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October 6, 2022

Mr. Dale Ulman
CGU CAPITAL MANAGEMENT
302 West Fifth Street, Suite 103
San Pedro, CA 90731

Subject: **5030 Patterson Avenue Industrial Project Trip Generation & Access Analysis & VMT Screening Study, City of Perris, California *(DPR-22-00013)***

Dear Dale,

MAT Engineering, Inc. is pleased to submit this trip generation study and VMT screening for the proposed 5030 Patterson Avenue Industrial project in the City of Perris.

The analysis contained in this technical letter and memorandum is based on the detailed scope of work previously reviewed and approved by the City of Perris.

A. Project Description & Location

The project site located at 5030 Patterson Avenue in the City of Perris and is planned to consist of approximately 94,453 square feet of industrial/warehouse use. The site is currently utilized for storage.

Access for the proposed project is planned as follows:

- One unsignalized northerly driveway on Patterson Avenue providing full access for passenger cars. This driveway will be approximately 27 feet from the northerly edge of the site. This driveway will be approximately 26 feet wide.

- One unsignalized southerly driveway on Patterson Avenue providing full access for trucks. This driveway will be approximately 6.5 feet from the southerly edge of the site and approximately 218 feet south of the project northerly driveway. This driveway will be approximately 45 feet wide.

Currently, the parcel across the project site on Patterson Avenue is generally vacant. Hence, there are currently no driveways across the street from the project site that would dictate the alignment and location of the project site driveways. It is recommended when the parcel across the street is

developed, its driveway spacing and locations take into account the project site driveway locations for alignment and enhanced traffic operations.

Exhibit A shows the project location. **Exhibit B** shows the proposed site plan.

B. Project Trip Generation

Trip generation represents the amount of trips attracted and produced by a land use.

The trip generation for the project is based upon the specific land uses that have been planned for this project and has been determined utilizing the Institute of Transportation Engineers (ITE) trip generation rates which is typically an industry standard for calculating trips associated with land uses

Table 1 shows the trip ITE trip generation rates for the proposed project which are based on the ITE Warehouse Land Use (ITE Code 150).

Table 1
ITE Trip Generation Rates

Land Use	ITE Code	Units	Peak Hour						Daily
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
Warehouse	150	TSF	0.13	0.04	0.17	0.05	0.13	0.18	1.71

Notes:

Source: 2021 ITE 11th Edition Trip Generation Manual;

TSF = Thousand Square Feet

Utilizing the ITE trip generation rates from Table 1, Table 2 shows a summary of the trip generation for the proposed project.

Table 2
Project Trip Generation [1]

Land Use		Quantity	Units	ITE Code	Peak Hour						Daily
					AM Peak Hour			PM Peak Hour			
					In	Out	Total	In	Out	Total	
Warehouse (Without PCE Adjustment)		94.453	TSF	150	12	4	16	5	12	17	162
Vehicle Type Breakdown											
Warehouse (72.5 % Passenger Cars) [2]					9	13	12	4	8	12	117
Warehouse (27.5% Trucks) [2]					3	1	4	1	4	5	45
Percent Mix of Vehicles [2]	2-Axle Trucks (16.7% of Truck Trips)				0.50	0.17	0.67	0.17	0.67	0.84	7.52
	3-Axle Trucks (20.7% of Truck Trips)				0.62	0.21	0.83	0.21	0.83	1.04	9.32
	4-Axle Trucks (62.5% of Truck Trips)				1.88	0.62	2.50	0.62	2.50	3.12	28.16
PCE-Adjusted Trips											
Passenger Car Equivalent (PCE)	2-Axle Trucks (2.0 PCE)				1	0	1	0	2	2	15
	3-Axle Trucks (2.5 PCE)				2	0	2	1	2	3	23
	4-Axle Trucks (3.0 PCE)				6	2	8	2	7	9	84
	Passenger Vehicles (1.0 PCE)				9	3	12	4	8	12	117
Total (PCE-Adjusted)					**18**	**5**	**23**	**7**	**19**	**26**	**239**

Source::

1 = Institute of Transportation Engineers (ITE) 2021 Trip Generation Manual (11th Edition) Source: 2021 ITE 11th Edition Trip Generation Manual;

2 = South Coast Air Quality Management District Normalized Truck Mix Data for Warehouse without Cold Storage

As shown in Table 2, without taking any credit for the trips associated with the existing displaced land uses:

- The proposed project is forecast to generate approximately 162 daily trips which include approximately 16 AM peak hour trips and approximately 17 PM peak hour trips.

- Since warehouse use is expected to generate truck traffic, the trip generation has been adjusted to account for truck trips using the *South Coast Air Quality Management District (SCAQMD) Normalized Truck Mix Data* for Warehouse Without Cold Storage Use, per the City of Perris requirements using the following truck mix assumptions:

    - Passenger Vehicle: 72.5% of the total trips

    - 2-axle Truck: 16.7% of the total truck trips

- 3-axle Truck: 20.7% of the total truck trips
- 4-axle Truck: 62.5% of the total truck trips

Since trucks move slower and occupy more space on the roadway than passenger vehicles, the truck trips have been converted to Passenger Car Equivalent (PCE) trips by applying the following PCE adjustment factors to the generated trips:

- Passenger Vehicle: 1.0 PCE
- 2-axle Truck: 2.0 PCE
- 3-axle Truck: 2.5 PCE
- 4-axle Truck: 3.0 PCE

After converting the truck trips to passenger Car Equivalents (PCE), the proposed project is forecast to generate approximately 239 PCE-adjusted daily trips which include approximately 23 PCE-adjusted AM peak hour trips and approximately 26 PCE-adjusted PM peak hour trips.

As requested by the City, a focused traffic analysis has been prepared for the proposed project to evaluate the following elements:

- Trip Generation Evaluation & Access Analysis to evaluate the following:
  - Provide a discussion of the total project trip generation as shown in Tables 1 and 2.
  - Discuss the movement of vehicles at the two driveways along with truck turning templates showing the movement of trucks at the southerly driveway.
  - Provide the expected magnitude of PCE-adjusted trips at each driveway.
  - Evaluate driveway spacing requirements per the *City of Perris Valley Commerce Center Specific Plan* criteria.

- Provide a conceptual striping plan showing the roadway striping along the project frontage on Patterson Avenue.

- Vehicle Miles Traveled (VMT) Screening Evaluation using the City's VMT tool.

C. Trip Generation Evaluation & Access Analysis

As shown in Table 2, without taking any credit for the trips associated with the existing displaced land uses:

- The proposed project is forecast to generate approximately 162 daily trips which include approximately 16 AM peak hour trips and approximately 17 PM peak hour trips.

- After converting the truck trips to passenger Car Equivalents (PCE), the proposed project is forecast to generate approximately 239 PCE-adjusted daily trips which include approximately 23 PCE-adjusted AM peak hour trips and approximately 26 PCE-adjusted PM peak hour trips.

Typically, a full traffic study is required when a project generates more than 50 peak hour trips. Since the proposed project is expected to generate a low number of trips, a full traffic study is not required for the proposed project. Due to the low number of trips, the project is expected to not have an adverse impact on the level of service and operations of the surrounding circulation system and roadway network.

C.1. Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site.

Trip distribution is heavily influenced by the geographical location of the site, the location of residential, employment and recreational opportunities, and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses, and highways within the community and existing traffic volumes.

As previously noted, access for the proposed project is planned as follows:

- One unsignalized northerly driveway on Patterson Avenue providing full access for passenger cars. This driveway will be approximately 27 feet from the northerly edge of the site. This driveway will be approximately 26 feet wide.

- One unsignalized southerly driveway on Patterson Avenue providing full access for trucks. This driveway will be approximately 6.5 feet from the southerly edge of the site and approximately 218 feet south of the project northerly driveway. This driveway will be approximately 45 feet wide.

Exhibit C shows the City of Perris designated truck routes.

Exhibit D-1 shows the project trip distribution for passenger vehicles. **Exhibit D-2** shows the project trip distribution for trucks.

C.2. Project Trip Assignment

The assignment of traffic from the project site to the adjoining roadway system has been based upon the project's trip generation, trip distribution, and proposed arterial highway and local street systems that this traffic study assumes would be in place by the time of initial occupancy of the site.

Exhibit E shows the project traffic volumes (trip assignment) on the two driveways after accounting for PCE adjustments.

C.3. Truck Turning Movements at the Driveway

An evaluation has been prepared for truck maneuvers at the southerly driveway and on-site.

Exhibit F shows the truck turning maneuvers.

As shown in **Exhibit F**, truck turns can be accommodated without conflicting with the driveway curbs and physical on-site improvements.

C.4. Driveway Spacing Evaluation

The analysis includes an evaluation of driveway spacing per the *City of Perris Valley Commerce Center Specific Plan.*

Exhibit G shows the planned driveway spacing for the project driveways.

Based on the *City of Perris Valley Commerce Center Specific Plan,* the following driveway spacing and intersection intervals are recommended:

Table 3
Perris Valley Commerce Center On-Site Standards/Guidelines
Recommended Driveway Spacing

Roadway Type	Intersection Interval
Local	200 feet
Collector	330 feet
Major Collector	330 feet
Secondary Arterial (Painted Median)	660 feet
Secondary Arterial (Raised Median)	660 feet
Arterial	1,320 feet
Expressway	2,640 feet

Source: *Perris Valley Commerce Center On-Site Standards/Guidelines Table 4.0-2.*

Exhibit H shows the City of Perris General Plan Circulation Element. **Exhibit I** shows the City of Perris General Plan Typical Roadway Cross Sections.

As shown in **Exhibit H**, Patterson Avenue is designated as a Secondary Arterial. Per the *City of Perris Valley Commerce Center Specific Plan*, an intersection spacing of 660 feet is recommended for Patterson Avenue.

However, as shown in **Exhibit G**, the distance between the proposed driveways does not satisfy this recommendation.

Due to the size and shape of the project site and total length of the site frontage (approximately 322 feet), providing 660 feet of intersection spacing is not feasible for this site and also for most of the neighboring sites located on the two sides of Patterson Avenue.

Considering this constraint, the project driveways have been designed to have as much separation from each other as possible.

The two driveways are provided in order to improve site access and on-site circulation by separating truck traffic from passenger vehicle traffic as feasible.

Hence, even though the project driveway spacing does not meet the recommended separation from the *City of Perris Valley Commerce Center Specific Plan,* it is designed and planned as best as possible considering the physical constraints of the site and the surrounding environment.

C.5. Conceptual Striping

A conceptual striping plan will be prepared to show the lanes and layout of Patterson Avenue along the project site frontage when the half section of Patterson Avenue along the frontage is built by the project.

Exhibit J shows the conceptual striping plan.

D. Proposed Scope of Vehicle Miles Traveled (VMT) Analysis

In response to Senate Bill (SB) 743, the California Natural Resource Agency certified and adopted new CEQA Guidelines in December 2018 which now identify Vehicle Miles Traveled (VMT) as the most appropriate metric to evaluate a project's transportation impact under CEQA (§ 15064.3).

Effective July 1, 2020, the previous CEQA metric of LOS, typically measured in terms of automobile delay, roadway capacity and congestion, generally will no longer constitute a significant environmental impact.

The City of Perris has updated their transportation impact guidelines *City of Perris Transportation Impact Analysis Guidelines for CEQA (May 12, 2020)* to provide recommendations in the form of thresholds of significance and methodology for identifying VMT related impacts.

Based on the City's TIA Guidelines, there are various types of screening that may be applied to effectively screen out land use projects from project-level assessment. The screening criteria are the following:

- Projects that are 100% Affordable Housing
- Projects located within half mile of qualifying transit
- Projects that are local-serving uses
- Projects located within a low VMT area
- Project with net daily trips less than 500 trips per day

Based on the established and adopted criteria, projects that generate less than 500 daily trips are presumed to have a less than significant VMT impacts and screen out for requiring a full VMT analysis.

As shown previously in Table 2, without taking any credit for the trips associated with the existing displaced land uses:

- The proposed project is forecast to generate approximately 162 daily trips which include approximately 16 AM peak hour trips and approximately 17 PM peak hour trips.

- After converting the truck trips to passenger Car Equivalents (PCE), the proposed project is forecast to generate approximately 239 PCE-adjusted daily trips which include approximately 23 PCE-adjusted AM peak hour trips and approximately 26 PCE-adjusted PM peak hour trips.

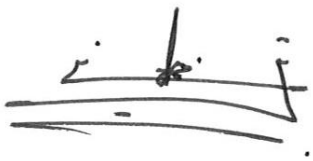
Hence, based on the City's adopted VMT guidelines, the proposed project is presumed to have a less than significant VMT impacts and screen out for requiring a full VMT analysis

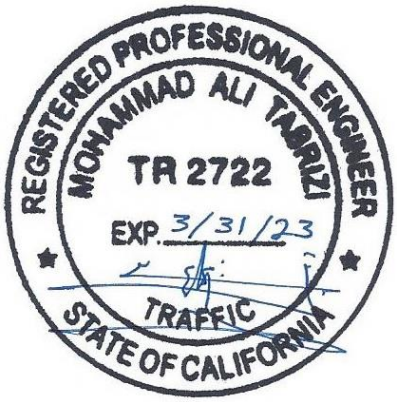
A City of Perris VMT screening tool form has been prepared for the proposed project and is contained in Attachment A.

MAT Engineering Inc. appreciates the opportunity to provide this technical letter and memorandum. If you have any questions, concerns, or comments, please contact us at 949-344-1828 or at@matengineering.com.

Respectfully submitted,

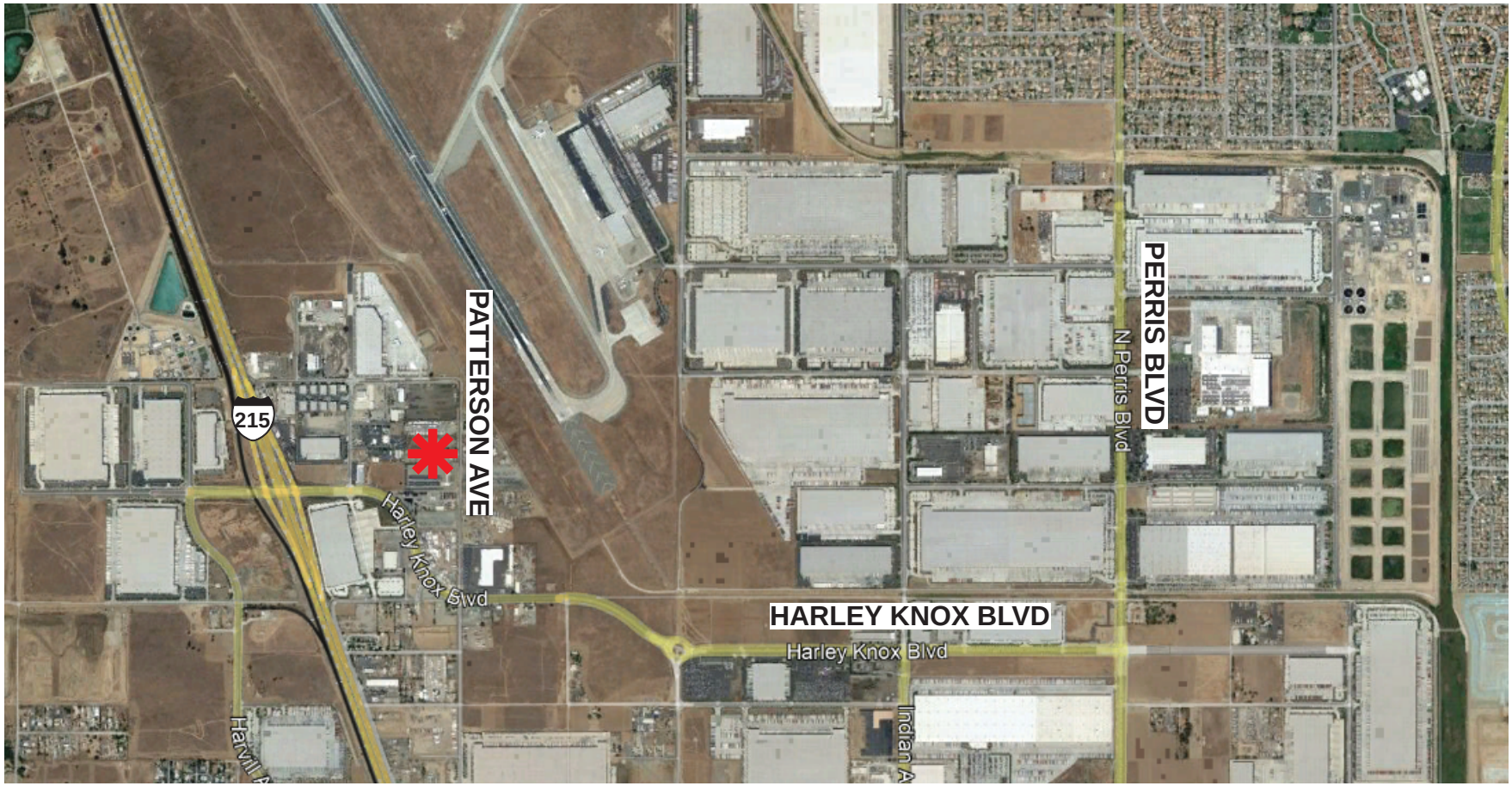
MAT ENGINEERING, INC.





Alex Tabrizi, PE, TE

President



Legend:

Site Location

Not to Scale

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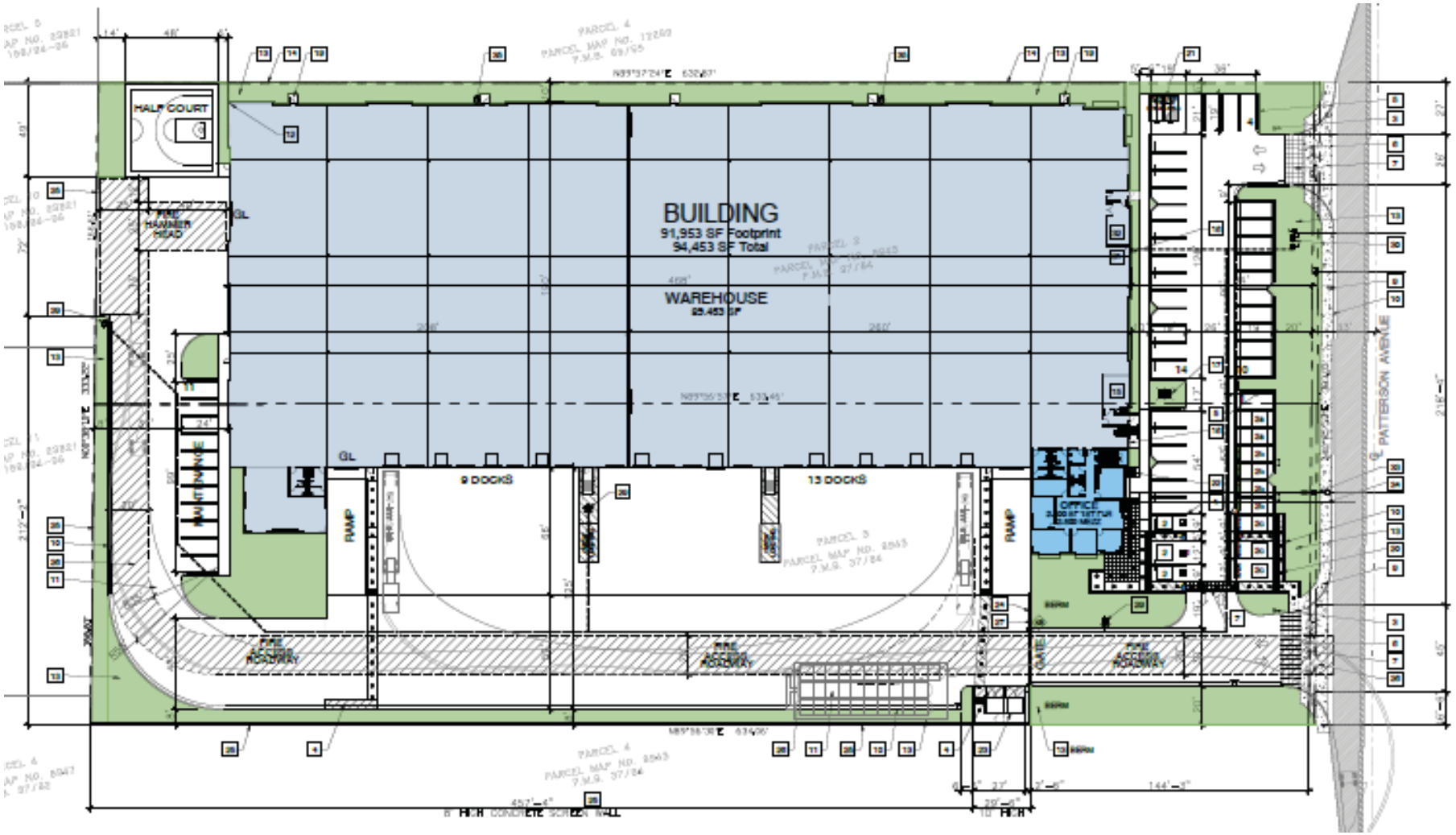
Project Location

Exhibit A



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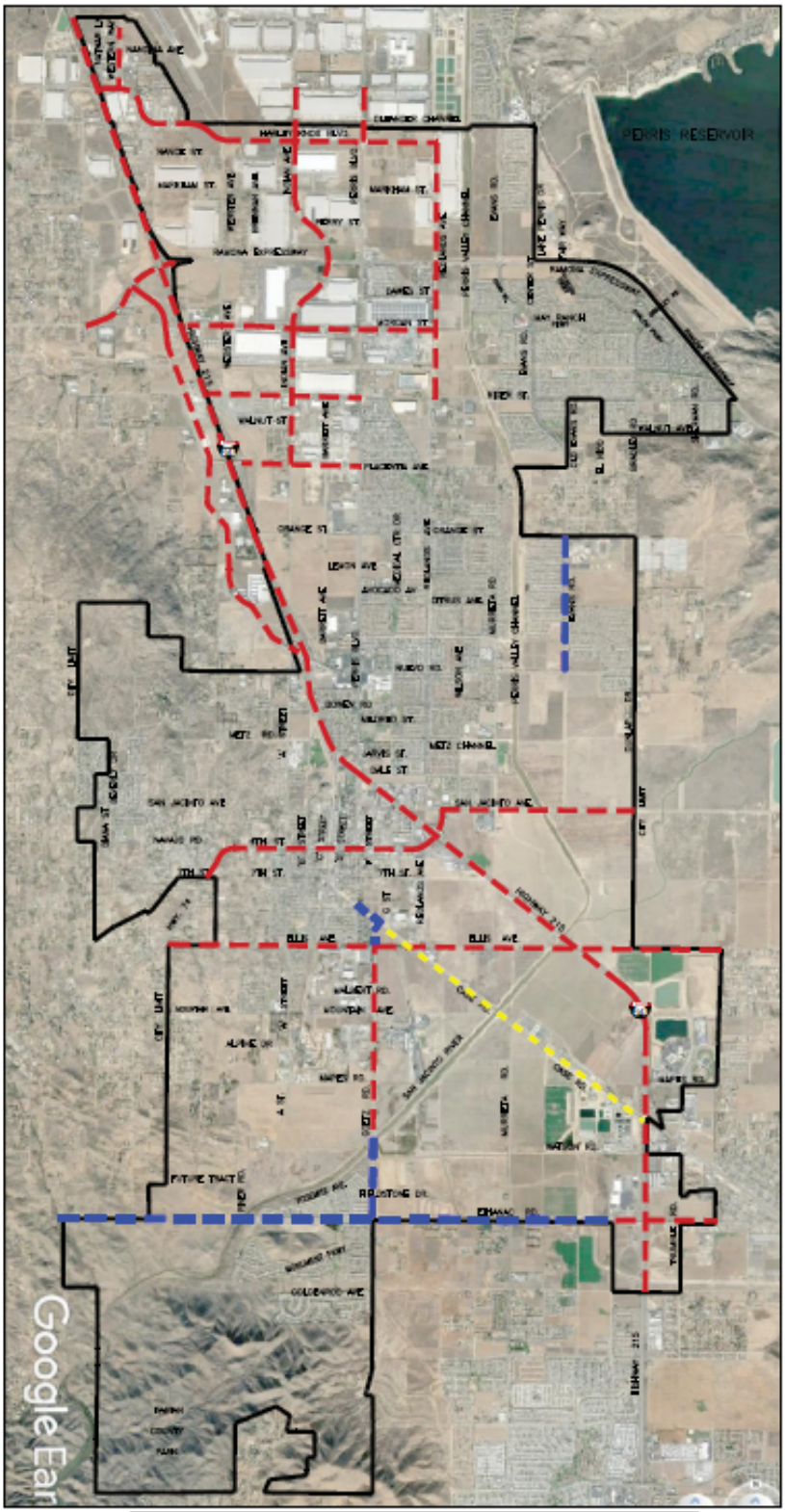
Site Plan

Exhibit B

CITY OF PERRIS TRUCK ROUTES

GPA22-05068 & OA22-05069



LEGEND:

- PERRIS CITY LIMITS
- TRUCK ROUTES TO REMAIN IN PLACE
- NEW TRUCK ROUTE
- REMOVED TRUCK ROUTES

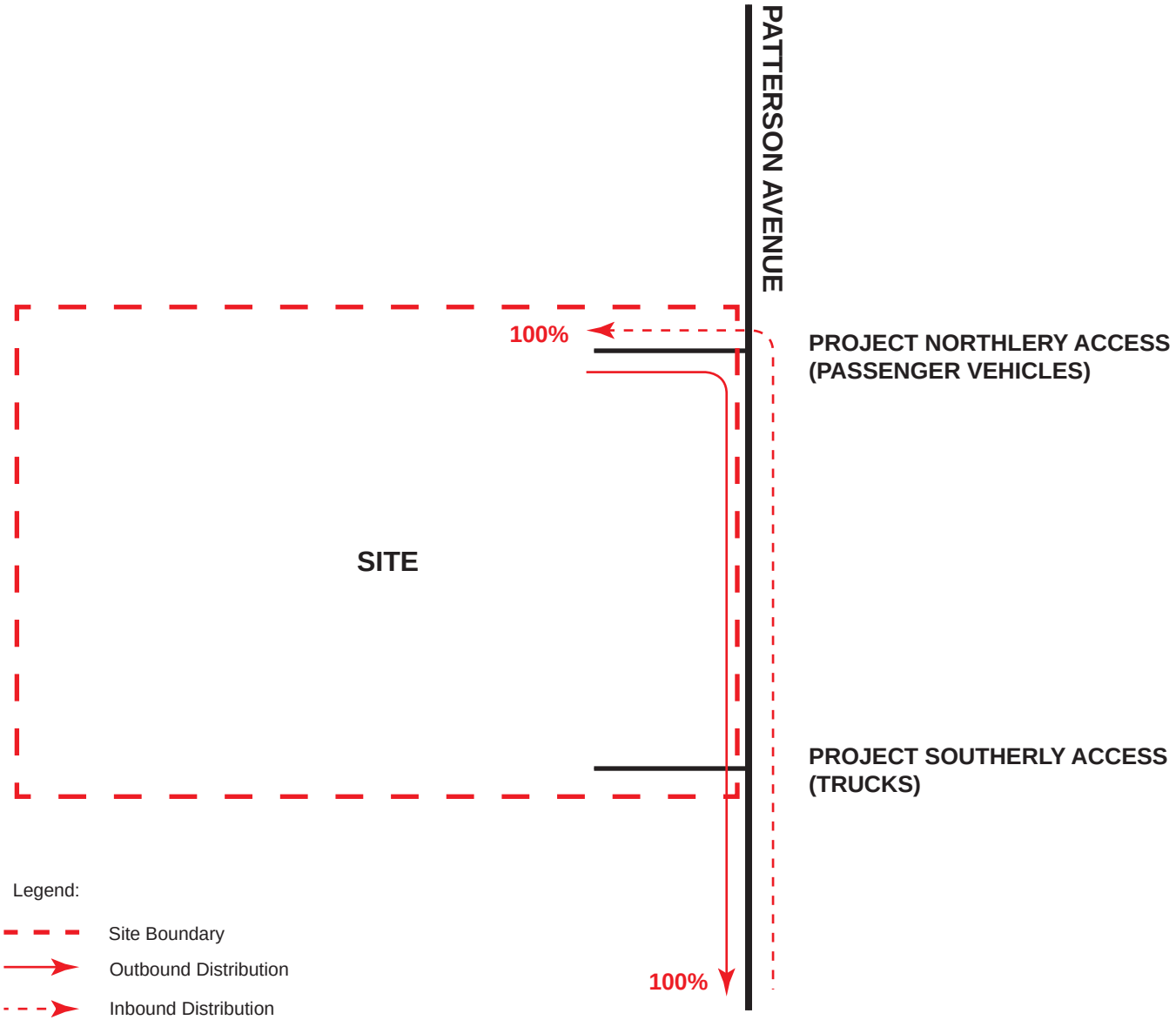
Not to Scale

ENGINEERING, INC.

City of Perris Designted Truck Routes

5030 Patterson Avenue Project, City of Perris, California / 0002-2022-01 SEP/2022

Exhibit C



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Project Trip Distribution (Passenger Vehicles)

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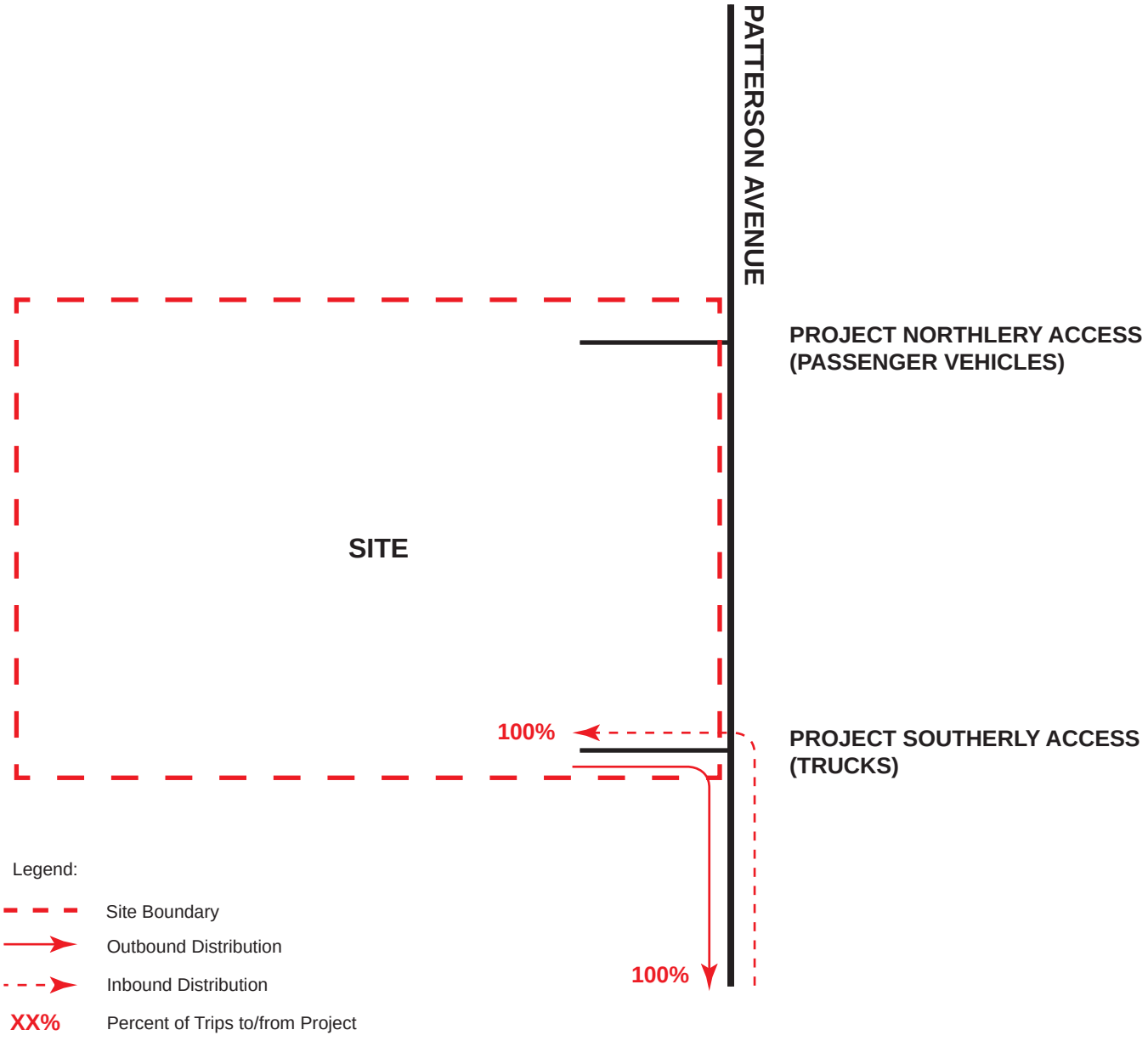

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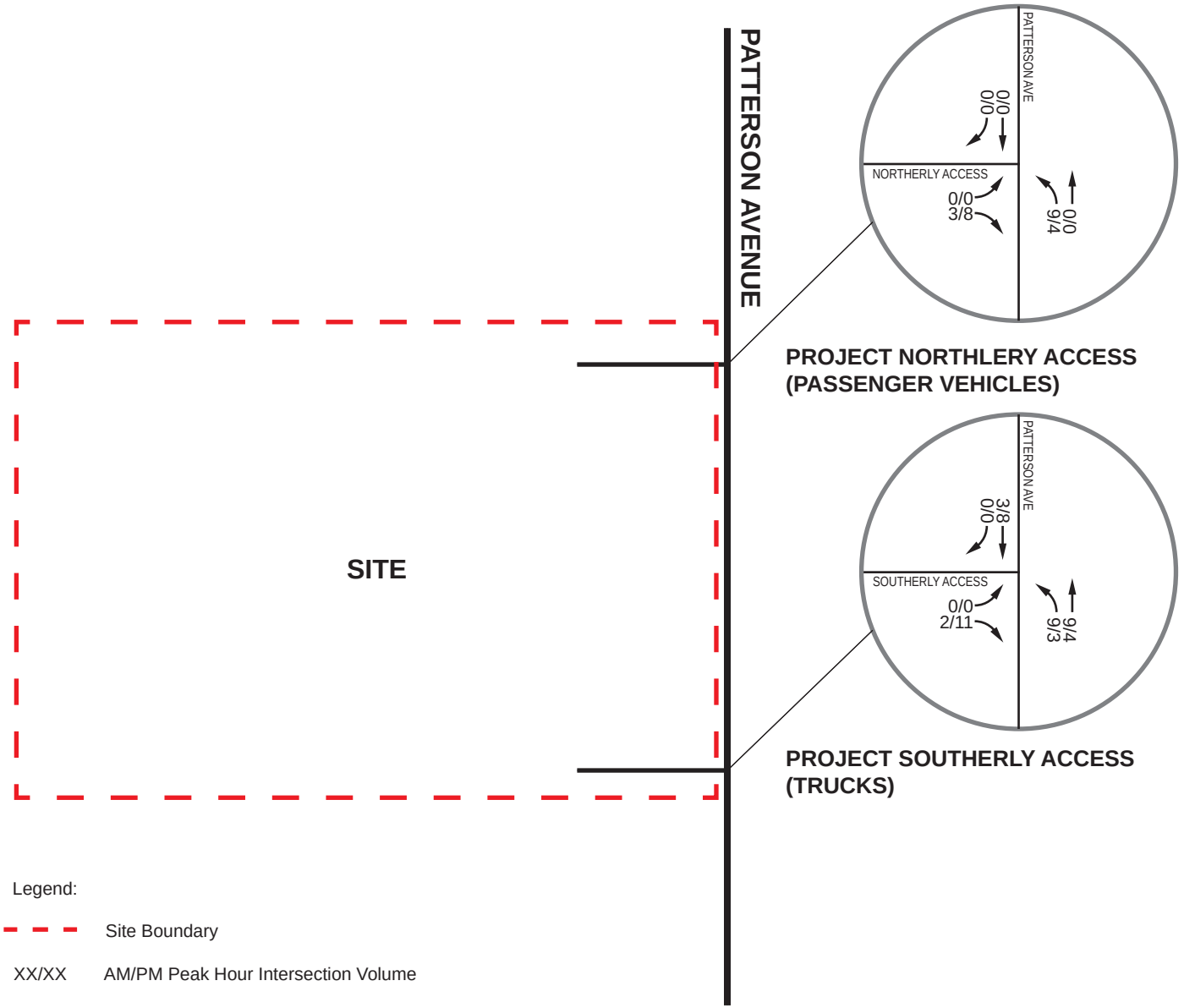
Project Trip Distribution (Trucks)



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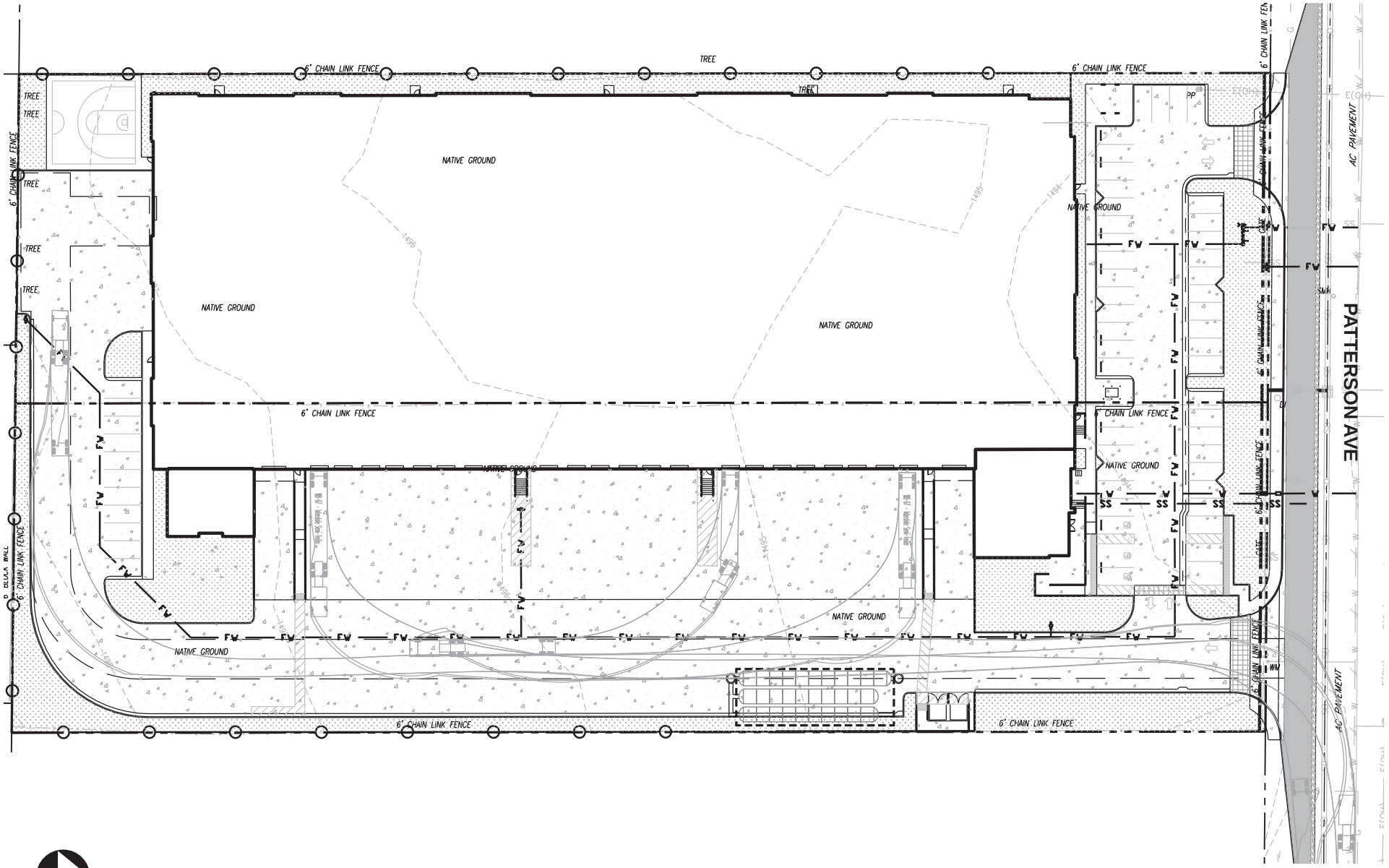
Project Trip Assignment (PCE-Adjusted)



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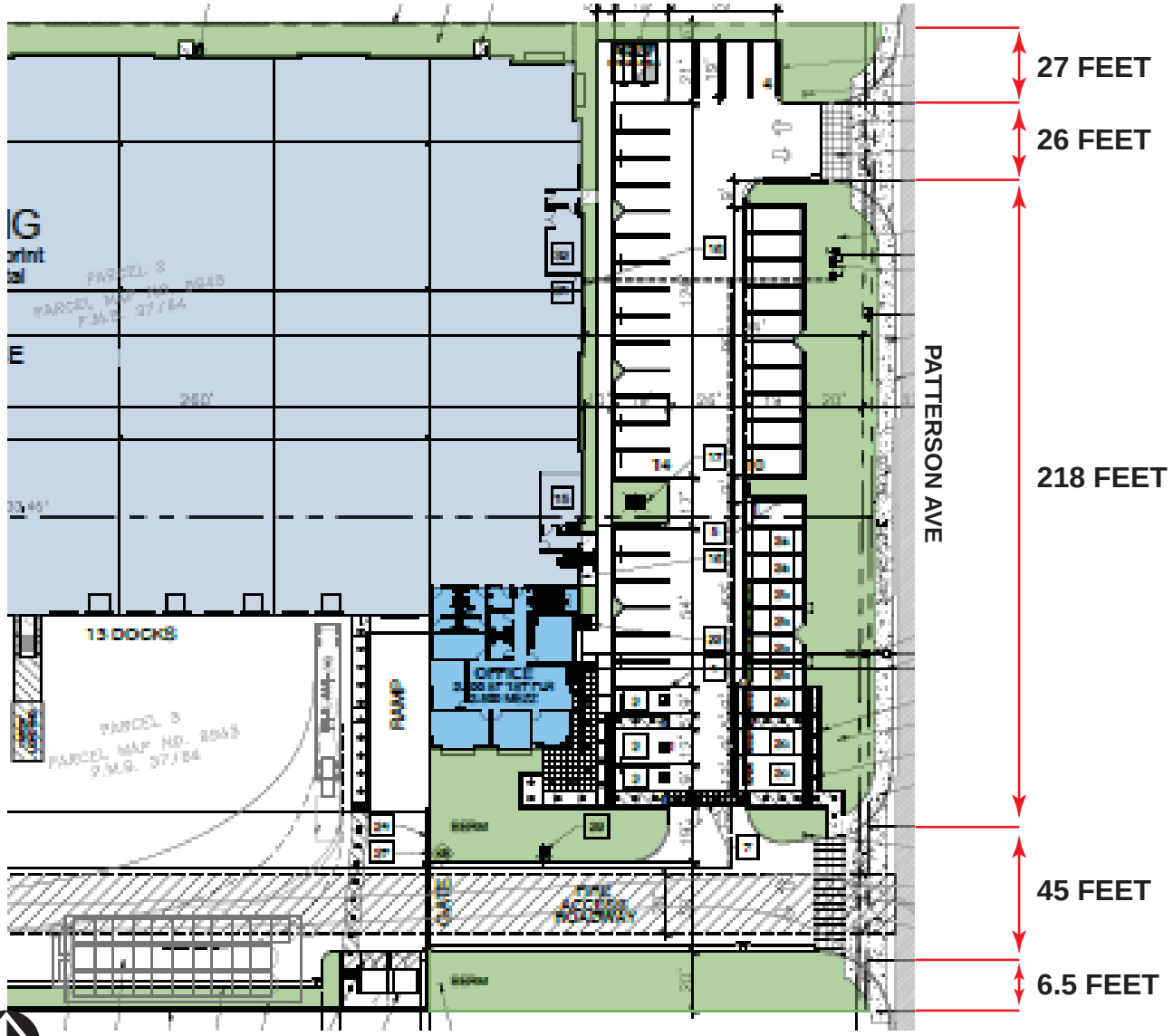
Truck Turning Manuevers

5030 Patterson Avenue Project, City of Perris, California / 0002-2022-01

SEP/2022

Exhibit F

ENGINEERING, INC.



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Proposed Driveway Spacing

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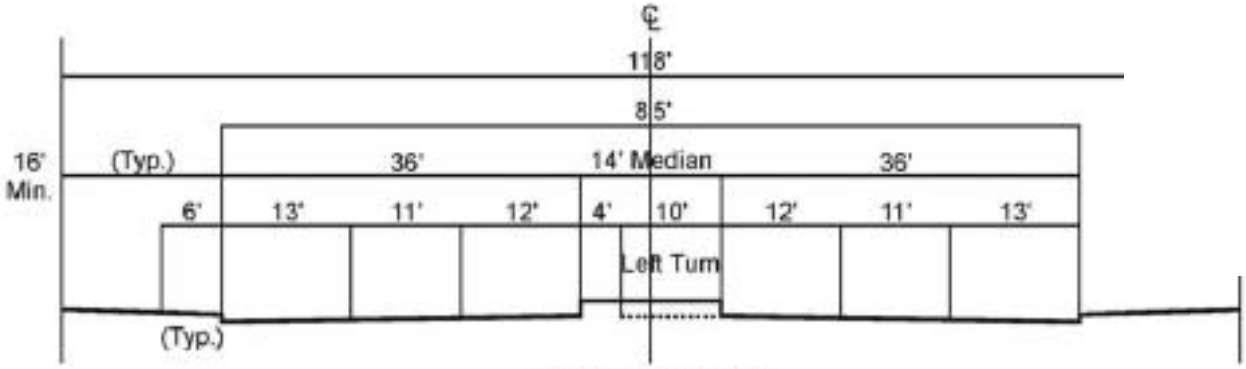
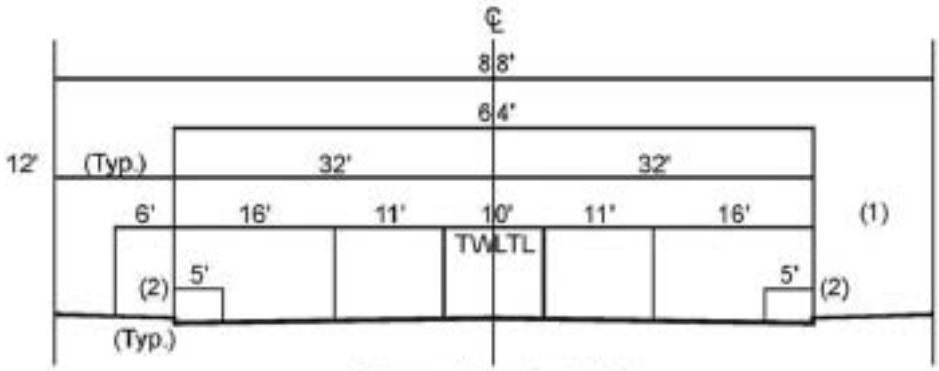
City of Perris General Plan Circulation

5030 Patterson Avenue Project, City of Perris, California / 0002-2022-01 JUL/2022

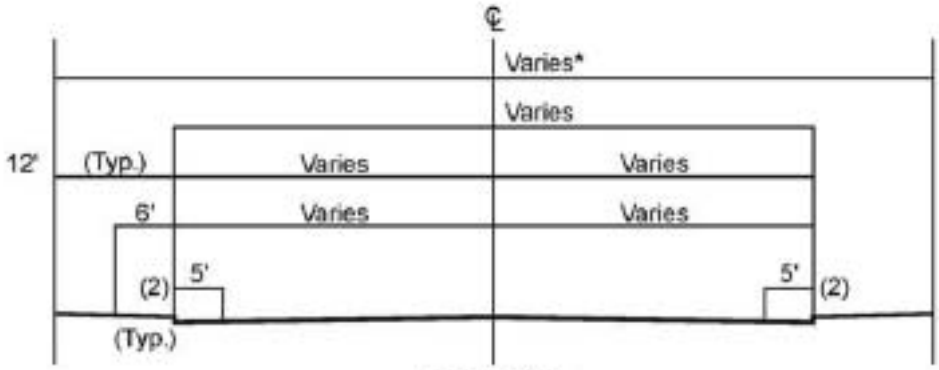
Exhibit H



Primary Arterial



Secondary Arterial



Collector

Legend

(1) No stopping any time both sides.

(2) Bike lane where designated.

* The width of the collector street can range from 40 feet to 64 feet curb-to-curb.

TWLTL = Two Way Left Turn Lane

Not to Scale

ENGINEERING, INC.

City of Perris Typical Roadway Cross Sections

Legend:

- (XX') Existing Lane Dimension
- XX' Proposed Lane Dimension
- ⇦ Direction of Travel
- 6-inch White Solid Line
- 6-inch Double Yellow Solid Line

Not to Scale

Patterson Avenue Proposed Conceptual Striping & Pavement Delineation

5030 Patterson Avenue Project, City of Perris, California / 0002-2022-01 SEP/2022

Exhibit J

ENGINEERING, INC.

Attachment A

City of Perris VMT Screening Form

City of Perris
www.cityofperris.org

CITY OF PERRIS
VMT SCOPING FORM FOR LAND USE PROJECTS

This Scoping Form acknowledges the City of Perris requirements for the evaluation of transportation impacts under CEQA. The analysis provided in this form should follow the City of Perris TIA Guidelines, dated May 12, 2020.

I. Project Description

Tract/Case No.: **5030 PATTERSON AVENUE - DPR-22-00013**

Project Name: **5030 PATTERSON AVENUE INDUSTRIAL/WAREHOUSE**

Project Location: **5030 PATTERSON AVENUE, PERRIS, CA**

Project Description: **94,453 SQUARE FEET OF WAREHOUSE USE**
(Please attach a copy of the project Site Plan)

Current GP Land Use: **COMMERCIAL / INDUSTRIAL**

Proposed GP Land Use:

Current Zoning: **COMMERCIAL / INDUSTRIAL**

Proposed Zoning: **COMMERCIAL / INDUSTRIAL**

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RHNA and RTP/SCS Strategies.

II. VMT Screening Criteria

	YES		NO		Attachments:
A. Is the Project 100% affordable housing?	YES		NO	X	
B. Is the Project within 1/2 mile of qualifying transit?	YES		NO	X	
C. Is the Project a local serving land use?	YES		NO	X	
D. Is the Project in a low VMT area?	YES		NO	X	
E. Are the Project's Net Daily Trips less than 500 ADT?	YES	X	NO		

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	15.05	VMT/Capita
Citywide Employment-Based VMT =	11.62	VMT/Employee

WRCOG VMT MAP

Project TAZ	VMT Rate for Project TAZ[1]	Type of Project	
TAZ 3754	VMT/Capita	Residential:	13.42
	VMT/Employee	Non-Residential:	12.19

[1] Base year (2012) projections from RIVTAM.

Trip Generation Evaluation:

Source of Trip Generation: **ITE 11TH EDITION 2021**

Project Trip Generation: **162** Average Daily Trips (ADT)

	YES		NO		
Internal Trip Credit:	YES		NO	X	% Trip Credit:
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:
Affordable Housing Credit:	YES		NO	X	% Trip Credit:
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:

Net Project Daily Trips: **162** Average Daily Trips (ADT) Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	YES	- -	NO	X

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

YES

B. Is mitigation required?

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

NO

C. Is additional VMT modeling required to evaluate Project impacts?

YES	- -	NO	X

If the Project requires a zone change and/or General Plan Amendment AND generates 2,500 or more net daily trips, then additional VMT modeling using RIVTAM/RIVCOM is required. If the project generates less than 2,500 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	- -	- -
B. Unmitigated Project TAZ VMT Rate:	- -	- -
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	- -	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		0.00%

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	- -	- -

F. Is the project pressumed to have a less than significant impact with mitigation?

NO MITIGATION IS REQUIRED

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	MAT ENGINEERING, INC.	Company:	CGU CAPITAL MANAGEMENT
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Email:	AT@MATENGINEERING.COM	Email:	dale@cgucapital.com
Date:	9/22/2022	Date:	9/22/2022

Approved by:

Perris Development Serivces Dept.	Date	Perris Public Works Dept.	Date