

# **TRAFFIC IMPACT ANALYSIS**

Prepared for

# **CITY OF MORENO VALLEY**

Prepared by



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SOUTHERN CALIFORNIA



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# TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION	6 6
TRANSPORTATION NETWORK	8
Roadway Network	8
Bicycle Network	8
Transit Network	8
Consistency With General Plan Circulation Element	9
ANALYSIS METHODOLOGY	9
Roadway Segment Analysis Methodology	9
City of Palmdale Performance Criteria	10
City of Palmdale Thresholds of Significance	12
PROPOSED PROJECT	12
Forecast Project Trip Generation	12
Trip Distribution of Proposed Project	15
Project Trip Assignment	15
EXISTING CONDITIONS ANALYSIS	15
Existing Conditions Peak Hour Traffic Volumes	16
Existing Conditions Roadway Segment LOS	16
FORECAST EXISTING WITH PROJECT CONDITIONS ANALYSIS	18
Forecast Existing With Project Conditions Traffic Volumes	18
Forecast Existing With Project Conditions Roadway Segment LOS	18
Forecast Existing With Project Conditions Mitigation Measures	20
Mitigated Forecast Existing With Project Conditions Roadway Segment LOS	21
FORECAST GENERAL PLAN BUILDOUT WITHOUT PROJECT CONDITIONS ANALYSIS Forecast General Plan Without Project Conditions Peak Hour Traffic Volumes Forecast General Plan Buildout Without Project Conditions Roadway Segment LOS	22 22 23
FORECAST GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS ANALYSIS	25
Forecast General Plan Buildout With Project Conditions Traffic Volumes	25
Forecast General Plan Buildout With Project Conditions Roadway Segment LOS	25
Forecast General Plan Buildout With Project Conditions Mitigation Measures	27
CONGESTION MANAGEMENT PROGRAM ANALYSIS	28

MITIGATION MEASURE IMPLEMENTATION	28
MITIGATION MEASURES	29
CONCLUSIONS	31

APPENDIX A TRIP DISTRIBUTION GRAPHICS BY NODE

# LIST OF TABLES

Table 1	V/C & LOS Ranges	10
Table 2	City of Moreno Valley Roadway Segment Classification and Capacity	10
Table 3	Study Roadway Segment Acceptable LOS Target	11
Table 4	ITE Trip Rates for Displaced & Proposed Project Site Uses	13
Table 5	Forecast Trip Generation of Proposed Project	14
Table 6	Existing Conditions Roadway Segment ADT & LOS	17
Table 7	Forecast Existing With Project Conditions Roadway Segment ADT & LOS	19
Table 8	Mitigated Forecast Existing With Project Conditions Roadway Segment	
	ADT & LOS	22
Table 9	Forecast General Plan Buildout Without Project Conditions Roadway	
	Segment ADT & LOS	24
Table 10	Forecast General Plan Buildout With Project Conditions Roadway	
	Segment ADT & LOS	26

# LIST OF EXHIBITS

All exhibits are provided at the end of the report, prior to the Appendices.

- Exhibit 1 Regional Project Location
- Exhibit 2 Project Location Map & Nodes
- Exhibit 3 Study Roadway Segment Locations
- Exhibit 4 Forecast ADT Trip Assignment of Proposed Project (Existing Circulation System)
- Exhibit 5 Forecast ADT Trip Assignment of Proposed Project (General Plan Buildout Circulation System)
- Exhibit 6 Existing ADT Volumes
- Exhibit 7 Existing Conditions Roadway Segment Geometry
- Exhibit 8 Forecast Existing With Project Conditions ADT Volumes
- Exhibit 9 Mitigated Forecast Existing With Project Conditions Roadway Segment Geometry
- Exhibit 10 Forecast General Plan Buildout Without Project Conditions ADT Volumes
- Exhibit 11 General Plan Buildout Conditions Roadway Segment Geometry
- Exhibit 12 Forecast General Plan Buildout With Project Conditions ADT Volumes

#### EXECUTIVE SUMMARY

This traffic analysis is prepared to evaluate traffic operations related to the Alessandro Boulevard Corridor Implementation Project, and the zoning change for Calculation 4 within the Housing Element. The proposed project is a City-initiated project to: 1) create the Mixed Use Overlay Districts to implement the Vision Plan for Alessandro Boulevard Corridor, and 2) increase the maximum permitted density to 30 dwelling units per acre in specified areas of the City. The proposed changes affect approximately 294 acres along or adjacent to Alessandro Boulevard.

At full implementation, the proposed project would include 7,288 multi-family dwelling units and 931,858 square feet of commercial uses. This represents a change in the following over existing uses:

- Decrease of 46 single-family dwelling units
- Decrease of 65,249 square feet of commercial uses
- Decrease of 31,786 square feet of commercial uses
- Increase of 7,160 multi-family dwelling units

The project is generally located at six nodes along Alessandro Boulevard, with one node (Calculation 4) located near the corner of Perris Boulevard/Iris Avenue.

When accounting for the proposed and displaced land uses, the proposed project is forecast to generate approximately 38,101 net new daily trips, which includes 3,424 net new a.m. peak hour trips and 3,718 net new p.m. peak hour trips.

The study roadway segments are operating at an acceptable LOS according to the City of Moreno Valley performance criteria with the exception of the following four study roadway segments:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

With the addition of project-generated trips, the following seven (7) roadway segments are forecast to operate at a deficient LOS according to the City of Moreno Valley performance criteria for forecast existing with project conditions:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Lasselle Street and Morrison Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;

- Lasselle Street north of Alessandro Boulevard;
- Nason Street north of Alessandro Boulevard;
- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

Assuming implementation of the roadway segment mitigation measures, the study roadway segments are forecast to operate at an acceptable LOS according to City of Moreno Valley performance criteria for mitigated forecast existing with project conditions.

The following three (3) roadway segments are forecast to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout without project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

With the addition of project-generated trips, the following three (3) roadway segments are forecast to continue to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout with project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

The three deficient roadway segments identified above were already identified as significantly unavoidable impacts in the General Plan EIR, and Statements of Overriding Consideration were adopted. The proposed project does not generate any new significant impacts beyond those already analyzed in the General Plan EIR, nor does the proposed project generate any impacts that exceed significance threshold criteria.

Since the City LOS standard is LOS C, or LOS D, and is higher than the designated CMP standards for Riverside County, the City LOS standards govern, and no CMP impact is forecast to occur.

Proportionate contribution to the following mitigation measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient study roadway segments for forecast existing with project conditions:

#### Mitigation Measure #1 Alessandro Boulevard between Kitching Street and Lasselle Street – Widen/restripe Alessandro Boulevard between Kitching Street and Lasselle Street from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major

Arterial in the City of Moreno General Plan Circulation Element.

- Mitigation Measure #2 Alessandro Boulevard between Lasselle Street and Morrison Street – Widen/restripe Alessandro Boulevard between Lasselle Street and Morrison Street from a two-lane divided roadway to a four -lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #3 Alessandro Boulevard between Oliver Street and Moreno Beach Drive – Widen/restripe Alessandro Boulevard between Oliver Street and Moreno Beach Drive from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #4 Lasselle Street north of Alessandro Boulevard Consistent with the City of Moreno Valley General Plan Circulation Element, widen/restripe Lasselle Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial.
- Mitigation Measure #5 Nason Street north of Alessandro Boulevard Widen/restripe Nason Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Modified Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #6 Moreno Beach Drive north of Alessandro Boulevard Widen/restripe Moreno Beach drive north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #7 Moreno Beach Drive south of Alessandro Boulevard Widen/restripe Moreno Beach drive south of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Proportionate contribution to the following mitigation measures are identified to ensure that the forecast traffic impacts at the deficient roadway segments for forecast General Plan Buildout with project conditions remain at or below the LOS in Table 10:

- Mitigation Measure #8 Implement Project-Specific Transportation Demand **Management Program –** As development occurs within the entire Traffic Impact Analysis study area, project applicants demonstrate, subject to the City's approval, shall implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Metrolink or other Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.
- Mitigation Measure #9 Arterial Segment Analysis - Conduct studies of specific arterial segments to determine if any additional improvements will be needed to maintain an acceptable LOS at General Plan Buildout. Generally, these segments will be studied as new developments are proposed in their vicinity. Measures will be identified that are consistent with the Circulation Element designation of these roadway segments, such as additional turn lanes at intersections, signal optimization by coordination and enhanced phasing, and travel demand management measures. The study of specified arterial segments will be required to identify measures to maintain an acceptable LOS at General Plan Buildout for at least one of the reasons discussed below:
  - (a) Segments will need improvement, but their ultimate volumes slightly exceed design capabilities.
  - (b) Segments will need improvements but require interjurisdictional coordination.
  - (c) Segments would require significant encroachment on existing adjacent development if built-out to their Circulation Element designations.

(Source: General Plan EIR, Mitigation Measure TRF-1)

Since implementation of the two mitigation measures listed above are expected to reduce project-related impacts, and since no new significant unavoidable impacts are identified, no additional mitigation measures are required.

#### INTRODUCTION

This traffic analysis is prepared to evaluate traffic operations related to the Alessandro Boulevard Corridor Implementation Project, and the zoning change for Calculation 4 within the Housing Element. The proposed project is a City-initiated project to: 1) create the Mixed Use Overlay Districts to implement the Vision Plan for Alessandro Boulevard Corridor, and 2) increase the maximum permitted density to 30 dwelling units per acre in specified areas of the City. The proposed changes affect approximately 294 acres along or adjacent to Alessandro Boulevard.

At full implementation, the proposed project would include 7,288 multi-family dwelling units and 931,858 square feet of commercial uses. This represents a change in the following over existing uses:

- Decrease of 46 single-family dwelling units
- Decrease of 65,249 square feet of commercial uses
- Decrease of 31,786 square feet of commercial uses
- Increase of 7,160 multi-family dwelling units

The project is generally located at six nodes along Alessandro Boulevard, with one node (Calculation 4) located near the corner of Perris Boulevard/Iris Avenue. Exhibit 1 shows the regional location of the project site. Exhibit 2 shows the project site location with the six nodes and the Housing Element Calculation 4 Area.

#### Study Area

This study evaluates operations at the following thirty-four (34) roadway segments:

- 1. Alessandro Boulevard between I-215 Frontage Road and Day Street;
- 2. Alessandro Boulevard between Day Street and Elsworth Street;
- 3. Alessandro Boulevard between Elsworth Street and Frederick Street;
- 4. Alessandro Boulevard between Frederick Street and Graham Street;
- 5. Alessandro Boulevard between Graham Street and Heacock Street;
- 6. Alessandro Boulevard between Heacock Street and Indian Street;
- 7. Alessandro Boulevard between Indian Street and Perris Street;
- 8. Alessandro Boulevard between Perris Street and Kitching Street;
- 9. Alessandro Boulevard between Kitching Street and Lasselle Street;

- 10. Alessandro Boulevard between Lasselle Street and Morrison Street;
- 11. Alessandro Boulevard between Morrison Street and Nason Street;
- 12. Alessandro Boulevard between Nason Street and Oliver Street;
- 13. Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- 14. Alessandro Boulevard between Moreno Beach Drive and Quincy Street;
- 15. Cactus Avenue west of Perris Street;
- 16. Cactus Avenue east of Perris Street;
- 17. Day Street north of Alessandro Boulevard;
- 18. Frederick Street north of Alessandro Boulevard;
- 19. Frederick Street south of Alessandro Boulevard;
- 20. Heacock Street north of Alessandro Boulevard;
- 21. Heacock Street south of Alessandro Boulevard;
- 22. Perris Street north of Alessandro Boulevard;
- 23. Perris Street south of Alessandro Boulevard;
- 24. Perris Street north of Cactus Avenue;
- 25. Perris Street south of Cactus Avenue;
- 26. Perris Street south of Iris Avenue;
- 27. Lasselle Street north of Alessandro Boulevard;
- 28. Lasselle Street south of Alessandro Boulevard;
- 29. Morrison Street north of Alessandro Boulevard;
- 30. Morrison Street south of Alessandro Boulevard (future);
- 31. Nason Street north of Alessandro Boulevard;
- 32. Nason Street south of Alessandro Boulevard;
- 33. Moreno Beach Drive north of Alessandro Boulevard; and
- 34. Moreno Beach Drive south of Alessandro Boulevard.

Exhibit 3 shows the locations of the study roadway segments, which are analyzed for the following study scenarios:

- Existing Conditions;
- Forecast Existing With Project Conditions;
- Forecast General Plan Buildout Without Project Conditions; and
- Forecast General Plan Buildout With Project Conditions.

#### TRANSPORTATION NETWORK

As noted in the City of Moreno Valley General Plan Circulation Element (GPCE), the City of Moreno Valley possesses an extensive transportation network that consists of state highways, arterials and local streets, public transit, and nearby rail. The following sections provide description of the key transportation systems such as the arterial system, transit network, bicycle network, and the pedestrian network.

#### **Roadway Network**

The project includes areas located along Alessandro Boulevard and near the Perris Boulevard/Iris Avenue. Major regional traffic is served by Interstate 215 (I-215) to the west, and State Route 60 (SR-60) to the north. Access to I-215 in the project vicinity is provided via interchanges at Alessandro Boulevard and Cactus Boulevard. Access to SR-60 in the project vicinity is provided via interchanges at Day Street, Frederik Street, Heacock Street, Perris Boulevard, Nason Street, and Moreno Beach Drive.

Alessandro Boulevard is an east-west roadway connecting the Moreno Valley area to the I-215 Freeway. Currently, Alessandro Boulevard varies in width from a two-lane divided roadway on the east end of the study area to a six-lane divided roadway on the west boundary of the study area near the I-215 Freeway. On-street parking is prohibited along Alessandro Boulevard in the study area. The City of Moreno Valley General Plan Circulation Element classifies Alessandro Boulevard within the study area as a six lane Divided Major Arterial.

#### **Bicycle Network**

The Moreno Valley Bikeway Plan consists of Class I, Class II and Class III routes. Class I bikeways are dedicated trails, separated from vehicular traffic. Class II are designated, striped bikeways generally located along the right shoulder of the roadway. Class III routes are designated bikeways, not striped, and are shared with vehicles. These bikeways provide the opportunity for an alternative mode of transportation for both recreational and commuting uses.

#### Transit Network

Public transit in the City of Moreno Valley consists primarily of bus service. As noted in the GPCE, it is anticipated that Moreno Valley will also have future access to commuter rail and Bus Rapid Transit (BRT) services. Major components of the public transit system are described below:

The ability to efficiently maneuver within and outside Moreno Valley is predominantly dependent on the automobile. Moreno Valley is working closely with the Riverside County Transportation Commission, the Riverside Transit Agency (RTA) and other local governments to establish efficient transit connections among areas of activity and concentrated development.

Fixed bus service on or crossing Alessandro Boulevard is provided via RTA routes 11, 18, 19, 20, and 35. Additionally, Amtrak Thruway service picks up on Alessandro Boulevard just west of Old 215 Frontage Road.

Currently, the RCTC owns a rail line located west of Moreno Valley, parallel to I-215. This is a service line track that carries a low volume of freight trains to and from industrial, commercial, and agricultural areas, south of Moreno Valley. As a Measure A project, RCTC intends to initiate commuter rail service on this line that would extend initially to Perris. A commuter rail station is planned for the southwest quadrant of the Alessandro Boulevard/I-215 interchange that would provide direct access for Moreno Valley residents. Funding is being collected to implement the new commuter rail service, and design plans are underway for stations along the new spur.

#### Consistency With General Plan Circulation Element

The General Plan Circulation Element (GPCE) includes discussion of issues and improvements that are relevant to roadway improvements in the vicinity of the proposed project. Goal 1 of the Circulation Element states:

• Develop a safe, efficient, environmentally and financially sound, integrated vehicular circulation system consistent with the City General Plan Circulation Element Map, which provides access to development and supports mobility requirements of the system's users.

#### ANALYSIS METHODOLOGY

#### Roadway Segment Analysis Methodology

Level of service (LOS) is commonly used as a qualitative description of roadway segment operation and is based on the capacity of the roadway segment and the volume of traffic using the roadway segment. The City of Moreno Valley utilizes the Volume-to-Capacity (V/C) analysis methodology to determine the operating LOS of the roadway segments.

The V/C analysis methodology describes the operation of a roadway segment using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding Volume/Capacity (V/C) ratios shown in Table 1.

Roadway Segment						
V/C Ratio	LOS					
<u>≤</u> 0.60	A					
> 0.61 <u>&lt;</u> 0.70	В					
> 0.71 <u>&lt;</u> 0.80	С					
> 0.81 <u>&lt;</u> 0.90	D					
> 0.91 <u>&lt;</u> 1.00	E					
> 1.00	F					

	Table 1	
V/C	& LOS Range	s

Source: 1990 Transportation Research Board.

The City of Moreno Valley Circulation Element recognizes that an LOS of C is optimal. However, it also allows peak hour levels of service in the LOS "D" range in certain locations. These locations include areas of high employment concentration, north/south roads in the vicinity of SR-60 or other locations in already developed areas of the City with geometric constraints that prevent LOS "C" from being achieved.

Generally, the capacity of a roadway is affected by a number of factors, including the street's width, the number of crossing arterials and collectors, the amount of green time give to the street at each signal, the presence or absence of on-street parking, the number of turning lanes at each intersection and the number of driveways.

The City of Moreno Valley roadway capacities used in this analysis to determine V/C ratios are shown in Table 2.

Facility Type	Number of Lanes	LOS E Capacity (Vehicles)
Divided Major Arterial	6	56,300
Divided Arterial	6	56,300
Divided Arterial	4	37,500
Arterial	4	25,000
Minor Arterial	4	25,000
Collector	2	12,500

Table 2City of Moreno Valley Roadway Segment Classification and Capacity

Source: City of Moreno Valley Traffic Impact analysis Preparation Guide (August 2007).

#### **City of Palmdale Performance Criteria**

The City of Moreno Valley Circulation Element recognizes that an LOS of C is optimal, however, LOS D is the acceptable performance at some locations within the City. The LOS Standards within the City are identified within the Circulation Element by roadway segment and are summarized in Table 3 for the roadway segments analyzed within this report.

Study Roadway Segment	Acceptable LOS
1. Alessandro Blvd btwn Old 215 Frontage Rd & Day St	D
2. Alessandro Blvd btwn Day St & Elsworth St	D
3. Alessandro Blvd btwn Elsworth St & Frederick St	D
4. Alessandro Blvd btwn Frederick St Graham St	D
5. Alessandro Blvd btwn Graham St & Heacock St	D
6. Alessandro Blvd btwn Heacock St & Indian St	D
7. Alessandro Blvd btwn Indian St & Perris St	D
8. Alessandro Blvd btwn Perris St & Kitching St	D
9. Alessandro Blvd btwn Kitching St & Lasselle St	D
10. Alessandro Blvd btwn Lasselle St & Morrison St	D
11. Alessandro Blvd btwn Morrison St & Nason St	D
12. Alessandro Blvd btwn Nason St & Oliver St	С
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	С
14. Alessandro Blvd btwn Moreno Beach Dr & Quincy St	С
15. Cactus Ave w/o Perris St	С
16. Cactus Ave e/o Perris St	С
17. Day St n/o Alessandro Blvd	D
18. Frederick St n/o Alessandro Blvd	С
19. Frederick St s/o Alessandro Blvd	D
20. Heacock St n/o Alessandro Blvd	D
21. Heacock St s/o Alessandro Blvd	D
22. Perris St n/o Alessandro Blvd	D
23. Perris St s/o Alessandro Blvd	D
24. Perris St n/o Cactus Ave	D
25. Perris St s/o Cactus Ave	D
26. Perris St s/o Iris Ave	D
27. Lasselle St n/o Alessandro Blvd	D
28. Lasselle St s/o Alessandro Blvd	D
29. Morrison St n/o Alessandro Blvd	С
30. Morrison St s/o Alessandro Blvd (future)	D
31. Nason St n/o Alessandro Blvd	С
32. Nason St s/o Alessandro Blvd	D
33. Moreno Beach Dr n/o Alessandro Blvd	D
34. Moreno Beach Dr s/o Alessandro Blvd	D

 Table 3

 Study Roadway Segment Acceptable LOS Target

**Notes:** n/o = north of; s/o = south of; e/o = east of; w/o = west of; btwn = between.

Source: City of Moreno Valley Traffic Impact analysis Preparation Guide (August 2007).

#### City of Palmdale Thresholds of Significance

Consistent with the GPCE traffic analysis, a significant impact would occur at roadway segments if implementation of the project would:

• Cause an increase in traffic that results in an LOS exceeding the City's LOS standards.

#### PROPOSED PROJECT

The proposed project is a City-initiated project to: 1) create the Mixed Use Overlay Districts to implement the Vision Plan for Alessandro Boulevard Corridor, and 2) increase the maximum permitted density to 30 dwelling units per acre in specified areas of the City. The proposed changes affect approximately 294 acres along or adjacent to Alessandro Boulevard.

At full implementation, the proposed project would include 7,288 multi-family dwelling units and 931,858 square feet of commercial uses. This represents a change in the following over existing uses:

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- Decrease of 31,786 square feet of commercial uses
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The project is generally located at six nodes along Alessandro Boulevard, with one node (Calculation 4) located near the corner of Perris Boulevard/Iris Avenue. Exhibit 2 shows the project site location with the six nodes and the Housing Element Calculation 4 Area. Each node is considered individually for the traffic analysis since they are typically spaced about 1-mile apart.

#### Forecast Project Trip Generation

To calculate trips forecast to be generated by the proposed land use, *Institute of Transportation Engineers (ITE)* trip generation rates were utilized. Table 4 summarizes the *ITE* trip generation rates used to calculate the number of trips forecast to be generated by uses proposed and displaced by the proposed project.

Land Use (JTE Code)	Unite	AM Peak Hour			РМ	Daily		
	Units	In	Out	Total	In	Out	Total	Rate
Single-Family Detached Housing (210)	du	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Apartment (220)	du	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Residential Townhouse (230)	du	0.07	0.37	0.44	0.35	0.17	0.52	5.81
General Office (710)	tsf	1.36	0.19	1.55	0.25	1.24	1.49	11.01
Shopping Center (820)	tsf	0.61	0.39	1.00	1.83	1.90	3.73	42.94

Table 4ITE Trip Rates for Displaced & Proposed Project Site Uses

Source: 2008 ITE Trip Generation Manual, 8<sup>th</sup> Edition.

**Note:** tsf = thousand square feet. du = dwelling unit.

Table 4 summarizes the net trips forecast to be generated by the proposed project by each Node when accounting for proposed and displaced land uses.

Location		eak Hou	r Trips	PM Pe	Daily		
Location	In	Out	Total	In	Out	Total	Trips
Node 1							
- 15 Single Family Dwelling Units	-3	-8	-11	-10	-6	-16	-144
- 177.881-tsf Shopping Center/Retail	-109	-69	-178	-326	-338	-664	-7,638
ITE 34% PM Pass-by Discount for Retail	0	0	0	111	115	226	226
542 Apartment Dwelling Units	54	222	276	217	119	336	3,604
136 Townhouse Dwelling Units	10	50	60	48	23	71	790
Node 1 Subtotal	-48	195	147	40	-87	-47	-3,162
Node 2		-			-		
575 Apartment Dwelling Units <sup>1</sup>	58	236	294	214	118	332	3,518
144 Townhouse Dwelling Units <sup>1</sup>	10	53	63	46	22	68	770
14.32-tsf General Office <sup>1</sup>	19	3	22	4	17	21	145
57.283-tsf Shopping Center/Retail <sup>1</sup>	35	22	57	98	101	199	2,263
ITE 34% PM Pass-by Discount for Retail	0	0	0	-33	-34	-67	-67
Node 2 Subtotal	122	314	436	329	224	553	6,629
Node 3							
- 70.677-tsf Shopping Center/Retail	-43	-28	-71	-129	-134	-263	-3,035
ITE 34% PM Pass-by Discount for Retail	0	0	0	44	46	89	89
377 Apartment Dwelling Units	38	155	193	151	83	234	2,507
94 Townhouse Dwelling Units	7	35	42	33	16	49	546
Node 3 Subtotal	2	162	164	99	11	109	107
Node 4							
- 273.757-tsf Shopping Center/Retail	-167	-107	-274	-501	-520	-1021	-11,755
ITE 34% PM Pass-by Discount for Retail	0	0	0	170	177	347	347
697 Apartment Dwelling Units	70	286	356	279	153	432	4,635
174 Townhouse Dwelling Units	12	64	76	61	30	91	1,011
Node 4 Subtotal	-85	243	158	9	-160	-151	-5,762
Node 5							
390 Apartment Dwelling Units <sup>2</sup>	39	160	199	136	75	211	2,283
97 Townhouse Dwelling Units <sup>2</sup>	7	36	43	30	14	44	496
24.350-tsf General Office <sup>2</sup>	33	5	38	5	26	31	236
97.400-tsf Shopping Center/Retail <sup>2</sup>	59	38	97	155	161	316	3,680
ITE 34% PM Pass-by Discount for Retail	0	0	0	-53	-55	-108	-108
Node 5 Subtotal	138	239	377	273	221	494	6,587
Node 6							
- 21 Single Family Dwelling Units	-4	-12	-16	-13	-8	-21	-201
- 31.786-tsf General Office	-43	-6	-49	-8	-39	-47	-350
2417 Apartment Dwelling Units <sup>3</sup>	242	991	1,233	899	495	1,394	14,948
604 Townhouse Dwelling Units <sup>3</sup>	42	223	265	196	96	292	3,263
263.712-tsf Shopping Center/Retail <sup>3</sup>	161	103	264	449	466	915	10,531

Table 5Forecast Trip Generation of Proposed Project

Location		AM Peak Hour Trips			PM Peak Hour Trips			
Location	In	Out	Total	In	Out	Total	Trips	
ITE 34% PM Pass-by Discount for Retail	0	0	0	-153	-158	-311	-311	
Node 6 Subtotal	398	1,299	1,697	1,370	852	2,222	27,880	
Calculation Area 4								
- 10 Single Family Dwelling Units	-2	-6	-8	-6	-4	-10	-96	
730 Apartment Dwelling Units	73	299	372	292	161	453	4,855	
183 Townhouse Dwelling Units	13	68	81	64	31	95	1,063	
Calculation Area 4 Subtotal	84	361	445	350	188	538	5,822	
Proposed Project Total Forecast Net Trip Generation	611	2,813	3,424	2,470	1,249	3,718	38,101	

**Notes:** tsf = thousand square feet.

1 = Assumes the following internal trip capture reduction as calculated per ITE guidelines: 7% Reduction in p.m. peak hour trips, and 8% reduction in daily trips.

2 = Assumes the following internal trip capture reduction as calculated per ITE guidelines: 13% Reduction in p.m. peak hour trips, and 12% reduction in daily trips.

3 = Assumes the following internal trip capture reduction as calculated per ITE guidelines: 7% Reduction in p.m. peak hour trips, and 7% reduction in daily trips.

As shown in Table 5, when accounting for the proposed and displaced land uses, the proposed project is forecast to generate approximately 38,101 net new daily trips, which includes 3,424 net new a.m. peak hour trips and 3,718 net new p.m. peak hour trips.

#### **Trip Distribution of Proposed Project**

Forecast trip distribution of the proposed project generated trips is based on field reconnaissance, understanding of the circulation system, and City-provided information. The trip distribution was refined where appropriate for General Plan Buildout conditions accounting for additional roadway connections. Appendix A shows forecast trip percent distribution of project-generated trips.

#### **Project Trip Assignment**

Exhibit 4 shows the corresponding assignment of project-generated daily trips assuming the trip percent distribution shown in Appendix A for forecast existing plus project conditions. Exhibit 5 shows the corresponding assignment of project-generated daily trips assuming the trip percent distribution shown in Appendix A for forecast General Plan Buildout conditions.

#### **EXISTING CONDITIONS ANALYSIS**

This section analyzes operations of the circulation system for existing conditions.

#### Existing Conditions Peak Hour Traffic Volumes

To determine existing operation of the study roadways, City of Moreno Valley staff provided year 2006 average daily traffic (ADT) volumes for the study roadway segments. Existing data was not available on Alessandro Boulevard between Old 215 Frontage Road and Day Street, however, this location is analyzed in the General Plan Buildout conditions scenarios.

Exhibit 6 shows existing ADT volumes at the study roadways. Exhibit 7 shows existing conditions roadway segment geometry.

#### **Existing Conditions Roadway Segment LOS**

Existing Table 6 summarizes existing conditions roadway segment ADT volumes and corresponding LOS.

Study Roadway Segment	Roadway Geometry	LOS E Capacity	Acceptable LOS	Existing ADT	V/C Ratio	LOS
1. Alessandro Blvd btwn Old 215 Frontage Rd & Day St	6D	56,300	D	N/A	N/A	N/A
2. Alessandro Blvd btwn Day St & Elsworth St	5D	46,875	D	35,600	0.76	С
3. Alessandro Blvd btwn Elsworth St & Frederick St	6D	56,300	D	31,300	0.56	Α
4. Alessandro Blvd btwn Frederick St Graham St	5D	46,875	D	39,000	0.83	D
5. Alessandro Blvd btwn Graham St & Heacock St	5D	46,875	D	34,500	0.74	С
6. Alessandro Blvd btwn Heacock St & Indian St	6D	56,300	D	30,000	0.53	А
7. Alessandro Blvd btwn Indian St & Perris St	6D	56,300	D	23,000	0.41	Α
8. Alessandro Blvd btwn Perris St & Kitching St	4D	37,500	D	18,100	0.48	Α
9. Alessandro Blvd btwn Kitching St & Lasselle St	2D	12,500	D	16,600	1.33	F
10. Alessandro Blvd btwn Lasselle St & Morrison St	2D	12,500	D	8,000	0.64	В
11. Alessandro Blvd btwn Morrison St & Nason St	2D	12,500	D	8,400	0.67	В
12. Alessandro Blvd btwn Nason St & Oliver St	2D	12,500	С	8,800	0.70	В
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	2D	12,500	С	10,200	0.82	D
14. Alessandro Blvd btwn Moreno Beach Dr & Quincy St	2D	12,500	С	7,150	0.57	Α
15. Cactus Ave w/o Perris St	4D	37,500	С	18,000	0.48	Α
16. Cactus Ave e/o Perris St	4D	37,500	С	20,200	0.54	Α
17. Day St n/o Alessandro Blvd	2D	12,500	D	8,600	0.69	В
18. Frederick St n/o Alessandro Blvd	4D	37,500	С	17,200	0.46	Α
19. Frederick St s/o Alessandro Blvd	4D	37,500	D	8,500	0.23	Α
20. Heacock St n/o Alessandro Blvd	4D	37,500	D	18,500	0.49	Α
21. Heacock St s/o Alessandro Blvd	4D	37,500	D	16,000	0.43	А
22. Perris St n/o Alessandro Blvd	4D	37,500	D	27,300	0.73	С
23. Perris St s/o Alessandro Blvd	4D	37,500	D	24,800	0.66	В
24. Perris St n/o Cactus Ave	4D	37,500	D	24,800	0.66	В
25. Perris St s/o Cactus Ave	4D	37,500	D	23,600	0.63	В
26. Perris St s/o Iris Ave	6D	56,300	D	25,900	0.46	Α
27. Lasselle St n/o Alessandro Blvd	2D	12,500	D	10,100	0.81	D
28. Lasselle St s/o Alessandro Blvd	4D	37,500	D	12,100	0.32	Α
29. Morrison St n/o Alessandro Blvd	4D	37,500	С	1,200	0.03	Α
30. Morrison St s/o Alessandro Blvd (future)			D	N/A	N/A	N/A
31. Nason St n/o Alessandro Blvd	2D	12,500	С	9,000	0.72	С
32. Nason St s/o Alessandro Blvd	4D	37,500	D	10,600	0.28	Α
33. Moreno Beach Dr n/o Alessandro Blvd	2D	12,500	D	14,900	1.19	F
34. Moreno Beach Dr s/o Alessandro Blvd	2D	12,500	D	14,000	1.12	F

 Table 6

 Existing Conditions Roadway Segment ADT & LOS

**Notes:** n/o = north of; s/o = south of; e/o = east of; w/o = west of; btwn = between; Deficient operation shown in **bold.** N/A = Not Available.

As shown in Table 6, the study roadway segments are operating at an acceptable LOS according to the City of Moreno Valley performance criteria with the exception of the following four study roadway segments:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

#### FORECAST EXISTING WITH PROJECT CONDITIONS ANALYSIS

This section analyzes operations of the circulation system with the addition of trips forecast to be generated by the proposed project to existing conditions.

#### Forecast Existing With Project Conditions Traffic Volumes

Forecast existing with project conditions traffic volumes were derived by adding trips forecast to be generated by the proposed project to existing conditions traffic volumes. Exhibit 8 shows forecast existing with project conditions ADT volumes at the study roadways.

#### Forecast Existing With Project Conditions Roadway Segment LOS

Table 7 summarizes forecast existing with project conditions roadway segment ADT volumes and corresponding LOS.

Study Roadway Segment	Roadway Geometry	LOS E Capacity	Acceptable LOS	Existing With Project ADT	V/C Ratio	LOS
1. Alessandro Blvd btwn Old 215 Frontage Rd & Day St	6D	56,300	D	N/A	N/A	N/A
2. Alessandro Blvd btwn Day St & Elsworth St	5D	46,875	D	37,744	0.81	D
3. Alessandro Blvd btwn Elsworth St & Frederick St	6D	56,300	D	34,886	0.62	В
4. Alessandro Blvd btwn Frederick St Graham St	5D	46,875	D	40,930	0.87	D
5. Alessandro Blvd btwn Graham St & Heacock St	5D	46,875	D	36,430	0.78	С
6. Alessandro Blvd btwn Heacock St & Indian St	6D	56,300	D	31,892	0.57	А
7. Alessandro Blvd btwn Indian St & Perris St	6D	56,300	D	24,892	0.44	Α
8. Alessandro Blvd btwn Perris St & Kitching St	4D	37,500	D	23,296	0.62	В
9. Alessandro Blvd btwn Kitching St & Lasselle St	2D	12,500	D	21,796	1.74	F
10. Alessandro Blvd btwn Lasselle St & Morrison St	2D	12,500	D	14,112	1.13	F
11. Alessandro Blvd btwn Morrison St & Nason St	2D	12,500	D	9,786	0.78	С
12. Alessandro Blvd btwn Nason St & Oliver St	2D	12,500	С	8,974	0.72	С
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	2D	12,500	С	10,374	0.83	D
14. Alessandro Blvd btwn Moreno Beach Dr & Quincy St	2D	12,500	С	7,614	0.61	В
15. Cactus Ave w/o Perris St	4D	37,500	С	20,890	0.56	А
16. Cactus Ave e/o Perris St	4D	37,500	С	21,742	0.58	А
17. Day St n/o Alessandro Blvd	2D	12,500	D	8,412	0.67	В
18. Frederick St n/o Alessandro Blvd	4D	37,500	С	20,846	0.56	А
19. Frederick St s/o Alessandro Blvd	4D	37,500	D	9,164	0.24	А
20. Heacock St n/o Alessandro Blvd	4D	37,500	D	18,560	0.49	Α
21. Heacock St s/o Alessandro Blvd	4D	37,500	D	16,010	0.43	Α
22. Perris St n/o Alessandro Blvd	4D	37,500	D	27,042	0.72	С
23. Perris St s/o Alessandro Blvd	4D	37,500	D	28,422	0.76	С
24. Perris St n/o Cactus Ave	4D	37,500	D	28,422	0.76	С
25. Perris St s/o Cactus Ave	4D	37,500	D	28,784	0.77	С
26. Perris St s/o Iris Ave	6D	56,300	D	27,888	0.50	А
27. Lasselle St n/o Alessandro Blvd	2D	12,500	D	14,712	1.18	F
28. Lasselle St s/o Alessandro Blvd	4D	37,500	D	14,992	0.40	А
29. Morrison St n/o Alessandro Blvd	4D	37,500	С	12,226	0.33	А
30. Morrison St s/o Alessandro Blvd (future)			D	N/A	N/A	N/A
31. Nason St n/o Alessandro Blvd	2D	12,500	С	17,490	1.40	F
32. Nason St s/o Alessandro Blvd	4D	37,500	D	13,026	0.35	Α
33. Moreno Beach Dr n/o Alessandro Blvd	2D	12,500	D	14,900	1.19	F
34. Moreno Beach Dr s/o Alessandro Blvd	2D	12,500	D	14,292	1.14	F

 Table 7

 Forecast Existing With Project Conditions Roadway Segment ADT & LOS

**Notes:** n/o = north of; s/o = south of; e/o = east of; w/o = west of; btwn = between; Deficient operation shown in **bold.** N/A = Not Available.

As shown in Table 7, with the addition of project-generated trips, the following seven (7) roadway segments are forecast to operate at a deficient LOS according to the City of Moreno Valley performance criteria for forecast existing with project conditions:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Lasselle Street and Morrison Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- Lasselle Street north of Alessandro Boulevard;
- Nason Street north of Alessandro Boulevard;
- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

#### Forecast Existing With Project Conditions Mitigation Measures

Proportionate contribution to the following mitigation measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient study roadway segments for forecast existing with project conditions:

- Mitigation Measure #1 Alessandro Boulevard between Kitching Street and Lasselle Street – Widen/restripe Alessandro Boulevard between Kitching Street and Lasselle Street from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #2 Alessandro Boulevard between Lasselle Street and Morrison Street – Widen/restripe Alessandro Boulevard between Lasselle Street and Morrison Street from a two-lane divided roadway to a four -lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #3 Alessandro Boulevard between Oliver Street and Moreno Beach Drive – Widen/restripe Alessandro Boulevard between Oliver Street and Moreno Beach Drive from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

- Mitigation Measure #4 Lasselle Street north of Alessandro Boulevard Consistent with the City of Moreno Valley General Plan Circulation Element, widen/restripe Lasselle Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial.
- Mitigation Measure #5 Nason Street north of Alessandro Boulevard Widen/restripe Nason Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Modified Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #6 Moreno Beach Drive north of Alessandro Boulevard Widen/restripe Moreno Beach drive north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #7 Moreno Beach Drive south of Alessandro Boulevard Widen/restripe Moreno Beach drive south of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Exhibit 9 shows the mitigated forecast existing with project conditions roadway segment geometry assuming implementation of the mitigation measures.

#### Mitigated Forecast Existing With Project Conditions Roadway Segment LOS

Table 8 summarizes mitigated forecast existing with project conditions roadway segment ADT volumes and corresponding LOS at affected locations assuming implementation of the roadway segment mitigation measures.

Study Roadway Segment	Mitigated Roadway Geometry	Mitigated LOS E Capacity	Acceptable LOS	Existing With Project ADT	V/C Ratio	LOS
9. Alessandro Blvd btwn Kitching St & Lasselle St	4D	37,500	D	21,796	0.58	А
10. Alessandro Blvd btwn Lasselle St & Morrison St	4D	37,500	D	14,112	0.38	Α
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	4D	37,500	С	10,374	0.28	Α
27. Lasselle St n/o Alessandro Blvd	4D	37,500	D	14,712	0.39	Α
28. Lasselle St s/o Alessandro Blvd	4D	37,500	D	14,992	0.40	А
31. Nason St n/o Alessandro Blvd	4D	37,500	С	17,490	0.47	Α
33. Moreno Beach Dr n/o Alessandro Blvd	4D	37,500	D	14,900	0.40	А
34. Moreno Beach Dr s/o Alessandro Blvd	4D	37,500	D	14,292	0.38	А

 Table 8

 Mitigated Forecast Existing With Project Conditions Roadway Segment ADT & LOS

**Notes:** n/o = north of; s/o = south of; btwn = between; Deficient operation shown in **bold**.

As shown in Table 8, assuming implementation of the roadway segment mitigation measures, the study roadway segments are forecast to operate at an acceptable LOS according to City of Moreno Valley performance criteria for mitigated forecast existing with project conditions.

# FORECAST GENERAL PLAN BUILDOUT WITHOUT PROJECT CONDITIONS ANALYSIS

This section analyzes operations of the circulation system for forecast General Plan without project conditions.

#### Forecast General Plan Without Project Conditions Peak Hour Traffic Volumes

To determine forecast General Plan Buildout conditions operation of the study roadways, City of Moreno Valley staff provided General Plan Buildout average daily traffic (ADT) volumes for the study roadway segments.

Exhibit 10 shows forecast General Plan Buildout without project conditions ADT volumes at the study roadways.

This traffic analysis assumes implementation of the General Plan Circulation Element roadway designations listed below:

- Improvement of Day Street north and south of Alessandro Boulevard from a two-lane Industrial Collector to a four-lane Divided Arterial;
- Improvement of Perris Street north and south of Alessandro Boulevard from a four-lane Divided Arterial to a six-lane Divided Major Arterial;
- Improvement of Perris Street north and south of Cactus Avenue from a fourlane Divided Arterial to a six-lane Divided Major Arterial;

- Improvement of Lasselle Street north of Alessandro Boulevard from a twolane Industrial Collector to a four-lane Divided Arterial;
- Construction of Morrison Street south of Alessandro Boulevard as a four-lane divided Arterial;
- Improvement of Nason Street north of Alessandro Boulevard from a two-lane Industrial Collector to a six-lane Modified Divided Major Arterial;
- Improvement of Nason Street south of Alessandro Boulevard from a four-lane Divided Arterial to a six-lane Modified Divided Major Arterial;
- Improvement of Moreno Beach Drive north and south of Alessandro Boulevard from a two-lane Industrial Collector to a six-lane Divided Major Arterial;
- Improvement of Alessandro Boulevard between I-215 and Old 215 Frontage Road from a four-lane Divided Arterial to a six-lane Divided Major Arterial;
- Improvement of Alessandro Boulevard between Day Street and Elsworth Street from a five-lane divided roadway to a six-lane Divided Major Arterial;
- Improvement of Alessandro Boulevard between Frederick Street and Heacock Street from a five-lane divided roadway to a six-lane Divided Major Arterial;
- Improvement of Alessandro Boulevard between Perris Street and Kitching Street from a four-lane Divided Arterial to a six-lane Divided Major Arterial; and
- Improvement of Alessandro Boulevard Kitching Street and Quincy Street from a two-lane Industrial Collector to a six-lane Divided Major Arterial.

Exhibit 11 shows forecast General Plan Buildout without project conditions roadway segment geometry.

# Forecast General Plan Buildout Without Project Conditions Roadway Segment LOS

Table 9 summarizes forecast General Plan Buildout without project conditions roadway segment ADT volumes and corresponding LOS.

Study Roadway Segment	Roadway Geometry	LOS E Capacity	Acceptable LOS	GP Without Project ADT	V/C Ratio	LOS
1. Alessandro Blvd btwn Old 215 Frontage Rd & Day St	6D	56,300	D	52,800	0.94	Е
2. Alessandro Blvd btwn Day St & Elsworth St	6D	56,300	D	48,000	0.85	D
3. Alessandro Blvd btwn Elsworth St & Frederick St	6D	56,300	D	46,900	0.83	D
4. Alessandro Blvd btwn Frederick St Graham St	6D	56,300	D	48,900	0.87	D
5. Alessandro Blvd btwn Graham St & Heacock St	6D	56,300	D	40,100	0.71	С
6. Alessandro Blvd btwn Heacock St & Indian St	6D	56,300	D	26,200	0.47	Α
7. Alessandro Blvd btwn Indian St & Perris St	6D	56,300	D	31,100	0.55	Α
8. Alessandro Blvd btwn Perris St & Kitching St	6D	56,300	D	30,300	0.54	Α
9. Alessandro Blvd btwn Kitching St & Lasselle St	6D	56,300	D	25,300	0.45	Α
10. Alessandro Blvd btwn Lasselle St & Morrison St	6D	56,300	D	17,700	0.31	Α
11. Alessandro Blvd btwn Morrison St & Nason St	6D	56,300	D	16,600	0.29	Α
12. Alessandro Blvd btwn Nason St & Oliver St	6D	56,300	С	20,200	0.36	Α
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	6D	56,300	С	21,600	0.38	Α
14. Alessandro Blvd btwn Moreno Beach Dr & Quincy St	6D	56,300	С	17,900	0.32	Α
15. Cactus Ave w/o Perris St	4D	37,500	С	23,200	0.62	В
16. Cactus Ave e/o Perris St	4D	37,500	С	26,700	0.71	С
17. Day St n/o Alessandro Blvd	4D	37,500	D	29,700	0.79	С
18. Frederick St n/o Alessandro Blvd	4D	37,500	С	15,300	0.41	Α
19. Frederick St s/o Alessandro Blvd	4D	37,500	D	4,300	0.11	Α
20. Heacock St n/o Alessandro Blvd	4D	37,500	D	35,900	0.96	Е
21. Heacock St s/o Alessandro Blvd	4D	37,500	D	35,000	0.93	Е
22. Perris St n/o Alessandro Blvd	6D	56,300	D	30,700	0.55	Α
23. Perris St s/o Alessandro Blvd	6D	56,300	D	30,900	0.55	Α
24. Perris St n/o Cactus Ave	6D	56,300	D	30,900	0.55	Α
25. Perris St s/o Cactus Ave	6D	56,300	D	29,700	0.53	Α
26. Perris St s/o Iris Ave	6D	56,300	D	31,300	0.56	Α
27. Lasselle St n/o Alessandro Blvd	4D	37,500	D	19,000	0.51	Α
28. Lasselle St s/o Alessandro Blvd	4D	37,500	D	11,700	0.31	Α
29. Morrison St n/o Alessandro Blvd	4D	37,500	С	17,200	0.46	Α
30. Morrison St s/o Alessandro Blvd (future)	4D	37,500	D	23,400	0.62	В
31. Nason St n/o Alessandro Blvd	6D	56,300	С	32,700	0.58	Α
32. Nason St s/o Alessandro Blvd	6D	56,300	D	28,900	0.51	Α
33. Moreno Beach Dr n/o Alessandro Blvd	6D	56,300	D	19,800	0.35	Α
34. Moreno Beach Dr s/o Alessandro Blvd	6D	56,300	D	20,600	0.37	А

# Table 9Forecast General Plan Buildout Without Project ConditionsRoadway Segment ADT & LOS

**Notes:** n/o = north of; s/o = south of; e/o = east of; w/o = west of; btwn = between; Deficient operation shown in **bold.** N/A = Not Available.

As shown in Table 9, the following three (3) roadway segments are forecast to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout without project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

#### FORECAST GENERAL PLAN BUILDOUT WITH PROJECT CONDITIONS ANALYSIS

#### Forecast General Plan Buildout With Project Conditions Traffic Volumes

Forecast General Plan Buildout with project conditions traffic volumes were derived by adding trips forecast to be generated by the proposed project to forecast General Plan Buildout without project conditions traffic volumes. Exhibit 12 shows forecast General Plan Buildout with project conditions ADT volumes at the study roadways.

#### Forecast General Plan Buildout With Project Conditions Roadway Segment LOS

Table 10 summarizes forecast General Plan Buildout with project conditions roadway segment ADT volumes and corresponding LOS.

Study Roadway Segment	Roadway Geometry	LOS E Capacity	Acceptable LOS	GP With Project ADT	V/C Ratio	LOS
1. Alessandro Blvd btwn Old 215 Frontage Rd & Day St	6D	56,300	D	54,332	0.97	Е
2. Alessandro Blvd btwn Day St & Elsworth St	6D	56,300	D	50,144	0.89	D
3. Alessandro Blvd btwn Elsworth St & Frederick St	6D	56,300	D	50,486	0.90	D
4. Alessandro Blvd btwn Frederick St Graham St	6D	56,300	D	50,830	0.90	D
5. Alessandro Blvd btwn Graham St & Heacock St	6D	56,300	D	42,030	0.75	С
6. Alessandro Blvd btwn Heacock St & Indian St	6D	56,300	D	28,092	0.50	Α
7. Alessandro Blvd btwn Indian St & Perris St	6D	56,300	D	32,992	0.59	Α
8. Alessandro Blvd btwn Perris St & Kitching St	6D	56,300	D	33,920	0.60	Α
9. Alessandro Blvd btwn Kitching St & Lasselle St	6D	56,300	D	28,920	0.51	Α
10. Alessandro Blvd btwn Lasselle St & Morrison St	6D	56,300	D	20,662	0.37	Α
11. Alessandro Blvd btwn Morrison St & Nason St	6D	56,300	D	17,986	0.32	Α
12. Alessandro Blvd btwn Nason St & Oliver St	6D	56,300	С	20,374	0.36	Α
13. Alessandro Blvd btwn Oliver St & Moreno Beach Dr	6D	56,300	С	21,774	0.39	Α
14. Alessandro Blvd btwn Moreno Beach Dr & Quincy St	6D	56,300	С	18,364	0.33	Α
15. Cactus Ave w/o Perris St	4D	37,500	С	26,090	0.70	В
16. Cactus Ave e/o Perris St	4D	37,500	С	29,818	0.80	С
17. Day St n/o Alessandro Blvd	4D	37,500	D	29,512	0.79	С
18. Frederick St n/o Alessandro Blvd	4D	37,500	С	18,946	0.51	Α
19. Frederick St s/o Alessandro Blvd	4D	37,500	D	4,964	0.13	Α
20. Heacock St n/o Alessandro Blvd	4D	37,500	D	35,960	0.96	Е
21. Heacock St s/o Alessandro Blvd	4D	37,500	D	35,010	0.93	Е
22. Perris St n/o Alessandro Blvd	6D	56,300	D	30,442	0.54	Α
23. Perris St s/o Alessandro Blvd	6D	56,300	D	32,946	0.59	А
24. Perris St n/o Cactus Ave	6D	56,300	D	32,946	0.59	А
25. Perris St s/o Cactus Ave	6D	56,300	D	34,884	0.62	В
26. Perris St s/o Iris Ave	6D	56,300	D	33,288	0.59	Α
27. Lasselle St n/o Alessandro Blvd	4D	37,500	D	23,612	0.63	В
28. Lasselle St s/o Alessandro Blvd	4D	37,500	D	13,018	0.35	Α
29. Morrison St n/o Alessandro Blvd	4D	37,500	С	28,226	0.75	С
30. Morrison St s/o Alessandro Blvd (future)	4D	37,500	D	26,550	0.71	С
31. Nason St n/o Alessandro Blvd	6D	56,300	С	41,190	0.73	С
32. Nason St s/o Alessandro Blvd	6D	56,300	D	31,326	0.56	А
33. Moreno Beach Dr n/o Alessandro Blvd	6D	56,300	D	19,800	0.35	А
34. Moreno Beach Dr s/o Alessandro Blvd	6D	56,300	D	20,892	0.37	А

 Table 10

 Forecast General Plan Buildout With Project Conditions Roadway Segment ADT & LOS

**Notes:** n/o = north of; s/o = south of; e/o = east of; w/o = west of; btwn = between; Deficient operation shown in **bold.** N/A = Not Available.

As shown in Table 10, with the addition of project-generated trips, the following three (3) roadway segments are forecast to continue to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout with project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

The three deficient roadway segments identified above were already identified as significantly unavoidable impacts in the General Plan EIR, and Statements of Overriding Consideration were adopted. The proposed project does not generate any new significant impacts beyond those already analyzed in the General Plan EIR, nor does the proposed project generate any impacts that exceed significance threshold criteria.

#### Forecast General Plan Buildout With Project Conditions Mitigation Measures

Proportionate contribution to the following mitigation measures are identified to ensure that the forecast traffic impacts at the deficient roadway segments remain at or below the LOS shown in the operations table for forecast General Plan Buildout with project conditions:

- Implement Project-Specific Transportation Mitigation Measure #8 Demand Management Program – As development occurs within the entire Traffic Impact Analysis study area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Metrolink or other Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.
- Mitigation Measure #9 Arterial Segment Analysis Conduct studies of specific arterial segments to determine if any additional improvements will be needed to maintain an acceptable LOS at General Plan Buildout. Generally, these segments will be studied as new developments are proposed in their vicinity. Measures will be identified that are consistent with the Circulation Element designation of these roadway segments, such as additional turn lanes at intersections, signal optimization by coordination and enhanced phasing, and travel demand management measures. The study of

specified arterial segments will be required to identify measures to maintain an acceptable LOS at General Plan Buildout for at least one of the reasons discussed below:

- (a) Segments will need improvement, but their ultimate volumes slightly exceed design capabilities.
- (b) Segments will need improvements but require interjurisdictional coordination.
- (c) Segments would require significant encroachment on existing adjacent development if built-out to their Circulation Element designations.

(Source: General Plan EIR, Mitigation Measure TRF-1)

Since implementation of the two mitigation measures listed above are expected to reduce project-related impacts, and since no new significant unavoidable impacts are identified, no additional mitigation measures are required.

#### CONGESTION MANAGEMENT PROGRAM ANALYSIS

The Congestion Management Program (CMP) was established in 1990 under Proposition 111. The intent of the CMP is to more directly link land use, transportation and air quality thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality. Riverside County Transportation Commission (RCTC) is the designated Congestion Management Agency (CMA) for Riverside County, and holds responsibility for the development and implementation of the Riverside County CMP. The CMP identifies a network of roadways that serve as regional linkages between Riverside County cities and adjacent counties. Local agencies are required to monitor how new development projects will impact the CMP network. Should a new development project cause a location on the CMP network to fall below a Level of Service (LOS) F, the local agency must prepare a deficiency plan that would outline specific mitigation measures and a schedule for mitigating the deficiency.

Since the City LOS standard is LOS C, or LOS D, and is higher than the designated CMP standards for Riverside County, the City LOS standards govern, and no CMP impact is forecast to occur.

#### MITIGATION MEASURE IMPLEMENTATION

The County of Riverside requires transportation and general infrastructure fees paid at the time a certificate of occupancy is used for the proposed project or upon final inspection, whichever comes first. As applicable for each project, the City will clarify the need for payment towards the *Riverside County Transportation Uniform Mitigation Fee (TUMF) Program* (per Ordinance Number 824) and/or towards other applicable fee programs such as the City Development Impact Fee Program (DIF). The City DIF address local transportation improvements such as arterial streets, traffic signals, and interchange improvements, while TUMF fees are set by the Western Riverside Council of Governments and address regional transportation improvements.

#### MITIGATION MEASURES

Proportionate contribution to the following mitigation measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient study roadway segments for forecast existing with project conditions:

- Mitigation Measure #1 Alessandro Boulevard between Kitching Street and Lasselle Street Widen/restripe Alessandro Boulevard between Kitching Street and Lasselle Street from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #2 Alessandro Boulevard between Lasselle Street and Morrison Street – Widen/restripe Alessandro Boulevard between Lasselle Street and Morrison Street from a two-lane divided roadway to a four -lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #3 Alessandro Boulevard between Oliver Street and Moreno Beach Drive – Widen/restripe Alessandro Boulevard between Oliver Street and Moreno Beach Drive from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #4 Lasselle Street north of Alessandro Boulevard Consistent with the City of Moreno Valley General Plan Circulation Element, widen/restripe Lasselle Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial.
- Mitigation Measure #5 Nason Street north of Alessandro Boulevard Widen/restripe Nason Street north of Alessandro Boulevard

from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Modified Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Mitigation Measure #6 Moreno Beach Drive north of Alessandro Boulevard – Widen/restripe Moreno Beach drive north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Mitigation Measure #7 Moreno Beach Drive south of Alessandro Boulevard – Widen/restripe Moreno Beach drive south of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Proportionate contribution to the following mitigation measures are identified to ensure that the forecast traffic impacts at the deficient roadway segments for forecast General Plan Buildout with project conditions remain at or below the LOS in Table 10:

- Mitigation Measure #8 Implement Project-Specific Transportation Demand **Management Program –** As development occurs within the entire Traffic Impact Analysis study area, project applicants demonstrate, subject to the City's approval, shall implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Metrolink or other Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.
- Mitigation Measure #9 Arterial Segment Analysis Conduct studies of specific arterial segments to determine if any additional improvements will be needed to maintain an acceptable LOS at General Plan Buildout. Generally, these segments will be studied as new developments are proposed in their vicinity. Measures will be identified that are consistent with the Circulation Element designation of these roadway segments, such as additional turn lanes at intersections, signal optimization by coordination and enhanced phasing, and

travel demand management measures. The study of specified arterial segments will be required to identify measures to maintain an acceptable LOS at General Plan Buildout for at least one of the reasons discussed below:

- (a) Segments will need improvement, but their ultimate volumes slightly exceed design capabilities.
- (b) Segments will need improvements but require interjurisdictional coordination.
- (c) Segments would require significant encroachment on existing adjacent development if built-out to their Circulation Element designations.

(Source: General Plan EIR, Mitigation Measure TRF-1)

Since implementation of the two mitigation measures listed above are expected to reduce project-related impacts, and since no new significant unavoidable impacts are identified, no additional mitigation measures are required.

#### CONCLUSIONS

When accounting for the proposed and displaced land uses, the proposed project is forecast to generate approximately 38,101 net new daily trips, which includes 3,424 net new a.m. peak hour trips and 3,718 net new p.m. peak hour trips.

The study roadway segments are operating at an acceptable LOS according to the City of Moreno Valley performance criteria with the exception of the following four study roadway segments:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

With the addition of project-generated trips, the following seven (7) roadway segments are forecast to operate at a deficient LOS according to the City of Moreno Valley performance criteria for forecast existing with project conditions:

- Alessandro Boulevard between Kitching Street and Lasselle Street;
- Alessandro Boulevard between Lasselle Street and Morrison Street;
- Alessandro Boulevard between Oliver Street and Moreno Beach Drive;
- Lasselle Street north of Alessandro Boulevard;
- Nason Street north of Alessandro Boulevard;

- Moreno Beach Drive north of Alessandro Boulevard; and
- Moreno Beach Drive south of Alessandro Boulevard.

Assuming implementation of the roadway segment mitigation measures, the study roadway segments are forecast to operate at an acceptable LOS according to City of Moreno Valley performance criteria for mitigated forecast existing with project conditions.

The following three (3) roadway segments are forecast to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout without project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

With the addition of project-generated trips, the following three (3) roadway segments are forecast to continue to operate at a deficient LOS according to City of Moreno Valley performance criteria for forecast General Plan Buildout with project conditions:

- Alessandro Boulevard between I-215 Frontage Road and Day Street;
- Heacock Street north of Alessandro Boulevard; and
- Heacock Street south of Alessandro Boulevard.

The three deficient roadway segments identified above were already identified as significantly unavoidable impacts in the General Plan EIR, and Statements of Overriding Consideration were adopted. The proposed project does not generate any new significant impacts beyond those already analyzed in the General Plan EIR, nor does the proposed project generate any impacts that exceed significance threshold criteria.

Since the City LOS standard is LOS C, or LOS D, and is higher than the designated CMP standards for Riverside County, the City LOS standards govern, and no CMP impact is forecast to occur.

Proportionate contribution to the following mitigation measures are identified to fully reduce the forecast traffic impacts to a less than significant level at the deficient study roadway segments for forecast existing with project conditions:

Mitigation Measure #1 Alessandro Boulevard between Kitching Street and Lasselle Street – Widen/restripe Alessandro Boulevard between Kitching Street and Lasselle Street from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

- Mitigation Measure #2 Alessandro Boulevard between Lasselle Street and Morrison Street – Widen/restripe Alessandro Boulevard between Lasselle Street and Morrison Street from a two-lane divided roadway to a four -lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #3 Alessandro Boulevard between Oliver Street and Moreno Beach Drive – Widen/restripe Alessandro Boulevard between Oliver Street and Moreno Beach Drive from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #4 Lasselle Street north of Alessandro Boulevard Consistent with the City of Moreno Valley General Plan Circulation Element, widen/restripe Lasselle Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial.
- Mitigation Measure #5 Nason Street north of Alessandro Boulevard Widen/restripe Nason Street north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a sixlane Modified Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #6 Moreno Beach Drive north of Alessandro Boulevard Widen/restripe Moreno Beach drive north of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.
- Mitigation Measure #7 Moreno Beach Drive south of Alessandro Boulevard Widen/restripe Moreno Beach drive south of Alessandro Boulevard from a two-lane divided roadway to a four-lane Divided Arterial. This study roadway segment is classified as a six-lane Divided Major Arterial in the City of Moreno General Plan Circulation Element.

Proportionate contribution to the following mitigation measures are identified to ensure that the forecast traffic impacts at the deficient roadway segments for forecast General Plan Buildout with project conditions remain at or below the LOS in Table 10:

- Mitigation Measure #8 Implement Project-Specific Transportation Demand **Management Program –** As development occurs within the entire Traffic Impact Analysis study area, project applicants shall demonstrate, subject to the City's approval, implementation of transportation demand management (TDM) measures to reduce daily and peak hour traffic generation by a minimum of ten (10) percent. TDM measures may include but are not limited to financial contribution to creation and operation of a local shuttle to link land uses with park-and-ride lots and transit facilities (regional bus stations, Metrolink or other Transportation Center, etc.), ridesharing, bike/transit integration, cycling improvements, improved bike/pedestrian facilities, increased park-and-ride, telework, and alternative work schedules, etc.
- Mitigation Measure #9 Arterial Segment Analysis - Conduct studies of specific segments to determine arterial if anv additional improvements will be needed to maintain an acceptable LOS at General Plan Buildout. Generally, these segments will be studied as new developments are proposed in their vicinity. Measures will be identified that are consistent with the Circulation Element designation of these roadway segments, such as additional turn lanes at intersections, signal optimization by coordination and enhanced phasing, and travel demand management measures. The study of specified arterial segments will be required to identify measures to maintain an acceptable LOS at General Plan Buildout for at least one of the reasons discussed below:
  - (a) Segments will need improvement, but their ultimate volumes slightly exceed design capabilities.
  - (b) Segments will need improvements but require interjurisdictional coordination.
  - (c) Segments would require significant encroachment on existing adjacent development if built-out to their Circulation Element designations.

(Source: General Plan EIR, Mitigation Measure TRF-1)

Since implementation of the two mitigation measures listed above are expected to reduce project-related impacts, and since no new significant unavoidable impacts are identified, no additional mitigation measures are required.





Not to Scale







#### JUN/2012

# **Study Roadway Segment Locations**

Exhibit 3



Not to Scale



## Forecast ADT Trip Assignment of Proposed Project (Existing Circulation System)



## Forecast ADT Trip Assignment of Proposed Project (General Plan Buildout Circulation System)



Exhibit 5





Existing ADT Volumes





# **Existing Conditions Roadway Segment Geometry**



Not to Scale



# **Forecast Existing With Project Conditions ADT Volumes**





Exhibit 9

**Roadway Segment Geometry** 





# Forecast General Plan Buildout Without Project Conditions ADT Volumes

Exhibit 10



Source: City of Moreno Valley General Plan Circulation Element (July, 11 2006)



# **General Plan Buildout Conditions Roadway Segment Geometry**



Not to Scale



# Forecast General Plan Buildout With Project Conditions ADT Volumes

# APPENDIX A Trip Distribution Graphics by Node



Not to Scale





Not to Scale

Node 2 Forecast Trip Percent Distribution



# Node 3 Forecast Trip Percent Distribution





Not to Scale

Node 5 Forecast Trip Percent Distribution





Not to Scale

Node 6 Forecast Trip Percent Distribution



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Attachment F

