Appendix H-2

Focused Traffic Study Scope and Vehicle Miles Traveled [VMT] Screening for the Abbey Lane Industrial Development Victorville, California

David Evans and Associates

December 29, 2021

DAVID EVANS AND ASSOCIATES INC.

December 29, 2021 Job No. MOAI0000-0001

MEMORANDUM

To: Mr. Robert A. Martinez Architect, AIA, CASp, CASI
Martinez + Okamoto Architects, Inc.
15487 Seneca Road, Suite 203
Victorville, CA. 92392

From: James M. Daisa, PE
Senior Transportation Project Manager

RE: Focused Traffic Study Scope and Vehicle Miles Traveled (VMT) Screening for the Abbey Lane Industrial Development, Victorville, California

This memorandum presents key elements of the scope of work for the Focused Traffic Impact Analysis Report (TIA Report) evaluating the above referenced development project. This memorandum, a standard practice for the City of Victorville, presents our traffic study assumptions and methodologies to the City of Victorville for their review and approval. In particular, we estimate the proposed project's trip generation and distribute the trips to the project's site access points and proposed study intersections. This is key information the City needs to review and approve.

In addition to establishing the scope of the focused traffic study, this memorandum includes a screening assessment of the project to determine if a VMT analysis for CEQA clearance of the project is required. The screening assessment is based on Victorville's adopted criteria for exempting development projects from having to conduct a VMT analysis.

A. Project Description

The project site is located on the southwest corner of the intersection of Stoddard Wells Road and Abbey Lane in the City of Victorville, California, as illustrated in **Exhibit A**.

The proposed project consists of an 807,000 square foot industrial building with loading docks lining the eat and west sides of the building. The applicant has defined the use of the building as a distribution / fulfillment Center. Based on this definition, for purposes of estimating the traffic generated by the project, the most applicable land use category included in the Institute of Transportation Engineers (ITE) database is "High-Cube Fulfillment Center Warehouse".

The proposed project is bounded to the north by Abbey Lane and an existing recycling, to the south by vacant and undeveloped properties and a motel 6, to the east by Stoddard Wells Rd and vacant/undeveloped properties and hotels, and to the west by vacant/undeveloped properties. **Exhibit B** illustrates the proposed site plan.

Access to the site is proposed from two driveways on Stoddard Wells Road, one of which may be dedicated to ingress and egress of trucks, and two driveways on Abbey Lane. Note that there are two separate properties located west of Stoddard Wells Road and within the project's overall property line envelope that are not a part of the project and identified as such on the site plan in **Exhibit B**. The properties have single or multiple driveway access to Stoddard Wells Road that will not be considered in the focused traffic study.

B. Project Trip Generation

Table A summarizes the estimated trip generation of the proposed project for an average weekday, weekday AM (7-9 AM) and PM (4-6 PM) peak hours. The source of the rates (trips / independent variable) used to estimate trips is the Institute of Transportation Engineers (ITE) Trip Generation manual, 11th Edition. The rates selected for the proposed land use is a **High-Cube Fulfillment Center Warehouse Building** (ITE Land Use Category 155) subcategory Sort.

As noted in the ITE Trip Generation manual, 11th Edition, a high-cube warehouse (HCW) may contain a mezzanine. In a HCW setting, a mezzanine is a free-standing, semi-permanent structure that is commonly supported by structural steel columns and that is lined with racks or shelves. The gross floor area (GFA) utilized for the proposed project includes the floor area of the mezzanine.

The source of the mode share split between passenger cars and trucks is the Fontana Truck Trip Generation Study[1]. The mode share split is provided for Warehouse Uses (ITE Land Use Category 150).

The Passenger Car Equivalent (PCE) factors are from the City of Hesperia's (a neighboring City to Victorville) Traffic Impact Analysis Report Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment dated July 2020. The Passenger Car Equivalents (PCE) factors are provided by vehicle type. The conversion of trucks to PCEs is required for the calculation of intersection level of service.

Table A: Project Trip Generation

Use	Size/ Quantity	Daily	AM			PM		
High-Cube Fulfillment Center Warehouse - Sort Land Use Category (ITE 155)								
Per 1,000 Sq. Ft. GLA	806,792	6.44	0.70	0.17	0.87	0.47	0.73	1.20
Trips		5,196	569	133	702	378	591	969
	Mode Share	**Total Project Trip Generation by Vehicle Type**						
Passenger Cars (Percent of Total)	79.57%	4,135	453	106	559	300	470	770
2-Axle Trucks (Percent of Total)	3.46%	180	20	5	25	13	21	34
3-Axle Trucks (Percent of Total)	4.64%	242	27	6	33	18	27	45
4-Axle Trucks (Percent of Total)	12.33%	641	70	17	87	47	73	120
Total		5,198	570	134	704	378	591	969
	PCE Factor	**Total Project Trip Generation in Passenger Car Equivalents (PCE)**						
Passenger Cars)	1	4,135	453	106	559	300	470	770
2-Axle Trucks	1.5	270	30	8	38	20	32	52
3-Axle Trucks (Percent of Total)	2	484	54	12	66	36	54	90
4-Axle Trucks (Percent of Total)	3	1,923	210	51	261	141	219	360
Total		**6,812**	747	177	**924**	497	775	**1,272**

Notes:
KSF = Thousands of Square Feet.
AM / PM Peak Hour of Adjacent Street Traffic = Trip generation coinciding with the highest hourly volumes of traffic on the adjacent streets during the AM (7:00 AM and 9:00 AM) and PM (4:00 PM and 6:00 PM) commuter peak periods.
Source of trip generation rates: Institute of Transportation Engineers (ITE) Trip Generation (11th Edition). Average rates for land use category 155 (High-Cube Fulfillment Center Warehouse - Sort).
Source of passenger car / truck mode share (percentage of total): Fontana Truck Trip Generation Study for Heavy Warehouse Uses (August 2003).
Passenger Car Equivalents (PCE) factors: Industry standard values utilized in neighboring jurisdictions

Source: "Trip Generation Manual, Institute of Transportation Engineers", 11th Edition

[1] Fontana Truck Trip Generation Study. City of Fontana, County of San Bernardino, and the State of California. August 2003. This study evaluates vehicle trip generation characteristics of several land use categories that typically generate significant volumes of truck traffic. The study collected data at numerous industrial facilities including mix of vehicles by axle. The data from this study has been integrated into ITE's Trip Generation manual.

As presented in **Table A**, the proposed project is estimated to generate 6,812 PCE daily trips, 924 PCE AM peak hour trips, and 1,272 PCE PM peak hour trips during the adjacent street peak hours.

C. Project Trip Distribution and Assignment

To address the impacts of the estimated project traffic, the trips were distributed by direction towards` major commute routes and concentrations of residential and commercial / employment centers. Once the distribution pattern was established, project trips were assigned to the streets that serve the project.

The distribution of the auto project trips is illustrated in **Exhibit C1**. The distribution of the truck project trips is illustrated in **Exhibit C2**. The assignment of auto project trips to study intersections is illustrated in **Exhibit D1**. The assignment of truck project trips to study intersections is illustrated in **Exhibit D2**. The total project trip assignment to study intersections is illustrated in **Exhibit E.**

D. Study Intersections

Based on the location of the project with access points on Stoddard Wells Road and Abbey Lane, the proposed study intersections include one existing intersection and one key future driveway as listed below:

1. Stoddard Wells Road at Abbey Lane
2. Stoddard Wells Rd at Driveway "A" (future intersection)

The intersection of Stoddard Wells Road at Abbey Lane is a side-street-stop-controlled intersection, with Abbey Lane being stop-controlled.

<u>Site Access</u>

Access to the site is proposed with full access entrance at Driveway "A" on Stoddard Wells Road located about 950-feet south of Abbey Lane (measured from centerline to centerline). Two full access driveways are proposed on Abbey Lane.

The auto traffic will primarily use Abbey Lane for access to the project site. The distribution of the auto project trips is illustrated in **Exhibit C1**.

The Driveway "A" on Stoddard Wells Road provides truck queuing area and is intended for ingress and egress. The truck traffic will exclusively use Driveway "A" on Stoddard Wells. The distribution of the truck project trips is illustrated in **Exhibit C2**.

E. Level of Service Methodology

Level of service will be calculated using the Highway Capacity Manual (HCM6) methodologies for signalized and non-signalized intersections. All study intersections will be analyzed to identify deficiencies in the City's Level of Service (LOS) policy.

The capacity analysis will reflect trucks as a percentage of the total traffic volumes.

F. Traffic Study Scenarios

Scenarios analyzed in this study are consistent with San Bernardino County Congestion Management Program (CMP) requirements and include:

1. Existing Conditions (AM (7-9 AM) and PM (4-6 PM) peak)
2. Existing plus Project Conditions
    a. Existing + Project Traffic
3. Background Conditions (Year 2023)
    a. Existing + Ambient Growth (assuming a growth rate of 3.5% per year)
4. Project Conditions (Year 2023)
    a. Existing + Ambient Growth + Project Traffic
5. Future Horizon Year 2033 without project
    a. Background + Ambient Growth (assuming a growth rate of 3.5% per year)
6. Future plus Project (Horizon Year 2033)
    a. Background + Ambient Growth + Project Traffic

G. Vehicle Miles Traveled (VMT) Screening

The following is a screening assessment of the project based on criteria in the City of Victorville's Vehicle Miles Traveled (VMT) Analysis Guidelines adopted by the City in June of 2020 in conformance with SB 743.

Project Screening from Conducting VMT Analyses

Victorville uses screening criteria to determine if a development project is required to conduct a VMT analysis. If a project satisfies the criteria described below it is considered to have a less than significant impact on VMT and does not require an analysis.

Victorville has two criteria for screening projects from requiring a VMT analysis. The first criterion is based on the project's net daily increase in vehicle trips—if the project's net daily traffic generation is equal to or less than the City's threshold of 1,285 trips per day, it is exempt from a VMT analysis.

The second criterion is comprised of a list of specific land uses types and a maximum size threshold in terms of dwelling units for residential projects and floor area for non-residential projects. The listed types of land uses are deemed too small to cause a significant increase in VMT or they are considered "locally-serving" types of land uses that reduce VMT by providing nearby opportunities for employment, shopping, and services. Proposed projects matching the "project type" and falling within the size thresholds are exempt from a VMT analysis.

1. Screening for Net Increase in Daily Vehicle Trips

As shown in **Table A**, the project's net increase in daily trips is 6,812 PCE daily trips which exceeds the threshold of 1,285 daily trips in the City's guidelines. Based on this criterion, the project is not screened from requiring a VMT analysis.

2. Project Type Screening

According to the City of Victorville's VMT guidelines, the following types of land uses or development with the specified maximum size are exempt from having to conduct a VMT analysis:

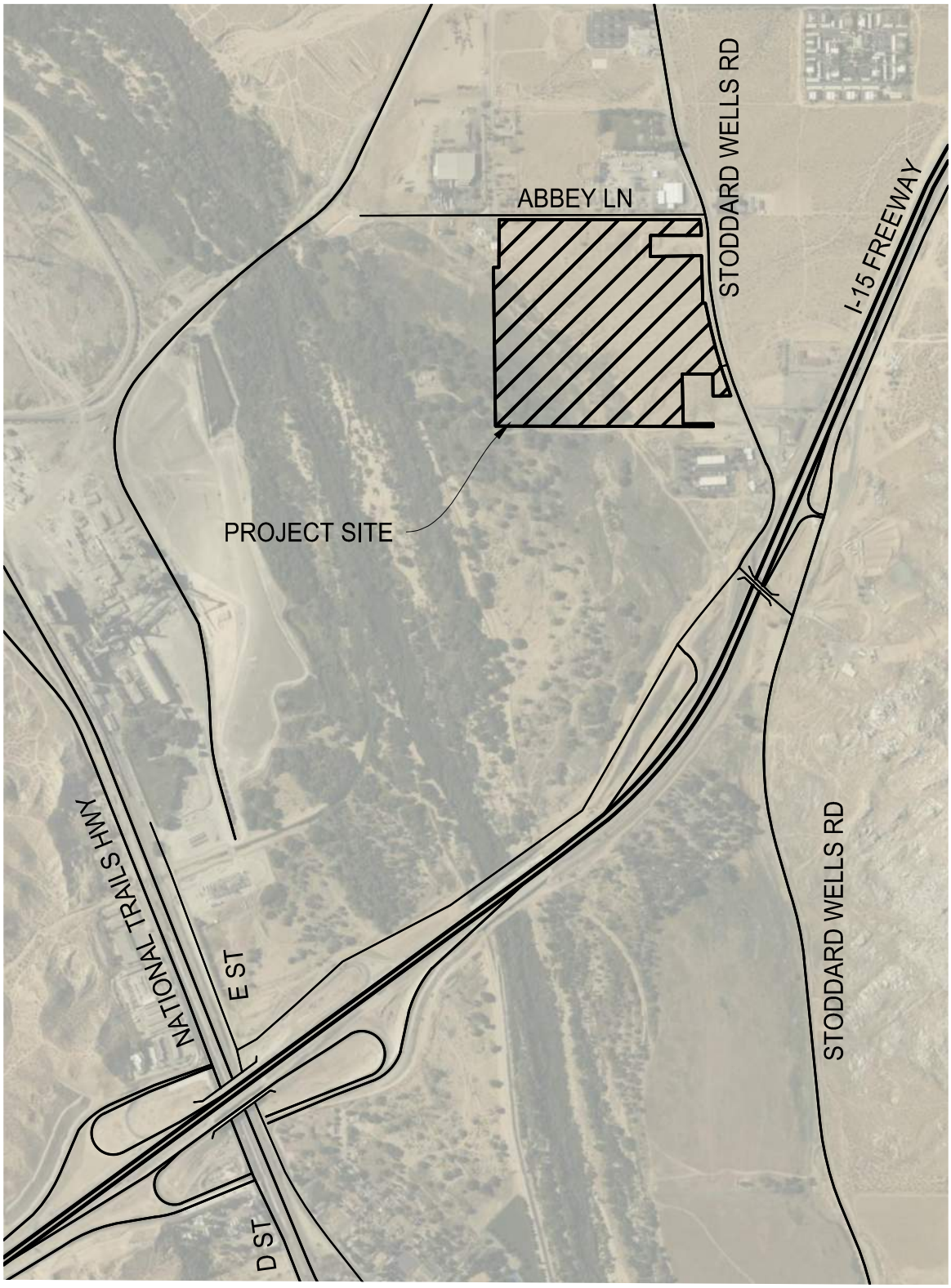
- Single Family or Multifamily Residential – 136 dwelling units or less
- Office — 227,000 square feet or less
- Retail — 122,000 square feet or less
- **Warehousing — 829,000 square feet or less**
- Light Industrial — 296,000 square feet or less
- K-12 Public School
- Daycare/Childcare/Pre-K
- Affordable Housing
- Student Housing
- Community Institutions, Social Services and Public Buildings

The proposed project is comprised of **High-Cube Fulfillment Center Warehouse** building square footage of approximately 807,000 (includes office mezzanine floor area) is below the City's warehousing size threshold of 829,000 square feet of floor area. Based on this criterion, the project is screened from being required to conduct a VMT analysis.

If you have any questions or comments, please feel free to contact us.

Attachments

1. Exhibit A – Vicinity Map
2. Exhibit B – Site Plan
3. Exhibit C1 – Auto Project Trip Distribution
4. Exhibit C2 – Truck Project Trip Distribution
5. Exhibit D1 – Auto Project Trips
6. Exhibit D2 – Truck PCE Project Trips
7. Exhibit E – Total PCE Project Trips



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NOT TO SCALE

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EXHIBIT A: VICINITY MAP
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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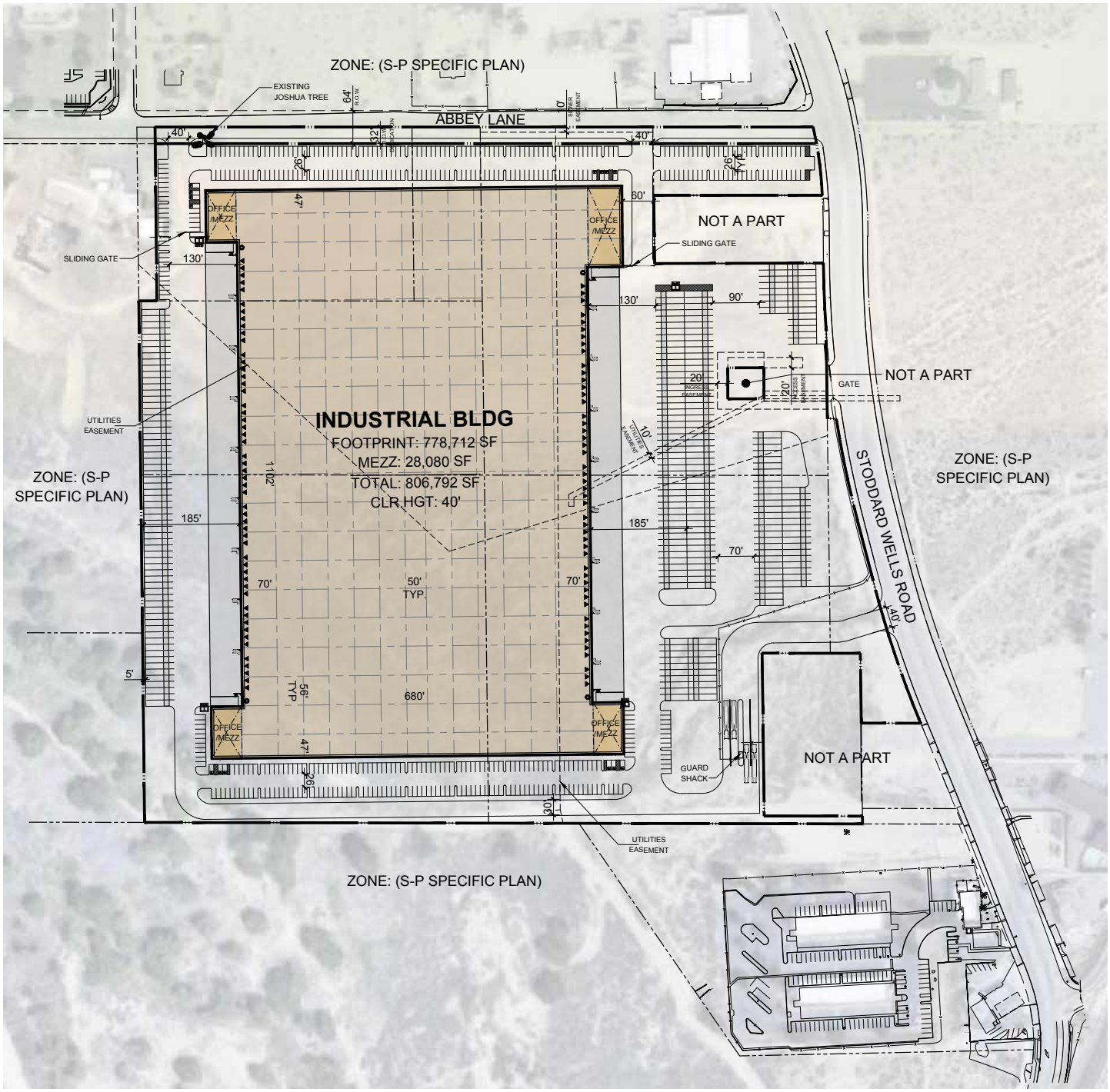

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EXHIBIT B: SITE PLAN
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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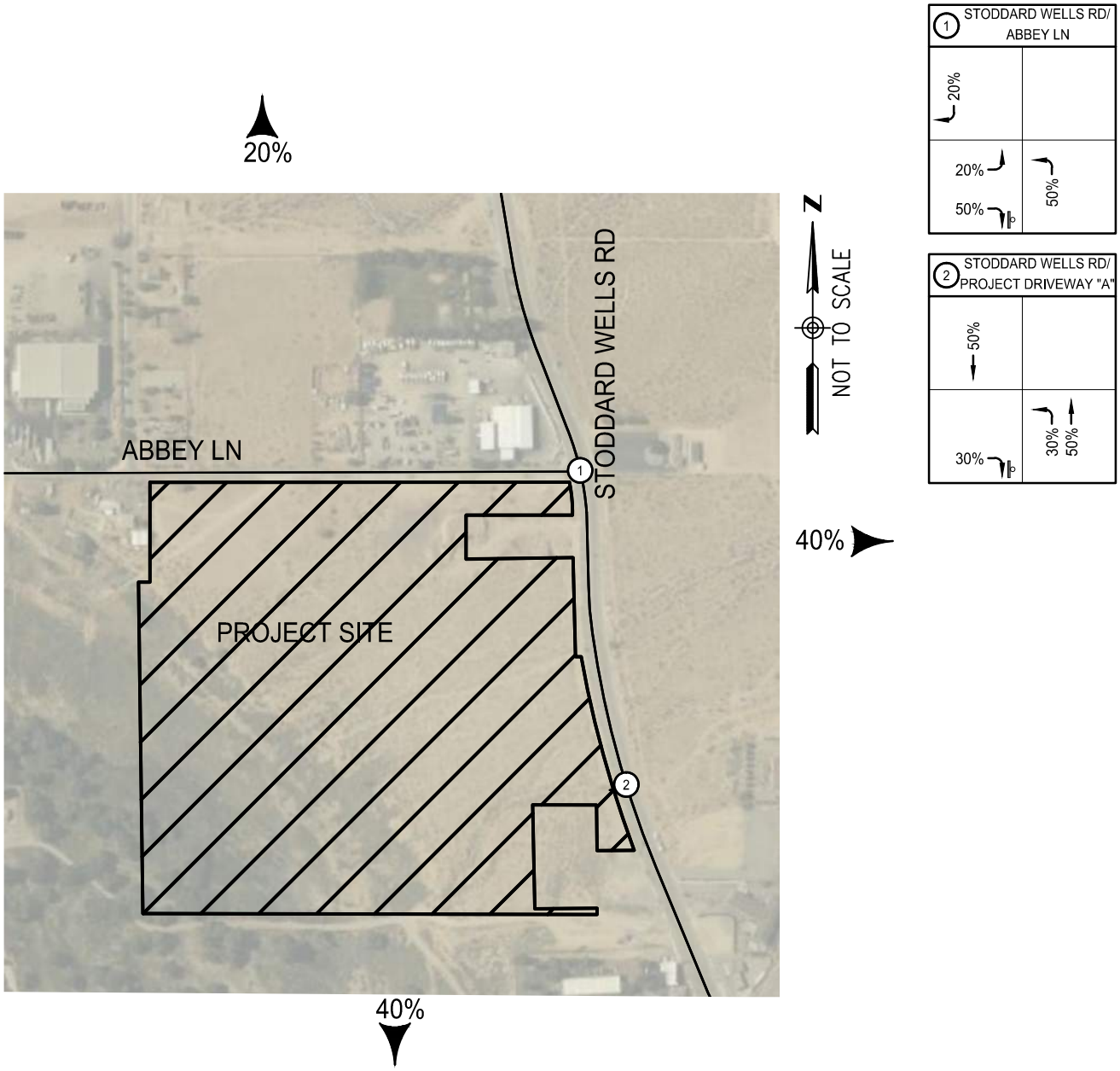

LEGEND

XX% - GENERAL PROJECT TRIP DISTRIBUTION

XX% - SPECIFIC PROJECT TRIP PERCENTAGE

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED APPROACH

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EXHIBIT C1: AUTO PROJECT TRIP DISTRIBUTION
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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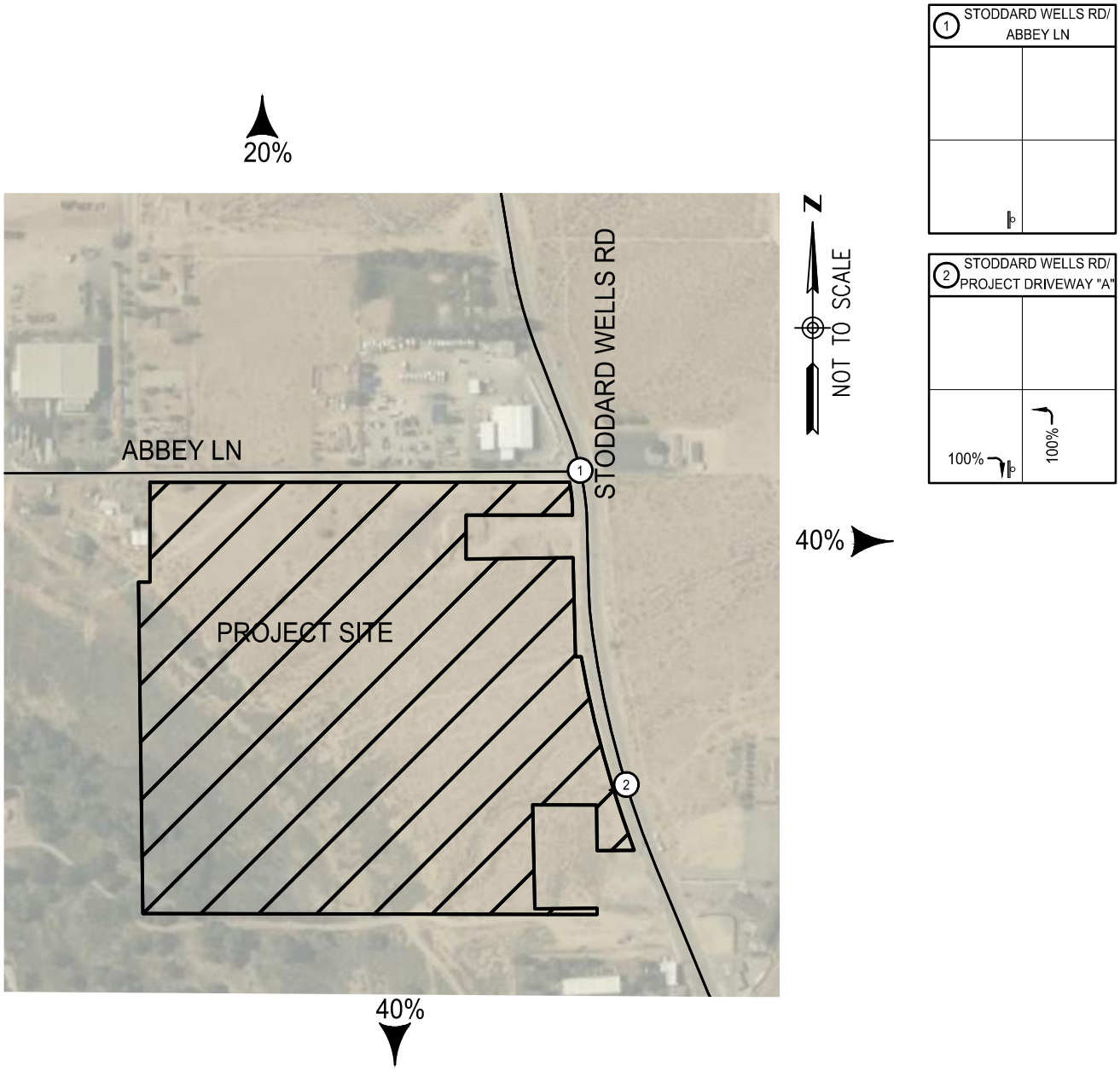

LEGEND

XX% - GENERAL PROJECT TRIP DISTRIBUTION

XX% - SPECIFIC PROJECT TRIP PERCENTAGE

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED APPROACH

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT C2: TRUCK PROJECT TRIP DISTRIBUTION
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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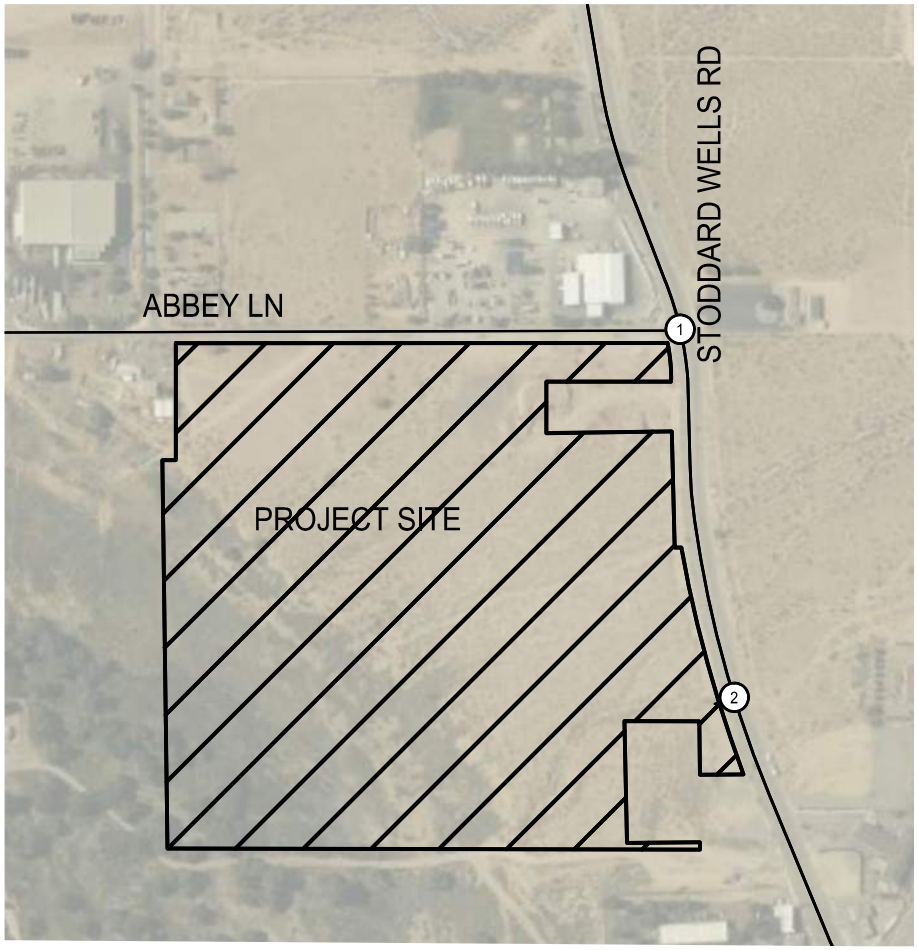

1 STODDARD WELLS RD/ ABBEY LN	
91/61	
22/94 53/235	227/151

2 STODDARD WELLS RD/ PROJECT DRIVEWAY "A"	
53/235	
32/141	136/91 227/151

AUTO PROJECT TRIPS

AM PEAK HOUR - 453 IN / 106 OUT
PM PEAK HOUR - 301 IN / 470 OUT

LEGEND

XX/XX - AM/PM PROJECT TRIP
(#) - STUDY INTERSECTIONS
- STOP CONTROLLED APPROACH

DAVID EVANS AND ASSOCIATES INC.

EXHIBIT D1: AUTO PROJECT TRIPS
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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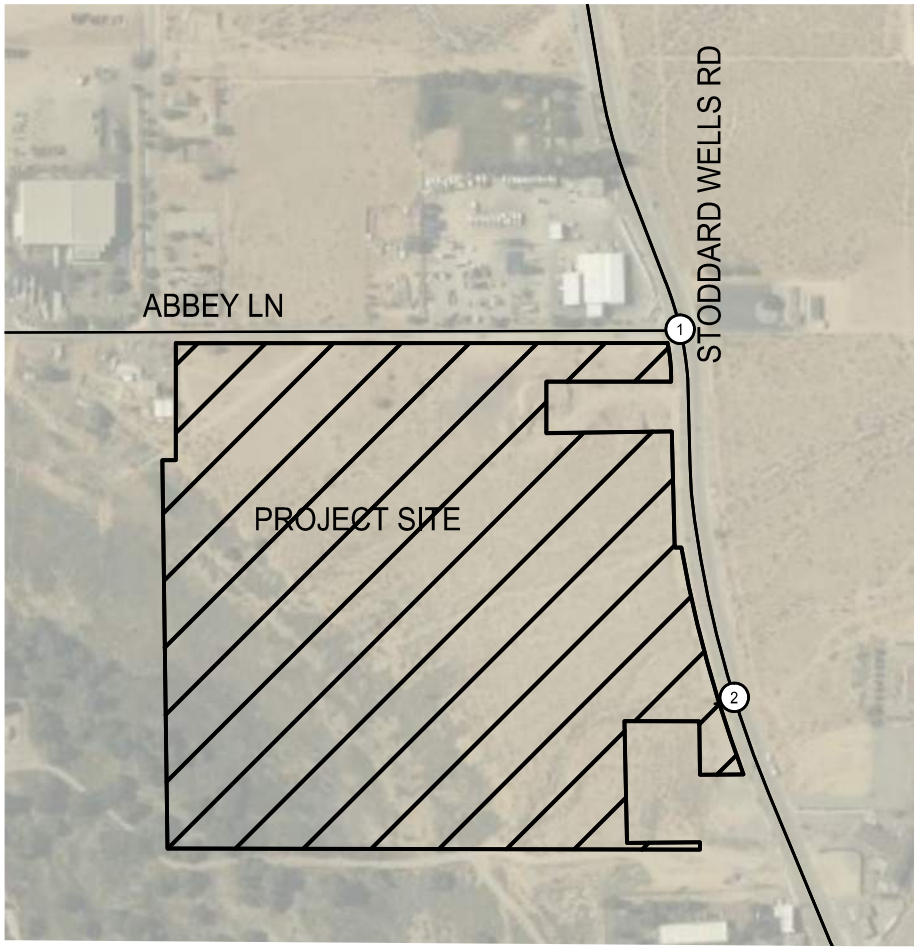

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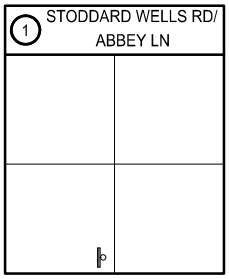
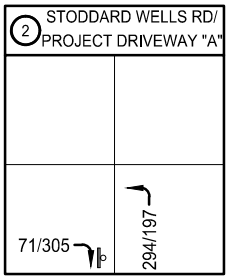
NOT TO SCALE





TRUCK PROJECT TRIPS

AM PEAK HOUR - 294 IN / 71OUT
PM PEAK HOUR - 197 IN / 305 OUT

LEGEND

XX/XX - AM/PM PCE PROJECT TRIP

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED APPROACH

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EXHIBIT D2: TRUCK PROJECT TRIPS
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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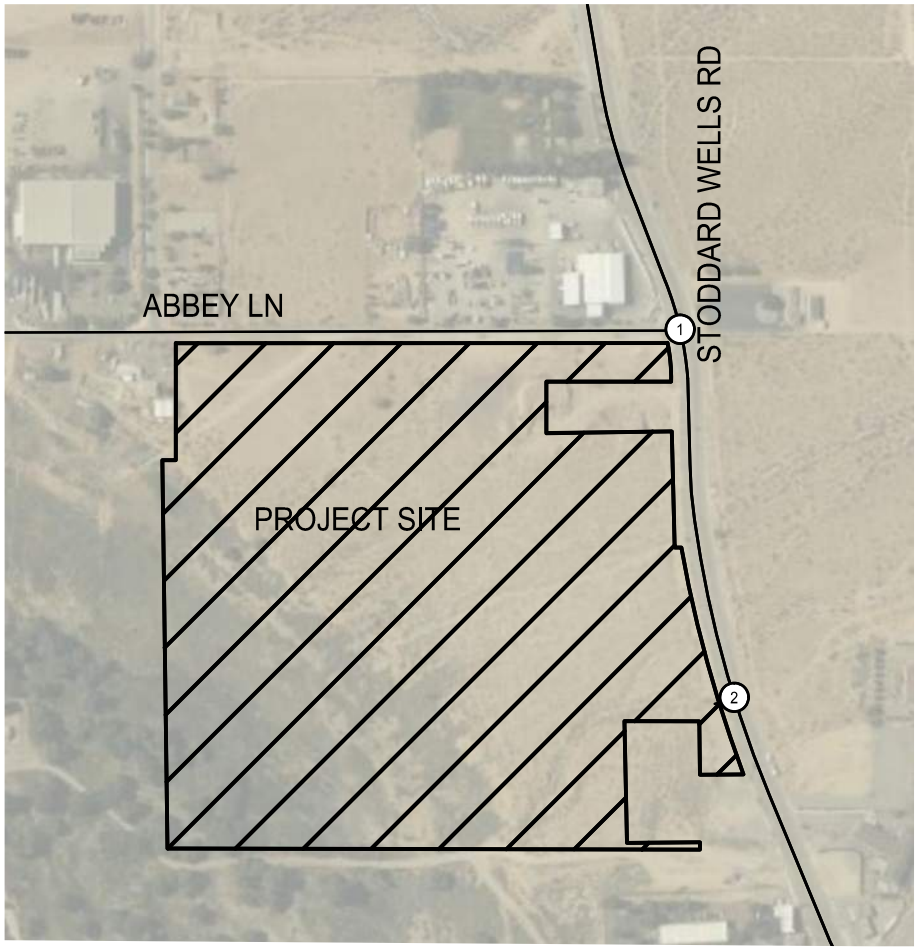

1 STODDARD WELLS RD/ ABBEY LN	
91/61	
22/94 53/235	227/151

2 STODDARD WELLS RD/ PROJECT DRIVEWAY "A"	
53/235	
103/446	430/288 227/151

TOTAL PCE PROJECT TRIPS

AM PEAK HOUR - 747 IN / 177 OUT
PM PEAK HOUR - 498 IN / 775 OUT

LEGEND

XX/XX - AM/PM PCE PROJECT TRIP

(#) - STUDY INTERSECTIONS

- STOP CONTROLLED APPROACH

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EXHIBIT E: TOTAL PCE PROJECT TRIPS
ABBEY LANE INDUSTRIAL DEVELOPMENT
VICTORVILLE, CALIFORNIA

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