRIK MAZARIAN

LEGEND:

FS	FINISH SURFACE
FL	FLOW LINE
EG	EDGE OF PAVEMENT
PE	PAD ELEVATION
---	TRACT BOUNDARY
---	RETAINING WALL
---	PROPOSED SEWER LINE
---	PROPOSED WATER LINE
---	PROPOSED STORM DRAIN
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	EXISTING MAJOR CONTOUR LINE
---	EXISTING MINOR CONTOUR LINE
(XXXX.XX)	EXISTING ELEVATION
XX.XX	PROPOSED ELEVATION
MSBL	MINIMUM SETBACK LINES
---	PROPOSED A.C. PAVEMENT
---	PROPOSED SIDEWALK
---	PROPOSED OPEN SPACE

GENERAL NOTES:

- LEGAL DESCRIPTION
REAL PROPERTY IN THE CITY OF LANCASTER, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

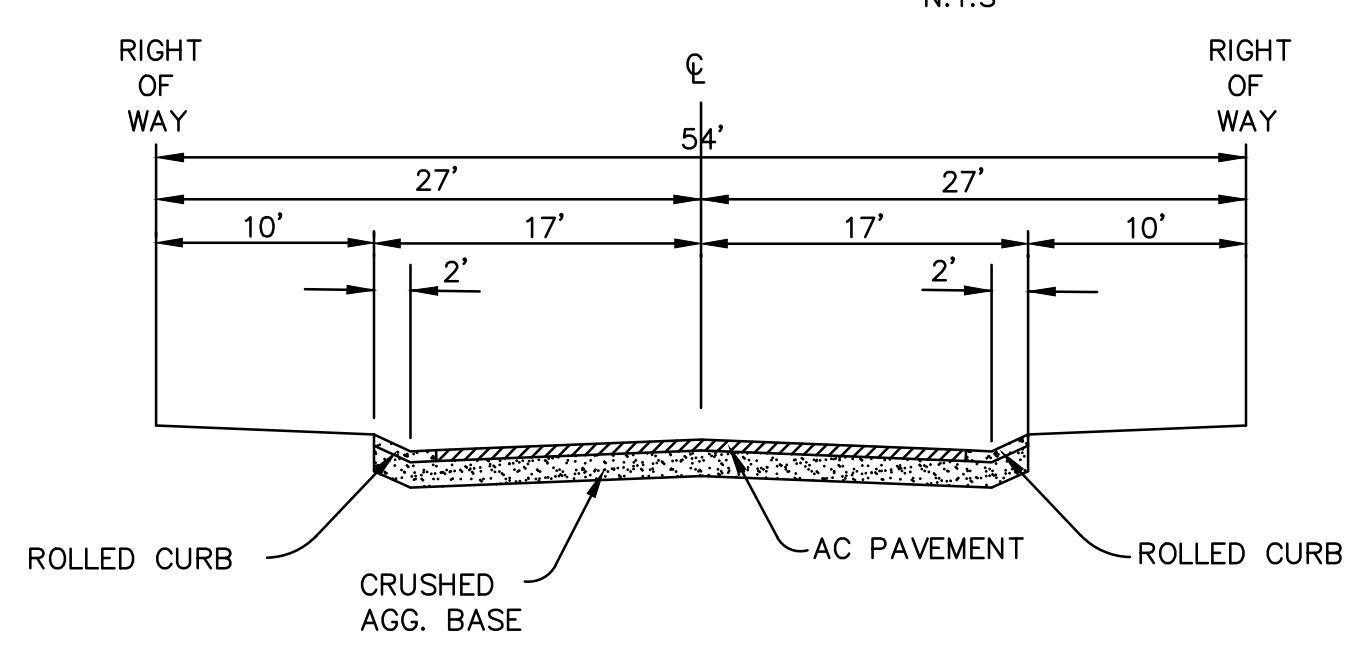
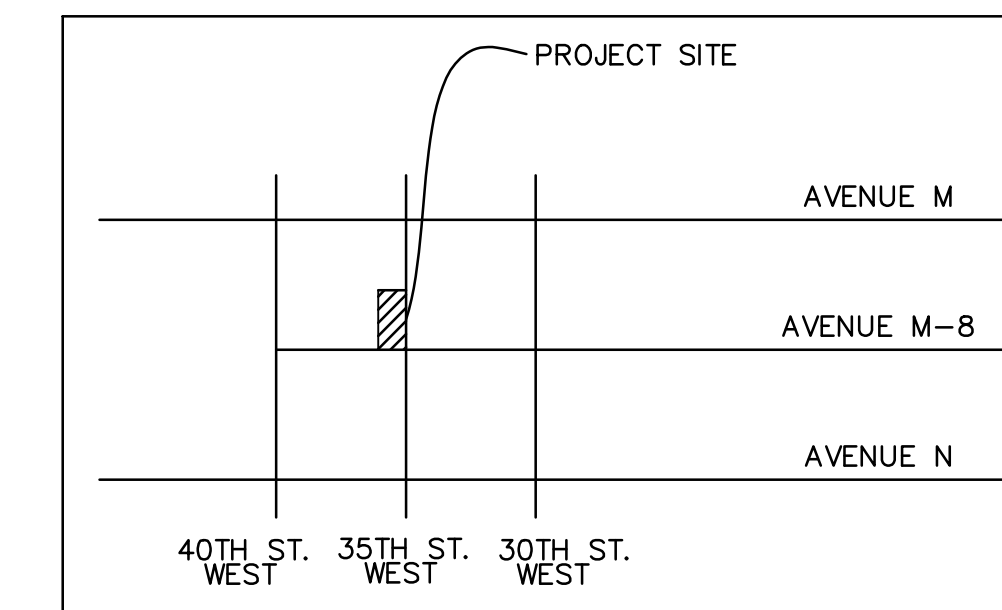
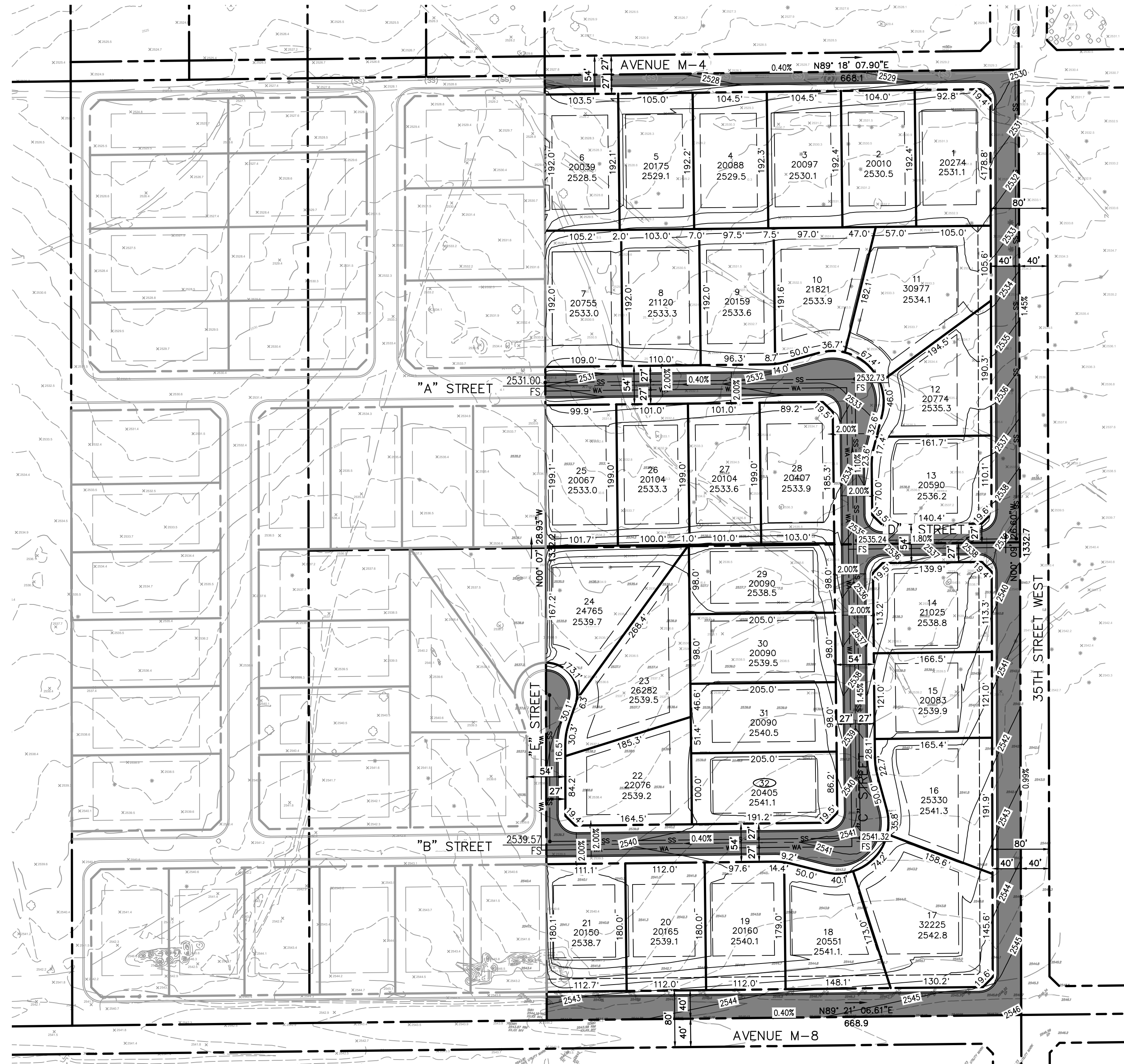
APN: 3111-001-088
THE NORTH 1/2 OF THE EAST 1/2 OF THE WEST 1/4 OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 12 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF LANCASTER, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT OF SAID LAND APPROVED BY THE SURVEYOR GENERAL DATED SEPTEMBER 3, 1855

APN: 3111-001-063
THE SOUTH HALF OF THE EAST HALF OF THE EAST HALF OF LOT 1 IN THE NORTHWEST QUARTER OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 12 WEST, SAN BERNARDINO MERIDIAN IN THE CITY OF LANCASTER, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF.

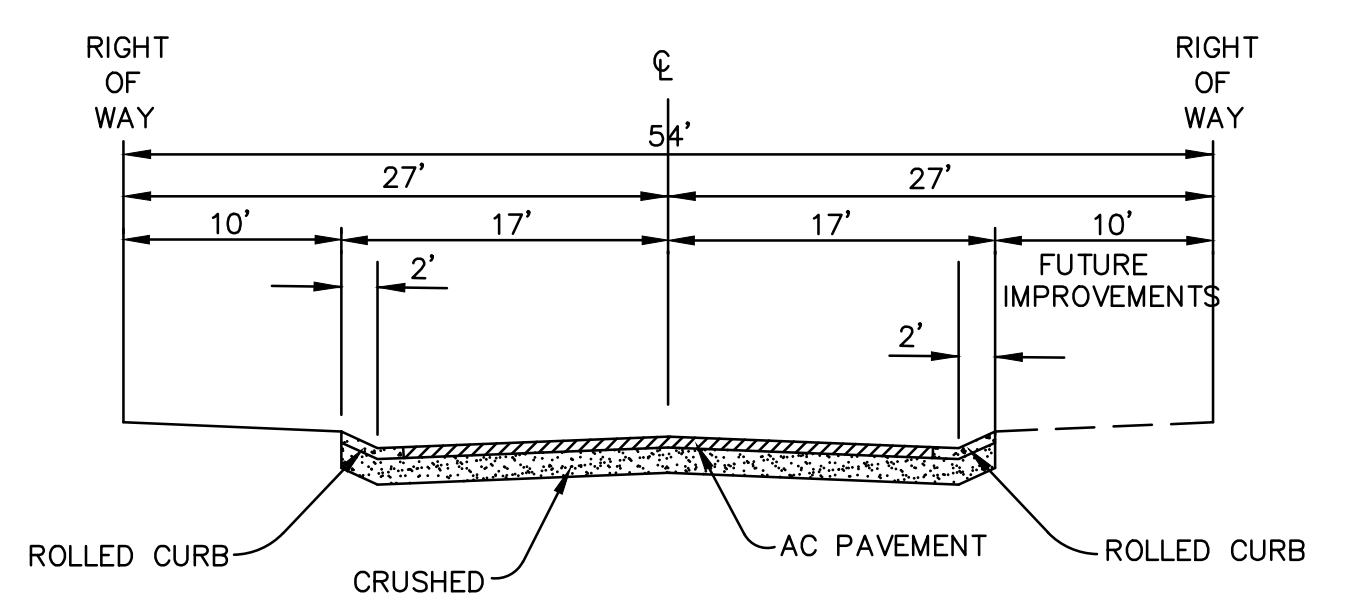
NOVEMBER 18, 2005
VACANT

NORTH-VACANT
SOUTH-EXIST SFR
EAST-VACANT
WEST-VACANT
SRR
SRR
20.5 AC±
15.9 AC±
32
1.6 DU/ACRE
2.0 DU/ACRE
3111-001-088 & 3111-001-063
- DATE OF SURVEY
- EXISTING LAND USE (ONSITE)
- EXISTING LAND USE
- EXISTING ZONING
- PROPOSED ZONING
- GROSS AREA
NET AREA
TOTAL RESIDENTIAL LOTS
GROSS DENSITY
NET DENSITY
- ASSESSOR'S PARCEL NO.

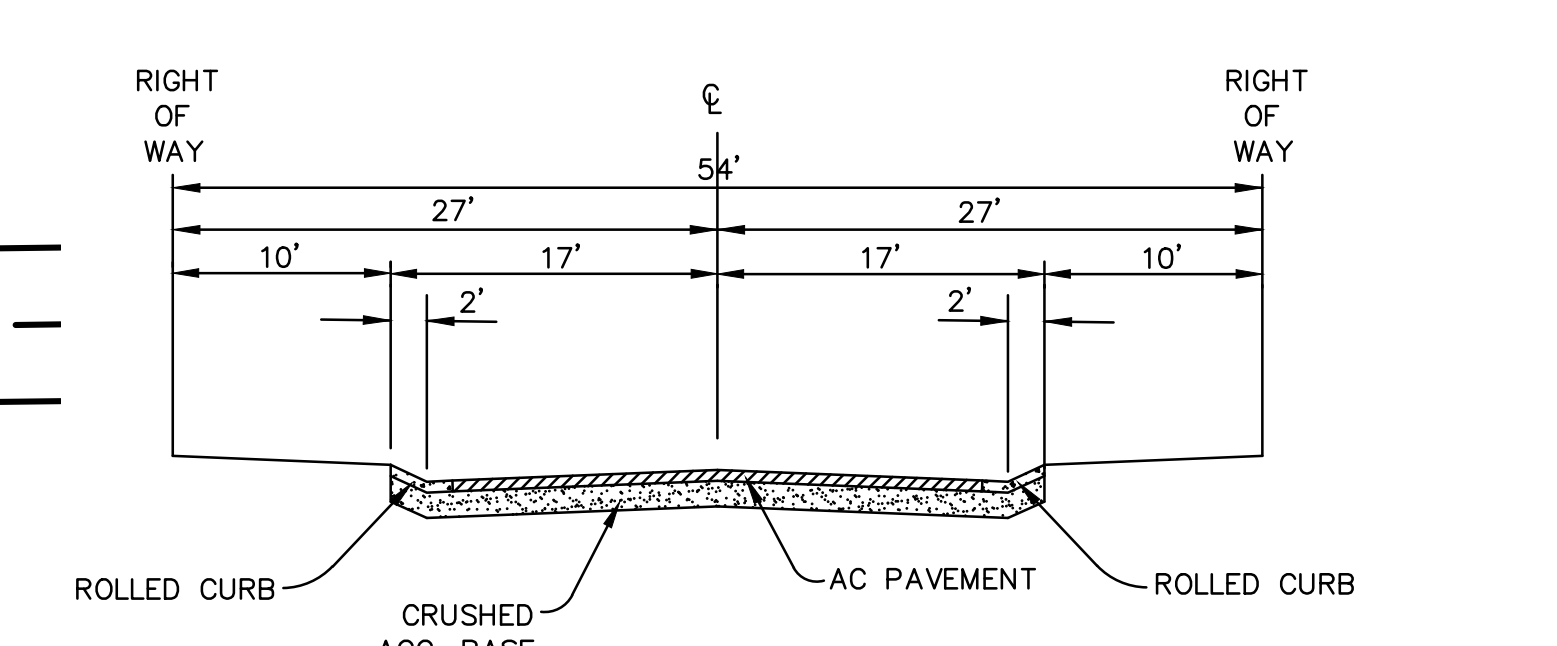
IN THE CITY OF LANCASTER, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA.
TENTATIVE TRACT MAP 067239



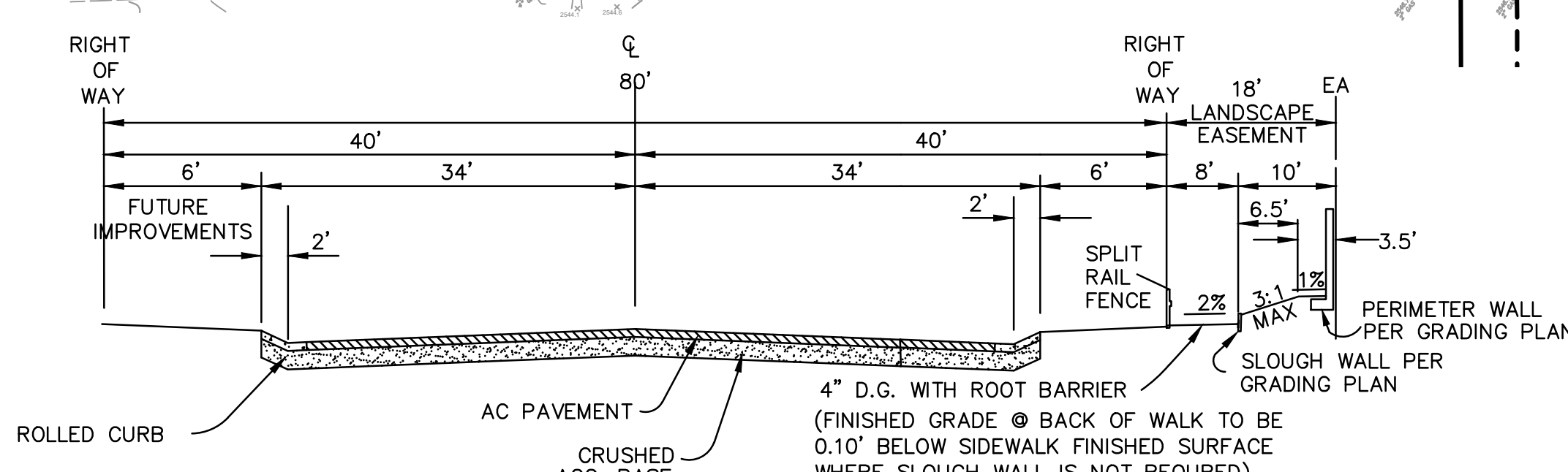
LOCAL STREET SECTION - "A, B, C, AND D" STREETS
54' R.O.W.
SCALE: N.T.S.



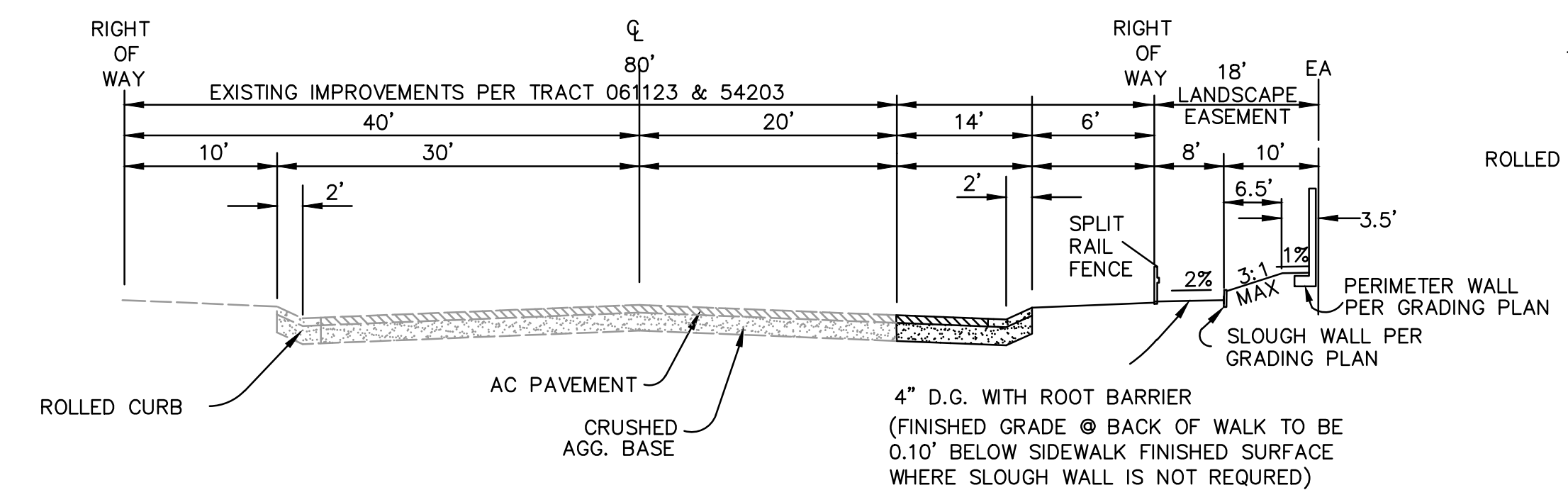
AVENUE M-4
54' R.O.W. (4' PARTIAL WIDTH)
SCALE: N.T.S.



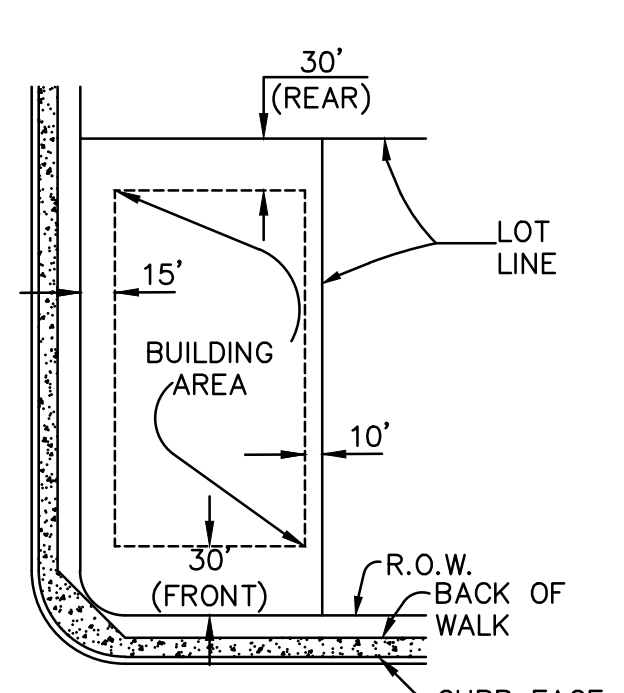
CUL-DE-SAC STREET SECTION - "E" STREET
54' R.O.W.
SCALE: N.T.S.



35TH ST WEST
80' R.O.W. (70' PARTIAL WIDTH)
SCALE: N.T.S.



AVENUE M-8
80' R.O.W. (60' PARTIAL WIDTH)
SCALE: N.T.S.

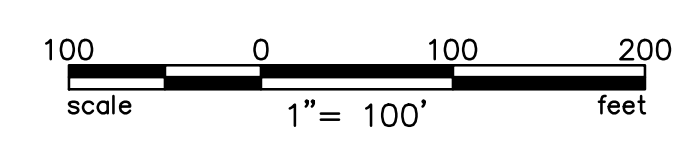


TYPICAL LOT SETBACKS
N.T.S.

SETBACK REQUIREMENTS

FRONT YARD	30'
REAR YARD	30'
INTERIOR SIDE YARD	10' MIN
TOTAL INTERIOR SIDE YARD (SUM OF 2 YARDS)	25'
STREET SIDE YARD	15' OR 20'*

* 15' WHEN ABUTTING A LOCAL STREET (<80' R/W)
20' WHEN ABUTTING AN ARTERIAL STREET (> OR = 80')



D & D ENGINEERING, INC.
119 W HYDE PARK BLVD
INGLEWOOD, CA 90302
Phone: 424-351-6800

CITY OF LANCASTER
35TH ST WEST & AVE M-8

TTM 67239

SCALE: 1" = 100'
DATE: 4/26/2022
SHEET NO.: 01 OF 01

Drawing Name: M:\21018\Eng\21018_Conceptual-Entitlements\TM_67239.dwg
Last Opened: Apr 26, 2022 5:45pm by: Jesse

Attachment 2 - SCAG Model TAZ Data

Socio-economic Data (SED)

Scenario	2012 Base Year	2012 Base Year Plus Project	2040 Future Year	2040 Future Year Plus Project
TAZ	20356100	20356100	20356100	20356100
TAZ_TIER1	20356000	20356000	20356000	20356000
POP	1,854	1,966	2,125	2,237
RES	1,854	1,966	2,125	2,237
HH	506	538	604	636
GN	0		0	
K12	0	0	0	0
COLLEGE	0	0	0	0
SFDU	496	528	498	530
MFDU	10	10	106	106
Tot_emp	3	3	4	4

Project Home-based VMT per Capita (TAZ)

2012 Base Year Plus Project	Population	1,966
	Home-based VMT	47,721
	Home-based VMT/Capita	24.3
2040 Future Year Plus Project	Population	2,237
	Home-based VMT	41,241
	Home-based VMT/Capita	18.4
2022 Existing Year Plus Project (Interpolation)	Population	2,063
	Home-based VMT	45,407
	Home-based VMT/Capita	22.0

