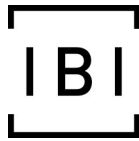


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**APPENDIX G**

**TRAFFIC IMPACT ASSESSMENT MEMORANDUM**

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## MEMORANDUM

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Date: October 27, 2023 Project No: 136304  
To: Hina Gupta, UltraSystems  
From: Mike Arizabal, IBI Group  
Project: Penske Leasing Service Facility  
Subject: Transportation Impact Analysis for Penske Truck Leasing and Service Facility

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This technical memorandum presents the Trip Generation/Site Access Analysis and Vehicle Miles Traveled (VMT) Assessment in support of the environmental documentation for the proposed Penske Truck Leasing project in Moreno Valley, California (21839 Alessandro Boulevard, Buildings 1 and 2). The project is located at the southeast corner of the Interstate 215 (I-215) Frontage Road and Alessandro Boulevard and consists of approximately 6,143 square feet (sf) of truck sales and rental office and 19,313 sf of service, washing, and fueling areas (not open to the general public). This memorandum was prepared in accordance with the recently adopted City of Moreno Valley Transportation Engineering Division Transportation Impact Analysis (TIA) Preparation Guide for VMT and LOS Assessment (June 2020) for development projects and includes the following:

- Level of Service Screening
- Vehicle Miles Traveled Screening
- Scoping Agreement
- Sight Access, Safety, and Parking Analysis

### LEVEL OF SERVICE SCREENING

Certain projects, because of their size, nature, or location, are exempt from the requirements of preparing a TIA. Projects that generate less than 100 peak hour trips are typically exempt from preparing the LOS portion of the TIA. Since trip generation rates for Truck Leasing Centers are not published as part of the Institute of Transportation Engineers (ITE) Trip Generation Handbook (11th Edition, 2021), IBI developed daily, AM peak hour, and PM peak hour trip generation estimates using the industry-accepted Truck Trip Generation Study conducted by the City of Fontana (August 2003).

The methodology of the Truck Trip Generation Study is structured to follow procedures of the ITE Trip Generation Manual. This study contributes to the relatively limited information provided by the ITE Trip Generation Manual on truck internal land uses by addressing several land uses that are not covered by this manual and by presenting vehicle trip generation rates with a break down by axles. The study is based solely on locally collected data are most applicable to local conditions particularly in the Inland Empire.

The category used, Truck Sales and Leasing, included data from facilities located in Fontana or adjacent areas in unincorporated San Bernardino County, Ontario, and Rancho Cucamonga. These facilities were primarily for the sale and leasing of new and used heavy duty commercial vehicles and were typically located along major arterials in either commercial or industrial areas. The facilities surveyed included maintenance services, part sales, and used truck sales.

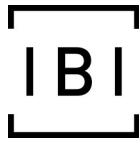


Table 1 shows the resulting trip generation for the proposed Penske Leasing Center.

**Table 1: Proposed Trip Generation**

Trip Rate <sup>1</sup>	Unit	ADT	A.M. Peak Hour			P.M. Peak Hour		
			In	Out	Total	In	Out	Total
Truck Sales and Leasing	TSF	5.68	0.90	0.47	1.37	0.61	0.66	1.26
<b>Project Trip Generation</b>	<b>Size</b>							
Penske Leasing Center	25,456	145	23	12	35	15	17	32

<sup>1</sup>Trip rates referenced from City of Fontana Truck Trip Generation Study pages 59-61(2003).

As shown in Table 1, the proposed project is estimated to generate 145 daily trips with 35 trips occurring during the AM peak hour (23 in/12out) and 32 trips occurring during the PM peak hour (15 in/17out). It should

Based on data collected as part of the City of Fontana Truck Trip Generation Study (pg. 64), the vehicle mix for land uses similar to the proposed Penske Truck Leasing Center is as follows:

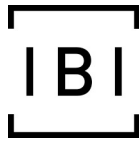
- Passenger Cars = 72.7%
- 2-Axle Trucks = 11.7%
- 3-Axle Trucks = 9.0%
- 4+-Axle Trucks = 6.0%

According to the City’s TIA Preparation Guide, all trips should be converted to Passenger Car Equivalents (PCEs) for projects that are anticipated to generate significant truck traffic. The PCE conversion factors are consistent with the Highway Capacity Manual (HCM) and are as follows:

- 1-Axle = 1.0 PCE
- 2-Axle = 1.5 PCE
- 3-Axle = 2.0 PCE
- 4+-Axle = 3.0 PCE

Applying these PCE factors to the vehicle mix results in a PCE trip generation of 182 daily trips, 44 AM peak hour trips, and 40 PM peak hour trips. **The resulting peak hour trip generation estimates are under the 100 peak hour trip threshold and therefore the project is considered exempt from preparing the LOS portion of the TIA.**

Although the proposed project is anticipated to generate less 100 peak hour trips, the City reserves the right to require the applicant to prepare a focused traffic analysis for truck intensive uses, including safety analysis, access/operational analysis, and nearby intersection LOS analysis – all of which can be provided if requested.



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Penske TIA – Page 3

## VEHICLE MILES TRAVELED SCREENING

The updated California Environmental Quality Act (CEQA) Guidelines certified and adopted by the California Natural Resources Agency in December 2018 have been in effect since July 2020 specify VMT as a metric to evaluate project impacts. As such, this analysis utilized both the State of California Office of Planning and Research (OPR) and City of Moreno Valley Traffic Impact Analysis Preparation Guide to screen whether further analysis is required. **Per the trip generation estimates in Table 1, the project is anticipated to generate approximately 182 PCE trips, which is lower than the 400-trip threshold for a VMT analysis.**

## TRIP GENERATION AND SITE ACCESS LETTER

The initial Scoping Agreement is provided in Appendix A. In the event the City requires additional analysis, IBI Group will submit an expanded Scoping Agreement to the Transportation Engineering Division for review and comment. The Trip Generation and Site Access Letter will include the following components:

- Trip Generation
- Trip Distribution
- Detailed Site Plan
- Traffic Counts

For purposes of this technical memorandum, the traffic analysis focused on site access, safety, and parking. Based on the City's TIA guidelines, an LOS analysis is not required.

## SITE ACCESS ANALYSIS

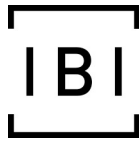
Consistent with City guidelines, this section reviews the project site plan to evaluate the adequacy of project driveways, internal roadways, and on-site circulation. The project site plan is shown in Figure 1. The site plan provides three (3) access driveways:

- Driveway 1: Full-Access Commercial Driveway on I-215 Frontage Road south of exit-only driveway
- Driveway 2: Right-Turn Exit Only Commercial Driveway on I-215 Frontage Road south of Alessandro Boulevard (existing landscaped and raised median prohibits left-turn ingress/egress).
- Driveway 3: Full-Access Driveway on Alessandro Boulevard east of I-215 Frontage Road

A queuing analysis were provided at each of the three (3) proposed project driveways. Exit approaches were assumed to have one lane, unless specified otherwise. No dedicated left-turn lanes were assumed into any of the project driveways, aside from the existing southbound left-turn lane at the full access driveway on the I-215 Frontage Road.

Any gated entrances should remain open during operating hours to minimize any queuing within the site and onto the adjacent streets.





Through movements at each project driveway were developed based on traffic counts collected on the I-215 Frontage Road and Alessandro Boulevard on November 9, 2021. Turning movements were added to each project driveway based on the trip generation from Table 1. Trips were assigned to each driveway as follows:

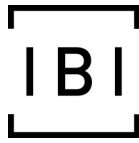
- Commercial Driveway 1: 90% inbound/20% outbound
- Commercial Driveway 2: 70% outbound
- Driveway 3: 10% inbound/10% outbound

To fully assess driveway performances, queue lengths for movements at the project ingress and egress locations were considered. HCS 10 software was used to evaluate 95th percentile queues. The purpose of the queuing analysis was to determine the appropriate storage length at each of the driveways. Table 2 below summarizes the results of the Existing + Project driveway queuing analysis.

**Table 2: Project Driveway Queuing Analysis**

ID	Peak Hour	Movement	Queue Length (ft.)	Lane Capacity (ft.)	Capacity Exceeded?
1	AM	SB – L	0.3	120	N
	PM	SB - L	0.2	120	N
	AM	WB - LR	0.1	90	N
	PM	WB – LR	0.1	90	N
2	AM	WB – LR	0.4	90	N
	PM	WB – LR	0.5	90	N
3	AM	WB - L	0.7	120	N
	PM	NB - L	0.1	30	N

Based on the queuing analysis, the anticipated queue lengths developed by vehicles entering and exiting the driveways would not exceed their respective lane queuing capacity.



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## **SAFETY ANALYSIS**

Internal circulation for trucks through the site would be conducted via a counterclockwise operation entering through Driveway 1 and exiting through Driveway 2. Only passenger vehicles could exit via Driveway 1 and enter/exit via Driveway 3. Based on a turning template analysis for 53' trailers, the turning radii for Driveways 1 (trucks entering) and 2 (trucks exiting) are adequate for truck turning movements. Sight distance is adequate for all project driveways as all egress lanes have clear sight lines with no obstructions.

- Commercial Driveway 1: Truck entrance and passenger car exit
- Commercial Driveway 2: Truck exit only, no passenger car access
- Driveway 3: No truck access, full-access for passenger cars (enter and exit)

Adequate signage will be installed to indicate the recommended circulation patterns at the driveways and within the site.

## **PARKING ANALYSIS**

Per the City of Moreno Valley Municipal Code (Table 9.11.040B-12 Off-Street Parking Requirements), the retail sales and leasing component of the project would require 1 parking space per 225 sf of gross floor area. At 6,143 sf of retail, the project would be required to provide a minimum of 28 spaces for customers and employees.

The project would provide a total of 267 parking spaces consisting of 50 car spaces (20 customer spaces and 30 employee spaces); 3 Electric Vehicle (EV) car parking spaces (for future use); 157 truck spaces (12 x 30 feet); 20 EV truck Spaces (12X30 feet); and 32 trailer spaces (12 x 60 feet). Approximately two-thirds of the parking spaces would be along the site perimeter. The provision of 50 spaces for the retail component exceeds the minimum required by code.

## **CONCLUSION**

Based on the results of the Trip Generation/VMT screening, site access analysis, safety evaluation, and parking analysis, the proposed project can be implemented without triggering any significant impacts based on City guidelines.



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Penske TIA – Page 7

## **APPENDIX A: SCOPING AGREEMENT**



**EXHIBIT A**

## Project Scoping Form

This scoping form shall be submitted to the Lead Agency to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

### Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Penske Leasing Service Facility
Project Address:	Highway 215 Frontage Road, Moreno Valley, CA
Project Opening Year:	2023
Project Description:	Proposed truck sales, rental, service, and fueling facility on the southeast corner of I-215 Frontage Road and Alessandro Blvd

	<b>Consultant:</b>	<b>Developer:</b>
Name:	IBI Group	
Address:	18401 Von Karman Ave, Ste 300, Irvine, CA 92612	
Telephone:	949-833-5588	
Email:	mike.arizabal@ibigroup.com	

### Trip Generation Information:

Trip Generation Data Source: No ITE 11th Edition rate available; City of Fontana Truck Trip Generation Study Rates used for Truck Sales and Leasing. Facilities are primarily for the sale and leasing of commercial vehicles. Typically, the facilities are located along major arterials in industrial areas and include maintenance, parts, and used truck sales.

Current General Plan Land Use:  
Industrial/Business Park

Proposed General Plan Land Use:  
Industrial/Business Park

Current Zoning:  
BP (Business Park)

Proposed Zoning:  
BP (Business Park)

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips				29 PCE	15 PCE	44 PCE
PM Trips				19 PCE	21 PCE	40 PCE

Trip Internalization:  Yes  No (\_\_\_\_\_% Trip Discount)

Pass-By Allowance:  Yes  No (\_\_\_\_\_% Trip Discount)

### Potential Screening Checks

Is your project screened from specific analyses (see Page 3 of the guidelines related to LOS assessment and Pages 22-23 for VMT screening criteria).

**Is the project screened from LOS assessment?**  Yes  No

LOS screening justification (see Page 3 of the guidelines): _____
<u>Project anticipated to generate less than 100 PCE trips during either peak hour.</u>
<u>Vehicle mix used: 72.7 Passenger Vehicles</u>
<u>11.7 2-axle</u>
<u>9.0 3-axle</u>
<u>6.6 4+axle</u>

**Is the project screened from VMT assessment?**       Yes       No

VMT screening justification (see Pages 22-23 of the guidelines): _____ Project anticipated to generate 182 PCE daily trips, which less than the 400 daily vehicle trip threshold per the TIA Guidelines _____ _____ _____
--

### Level of Service Scoping

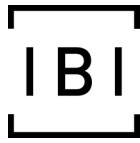
- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
%	%	%	%

**Link level of service and data collection:**

\_\_\_\_\_ will be required  
 will not be required

- Attach list of study intersections (and roadway segments if applicable)
- Attach site plan
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other \_\_\_\_\_
- Date of Traffic Counts 11/09/2021
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)



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Penske TIA – Page 11

## **APPENDIX B: DRIVEWAY LOS WORKSHEETS**

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Mike Arizabal			Intersection	Driveway 1/I-215 Frontage		
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley		
Date Performed	2022-02-21			Analysis Year	2021		
Analysis Time Period	AM Peak Hour						
Project Description <i>Penske TIA</i>							
East/West Street: <i>Driveway 1</i>				North/South Street: <i>I-215 Frontage Road</i>			
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		271	13	13	68		
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00	
Hourly Flow Rate, HFR (veh/h)	0	294	14	14	73	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	2	0	1	2	0	
Configuration		T	TR	L	T		
Upstream Signal		0			0		
Minor Street	Eastbound			Westbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				1		1	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	1.00	0.92	
Hourly Flow Rate, HFR (veh/h)	0	0	0	1	0	1	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Northbound	Southbound	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		L	L		R		
v (veh/h)		14	1		1		
C (m) (veh/h)		1264	606		897		
v/c		0.01	0.00		0.00		
95% queue length		0.03	0.00		0.00		
Control Delay (s/veh)		7.9	11.0		9.0		
LOS		A	B		A		
Approach Delay (s/veh)	--	--	10.0				
Approach LOS	--	--	A				

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Mike Arizabal			Intersection	Driveway 1/I-215 Frontage		
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley		
Date Performed	2022-02-21			Analysis Year	2021		
Analysis Time Period	PM Peak Hour						
Project Description <i>Penske TIA</i>							
East/West Street: <i>Driveway 1</i>				North/South Street: <i>I-215 Frontage Road</i>			
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		140	8	9	68		
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00	
Hourly Flow Rate, HFR (veh/h)	0	152	8	9	73	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	2	0	1	2	0	
Configuration		T	TR	L	T		
Upstream Signal		0			0		
Minor Street	Eastbound			Westbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				2		2	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	1.00	0.92	
Hourly Flow Rate, HFR (veh/h)	0	0	0	2	0	2	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Northbound	Southbound	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		L	L		R		
v (veh/h)		9	2		2		
C (m) (veh/h)		1432	760		986		
v/c		0.01	0.00		0.00		
95% queue length		0.02	0.01		0.01		
Control Delay (s/veh)		7.5	9.7		8.7		
LOS		A	A		A		
Approach Delay (s/veh)	--	--	9.2				
Approach LOS	--	--	A				

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Mike Arizabal			Intersection	Driveway 2/I-215 Frontage		
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley		
Date Performed	2022-02-21			Analysis Year	2021		
Analysis Time Period	AM Peak Hour						
Project Description <i>Penske TIA</i>							
East/West Street: <i>Driveway 2</i>				North/South Street: <i>I-215 Frontage Road</i>			
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		140					
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00	
Hourly Flow Rate, HFR (veh/h)	0	152	0	0	0	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	2	0	0	0	0	
Configuration		T					
Upstream Signal		0			0		
Minor Street	Eastbound			Westbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)						12	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	1.00	0.92	
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	0	13	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	1	
Configuration						R	
Delay, Queue Length, and Level of Service							
Approach	Northbound	Southbound	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration					R		
v (veh/h)					13		
C (m) (veh/h)					991		
v/c					0.01		
95% queue length					0.04		
Control Delay (s/veh)					8.7		
LOS					A		
Approach Delay (s/veh)	--	--	8.7				
Approach LOS	--	--	A				

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	Mike Arizabal			Intersection	Driveway 2/I-215 Frontage		
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley		
Date Performed	2022-02-21			Analysis Year	2021		
Analysis Time Period	PM Peak Hour						
Project Description <i>Penske TIA</i>							
East/West Street: <i>Driveway 2</i>				North/South Street: <i>I-215 Frontage Road</i>			
Intersection Orientation: <i>North-South</i>				Study Period (hrs): <i>0.25</i>			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		272					
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00	
Hourly Flow Rate, HFR (veh/h)	0	295	0	0	0	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	2	0	0	0	0	
Configuration		T					
Upstream Signal		0			0		
Minor Street	Eastbound			Westbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)						15	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	1.00	0.92	
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	0	16	
Percent Heavy Vehicles	0	0	0	0	0	0	
Percent Grade (%)		0			0		
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	0	0	1	
Configuration						R	
Delay, Queue Length, and Level of Service							
Approach	Northbound	Southbound	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration					R		
v (veh/h)					16		
C (m) (veh/h)					904		
v/c					0.02		
95% queue length					0.05		
Control Delay (s/veh)					9.1		
LOS					A		
Approach Delay (s/veh)	--	--	9.1				
Approach LOS	--	--	A				



TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Mike Arizabal			Intersection	Driveway 3/Alessandro			
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley			
Date Performed	2022-02-21			Analysis Year	2021			
Analysis Time Period	AM Peak Hour							
Project Description <i>Penske TIA</i>								
East/West Street: <i>Driveway 3</i>				North/South Street: <i>Alessandro</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)					672	3		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	730	3		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	0	0	0	0	2	0		
Configuration					T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)			1					
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00		
Hourly Flow Rate, HFR (veh/h)	0	0	1	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	1	0	0	0		
Configuration			R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (veh/h)					1			
C (m) (veh/h)					1091			
v/c					0.00			
95% queue length					0.00			
Control Delay (s/veh)					8.3			
LOS					A			
Approach Delay (s/veh)	--	--	8.3					
Approach LOS	--	--	A					

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	Mike Arizabal			Intersection	Driveway 3/Alessandro			
Agency/Co.	IBI Group			Jurisdiction	Moreno Valley			
Date Performed	2022-02-21			Analysis Year	2021			
Analysis Time Period	PM Peak Hour							
Project Description <i>Penske TIA</i>								
East/West Street: <i>Driveway 3</i>				North/South Street: <i>Alessandro</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)					1353	2		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	1470	2		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	0	0	0	0	2	0		
Configuration					T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)			2					
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00		
Hourly Flow Rate, HFR (veh/h)	0	0	2	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	1	0	0	0		
Configuration			R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (veh/h)					2			
C (m) (veh/h)					1091			
v/c					0.00			
95% queue length					0.01			
Control Delay (s/veh)					8.3			
LOS					A			
Approach Delay (s/veh)	--	--	8.3					
Approach LOS	--	--	A					