**APPENDIX J – TRAFFIC IMAPCT STUDY** 

LINSCOTT LAW & GREENSPAN

engineers

### TRAFFIC IMPACT STUDY EVERETT STREET TERRACES PROJECT City of Moorpark, California February 17, 2016

Prepared for:

Everett Street Terraces 1001 Newbury Road Thousand Oaks, CA 91320

LLG Ref. 5-13-0055-1



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#### APPENDIX

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- C. ICU and Levels of Service Explanation ICU Data Worksheets – AM and PM Peak Hours

#### **TRAFFIC IMPACT STUDY**

## **EVERETT STREET TERRACES PROJECT**

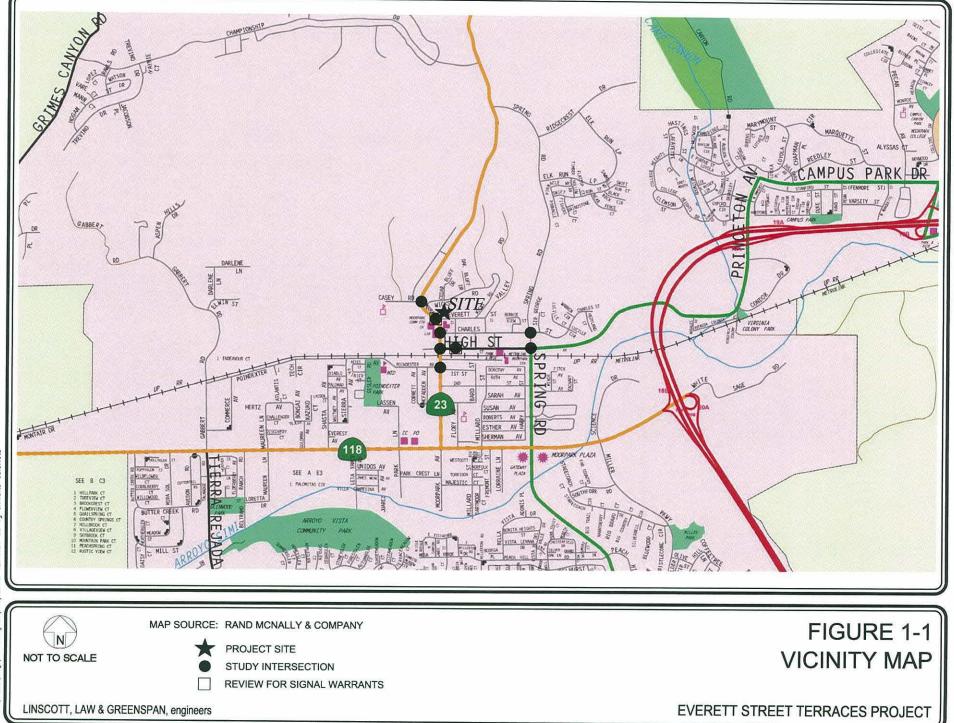
City of Moorpark, California February 17, 2016

### 1.0 INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts generated by the proposed Everett Street Terraces project. The proposed project is located on the north side of Everett Street, east of Moorpark Avenue in the City of Moorpark, California. The proposed project site location and general vicinity are shown in *Figure 1–1*.

The traffic analysis follows City of Moorpark traffic study guidelines (i.e., *Guidelines for Preparing Traffic and Circulation Studies*, 1993). This traffic analysis evaluates the potential project-related traffic impacts associated with the proposed development at eight key intersections in the vicinity of the project site. The study intersections were determined in consultation with the City of Moorpark staff. The Intersection Capacity Utilization (ICU) method was used to determine volume-to-capacity ratios and corresponding Levels of Service (LOS) at the study intersections.

This study (i) presents existing traffic volumes, (ii) forecasts existing plus project traffic volumes, (iii) determines project-related impacts, (iv) forecasts cumulative future traffic volumes with the related projects and the proposed project, and (v) provides fair-share calculations toward cumulative mitigation measures, where appropriate.



# 2.0 PROJECT DESCRIPTION

### 2.1 Site Location

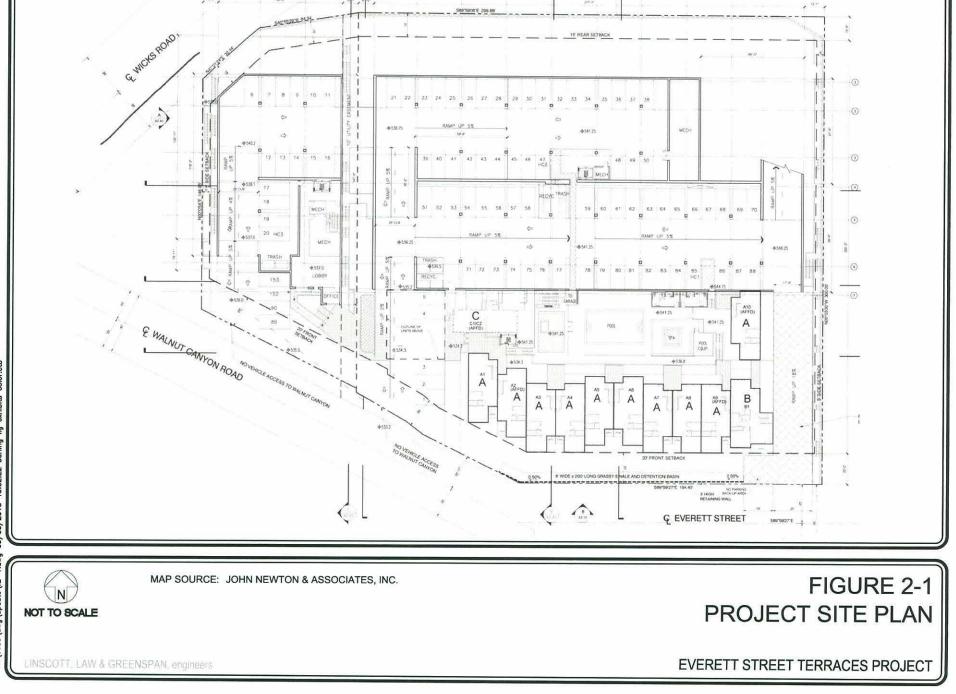
The proposed project is located on the north side of Everett Street, east of Moorpark Avenue in the City of Moorpark. The project site is bounded by residential uses to the north and east, Everett Street to the south, and Moorpark Avenue to the west.

## 2.2 Existing Project Site

The project site is located at the northeast corner of the Everett Street/Moorpark Avenue intersection. The overall project site comprises approximately 2 acres and a portion of the site was previously occupied by six single-family homes. The six existing single-family homes have been removed to accommodate the proposed project.

### 2.3 Proposed Project Description

The Everett Street Terraces project consists of the development of a residential condominium complex with 60 dwelling units. The condominium complex will consist of 2-bedroom and 3-bedroom units. The site plan for the proposed project is illustrated in *Figure 2–1*.



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# 3.0 SITE ACCESS AND CIRCULATION

The site access scheme for the proposed project is displayed in *Figure 2–1*. Descriptions of the existing site access and proposed project site access and circulation schemes are provided in the following subsections.

## 3.1 Existing Site Access

Vehicular access to the existing project site is presently provided via multiple access points on Everett Street and Moorpark Avenue along the project frontage. Two driveways are currently provided on the east side of Moorpark Avenue, which borders the project site to the west. Two driveways are currently provided on the north side of Everett Street, which borders the project site to the south. All existing project driveways currently accommodate left-turn and right-turn ingress and egress turning movements.

## 3.2 Proposed Project Site Access and Circulation

The proposed project site access scheme is displayed in *Figure 2–1*. Vehicular access to the project will be provided via one driveway on the north side of Everett Street at the most easterly portion of the project site.

# 4.0 EXISTING STREET SYSTEM

## 4.1 Regional Highway System

Regional access to the project site is provided by the State Route 118 (Ronald Reagan) Freeway and State Route 23 (Moorpark) Freeway, as shown in *Figure 1–1*. Full freeway ramp connections are provided on both the State Route 118 and State Route 23 Freeways at Los Angeles Avenue. Brief descriptions of the State Route 118 Freeway and State Route 23 Freeway are provided in the following paragraphs.

*State Route 118 (Ronald Reagan) Freeway* is a major freeway connecting Moorpark with the San Fernando Valley and the Los Angeles Basin. In the vicinity of the project, the State Route 118 Freeway provides two travel lanes in each direction. Both northbound and southbound ramps are provided on State Route 118 at Los Angeles Avenue.

*State Route 23 (Moorpark) Freeway* extends from the junction with the State Route 118 Freeway southerly to the US-101 (Ventura) Freeway in the City of Thousand Oaks. State Route 23 Freeway provides two to three travel lanes in each direction in the vicinity of the project. Both northbound and southbound ramps are provided on State Route 23 at Los Angeles Avenue.

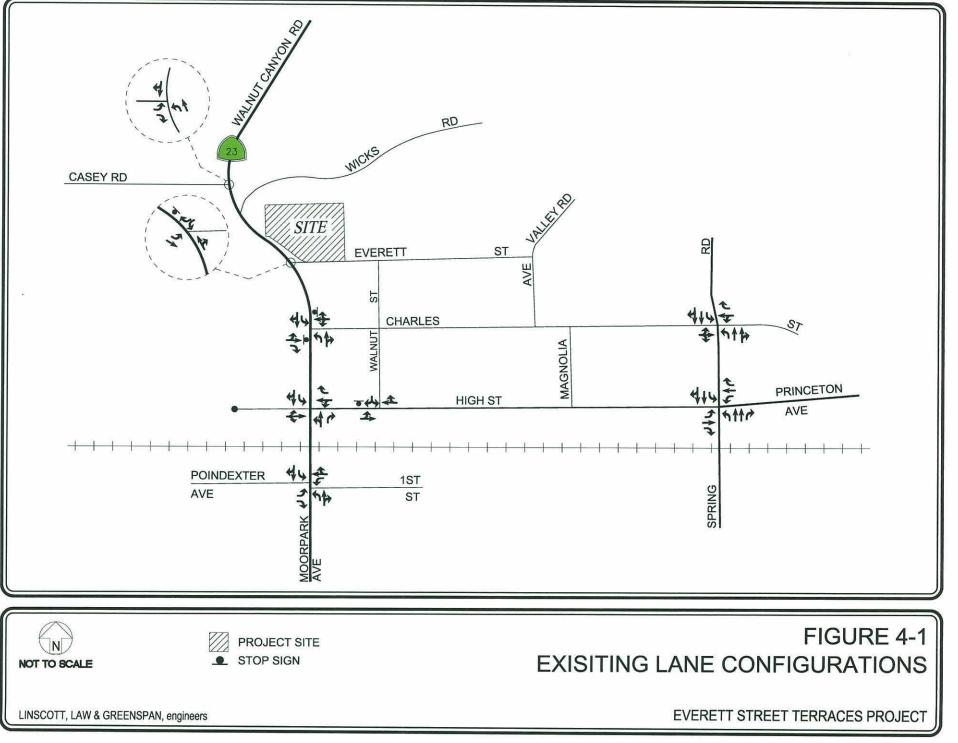
## 4.2 Local Street System

Immediate access to the project site is provided via Everett Street. The following eight study intersections were selected by City of Moorpark staff for analysis of potential impacts related to the proposed project:

- 1. Walnut Canyon Road-Moorpark Avenue / Casey Road
- 2. Moorpark Avenue / Everett Street
- 3. Moorpark Avenue / Charles Street
- 4. Moorpark Avenue / High Street
- 5. Moorpark Avenue / Poindexter Avenue 1<sup>st</sup> Street
- 6. Walnut Street / High Street
- 7. Spring Road / Charles Street
- 8. Spring Road / High Street Princeton Avenue

Five of the eight study intersections selected for analysis are currently controlled by traffic signals. The remaining three intersections – Moorpark Avenue/Everett Street, Moorpark Avenue/Charles Street and Walnut Street/High Street – are currently controlled by stop signs. The existing lane configurations at the eight study intersections are displayed in *Figure 4–1*.

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#### 4.3 Roadway Descriptions

Brief descriptions of the important roadways in the project site vicinity are provided in the following paragraphs.

*Moorpark Avenue* is a north-south roadway that borders the project site to the west. One through travel lane is provided in each direction on Moorpark Avenue in the project vicinity. North of Casey Road, Moorpark Avenue becomes Walnut Canyon Road. South of Los Angeles Avenue, Moorpark Avenue terminates just north of the Arroyo Simi. Exclusive left-turn lanes are provided in the northbound direction at the Casey Road intersection and in both directions at the Poindexter Avenue, High Street, and Charles Street intersections. A separate right-turn lane is provided in the northbound direction on Moorpark Avenue at the High Street intersection. Curbside parking is prohibited along both sides of Moorpark Avenue in the project vicinity. Moorpark Avenue is posted for a 30 miles per hour speed limit near the project site. Moorpark Avenue/Walnut Canyon Road is a State highway (SR-23).

*Walnut Street* is a north-south roadway that is located east of the project site. Walnut Street extends from Everett Street on the north to High Street on the south. One through travel lane is provided in each direction on Walnut Street in the project vicinity. Parking is allowed along both sides of Walnut Street in the project vicinity, except between Charles Street and High Street where two-hour angled parking is provided from 9:00 AM to 9:00 PM along both sides of the street. There is no posted speed limit on Walnut Street within the project study area, thus it is assumed to be a prima facie speed limit of 25 miles per hour.

*Spring Road* is a north-south roadway that is located east of the project site. Spring Road extends from Tierra Rejada Road on the south to Walnut Canyon Road on the north. Two through travel lanes are provided in each direction on Spring Road north of Los Angeles Avenue. South of Los Angeles Avenue, one through travel lane is provided in each direction on Spring Road. Exclusive left-turn lanes are provided on Spring Road at the High Street and Charles Street intersections. Curbside parking is prohibited along both sides of Spring Road in the project vicinity. Spring Road is posted for a 45 miles per hour speed limit north of High Street – Princeton Avenue and a 40 miles per hour speed limit south of High Street – Princeton Avenue near the project site.

*Casey Road* is an east-west roadway that is located north of the project site. One through travel lane is provided in each direction on Casey Road in the project vicinity. Separate left-turn and right-turn lanes are provided in the eastbound direction on Casey Road at the Moorpark Avenue intersection. Casey Road is posted for a 25 miles per hour speed limit near the project site.

*Charles Street* is an east-west roadway that is located south of the project site. One through travel lane is provided in each direction on Charles Street in the project vicinity. Curbside parking is allowed along both sides of Charles Street within the project study area. Charles Street is posted for a 25 miles per hour speed limit near the project site.

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*High Street* is an east-west roadway that is located south of the project site. High Street extends from Spring Road on the east to just west of Moorpark Avenue. East of Spring Road, High Street becomes Princeton Avenue. One through travel lane is provided in each direction on High Street in the project vicinity. An exclusive left turn lane is provided in eastbound on High Street at the Spring Road intersection. An exclusive westbound right-turn lane is provided on High Street at the Moorpark Avenue intersection and in the eastbound direction at the Spring Road intersection. Two-hour parking is provided from 6:00 AM to 6:00 PM along both sides of High Street in the project vicinity. High Street is posted for a 30 miles per hour speed limit near the project site.

*Princeton Avenue* is an east-west roadway that is located south of the project site. Princeton Avenue extends from Spring Road on the west to Campus Park Drive to the east. West of Spring Road, Princeton Avenue becomes High Street. One through travel lane is provided in each direction on Princeton Avenue in the project vicinity. Exclusive left-turn and right-turn lanes are provided in the westbound direction of Princeton Avenue at the Spring Road intersection. Curbside parking is prohibited along both sides of Princeton Avenue in the project vicinity. Princeton Avenue is posted for a 40 miles per hour speed limit near the project site.

*Poindexter Avenue* is an east-west roadway that is located south of the project site. One through travel lane is provided in each direction on Poindexter Avenue in the project vicinity. Exclusive left turn lanes are provided in both directions on Poindexter Avenue at the Moorpark Avenue intersection. An exclusive eastbound right-turn lane is provided on Poindexter Avenue at the Moorpark Avenue intersection. Curbside parking is prohibited along both sides of Poindexter Avenue in the project vicinity. Poindexter Avenue is posted for 40 miles per hour speed limit near the project site.

#### 4.4 Existing Public Bus Transit Service

Public bus transit service in the project study area is currently provided by the Moorpark City Transit. A summary of the existing transit routes, including the transit route, destinations and peak hour headways is presented in *Table 4–1*. The existing public transit routes in the proposed project site vicinity are illustrated in *Figure 4–2*.

#### Table 4-1 EXISTING TRANSIT ROUTES [1]

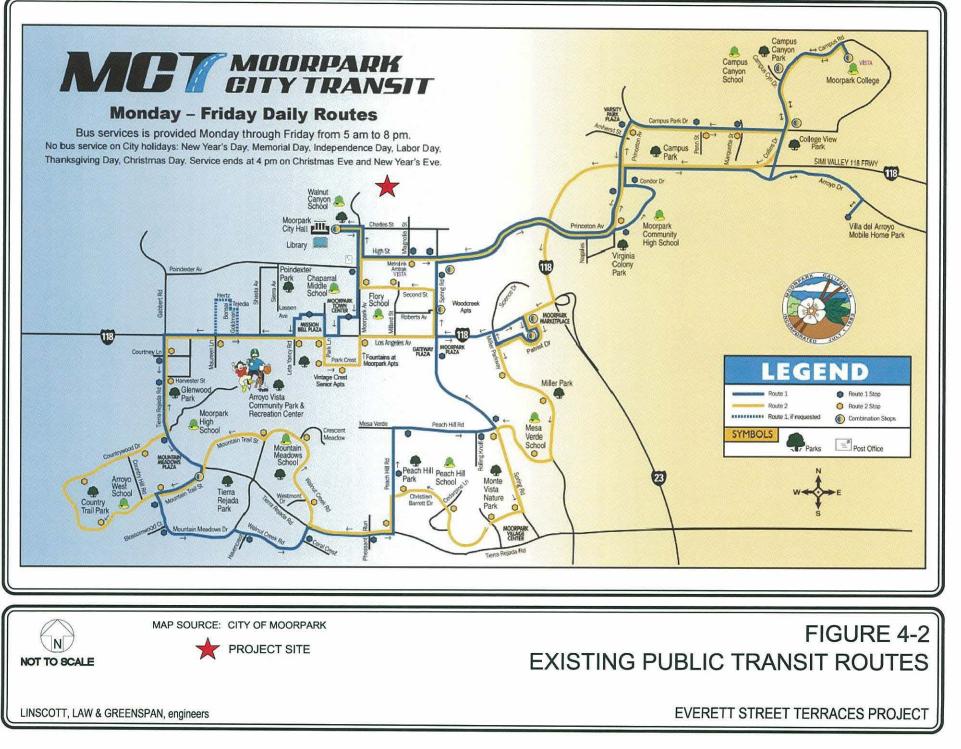
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	47. y	ROADWAY	NO. OF BUSES DURING PEAK HOUR				
ROUTE	ROUTE DESTINATIONS	NEAR SITE	DIR	AM	PM		
Moorpark City Transit Route 1	Civic Center, Town Center, Mission Bell Plaza, Peach Hill Park, Virginia Colony Park, and Moorpark College	High Street, Moorpark Avenue and Spring Road	EB WB	1 1	1 1		
Moorpark City Transit Route 2	Civic Center, Moorpark Marketplace, Moorpark College, and Country Trail Park	High Street, Moorpark Avenue and Spring Road	EB WB	1	1		

[1] Source: Moorpark City Transit, City of Moorpark Website.

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# 5.0 TRAFFIC COUNTS

Manual counts of vehicular turning movements were conducted at each of the eight study intersections during the weekday morning (AM) and afternoon (PM) commuter periods to determine the peak hour traffic volumes. The manual counts were conducted by a traffic count subconsultant at the eight study intersections from 7:00 to 9:00 AM to determine the AM peak commuter hour, and from 4:00 to 6:00 PM to determine the PM peak commuter hour. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 9:00 AM and 4:00 to 6:00 PM generally associated with weekday peak commuter hours.

In order to account for area-wide growth and represent conditions in the existing year, the traffic count data from 2013 was increased by a two (2.0%) annual traffic growth rate through the year 2016. The application of this growth factor allows for a conservative forecast of existing volumes in the project study area.

Moreover, it should be noted that Moorpark Avenue is heavily utilized as a truck route. Therefore, the traffic volumes along Moorpark Avenue were adjusted to account for truck traffic during the AM and PM peak hours. It is estimated that trucks represent approximately 15 percent (15%) and 10 percent (10%) of the AM and PM peak hour traffic volumes, respectively, on Moorpark Avenue. The percentage of trucks, as well as a passenger car equivalent (PCE) factor of 3.0 was utilized to adjust the traffic volumes to reflect truck traffic along Moorpark Avenue.

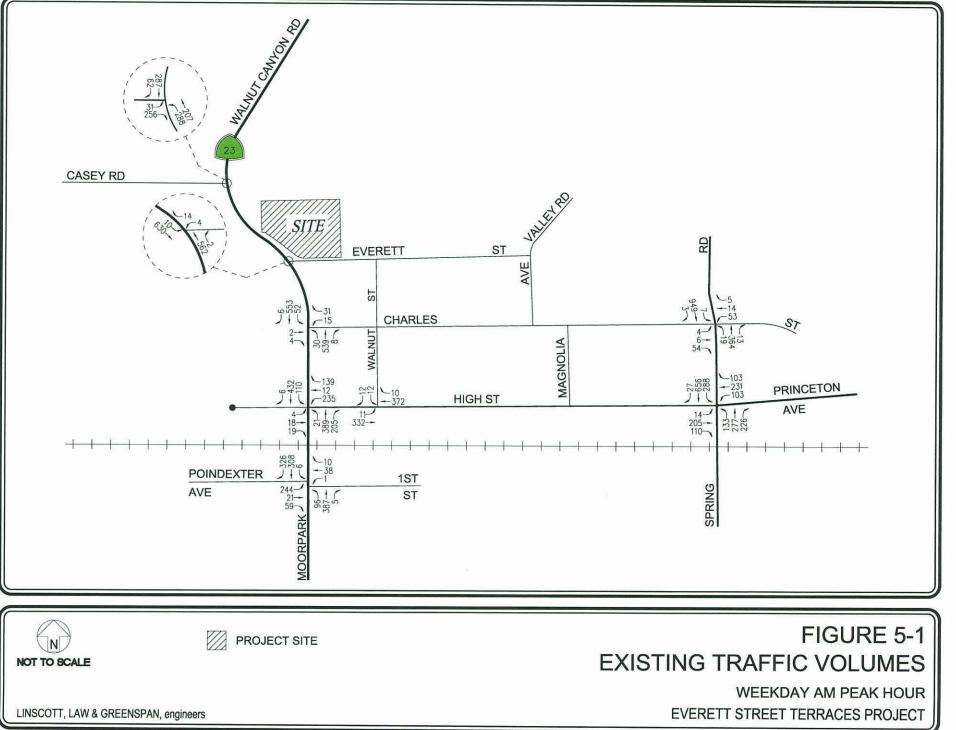
The existing weekday AM and PM peak hour traffic volumes at the eight study intersections are summarized in *Table 5–1*. The existing traffic volumes at the study intersections during the AM and PM peak hours are shown in *Figures 5–1* and *5–2*, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in *Appendix A*.

#### Table 5-1 **EXISTING TRAFFIC VOLUMES [1]**

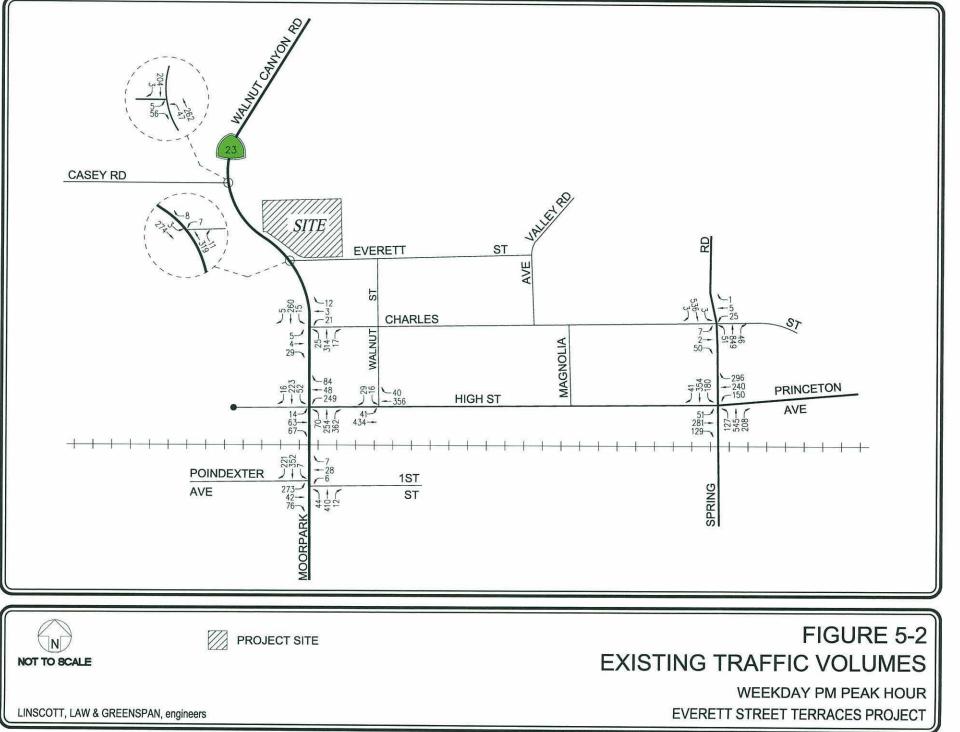
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NO					AK HOUR		AK HOUR	
NO.	INTERSECTION	DATE	DIR	BEGAN	VOLUME [2]	BEGAN	VOLUME [2]	
1	Walnut Canyon Road- Moorpark Avenue/ Casey Road	06/12/2013	NB SB EB WB	7:45	495 349 287 0	4:30	309 207 61 0	
2	Moorpark Avenue/ Everett Street	06/12/2013	NB SB EB WB	7:30	564 640 0 18	4:30	330 277 0 15	
3	Moorpark Avenue/ Charles Street	06/12/2013	NB SB EB WB	7:45	577 611 6 46	4:30	356 280 38 36	
4	Moorpark Avenue/ High Stret	06/12/2013	NB SB EB WB	7:30	615 548 41 386	4:30	686 291 144 381	
5	Moorpark Avenue/ Poindexter Avenue	06/12/2013	NB SB EB WB	7:30	488 640 324 49	4:30	466 580 391 41	
6	Walnut Street/ High Street	06/12/2013	NB SB EB WB	7:30	0 24 344 382	4:30	0 45 476 396	
7	Spring Road/ Charles Street	06/12/2013	NB SB EB WB	7:15	396 959 64 72	4:30	946 542 59 31	
8	Spring Road/ High Street- Princeton Avenue	06/12/2013	NB SB EB WB	7:45	636 971 329 437	4:30	880 575 461 686	

[1] [2]

Counts conducted by The Traffic Solution Traffic count data from 2013 was increased by a 2.0% annual traffic growth rate through the year 2016.



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# 6.0 PROJECT TRIP GENERATION

Traffic volumes expected to be generated by the proposed project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 9<sup>th</sup> Edition, 2012. Traffic volumes expected to be generated by the proposed project were based upon number of dwelling units. ITE Land Use Code 230 (Residential Condominium) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed project.

Traffic volumes expected to be generated by the prior uses located on the project site were also estimated using rates published in the ITE *Trip Generation* manual. ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates were used to forecast the traffic volumes generated by the prior single family homes located on the project site.

The trip generation forecast for the proposed project is summarized in *Table 6–1*. As presented in *Table 6-1*, the proposed project is expected to generate a net increase of 21 vehicle trips (3 inbound trips and 18 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate a net increase of 25 vehicle trips (17 inbound trips and 8 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 292 daily trip ends during a typical weekday (146 inbound trips and 146 outbound trips).

### Table 6-1 PROJECT TRIP GENERATION [1]

		DAILY TRIP ENDS [2]		PEAK HO DLUMES		PM PEAK HOUR VOLUMES [2]			
LAND USE	SIZE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAI	
<u>Proposed Use</u>		240					-		
Condominiums [3]	60 DU	349	4	22	26	21	10	31	
<i>Existing Use</i> Single Family Houses [4]	(6) DU	(57)	(1)	(4)	(5)	(4)	(2)	(6)	
							8		
T INCREASE		292	3	18	21	17	8	25	

[1] Source: ITE "Trip Generation", 9th Edition, 2012.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 230 (Residential Condo/Townhouse) trip generation average rates.

- Daily Trip Rate: 5.81 trips/dwelling unit; 50% inbound/50% outbound

- AM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 17% inbound/83% outbound

- PM Peak Hour Trip Rate: 0.52 trips/dwelling unit; 67% inbound/33% outbound

[4] ITE Land Use Code 210 (Single Family Detached Housing) trip generation average rates.

- Daily Trip Rate: 9.52 trips/dwelling unit; 50% inbound/50% outbound

- AM Peak Hour Trip Rate: 0.75 trips/dwelling unit; assume 25% inbound/75% outbound

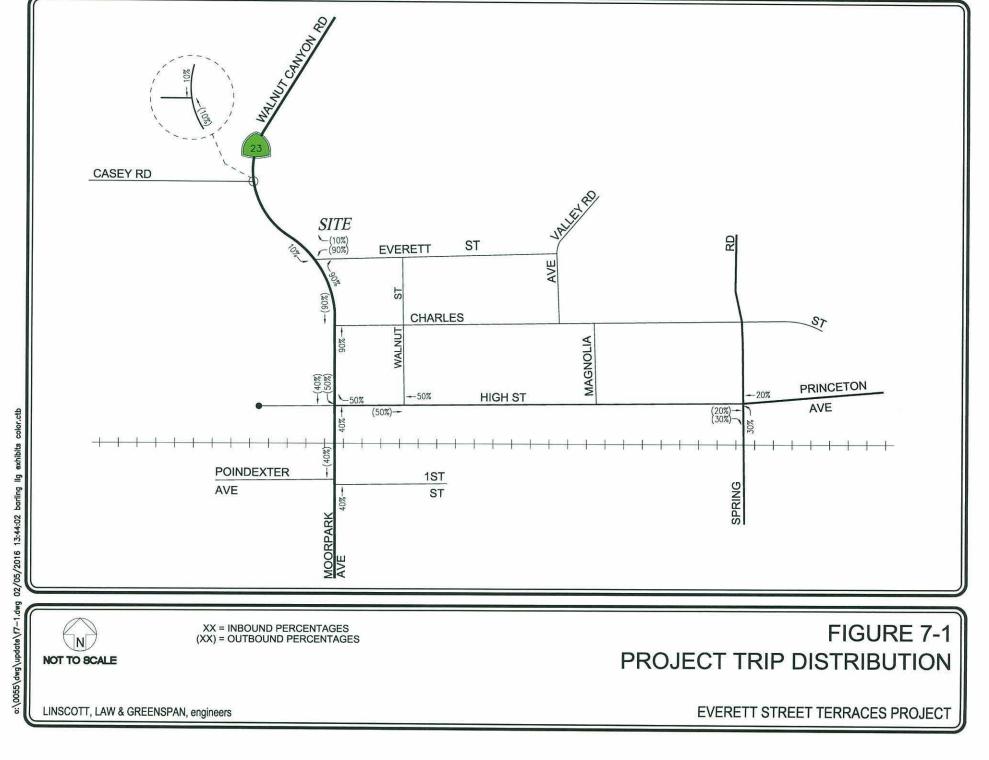
- PM Peak Hour Trip Rate: 1.00 trips/dwelling unit; 63% inbound/37% outbound

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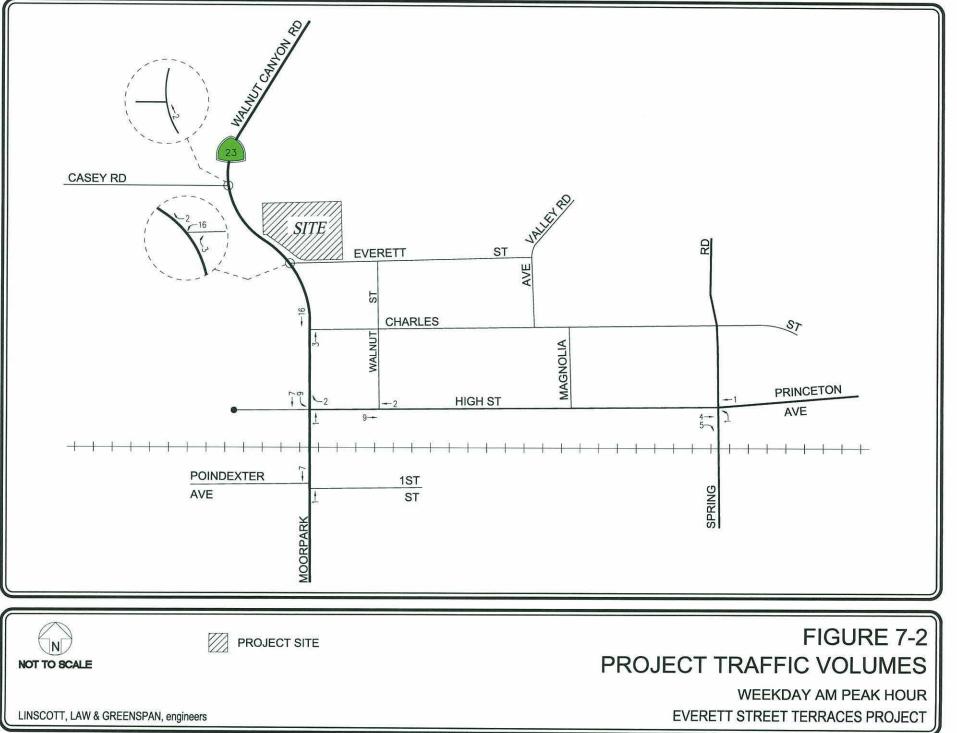
# 7.0 PROJECT TRIP DISTRIBUTION

Project generated traffic was assigned to the local roadway system based on a traffic distribution pattern which accounted for the proposed project land uses, the existing and planned project site access schemes, existing traffic patterns, characteristics of the surrounding roadway system, and nearby population and employment centers.

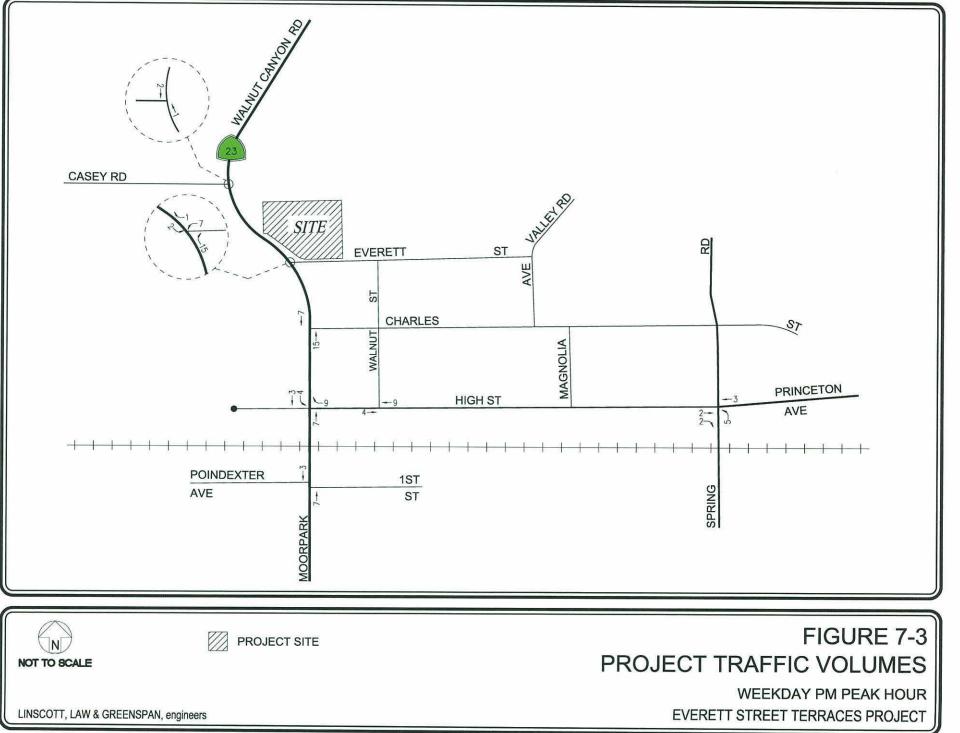
The project traffic volume distribution percentages during AM and PM peak hours at the eight study intersections are illustrated in *Figure 7–1*. The forecast project traffic volumes at the study intersections for the AM and PM peak hours are displayed in *Figures 7–2* and 7–3, respectively.



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# 8.0 CUMULATIVE DEVELOPMENT PROJECTS

Future Cumulative traffic counts at five of the eight study intersections are provided from a recent traffic study prepared for a nearby  $project^1$  in the City of Moorpark. A forecast of onstreet traffic conditions prior to occupancy of the proposed project is identified by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The supplemental future cumulative traffic count figure is provided in *Appendix B*.

Furthermore, related projects research based on information on file at the City of Moorpark Community Development Department, as well as recently approved traffic impact studies prepared for projects in the vicinity of the proposed project was also completed. The list of related projects was prepared in consultation with the City of Moorpark staff. The list of related projects in the project site area is presented in *Table 8–1*. The location of the related projects is shown in *Figure 8–1*.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE *Trip Generation* manual, or were obtained from previously approved traffic impact studies. The related projects' respective traffic generation for the AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 8–1*. The anticipated distribution of the related projects traffic volumes from the nearby traffic study was used for similar intersections and extrapolated for the remaining study intersections during the AM and PM peak hours as displayed in *Figures 8–2* and *8–3*, respectively.

<sup>&</sup>lt;sup>1</sup> Aldersgate Senior Living Project Traffic and Circulation Study, Associated Transportation Engineers, March 2014.

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MAP	PROJECT NAME/	PROJECT	ADDRESS/	LANDUSE	LAND USE DATA			AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			
NO.	PROJECT NUMBER	STATUS	LOCATION	LAND-USE	SIZE	DATA SOURCE	TRIP ENDS [2] VOLUMES	IN	OUT	TOTAL	IN	OLUMES	TOTAL	
E	RPD 2003-04	Under Construction	North of Championship Drive West of Grimes Canyon Road	Single-Family Home	50 DU	[3]	476	10	29	39	32	19	51	
2	RPD 2010-01	Proposed	South of Los Angeles Avenue East of Maureen Lane	Single-Family Home	284 DU	[3]	2,704	53	160	213	179	105	284	
3	RPD 2012-01	Proposed	North of Union Pacific Railroad Tracks West of Terminus of Casey Road	Single-Family Home	755 DU	[3]	7,225	142	424	566	481	282	763	
4	RPD 2009-02	Under Construction	Southeast Corner of Ridgecrest Drive and Elk Run Loop	Single-Family Home	133 DU	[3]	1,273	25	75	100	84	50	134	
5	RPD 2004-02 RPD 2004-03	Under Construction	East of Spring Road North of Ridgecrest Drive	Single-Family Home	132 DU	[3]	1,257	25	74	99	83	49	132	
6	RPD 1999-02	Under Construction	Meridian Hills Drive West of Walnut Canyon Road	Single-Family Home	248 DU	[3]	2,361	47	140	187	156	92	248	
7	RPD 2003-01	Under Construction	West of Walnut Canyon Road South of Meridian Hills Drive	Single-Family Home	17 DU	[3]	163	3	10	13	п	6	17	
8	RPD 2014-1	Approved	East of Walnut Canyon Road North of Wicks Road	Single-Family Home	110 DU	[3]	1,047	21	62	83	69	41	110	
9	RPD 2004-04	Approved	Marine View Drive East of Walnut Canyon Road at Championship Drive	Single-Family Home	21 DU	[3]	200	4	12	16	13	8	21	
10	Affordable Housing Project	Proposed	Between Charles Street and Everett Street Between Moonpark Avenue and Walnut Street	Apariment	24 DU	[4]	160	2	10	12	10	5	15	
n	RPD 2012-02	Proposed	South of Casey Road West of Walnut Canyon Road	Apartment	200 DU	[4]	1,330	20	82	102	81	43	124	
2	RPD 2010-02	Under Construction	South of Los Angeles Avenue Between Spring Road and Fremont Street	Condominium	99 DU	[5]	575	7	37	44	34	17	51	
3	RPD 2014-02	Proposed	635 Los Angeles Avenue	Condominium	66 DU	[5]	384	5	24	29	23	11	34	
4	CPD 2012-01	Approved	635 Los Angeles Avenue	Medical Office Building	76,000 GSF	[6]	2,746	138	37	175	71	192	263	
5	IPD 2000-01 Modification No. 1	Under Construction	West of SR-23 Freeway East of Miller Parkway South of Moorpark Marketplace	Office/Industrial Park	350,000 GSF	[7]	2,436	241	53	294	63	238	301	
6	TR 5609	Grading Underway	North of Union Pacific Railroad Tracks West of Gabbert Road		36 Acres	[8]	2,272	256	52	308	67	251	318	
7	CUP 2003-05	Proposed	13950 Princeton Avenue	Concrete Batch Plant	10 Acres	[9]	68	10	10	20	-11	n	22	
8	GPA Pre-Screen 2008-01	Approved	Los Angeles Avenue West of SCE Substation	General Office Production Sound Stages Security Personnel Trips	112,850 GSF 9 Stages	[10] [10] [10]	1,242 1,836 30	153 nom. nom.	21 nom. nom.	174 nom. nom.	28 nom. nom.	140 nom. nom.	168 nom. nom.	
9	City Hall/Civic Center Complex	Site Planning	83 High Street	City Hall	32,000 GSF	[11]	893	63	8	71	28	63	91	
0	CPD 2012-02	Approved	13950 Peach Hill Road	Church	21,644 GSF	[12]	197	10	9	19	11	9	20	
1	RPD 2013-01	Proposed	North of Casey Road West of Walnut Canyon Road	Senior Adult Housing	390 DU	[13]	1,342	27	51	78	53	45	98	

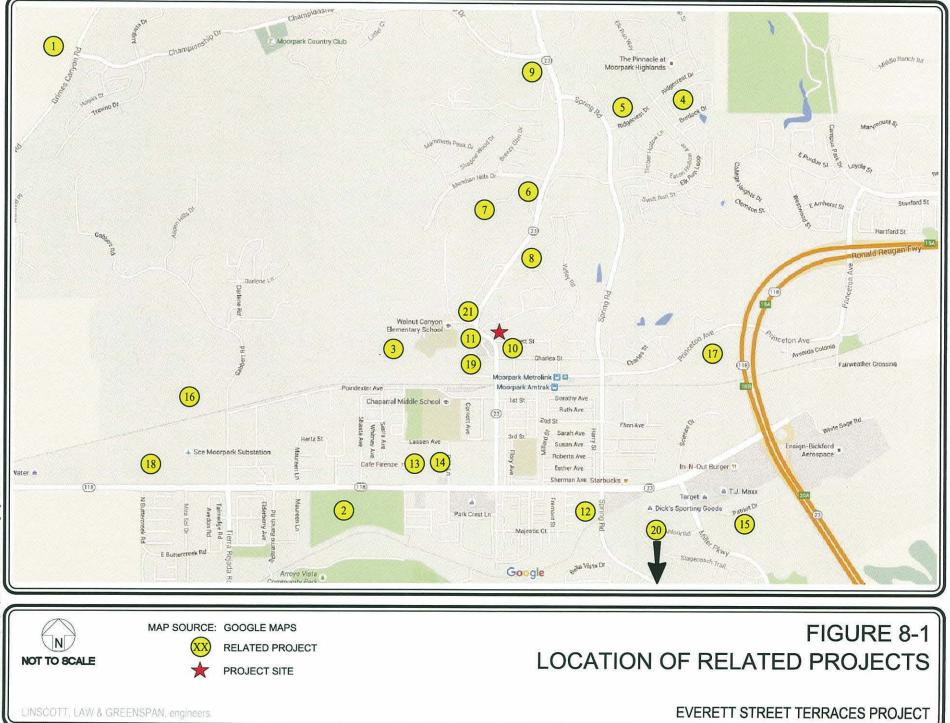
# Table 8-1 RELATED PROJECTS LIST AND TRIP GENERATION [1]

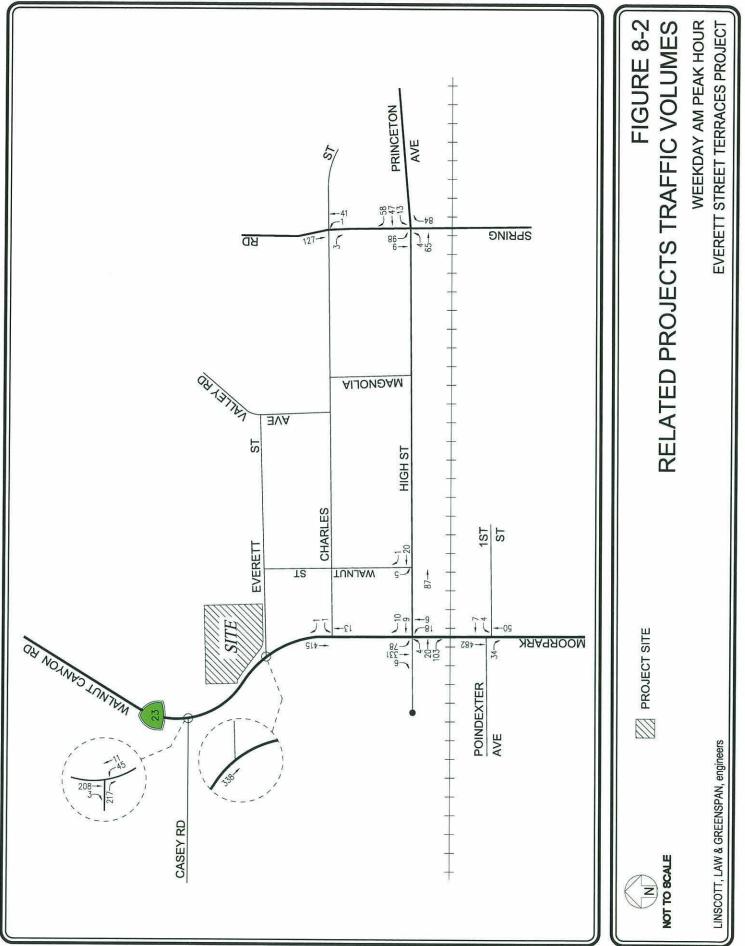
[1] Source: City of Moorpark Residential, Commercial, Industrial, and Public Projects Quarterly Status Report for July 2015

- III Source: City of Moorpark Residential, Commercial, Industrial, and Public Projects Quarterly St.
  [2] Tips are one-way traffic movements, entering or leaving.
  [3] ITE Land Uke Code 210 (Single-Family Detached Housing) (rip generation average rates.
  Daily Trip Rate: 9.52 trips/dwelling unit: 55% inbound/55% outbound
   MM Peak Hour Trip Rate: 1.00 trips/welling unit; 63% inbound/75% outbound
   PM Peak Hour Trip Rate: 1.00 trips/welling unit; 63% inbound/75% outbound
   M Peak Hour Trip Rate: 0.51 trips/dwelling unit; 65% inbound/75% outbound
   Mate: 6.65 trips/dwelling unit; 55% inbound/55% outbound
   Malk: Hour Trip Rate: 0.51 trips/dwelling unit; 63% inbound/55% outbound
   AM Peak Hour Trip Rate: 0.51 trips/dwelling unit; 20% inbound/55% outbound
   MP Peak Hour Trip Rate: 0.62 trips/dwelling unit; 20% inbound/55% outbound
   MP Peak Hour Trip Rate: 0.62 trips/dwelling unit; 75% inbound/55% outbound
   M Peak Hour Trip Rate: 0.44 trips/dwelling unit; 67% inbound/55% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 75% inbound/55% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 75% inbound/35% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 67% inbound/35% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 67% inbound/35% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 67% inbound/35% outbound
   PM Peak Hour Trip Rate: 0.44 trips/dwelling unit; 67% inbound/35% outbound
   M Peak Hour Trip Rate: 2.3 trips/1000 square feet; 50% inbound/35% outbound
   AM Peak Hour Trip Rate: 2.3 trips/1000 square feet; 50% inbound/21% outbound
   AM Peak Hour Trip Rate: 2.3 trips/1000 square feet; 50% inbound/21% outbound

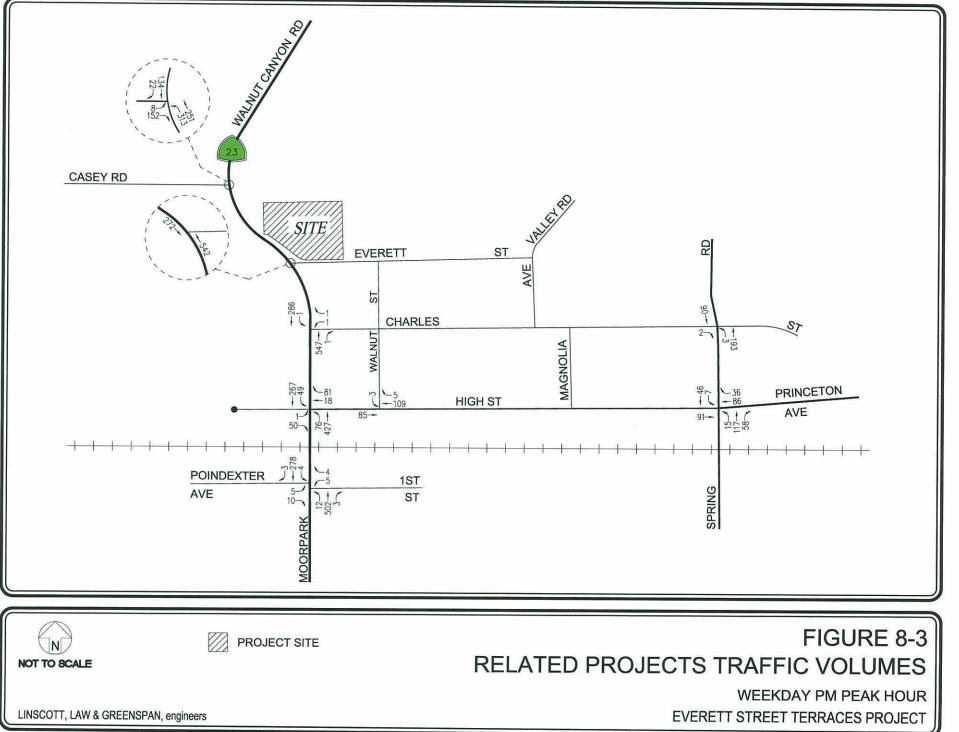
- Daily Trip Rate: 36.13 trips/1006 square feet; 50% inbound/50% outbound
   AM Peak Hour Trip Rate: 3.3 trips/1000 square feet; 61% inbound/30% outbound
   PM Peak Hour Trip Rate: 3.46 trip/1000 square feet; 61% inbound/30% outbound
   ITE Land Use Code 130 (Industrial Park) trip generation average rates
   Daily Trip Rate: 6.96 trips/1000 square feet; 50% inbound/50% outbound
   AM Peak Hour Trip Rate: 84 trips/1000 square feet; 82% inbound/18% outbound
   PM Peak Hour Trip Rate: 84 trips/1000 square feet; 21% inbound/18% outbound

- [8] ITE Land Use Code 130 (Industrial Park) trip generation average rates.
  Daily Trip Rate 63.11 trips/acre; 50% inbound/50% outbound
  AM Peak Hour Trip Rate: 8.55 trips/acre; 83% inbound/17% outbound
  [9] ITE Land Use Code 120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 6120 (Heavy Industrial) trip generation average rates.
  Daily Trip Rate: 729 (hpc)1000 square feet; 50% inbound/50% outbound
  AM Peak Hour Trip Rate: 238 trip 1000 square feet; 50% inbound/11% outbound
  AM Peak Hour Trip Rate: 238 trip 1000 square feet; 50% inbound/45% outbound
  AM Peak Hour Trip Rate: 638 trip 1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 638 trip 1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 038 trip 1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 038 trip 1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 038 trip 1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 037 trips/1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 037 trips/1000 square feet; 55% inbound/45% outbound
  AM Peak Hour Trip Rate: 030 trips/dwelling unit; 54% inbound/45% outbound
  AM Peak Hour Trip Rate: 0.25 trips/0408 inju frighters.





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# 9.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The eight study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis which determines Volume-to-Capacity (v/c) ratio on a critical lane basis. The overall intersection v/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. The Levels of Service vary from LOS A (free flow) to LOS F (jammed condition). As a design constraint for the City of Moorpark, it is intended that a LOS of C or better be maintained. A description of the ICU method and corresponding Levels of Service is provided in *Appendix B*.

### 9.1 Impact Criteria and Thresholds

The relative impact of the added project traffic volumes expected to be generated by the proposed project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the eight study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c relationships and service level characteristics at each study intersection.

The significance of the potential project generated traffic impacts at each study intersection was identified using guidelines included in the City of Moorpark's *Guidelines for Preparing Traffic and Circulation Studies*, 1993. According to the City's guidelines, a LOS degradation of one level or greater attributable to the project will be considered significant enough to require mitigation measures. A LOS degradation of less than one level may be considered significant, depending on circumstances. As a design constraint, it is intended that a LOS of C or better be maintained.

Based on City of Moorpark criteria, lane capacities of 1,500 vehicles per hour (vph) for left-turn and right-turn lanes, 1,600 vph for through lanes, and 2,600 vph for dual left or right turn lanes were used in the ICU calculations. Additionally, a clearance interval of 0.10 is also included in the ICU calculations.

#### 9.2 Traffic Impact Analysis Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

- (a) Existing conditions.
- (b) Condition (a) with completion and occupancy of the proposed project.
- (c) Condition (b) with implementation of project mitigation measures, where necessary.
- (d) Cumulative conditions with completion and occupancy of the related projects and the proposed project.
- (e) Condition (d) with implementation of cumulative mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the eight study intersections.

Summaries of the v/c ratios and LOS values for the study intersections during the AM and PM peak hours are shown in **Table 9–1**. The ICU data worksheets for the analyzed intersections are contained in *Appendix B*.

#### Table 9-1 SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE AM AND PM PEAK HOURS

			[	1]	[2	1			[3]		[4]	1
NO.	INTERSECTION	PEAK HOUR	EXIS V/C	TING LOS	EXISTING PROJ V/C	22 PU (22)	CHANGE V/C [(2)-(1)]	SIGNIF. IMPACT	FUTU CUMUL V/C	(*)(*)*****	FUTU W/CUMU MITIGA V/C	LATIVE
1	Walnut Canyon Road-Moorpark Avenue/	AM	0.530	A	0.530	A	0.000	NO	0.987	E	0.693	B
	Casey Road	PM	0.301	A	0.302	A	0.001	NO	0.577	A	0.577	A
2	Moorpark Avenue/	AM	0.503	A	0.507	A	0.004	NO	0.718	C	0.718	C
	Everett Street	PM	0.314	A	0.329	A	0.015	NO	0.667	B	0.451	A
3	Moorpark Avenue/	AM	0.488	A	0.490	A	0.002	NO	0.737	C	0.737	C
	Charles Street	PM	0.349	A	0.359	A	0.010	NO	0.675	B	0.675	B
4	Moorpark Avenue/	AM	0.610	B	0.617	B	0.007	NO	0.878	D	0.608	B
	High Street	PM	0.651	B	0.654	B	0.003	NO	1.010	F	0.706	C
5	Moorpark Avenue/	AM	0.752	C	0.757	C	0.005	NO	1.063	F	0.633	B
	Poindexter Avenue	PM	0.691	B	0.693	B	0.002	NO	0.901	E	0.544	A
6	Walnut Street/	AM	0.360	A	0.361	A	0.001	NO	0.385	A	0.385	A
	High Street	PM	0.426	A	0.428	A	0.002	NO	0.462	A	0.462	A
7	Spring Road/	AM	0.484	A	0.484	A	0.000	NO	0.492	A	0.492	A
	Charles Street	PM	0.435	A	0.435	A	0.000	NO	0.465	A	0.465	A
8	Spring Road/	AM	0.639	B	0.642	B	0.003	NO	0.813	D	0.763	C
	Princeton Avenue	PM	0.666	B	0.667	B	0.001	NO	0.765	C	0.689	B

# **10.0 TRAFFIC ANALYSIS**

### 10.1 Existing Conditions

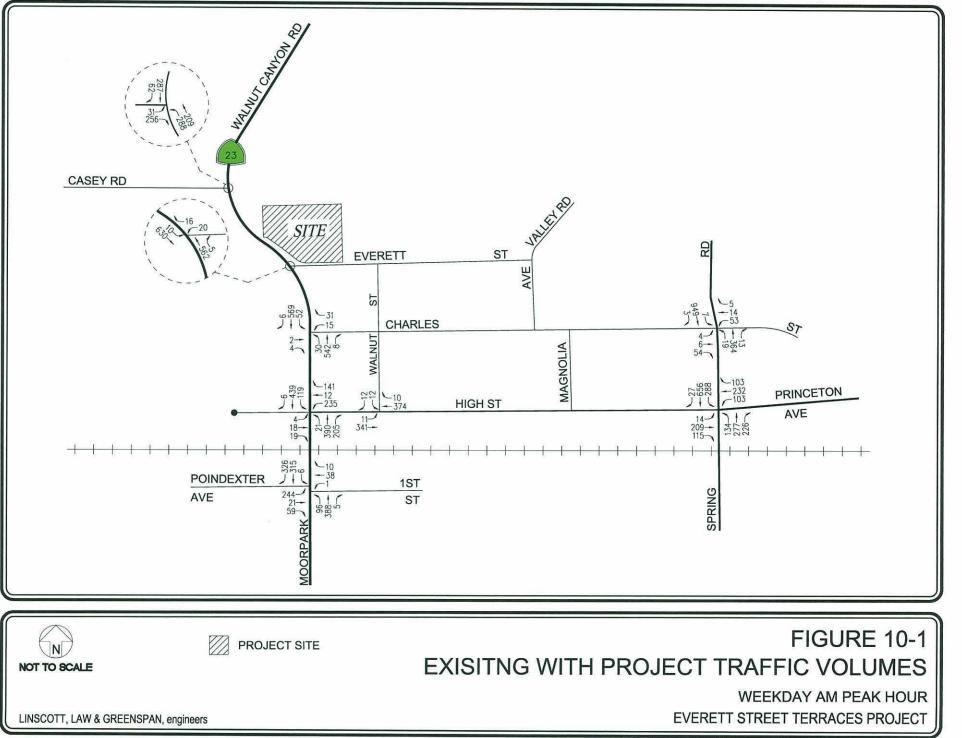
As indicated in column [1] of *Table 9–1*, all eight study intersections are presently operating at LOS C or better during the AM and PM peak hours under existing conditions. As previously mentioned, the existing traffic volumes at the study intersections during the AM and PM peak hours are displayed in *Figures 5–1 and 5–2*, respectively.

### 10.2 Existing With Project Conditions

In order to determine the operating conditions of the street system under existing with project conditions, traffic generated by the proposed project was added to the existing traffic conditions. As shown in column [2] of *Table 9–1*, the study intersections are expected to continue to operate at LOS C or better during the AM and PM peak hours with the addition of project traffic. The existing with project traffic volumes at the study intersections during the AM and PM peak hours are shown in *Figures 10–1* and *10–2*, respectively.

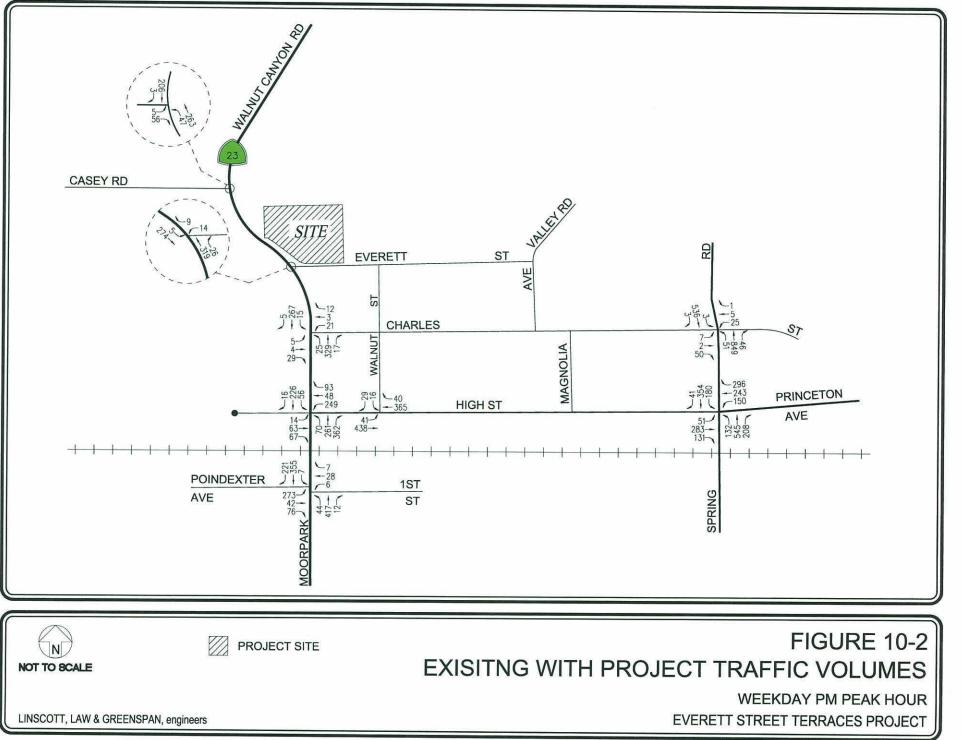
#### 10.3 Project Mitigation

As shown in *Table 9–1*, application of the City's threshold criteria to the "Existing With Project" scenario indicates that no significant project impacts are anticipated during either the AM or PM peak hours. Incremental, but not significant changes in the calculated V/C ratios are noted at the study intersections. Therefore, no traffic mitigation measures are required or recommended.



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# 10.4 Future Cumulative Conditions

The traffic volumes associated with the cumulative conditions reflect the additional traffic due to the construction and occupancy of all foreseeable development projects in the project vicinity, including the proposed project. As previously mentioned, the list of other development projects is summarized in *Table 8–1* (locations shown on *Figure 8–1*).

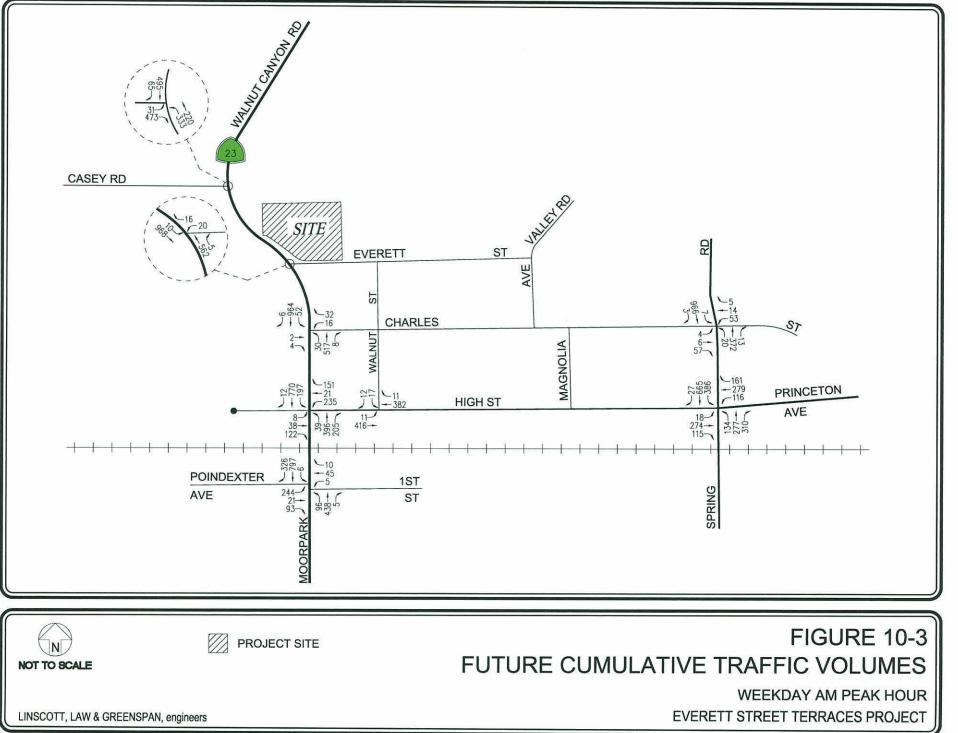
The v/c ratios at all seven study intersections are incrementally increased with the addition of traffic generated by the related projects, as well as the proposed project. As presented in column [3] of *Table 9–1*, three of the seven study intersections are expected to continue operating at LOS C or better during the AM and PM peak hours with the addition of traffic due to the related projects and the proposed project. The following four study intersections are expected to operate at LOS D or worse during the peak hours under the year cumulative conditions as shown below:

Int. No. 1: Walnut Canyon Road-Moorpark Avenue/ Casey Road	AM Peak Hour: $v/c = 0.987$ , LOS E
Int. No. 4: Moorpark Avenue/High Street	AM Peak Hour: $v/c = 0.878$ , LOS D PM Peak Hour: $v/c = 1.010$ , LOS F
Int. No. 5: Moorpark Avenue/Poindexter Avenue	AM Peak Hour: $v/c = 1.063$ , LOS F PM Peak Hour: $v/c = 0.901$ , LOS E
Int. No. 8: Spring Road/High Street-Princeton Avenue	AM Peak Hour: $v/c = 0.813$ , LOS D

The future year cumulative traffic volumes at the study intersections during the AM and PM peak hours are illustrated in *Figures 10–3* and *10–4*, respectively.

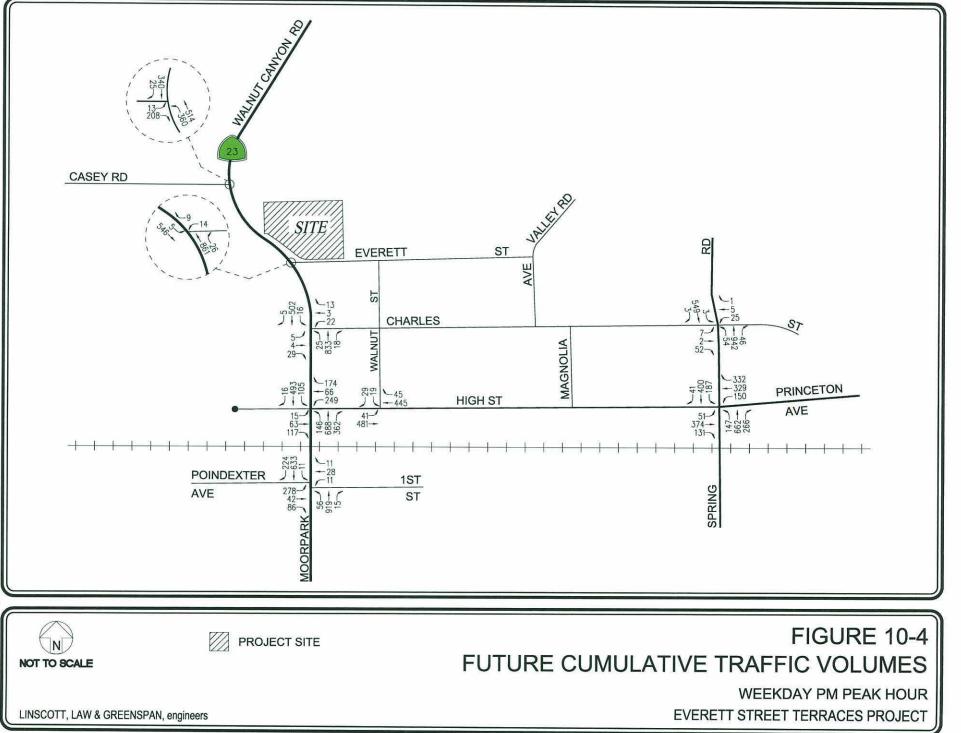
# 10.5 Cumulative Mitigation Measures

As indicated in the previous section, four of the seven study intersections are anticipated to operate at LOS D or worse during the AM and/or PM peak hours in the cumulative conditions. A review of potential mitigation measures, which will improve the overall operating conditions at these locations, have been conducted. In general, off-site improvement measures identified for future cumulative conditions should not be the sole responsibility of an individual project, but rather the development may contribute towards the cost of implementation of such improvements based on the project's share or usage of the facilities being improved. It is recognized that as a design constraint for the City of Moorpark, it is intended that a LOS C or better be maintained to the extent possible. The cumulative mitigation measures recommended at the study intersections are described in the following paragraphs.



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## Intersection No. 1: Walnut Canyon Road-Moorpark Avenue/Casey Road

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure at the Walnut Canyon Road-Moorpark Avenue/Casey Road intersection includes the traffic signal modification to provide an eastbound right-turn overlap phase to coincide with the northbound left-turn phase.

As shown in column [4] of *Table 9–1*, implementation of the recommended cumulative mitigation measures is expected to improve the v/c ratio at this intersection to 0.693 (LOS B) from 0.987 (LOS E) during the AM peak hour.

## Intersection No. 4: Moorpark Avenue/High Street

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure involves the widening of Moorpark Avenue to provide additional lanes between Casey Road and Third Street. The improvement measure at the Moorpark Avenue/High Street intersection includes the installation of additional northbound and southbound lanes as well as a traffic signal modification to provide a westbound right-turn overlap phase to coincide with the southbound left-turn phase. The resulting lane configurations on Moorpark Avenue at the intersection on the northbound approach would consist of one shared left/through lane, one through lane and one right-turn only lane and on the southbound approach would consist of one left-turn only one through lane and one shared through/right only lane.

As shown in column [4] of *Table 9–1*, implementation of the recommended cumulative mitigation measures are expected to improve the v/c ratio at this intersection maintained the v/c ratio to 0.608 (LOS B) from 0.878 (LOS D) during the AM peak hour and to 0.706 (LOS C) from 1.010 (LOS F) during the PM peak hour.

## Intersection No. 5: Moorpark Avenue/Poindexter Avenue

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure involves the widening of Moorpark Avenue to provide additional lanes between Casey Road and Third Street. The improvement measure at the Moorpark/Poindexter Avenue intersection includes the installation of additional southbound and northbound lanes. The resulting lane configuration on Moorpark Avenue for both the southbound and northbound approaches to the intersection would consist of one left-turn lane, one through lane and one shared through/right-turn lane. In addition, the cumulative measure at this location would consist of the conversion of the eastbound right-turn only lane to a shared left/through/right-turn lane. The resulting lane configuration on Moorpark Avenue on the eastbound approach to the intersection would consist of one left-turn lane and one shared left/through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, engineers

As shown in column [4] of *Table 9–1*, implementation of the recommended cumulative mitigation measures is expected to improve the v/c ratio at this intersection to 0.623 (LOS B) from 1.063 (LOS F) during the AM peak hour and to 0.544 (LOS A) from 0.901 (LOS E) during the PM peak hour.

## Intersection No. 8: Spring Road/High Street-Princeton Avenue

The cumulative improvement measure at this location consists of restriping the eastbound approach. The improvement involves the restriping the eastbound right-turn only lane into a shared through and right-turn lane. The resulting lane configuration on High Street on the eastbound approach of the intersection would consist of one left-turn only lane, one through lane, one through lane and one shared through and right-turn lane.

As shown in column [4] of *Table 9–1*, implementation of the recommended cumulative mitigation measures is expected to improve the v/c ratio at this intersection to 0.763 (LOS C) from 0.813 (LOS D) during the AM peak hour.

# 11.0 FAIR SHARE ANALYSIS

The methodology and the calculations of the project's pro-rata percentage at the study intersections which require cumulative regional improvements are summarized in *Table 11–1*. The method used for these calculations was based on the sum of the total weekday morning and afternoon (AM and PM) peak hours project generated traffic volumes on the approaches to each affected study intersection divided by the project plus other development (related) projects traffic volumes on those same approaches for the same AM and PM peak hours. It should be noted that existing traffic volumes are not included in the calculations.

As shown in *Table 11–1*, the proposed project's fair share contribution toward the cumulative regional improvements ranges from 0.4% at the Walnut Canyon Road-Moorpark Avenue/Casey Road intersection to 2.6% at the Spring Road/High Street-Princeton Avenue and Moorpark Avenue/High Street intersections.

Table 11-1 PRO-RATA PERCENTAGE OF CUMULATIVE IMPROVEMENT MEASURES

	Pro-Rata Pero	entage Method	ology	
A project's pro-rata percentage of cumulative AM and PM peak hour traffic volumes. The It should be noted that existing traffic and an	project's percentage share is	derived by divid	ding project traffic by project plus other	
-	the second se	Project Traffic er Related Projec	etc Traffie	
The following equation is not ideal to only it	70	250		
The following equation is provided to assist i roadway mitigation improvement measures:	n calculating the project's p	ro-rata percentag	ge to implement	
	where:	P =	Project's pro-rate percentage for cun measure	nulative mitigation
$P = \frac{Vp}{Vp + (Vc-Ve)}$		Vp =	AM & PM Peak Hour volume at the generated by the project	intersection
		Vc =	Cumulative (other related projects) AM & PM Peak Hour traffic volume	e at the intersection
		Vc =	Existing AM & PM Peak Hour traffi (must be subtracted when included i cumulative AM & PM Peak Hour tra	n
	Study Interse	ction(s) Calculat	tions	
Intersection	<u>AM &amp; PM</u> Traffic Volumes		Calculation	Percentage <u>of Impact</u>
Walnut Canyon Road-Moorpark Avenue/	Vp =5	P =	5	= 0.4 %
Casey Road	Vc = 3,077 Vc = 1,708	9 •	5 (5)+(3.077-1.708)	
	(14)	10 •2	(5) + (3,077 - 1,708) 42 (42) + (4,688 - 3,092)	= 2.6 %
Casey Road	Vc = 1,708 Vp = 42 Vc = 4,688	P =		= 2.6 % = 1.3 %

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# 12.0 CONCLUSIONS

This traffic analysis has been conducted to identify and evaluate the potential impacts of traffic generated by the proposed Everett Street Terraces project. In order to evaluate the potential traffic impacts to the local street system, eight intersections were analyzed to determine changes in operations following occupancy and utilization of the proposed project. It is concluded that the proposed project is not anticipated to create a significant impact at any of the study intersections, thus, no mitigation measures are required or recommended.

The project, along with the identified cumulative development projects, is anticipated to contribute to the degradation of intersection operations in the future cumulative traffic conditions. Potential cumulative improvement measures have been identified that are anticipated to improve the operating conditions. It is anticipated that the proposed project would contribute funds on a fair-share basis towards the implementation of the cumulative measures.

**APPENDIX A** 

MANUAL TRAFFIC COUNT DATA

 $U = 0.05^{12} (\sqrt{9500}, 0.05^{12}, \sqrt{9500}, 0.5, U = 0.055, \sqrt{9500}, 0.5, U = 0.055, \sqrt{9500}, \sqrt{9$ 

## Intersection Turning Movement Prepared by:

## National Data & Surveying Services

Project ID: CA13\_5332\_001 Day: WEDNESDAY City: City of Moorpark Date: 6/12/2013 AM Walnut Canyon Rd-Moorpark Walnut Canyon Rd-Moorpark NS/EW Streets: Casey Rd Casey Rd Ave Ave NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND NL NT NR SL ST SR EL ET ER WL WT WR TOTAL LANES: 0 1 1 0 1 0 1 0 1 0 0 0 7:00 AM 8 16 40 57 0 0 69 7:15 AM 8 20 47 0 0 82 7:30 AM 35 17 65 15 2 1 135 7:45 AM 8:00 AM 77 40 49 12 8 48 234 111 35 47 28 11 88 320 8:15 AM 64 38 58 15 7 82 264 8:30 AM 19 37 54 3 3 23 139 8:45 AM 17 29 34 2 3 4 89 NL NT NR SL ST SR EL ET ER WL WT WR TOTAL **TOTAL VOLUMES :** 339 232 0 0 394 62 33 0 272 0 0 0 1332 APPROACH %'s : 59.37% 40.63% 0.00% 0.00% 86.40% 13.60% 10.82% 0.00% 89.18% #DIV/0! #DIV/0! #DIV/0! PEAK HR START TIME : 745 AM TOTAL PEAK HR VOL : 271 150 0 0 208 58 29 0 241 0 0 0 957 PEAK HR FACTOR : 0.721 0.887 0.682 0.000 0.748

Project ID: CA13\_5332\_001

Day: WEDNESDAY

City:	City of Mo	oorpark				PM	1				Date:	6/12/2013	3
NS/EW Streets:	Walnut C	anyon Rd-I Ave	Moorpark	Walnut Ca	anyon Rd-N Ave		0.000000	Casey Rd			Casey Rd		
	N	ORTHBOUI	ND	S	OUTHBOUN	ND.	E	ASTBOUN	ID	١	WESTBOUI	ND	
LANES:	NL 1	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 0	ER	WL	wr	WR	TOTAL
DANES.	1	1	U	U	1	U	1	0	1	0	0	0	
4:00 PM	2	48			36	4	2		8				100
4:15 PM	4	42			25	0	2 0		7				78
4:30 PM	5 11	48			46	0	0		9				108
4:45 PM	11	60			39	1	3 0		15				129
5:00 PM	13	50			43	0	0		13				119
5:15 PM	15	48			32	2	2		16				115
5:30 PM	6	45			35	1	0		9				96
5:45 PM	6	45			31	2	2		13				99
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	62	386	0	0	287	10	9	0	90	0	0	0	844
APPROACH %'s :	13.84%	86.16%	0.00%	0.00%	96.63%	3.37%	9.09%	0.00%	90.91%	#DIV/0!	#DIV/0!	#DIV/0!	1.0000 1.
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	44	206	0	0	160	3	5	0	53	0	0	0	471
PEAK HR FACTOR :		0.880			0.886			0.806			0.000		0.913

Project ID:	CA13_533	2_002					Day:	WEDNESD	DAY				
City:	City of Mo	orpark				А	м				Date:	6/12/2013	3
NS/EW Streets:	M	oorpark Av	e	M	oorpark Av			Everett St		1	Everett St		
<u>.</u>	N	ORTHBOUN	1D	S	OUTHBOUN	ND.		EASTBOUN	D	W	ESTBOUN	ID	
LANES:	NL	NT 1	NR 0	SL	ST	SR	EL 0	ET	ER	WL	WT	WR	TOTAL
LAINES;	U	1	0	0	1	0	0	0	0	1	0	1	
7:00 AM		25	1	2	45					1		1	75
7:15 AM		26	1	0	56					1		1	85
7:30 AM		52	1	3 1 2 3 1	83					2		2	143
7:45 AM		128	0	1	100					1		3	233
8:00 AM		137	1	2	134				1	1		6	281
8:15 AM		91	0 3 0	3	140					0		2	236
8:30 AM		59	3	1	74					4		1	142
8:45 AM		44	0	0	39					3		0	86
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	562	7	12	671	0	0	0	0	13	0	16	1281
APPROACH %'s :	0.00%	98.77%	1.23%	1.76%	98.24%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	44.83%	0.00%	55.17%	
PEAK HR START TIME :	730	AM											TOTAL
PEAK HR VOL :	0	408	2	9	457	0	0	0	0	4	0	13	893
PEAK HR FACTOR :		0.743			0.815			0.000			0.607		0.794

CONTROL: 1-Way Stop (WB)

Project ID: (	CA13_533	2_002									Day:	WEDNESD	YAY
City: (	City of Mo	orpark				Р	м				Date:	6/12/2013	3
NS/EW Streets:	M	oorpark Av	e	M	oorpark Av	a state of		Everett St		I	Everett St		
	N	ORTHBOUM	ND.	S	OUTHBOUM	١D	1	EASTBOUN	1D	W	ESTBOUN	ID	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 0	ER 0	WL 1	WT 0	WR 1	TOTAL
4:00 PM		51	2	0	46					3		0	102
4:15 PM		50	3	0	35					3		2	93
4:30 PM		56	2	1	56					2		1	118
4:45 PM		73	1	1	54					0		2	131
5:00 PM		60	2	1	56					2		3	124
5:15 PM		62	2 5 2	0	49					3		2	121
5:30 PM		53		0	43					3		2	103
5:45 PM		47	5	1	44					3		0	100
X	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	452	22	4	383	0	0	0	0	19	0	12	892
APPROACH %'s :	0.00%	95.36%	4.64%	1.03%	98.97%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	61.29%	0.00%	38.71%	1
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	0	251	10	3	215	0	0	0	0	7	0	8	494
PEAK HR FACTOR :		0.882			0.956			0.000			0.750		0.943

CONTROL: 1-Way Stop (WB)

Project ID: CA13\_5332\_003

Day: WEDNESDAY

City: (	City of Mo	orpark				AN	4				Date:	6/12/2013	3
NS/EW Streets:	М	oorpark Av	e	M	oorpark Av			Charles St		(	Charles St		
	N	ORTHBOU	ND	S	OUTHBOUN	ND	E	ASTBOUN	D	W	ESTBOUN	ID	
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	2 4 10 16 3 5 4 5	24 27 49 115 129 85 62 43	2 4 0 3 1 4 1	3 2 15 10 14 10 0	42 56 82 84 124 122 71 41	0 0 1 2 2 1 1		0 0 1 0 1 1 0	1 1 0 2 0 2 2 2	9 8 10 6 2 1 5 4	0 0 1 0 0 0 0	1 5 12 9 5 3 1	84 103 160 249 284 236 163 98
TOTAL VOLUMES : APPROACH %'s :	NL 49 8.19%	NT 534 89.30%	NR 15 2.51%	SL 56 8.18%	ST 622 90.80%	SR 7 1.02%	EL 0 0.00%	ET 3 27.27%	ER 8 72.73%	WL 45 54.22%	WT 1 1.20%	WR 37 44.58%	TOTAL 1377
PEAK HR START TIME : PEAK HR VOL : PEAK HR FACTOR :	745 28	AM 391 0.791	8	49	401 0.826	6	0	2 0.500	4	14	0	29	TOTAL 932 0.820

CONTROL: 2-Way Stop (EB,WB)

# Intersection Turning Movement Prepared by:

# **National Data & Surveying Services**

Project ID: (	CA13_533	32_003									Day:	WEDNES	DAY
City: (	City of Mo	oorpark				PI	4				Date:	6/12/2013	3
NS/EW Streets:	M	oorpark Av	e	M	oorpark Av	e		Charles St	S. and	C	Charles St		
	N	ORTHBOUI	ND.	S	OUTHBOUM	ND	E	ASTBOUN	D	W	ESTBOUN	ID	
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL
4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM 5:45 PM	9 5 8 5 3 4 4 4 <b>NL</b> 46 8.63%	53 51 57 66 60 64 54 49 <b>NT</b> 454 85.18%	3 3 4 6 4 2 6 5 5 NR 33 6.19%	4 3 6 0 2 2 3 SL 26 6,42%	42 36 52 45 55 52 44 43 ST 369 91.11%	2 2 1 2 1 1 1 0 1 \$ \$ \$ 8 10 2 4770	0 1 2 1 1 0 1 EL 7	0 2 1 1 2 0 3 3 ET 12 12 2002	10 11 6 11 7 3 3 17 ER 68	8 5 10 4 6 5 5 5 WL 43 6	2 0 1 1 1 0 0 0 0 0 0	0 1 1 6 1 3 2 3 WR 17 7 20 150/	133 120 138 164 141 137 123 134 TOTAL 1090
			0.19%	0.42%	91.11%	2.47%	8.05%	13.79%	78.16%	66.15%	7.69%	26.15%	
PEAK HR START TIME : PEAK HR VOL : PEAK HR FACTOR :	430 24	247 0.897	16	14	204 0.945	5	5	4 0.643	27	20	3 0.500	11	TOTAL 580 0.884

CONTROL: 2-Way Stop (EB,WB)

Project ID: CA13\_5332\_004

Day: WEDNESDAY

City:	City of Mc	orpark				A	1				Date:	6/12/2013	3
NS/EW Streets:	М	oorpark Av	/e	M	oorpark Av	I		High St			High St		
	N	ORTHBOU	ND	S	DUTHBOUN	1D	E	ASTBOUN	D	W	ESTBOUN	ID	
LANES:	NL 0.5	NT 0.5	NR 1	SL 1	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	2 5 4 6 3 7 5 7	19 20 33 91 98 60 41 45	21 29 54 46 52 41 49 35	11 6 15 20 34 35 16 9	41 55 82 64 88 79 77 38	1 0 2 2 0 2 2 2 2	0 1 2 0 0 2 0 0	2 0 4 7 2 3 2	1 4 3 9 1 5 7 4	46 39 76 69 42 34 54 34	2 3 3 1 4 3 5	7 12 22 32 37 40 26 10	153 174 300 346 363 311 283 191
TOTAL VOLUMES : APPROACH %'s :	NL 39 5.05%	NT 407 52.65%	NR 327 42.30%	SL 146 21.44%	ST 524 76.95%	SR 11 1.62%	EL 5 7.94%	ET 24 38.10%	ER 34 53.97%	WL 394 65.23%	WT 24 3.97%	WR 186 30.79%	TOTAL 2121
PEAK HR START TIME : PEAK HR VOL :	730 20	AM282	193	104	313	6 I	4	17	10	224		121	TOTAL
PEAK HR FACTOR :	20	0.809	193	104	0.867	D	4	17 0.750	18	221	11 0.873	131	1320 0.909

## Intersection Turning Movement Prepared by:

# National Data & Surveying Services

Project ID: CA13\_5332\_004 Day: WEDNESDAY City: City of Moorpark Date: 6/12/2013 PM NS/EW Streets: Moorpark Ave Moorpark Ave High St High St NORTHBOUND SOUTHBOUND EASTBOUND WESTBOUND NL NT NR SL ST SR EL ET ER WL WT WR TOTAL LANES: 0.5 0.5 0.5 0.5 4:00 PM 71 4:15 PM 2 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM NL NT NR SL ST SR EL ET ER WL WT WR TOTAL **TOTAL VOLUMES :** 72.59% APPROACH %'s : 9.56% 33.69% 56.75% 4.18% 10.43% 38.70% 23.22% 50.87% 67.69% 11.75% 20.56% PEAK HR START TIME : 430 PM TOTAL PEAK HR VOL : 0.907 0.892 PEAK HR FACTOR : 0.750 0.889 0.927

Project ID: CA13\_5332\_005

Day: WEDNESDAY

City:	City of Mo	orpark				A	м				Date:	6/12/2013	3
NS/EW Streets:	M	oorpark Av	e	Mo	oorpark Av			exter Ave-	1st St	Poinde	exter Ave-:	1st St	
	N	ORTHBOUI	ND	S	DUTHBOUI	ND	E	ASTBOUN	D	۷	VESTBOUN	ID	
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 0	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	6 7 20 23 14 33 16 11	29 34 57 89 77 58 53 38	0 2 1 2 1 1 0 2	1 0 2 1 1 2 1	37 38 45 47 72 59 62 43	58 58 118 84 57 48 78 31	28 26 64 64 66 36 39 30	0 3 8 2 3 7 7 2	8 6 9 10 20 17 43 19	1 0 0 0 1 0 0	9 12 14 8 5 9 9 1	0 0 1 4 2 2 0 2	177 186 339 335 318 272 309 180
TOTAL VOLUMES : APPROACH %'s :	NL 130 22.65%	NT 435 75.78%	NR 9 1.57%	SL 10 1.06%	ST 403 42.65%	SR 532 56.30%	EL 353 68.28%	ET 32 6.19%	ER 132 25.53%	WL 2 2.50%	WT 67 83.75%	WR 11 13.75%	TOTAL 2116
PEAK HR START TIME : PEAK HR VOL :	730 . 90	AM 281	5	6	223	307	230	20	56	1	36	9	TOTAL 1264
PEAK HR FACTOR :		0.825			0.812			0.860			0.767		0.932

Project ID: CA13\_5332\_008

Day: WEDNESDAY

City:	City of Mo	orpark				AN	4				Date:	6/12/2013	3
NS/EW Streets:		Spring Rd		j.	Spring Rd			St-Princeto	n Ave	High S	it-Princeto	n Ave	
<u></u>	N	ORTHBOU	ND	S	OUTHBOUN	D	E	ASTBOUN	D	V	VESTBOUN	ID	
LANES:	NL 1	NT 1.5	NR 0.5	SL 1	<b>ST</b> 1.5	SR 0.5	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:30 AM	11 9 11 30 37 33 25 14	37 50 34 47 64 42 48 38	28 35 41 42 59 50 62 51	30 57 66 79 57 66 69 49	96 110 129 123 136 109 107 92	3 8 10 9 5 3 8 7	2 0 1 2 6 3 2 5	20 23 48 48 49 52 44 44	13 5 6 19 32 26 27 17	16 15 21 15 30 31 22	39 48 70 73 41 66 38 48	26 25 21 26 20 23 28 25	321 385 452 519 521 503 489 412
TOTAL VOLUMES : APPROACH %'s :	NL 170 18.93%	NT 360 40.09%	NR 368 40.98%	SL 473 33.12%	ST 902 63.17%	SR 53 3.71%	EL 21 4.25%	ET 328 66.40%	ER 145 29.35%	WL 165	WT 423 54.09%	WR 194 24.81%	TOTAL 3602
PEAK HR START TIME : PEAK HR VOL : PEAK HR FACTOR :	745 / 125	201 0.842	213	271	475 0.914	25	13	193 0.891	104	97	218 0.858	97	TOTAL 2032 0.975

# Intersection Turning Movement Prepared by:

# National Data & Surveying Services

Project ID: CA13\_5332\_005

Day: WEDNESDAY

City:	City of Mc	orpark				PI	м				Date:	6/12/2013	3
NS/EW Streets:	М	oorpark Av	e	M	oorpark Av	re	Poinde	xter Ave-	1st St	Poinde	exter Ave-:	lst St	
	N	ORTHBOUM	ND	S	DUTHBOU	ND	E	ASTBOUN	D	۷	VESTBOUN	ID	
LANES:	NL 1	NT 1	NR 0	<b>SL</b> 1	ST 1	SR 0	EL 1	ET 0	ER 1	WL 1	WT 0.5	WR 0.5	TOTAL
4:00 PM 4:15 PM	10 13	66 78	1 2	3 0	84 63	39 38	55 54	11 5	16 13	0	4	3	292 274
4:30 PM 4:45 PM	8	81 79	3	0 3	81 61	51 54	65 63	5 13 12	22 15	1 2	2	1 1	328 307
5:00 PM 5:15 PM	11 14	78 84	1 4	1 3	72 63	55 48	79 50	7 8	17 18	0 3	11 7	2 3	334 305
5:30 PM 5:45 PM	11 3	69 61	2 4	3 2 4	62 60	47 38	47 46	3 4	13 13	1 1	3 5	3 1	263 240
TOTAL VOLUMES : APPROACH %'s :	NL 78 11.24%	NT 596 85.88%	NR 20 2.88%	SL 16 1.72%	ST 546 58.58%	SR 370 39.70%	EL 459 70.72%	ET 63 9.71%	ER 127 19.57%	WL 8 11.76%	WT 46 67.65%	WR 14 20.59%	TOTAL 2343
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	41	322	11	7	277	208	257	40	72	6	26	7	1274
PEAK HR FACTOR :		0.917 0.932 0.896								0.750		0.954	

Project ID:	CA13_533	2_006									Day: \	WEDNES	YAC
City:	City of Mo	orpark				A	4				Date: 6	5/12/201	3
NS/EW Streets:		Walnut St		1	Walnut St			High St			High St		
	NC	ORTHBOU	ND	SC	OUTHBOU	ND	E	ASTBOUN	D	V	VESTBOUN	D	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0		0	1		4	1	33	0	0	62	0	101
7:15 AM	1		2	1		1	2	42	0	1	51	5	106
7:30 AM	0 0 0 0 0		0	1		3	2	76	0	0	104	3	189
7:45 AM	0		0	5		5	5	71	0	0	92	3	181
8:00 AM	0		0	2		1	2	93	0	0	90	2	190
8:15 AM	0		0	3		2	1	73	1	0	65	1	146
8:30 AM	0		0	4		3	0	67	0	0	75	3	152
8:45 AM	0		0	1		1	1	38	0	0	44	4	89
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	2	18	0	20	14 ΄	493	1	1	583	21	1154
APPROACH %'s :	33.33%	0.00%	66.67%	47.37%	0.00%	52.63%	2.76%	97.05%	0.20%	0.17%	96.36%	3.47%	i I
PEAK HR START TIME :	730 /	AM	1					10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					TOTAL
PEAK HR VOL :	0	0	0	11	0	11	10	313	1	0	351	9	706
PEAK HR FACTOR :		0.000			0.550			0.853			0.841		0.929

1975

CONTROL: 2-Way Stop (NB,SB)

		2.57				n veym	900	1000					
Project ID:	CA13_533	2_006									Day: \	VEDNES	YAY
City:	City of Mo	orpark									Date: 6	5/12/2013	3
	1					PN	1						i.
NS/EW Streets:	1	Walnut St		4	Walnut St			High St			High St		
	N	ORTHBOU	ND	SC	OUTHBOU	ND	E	ASTBOUN	D	V	VESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0			0		7	11	93	1	0	78	12	202
4:15 PM	0			1		6	5	92	0	0	83	4	191
4:30 PM	0			5		8	11	103	0	0	81	14	222
4:45 PM	0			6		6	10	103	0	0	95	9	229
5:00 PM				3		5	9	99	0	0	81	5	202
5:15 PM	1			1		8	9	104	1	0	78	10	212
5:30 PM	0			6		3	0	85	2	0	71	7	174
5:45 PM	0			1		4	3	94	0	2	59	6	169
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	23	0	47	58	773	4	2	626	67	1601
APPROACH %'s :	100.00%	0.00%	0.00%	32.86%	0.00%	67.14%	6.95%	92.57%	0.48%	0.29%	90.07%	9.64%	
PEAK HR START TIME :	430	PM								100			TOTAL
PEAK HR VOL :	1	0	0	15	0	27	39	409	1	0	335	38	865
PEAK HR FACTOR :		0.250	1		0.808			0.985			0.897		0.944

CONTROL: 2-Way Stop (NB,SB)

Project ID: CA13\_5332\_007

Day: WEDNESDAY

City:	City of Mo	orpark				A	1				Date: 6	5/12/2013	3
NS/EW Streets:		Spring Rd			Spring Rd		(	Charles St			Charles St		2 2
	N	ORTHBOU	ND	S	OUTHBOUN	ID	E	ASTBOUN	D	V	VESTBOUN	D	
LANES:	NL 1	NT 1.5	NR 0.5	<b>SL</b> 1	ST 2	SR 0	EL 0.5	<b>ET</b> 0.5	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM	7 3 5 7 4 2 8	58 67 53 65 79 60 75 55	2 3 4 0 5 3 4 2	0 3 1 2 1 1 1	113 156 190 180 162 156 151 115	1 2 0 1 0 0 1 1	0 2 0 2 0 0 3 0	1 2 0 1 3 1 1 0	13 14 10 11 16 21 24 7	10 15 14 11 10 18 8 7	3 1 2 8 2 3 1 2	1 2 1 0 1 1 0	209 270 279 286 286 268 272 198
TOTAL VOLUMES : APPROACH %'s :	NL 39 6.79%	NT 512 89.20%	NR 23 4.01%	SL 10 0.81%	ST 1223 98.71%	SR 6 0.48%	EL 7 5.30%	ET 9 6.82%	ER 116 87.88%	WL 93 75.61%	WT 22 17.89%	WR 8 6.50%	TOTAL 2068
PEAK HR START TIME :	715	AM											TOTAL
PEAK HR VOL :	18	264	12	7	688	3	4	6	51	50	13	5	1121
PEAK HR FACTOR :		0.808			0.914			0.803			0.850	50	0.980

Project ID:	CA13_533	32_007									Day:	WEDNESI	YAC
City: (	City of Mo	oorpark				P	м				Date:	6/12/201	3
NS/EW Streets:		Spring Rd			Spring Rd		(	Charles St			Charles St		
	N	ORTHBOUM	ND	S	OUTHBOUN	VD	E	ASTBOUN	D	V	VESTBOUN	D	
LANES:	NL 1	NT 1.5	NR 0.5	SL 1	ST 2	SR 0	EL 0.5	ET 0.5	ER 0	WL 0.5	WT 0.5	WR 1	TOTAL
4:00 PM	2	135	9	1	71	1	0	0	9	7	1	1	237
4:15 PM	8	153	12	0	64	0	0	0	7	3	1	0	248
4:30 PM	8	162	9	0	121	0	1	1	15	6	0	1	324
4:45 PM	11	183	9 9 9	2 0	90	1	1 2 2 2 4	1	10	6 4 5	1	0	314
5:00 PM	15	153		0	109	2	2	0	14	5	2	0	311
5:15 PM	14	169	16	1	101	0	2	0 3 0	8	9 7	2	0	322
5:30 PM	8	156	13	0	99	1	4	3	9	7	0	2	302
5:45 PM	11	181	16	0	78	0	1	0	7	8	0	1	303
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES : APPROACH %'s :	77 5.27%	1292 88.37%	93 6.36%	4 0.54%	733 98.79%	5 0.67%	12 12.50%	5 5.21%	79 82.29%	49 80.33%	7 11.48%	5 8.20%	2361
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	48	667	43	3	421	3	7	2	47	24	5	1	1271
PEAK HR FACTOR :		0.933			0.882			0.824			0.682		0.981

# Intersection Turning Movement Prepared by:

# **National Data & Surveying Services**

Project ID: CA13\_5332\_008

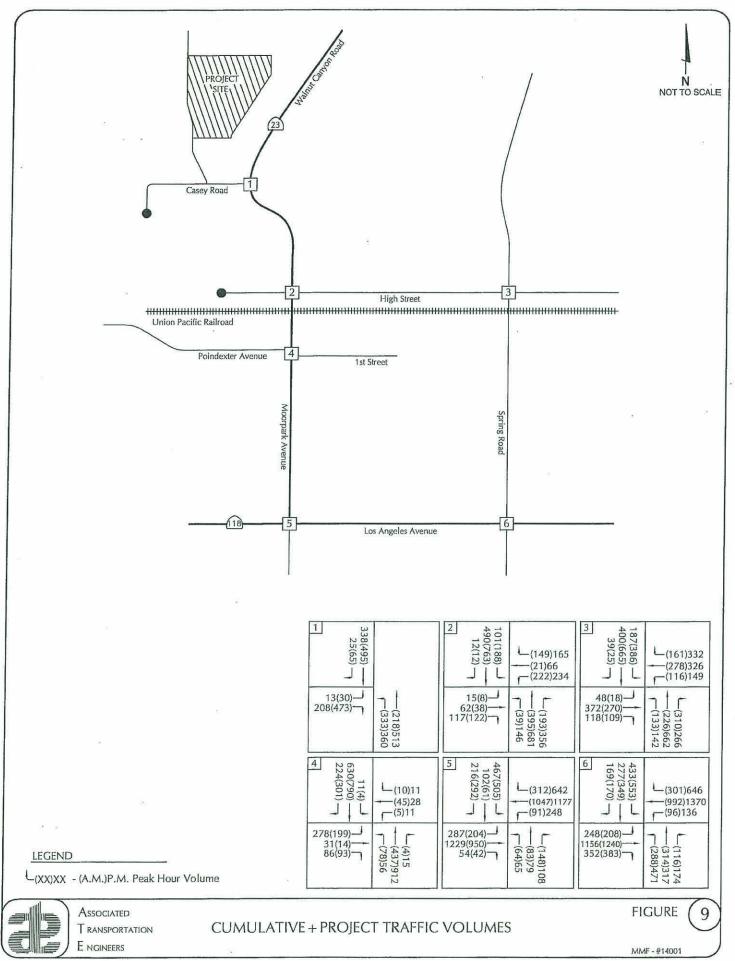
Day: WEDNESDAY

City:	City of Mo	orpark				Р	м				Date:	6/12/2013	l
NS/EW Streets:		Spring Rd			Spring Rd		High S	St-Princeto	n Ave	High S	St-Princeto	n Ave	
-	N	ORTHBOU	ND	S	OUTHBOUN	ND	E	ASTBOUN	D	V	VESTBOUN	ID	
LANES:	NL 1	NT 1.5	NR 0.5	SL 1	<b>ST</b> 1.5	SR 0.5	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM	22 42 32 29 23 36	78 102 100 115 103 110	47 47 50 44 49 53	43 24 46 32 52 40	51 39 90 60 69 59	5 4 12 6 13 8	8 5 11 18 10 9	77 66 52 70 95 48	25 16 22 54 21 25	36 25 30 26 36 49	57 51 43 73 47 63	59 67 67 69 66 77	508 488 555 596 584 577
5:30 PM 5:45 PM	30 31	101 118	47 48	38 35	72 56	8 6	10 21	48 61	23 51	30 26	41 75	70 68	518 596
TOTAL VOLUMES : APPROACH %'s :	NL 245 16.82%	NT 827 56.76%	NR 385 26.42%	SL 310 35.71%	ST 496 57.14%	SR 62 7.14%	EL 92 10.87%	ET 517 61.11%	ER 237 28.01%	WL 258 20.62%	WT 450 35.97%	WR 543 43.41%	TOTAL 4422
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	120	428	196	170	278	39	48	265	122	141	226	279	2312
PEAK HR FACTOR :		0.935			0.823			0.766			0.854		0.970

# APPENDIX B

SUPPLEMENTAL FUTURE CUMULATIVE TRAFFIC COUNT DATA

() 1055 neport 0055; Appendix Covers does



APPENDIX C

ICU AND LEVELS OF SERVICE EXPLANATION ICU DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

## INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersect	ion Capacity Utilization Cha	racteristics
Level of Service	Load Factor	Equivalent ICU
Α	0.0	0.00 - 0.60
В	0.0 - 0.1	0.61 - 0.70
С	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

## SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

#### SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

### SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

### SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

### SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

### SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

20931 Burbank Blvd., Ste C, Woodland Hills, CA 91367 (818) 835.8648 Fax (818) 835.8649

### N-S St:

Walnut Canyon Road/Moorpark Avenue Casey Road E-W St: Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU1

## INTERSECTION CAPACITY UTILIZATION

Walnut Canyon Road/Moorpark Avenue @ Casey Road Peak hr: AM Date: Annual Growth: 2.00%

02/08/2016

		EXIST. TRA	AFFIC		EXISTING I	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	V 'FUTURE	WITH REL	ATED PRO	IECTS	'FUTURE	WITH CUN	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Novement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	288	1500	0.192 *	0	0	288	1500	0.192 *	0	288	1500	0.192 *	45	333	1500	0.222	0	333	1500	0.222
Nb Thru	207	1600	0.129	0	0	209		0.131	0	209	1600	0.131	11	220	1600		Ő	220	1600	0.138
Nb Right	0	0	in and the second	0	0	0		(#):	0	0	0	-	0	0			0	0	0	-
Sb Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	287	1600	0.218 *	0	0	287	1600	0.218 *	0	287	1600	0.218 *	208	495	1600		0	495	1600	
Sb Right	62	0	7.	0	0	62	0	3 <b>5</b> 6	0	62	0	e e	3	65	0		0	65	0	-
Eb Left	31	1500	0.021	0	0	31	1500	0.021	0	31	1500	0.021	0	31	1500	0.021	0	31	1500	0.021
Eb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	
Eb Right	256	1500	0.171	0	0	256	1500	0.171	0	256	1500	0.171	217	473	1500	0.315 *	0	473	1500	
Vb Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000
Vb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	ŏ	0.000
Wb Right	0	0	ŝ	0	0	0	0	950-654 5.A 97.K	0	0	0	5) 5)	0	0	0	T.	0	0	0	-
ellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100
CU .OS			0.530 A					0.530 A				0.530 A				0.987 E				0.693 B

\* Key conflicting movement as a part of ICU1 Counts conducted by NDS

2 Capacity expressed in veh/hour of green

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#### N-S St: Walnut Canyon Road/Moorpark Avenue

E-W St: Casey Road Everett Street Terraces Project / 5-13-0055-1 Project: File: ICU1

## INTERSECTION CAPACITY UTILIZATION

Walnut Canyon Road/Moorpark Avenue @ Casey Road Peak hr: PM Date: Annual Growth: 2.00%

02/08/2016

		EXIST. TRA	FFIC		EXISTING	PLUS PRO	JECT			EXIST. W/F	ROJECT +	MITIGATION	<b>'FUTURE</b>	WITH REL	ATED PRO.	JECTS	'FUTURE	WITH CUN	ULATIVE MI	TIGATION
	1		V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2		Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	47	1500	0.031	0	0	47	1500	0.031	0	47	1500	0.031	313	360	1500	0.240 *	0	360	1500	0.240
Nb Thru	262	1600	0.164 *	1	0	263	1600	0.164 *	0	263	1600	0.164 *	251	514	1600		0	514	1600	
Nb Right	0	0	÷	0	0	0	0		0	0	0	5	0	0		-	Ő	0		
Sb Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000
Sb Thru	204	1600	0.129	0	0	206	1600	0.131	0	206	1600	0.131	134	340	1600		0	340	1600	
Sb Right	3	0		0	0	3	0	1001	0	3	0	and the second s	22	25	0	2	0	25		
Eb Left	5	1500	0.004	0	0	5	1500	0.004	0	5	1500	0.004	8	13	1500	0.009	0	13	1500	0.009
Eb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	8	0	0	0.000	0	0	0	
Eb Right	56	1500	0.037 *	0	0	56	1500	0.037 *	0	56	1500	0.037 *	152	208	1500	0.139	0	208	1500	
Wb Left	0	0	• 000.0	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000
Wb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0			0	0	0	0.000
Wb Right	0	0	<u>0</u> :	0	0	0	0	5	0	0	0	R	0	0	0		0	0	0	-
Yellow Allow	vance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100
CU			0.301					0.302				0.302				0.577				0.577
OS			A					A				A				A				A

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

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#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue	
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E-W St: Everett Street Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU2 Moorpark Avenue @ Everett Street Peak hr: AM Annual Growth: 2.00%

Date:

02/08/2016

EXIST. TRAFFIC **EXISTING PLUS PROJECT** EXIST. W/PROJECT + MITIGATION 'FUTURE WITH RELATED PROJECTS 'FUTURE WITH CUMULATIVE MITIGATION 1 2 V/C Added Shifted Total V/C Added Total 2 V/C Added Total 2 V/C Added Total 2 V/C Movement Volume Capacity Ratio Volume Vol. Volume Capacity Ratio Volume Volume Capacity Ratio Volume Volume Capacity Ratio Volume **Volume Capacity** Ratio Nb Left 0 0 0.000 0 0 0 0 0.000 \* 0 0 0 0.000 \* 0 0 0 0.000 \* 0 0 0 0.000 Nb Thru 562 1600 0.353 0 0 562 1600 0.355 0 562 1600 0.355 0 562 1600 0.355 0 562 3200 0.177 Nb Right 2 0 3 0 5 -0 100 0 5 0 0 5 0 -0 -5 0 ¥. Sb Left 10 1500 0.006 0 0 10 1500 0.006 0 10 1500 0.006 0 10 1500 0.006 0 1500 0.006 10 Sb Thru 630 1600 0.394 \* 0 0 630 1600 0.394 630 1600 0.394 \* 0 338 1600 0.605 968 0 968 1600 0.605 Sb Right 0 0 0 0 0 -0 0 0 0 . 0 0 0 -0 0 0  $\Xi$ Eb Left 0 0 0.000 \* 0 0 0 0 0.000 0 0 0 0.000 0 0 0.000 0 0 0 0 0.000 Eb Thru 0 0 0.000 0 0 0 0 0.000 0 0 0 0.000 0 0 0 0.000 0 0 0 0.000 Eb Right 0 0 0 0 0 2 0 0 0 0 0 0 0 0 -0 0 --Wb Left 4 1500 0.003 16 0 20 1500 0.013 0 20 1500 0.013 0 20 1500 0.013 0 20 1500 0.013 Wb Thru 0 0 0.000 0 0 0 0 0.000 0 0 0 0.000 0 0 0 0.000 0 0 0.000 0 Wb Right 14 1500 0.009 \* 2 0 16 1500 0.011 0 16 1500 0.011 0 16 1500 0.011 0 16 1500 0.011 Yellow Allowance: 0.100 \* 0.100 \* 0.100 \* 0.100 \* 0.100 ICU 0.503 0.507 0.507 0.718 0.718 LOS A A A C С

\* Key conflicting movement as a part of ICU

1 Counts conducted by NDS

2 Capacity expressed in veh/hour of green

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### INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue
14-0 01.	woorpark Avenue

E-W St: Everett Street Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU2

Moorpark Avenue @ Everett Street Peak hr: PM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	AFFIC		EXISTING	PLUS PRC	JECT			EXIST. W/F	ROJECT +	MITIGATION	'FUTURE	WITH REL	ATED PRO	JECTS	'FUTURE	WITH CUN	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
lovement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio
lb Left	0	0	0.000	0	0	C	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Ib Thru	319			0	0	319		0.216 *	0	319	1600	0.216 *	542	861	1600		0	861	3200	
lb Right	11	0	1	15	0	26		1520	0	26	0	2	0	26			Ő	26	0200	
b Left	3	1500	0.002	2	0	5	1500	0.003 *	0	5	1500	0.003 *	0	5	1500	0.003 *	0	5	1500	0.003
b Thru	274	1600	0.171	0	0	274	1600	0.171	0	274	1600	0.171	272	546		0.341	0	546	1600	
b Right	0	0		0	0	0	0	5 <b>-</b> 0	0	0	0	2	0	0			0	0	0	
b Left	0	0	0.000 *	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
b Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000				
b Right	0	0	8	0	0	0	0	576	0	0	0	E.	0	0 0 0	0		0 0	0 0	0	
Vb Left	7	1500	0.005	7	0	14	1500	0.010	0	14	1500	0.010	0	14	1500	0.010	0	14	1500	0.010
Vb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0			0	0	0	
Vb Right	8	1500	0.006 *	1	0	9	1500	0.006	0	9	1500	0.006	0	9	1500	0.006	0	9	1500	
ellow Allow	/ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *
CU OS			0.314 A					0.329 A				0.329 A				0.667 B				0.451

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

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#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue
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E-W St: Charles Street Project: Everett Street Terraces Project / 5-13-0055-1

File: ICU3 Moorpark Avenue @ Charles Street Peak hr: AM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	FFIC		EXISTING I	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	FUTURE	WITH REL	ATED PRO.	JECTS	'FUTURE	WITH CUM	<b>IULATIVE MI</b>	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total		V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio
Nb Left	30	1500	0.020	0	0	30	1500	0.020 *	0	30	1500	0.020 *	0	30	1500	0.020 *	0	30	1500	0.020
Nb Thru	539	1600	0.342 *	3	0	542	1600	0.344	0	542	1600	0.344	13	517	1600	0.328	Ő	517	1600	
Nb Right	8	0	5	0	0	8	0	19	0	8	0		0	8		-	Ő	8	0	
Sb Left	52	1500	0.035 *	0	0	52	1500	0.035	0	52	1500	0.035	0	52	1500	0.035	0	52	1500	0.035
Sb Thru	553	1600	0.350	16	0	569	1600	0.360 *	0	569	1600	0.360 *	415	964	1600	0.606 *		964	1600	
Sb Right	6	0	a.	0	0	6	0	181 181	0	6	0	-	0	6		-	0 0	6		
Eb Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Thru	2	1600	0.001 *	0	0	2	1600	0.001 *	0	2	1600	0.001 *	0	2		0.001 *	0	2		
Eb Right	4	1500	0.003	0	0	4	1500	0.003	0	4	1500	0.003	0	2 4	1500	0.003	0	4	1500	
Nb Left	15	0	0.009 *	0	0	15	0	0.009 *	0	15	0	0.009 *	1	16	0	0.010 *	0	16	0	0.010
Nb Thru	0	1600	0.009	0	0	0	1600	0.009	0	0	1600	0.009	0	0	1600	0.010	0	0	1600	
Wb Right	31	1500	0.021	0	0	31	1500	0.021	0	31	1500	0.021	1	32	1500	0.021	0	32	1500	
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100
CU _OS			0.488 A					0.490 A				0.490 A				0.737 C				0.737 C

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

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#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue
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E-W St: Charles Street

Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU3

Moorpark Avenue @ Charles Street Peak hr: PM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	FFIC	EXISTING PLUS PROJECT						EXIST. W/	PROJECT +	MITIGATION	ITIGATION 'FUTURE WITH RELATED PROJECT				'FUTURE	ULATIVE MI	TIVE MITIGATION	
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total		V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	25	1500	0.017	0	0	25	1500	0.017	0	25	1500	0.017	0	25	1500	0.017	0	25	1500	0.017
Nb Thru	314	1600	0.207 *	15	0	329		0.216 *	0	329	1600	0.216 *	547	833			0	833	1600	
Nb Right	17	0	2	0	0	17	0		0	17	0	-	1	18		-	0	18		-
Sb Left	15	1500	0.010 *	0	0	15	1500	0.010 *	0	15	1500	0.010 *	1	16	1500	0.011 *	0	16	1500	0.011
Sb Thru	260	1600	0.166	7	0	267	1600	0.170	0	267	1600	0.170	286	502		0.317	0	502	1600	
Sb Right	5	0	н	0	0	5	0	142	0	5	0	2	0	5		÷	0	5	0	-
Eb Left	5	0	0.003	0	0	5	0	0.003	0	5	0	0.003	0	5	0	0.003	0	5	0	0.003
Eb Thru	4	1600	0.006	0	0	4	1600	0.006	0	4	1600	0.006	0	4	1600	0.006	0	4	1600	
Eb Right	29	1500	0.019 *	0	0	29	1500	0.019 *	0	29	1500	0.019 *	0	29		0.019 *	0	29	1500	
Nb Left	21	0	0.013 *	0	0	21	0	0.013 *	0	21	0	0.013 *	1	22	0	0.014 *	0	22	0	0.014
Nb Thru	3	1600	0.015	0	0	3	1600	0.015	0	3	1600	0.015	0	22 3	1600	0.016	0	22 3	1600	0.016
Wb Right	12	1500	0.008	0	0	12	1500	0.008	0	12	1500	0.008	1	13	1500	800.0	0	13	1500	
Yellow Allov	wance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *
CU _OS			0.349 A					0.359 A				0.359 A				0.675 B				0.675 B

Key conflicting movement as a part of ICU
Counts conducted by NDS
Capacity expressed in veh/hour of green

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## INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue
E 111 C.	

E-W St: High Street Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU4

Moorpark Avenue @	High Street
Peak hr:	AM
Annual Growth:	2.00%

02/08/2016

Date:

		EXIST. TRA	FFIC	EXISTING PLUS PROJECT						EXIST. W/PROJECT + MITIGATION 'FUTURE				WITH REL	ATED PRO	JECTS	'FUTURE	WITH CUMULATIVE MITIGAT		TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio
Nb Left	21	0	0.013	0	0	21	0	0.013	0	21	0	0.013	18	39	0	0.024 *	0	39	0	0.012
Nb Thru	389	1600	0.257 *	1	0	390	1600	0.257 *	0	390	1600	0.257 *	6	396			0			0.136
Nb Right	205	1500	0.137	0	0	205	1500	0.137	0	205	1500	0.137	0	205			0			0.137
Sb Left	110	1500	0.074 *	9 7	0	119	1500	0.080 *	0	119	1500	0.080 *	78	197	1500	0.131	0	197	1500	0.131
Sb Thru	432	1600	0.274	7	0	439	1600	0.278	0	439	1600	0.278	331	770		0.489 *	Ő			0.244
Sb Right	6	0	ã	0	0	6	0	120	0	6	0		6	12			0	12		-
Eb Left	4	0	0.003	0	0	4	0	0.003	0	4	0	0.003	4	8	0	0.005	0	8	0	0.005
Eb Thru [3]	18	1600	0.026 *	0	0	18	1600	0.026 *	0	18	1600	0.026 *	20	38	1600	0.105 *	0	38		0.029
Eb Right	19	0	0	0	0	19	0	50765035 1072	0	19	0	5. State 1997	103	122	0	-	0	122		
Wb Left	235	0	0.147	0	0	235	0	0.147	0	235	0	0.147	0	235	0	0.147	0	235	0	0.147
Wb Thru [3]	12	1600	0.154 *	0	0	12	1600	0.154 *	0	12	1600	0.154 *	9	21	1600	0.160 *	0	21	1600	
Wb Right	139	1500	0.093	2	0	141	1500	0.094	0	141	1500	0.094	10	151	1500	0.101	0	151	1500	
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *
CU LOS		]	0.610 B					0.617 B				0.617 B				0.878 D				0.608 B

\*Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Eastbound and Westbound operate with split phasing.

#### LINSCOTT, LAW & GREENSPAN, ENGINEERS

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#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Moorpark Avenue	
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E-W St: High Street Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU4

Moorpark Avenue @ High Street Peak hr: PM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TR	AFFIC		EXISTING	PLUS PRO	JECT			EXIST. W/F	ROJECT +	MITIGATION	V'FUTURE	WITH REL	ATED PRO	JECTS	'FUTURE WITH CUMULAT			ATIVE MITIGATION	
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	00000000	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio	Volume		Capacity	Ratio	
Nb Left	70	0	0.044	0	0	70	0	0.044	0	70	0	0.044	76	146	0	0.091	0	146	0	0.046	
Nb Thru	254	1600	0.202	0	0	261	1600	0.207	0	261	1600	0.207	427	688	1600	0.521 *	0	688	3200	0.261	
Nb Right	362	1500	0.241 *	0	0	362	1500	0.241 *	0	362	1500	0.241 *	0	362	1500		0 0	362			
Sb Left	52	1500	0.035 *	4	0	56	1500	0.037 *	0	56	1500	0.037 *	49	105	1500	0.070 *	0	105	1500	0.070	
Sb Thru	223	1600	0.149	3	0	226	1600	0.151	0	226	1600	0.151	267	493	1600	0.318	0	493	3200	0.159	
Sb Right	16	0		0	0	16	0	1.00	0	16	0	2	0	16		2	0	16		-	
Eb Left	14	0	0.009	0	0	14	0	0.009	0	14	0	0.009	1	15	0	0.009	0	15	0	0.009	
Eb Thru [3]	63	1600	0.090 *	0	0	63	1600	0.090 *	0	63	1600	0.090 *	0	63	1600	0.122 *	0	63	1600	0.049	
Eb Right	67	0	0	0	0	67	0	2#3	0	67	0	#.	50	117	0	*	0	117	1500		
Wb Left	249	0	0.156	0	0	249	0	0.156	0	249	0	0.156	0	249	0	0.156	0	249	0	0.156	
Wb Thru [3]	48	1600	0.186 *	0	0	48	1600	0.186 *	0	48	1600	0.186 *	18	66	1600	0.197 *	0	66	1600		
Wb Right	84	1500	0.056	9	0	93	1500	0.062	0	93	1500	0.062	81	174	1500	0.116	0	174	1500	0.046	
Yellow Allov	vance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100	
CU LOS			0.651 B					0.654 B				0.654 B				1.010 F				0.706 C	

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS

Capacity expressed in veh/hour of green
 Eastbound and Westbound operate with split phasing.

#### LINSCOTT, LAW & GREENSPAN, ENGINEERS

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N-S St:	Moorpark Avenue	
14-3 31.	woorpark Avenue	

Poindexter Avenue/1st Street Everett Street Terraces Project / 5-13-0055-1 E-W St: Project:

File: ICU5

#### INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Poindexter Avenue/1st Street Peak hr: AM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	FFIC		EXISTING	PLUS PRO	JECT			EXIST. W/F	ROJECT +	MITIGATION	<b>FUTURE</b>	WITH REL	ATED PRO	JECTS	FUTURE	WITH CUN	ULATIVE MI	VE MITIGATION	
	1	2	0.0000000	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total		V/C	Added	Total	2		
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	
Nb Left	96	1500	0.064 *	0	0	96	1500	0.064 *	0	96	1500	0.064 *	0	96	1500	0.064 *	0	96	1500	0.064	
Nb Thru	387	1600	0.245	1	0	388		0.246	0	388	1600	0.246	50	438	1600		0	438	3200		
Nb Right	5	0		0	0	5		36	0	5	0	-	0	5			0	-5	0200	-	
Sb Left	6	1500	0.004	0	0	6	1500	0.004	0	6	1500	0.004	0	6	1500	0.004	0	6	1500	0.004	
Sb Thru	308	1600	0.396 *	7	0	315	1600	0.400 *	0	315	1600	0.400 *	482	797	1600		0	797	3200		
Sb Right	326	0	-	0	0	326	0	1.5	0	326	0	*	0	326	0		Ő	326	0	-	
Eb Left	244	1500	0.163 *	0	0	244	1500	0.163 *	0	244	1500	0.163 *	0	244	1500	0.163 *	0	244	0	0.079	
Eb Thru	21	1600	0.050	0	0	21	1600	0.050	0	21	1600	0.050	0	21	1600	0.071	0	21	3100		
Eb Right	59	0	E.	0	0	59	0	-95 -	0	59	0	R	34	93	0	¥	0	93	0	2	
Wb Left	1	1500	0.001	0	0	1	1500	0.001	0	1	1500	0.001	4	5	1500	0.003	0	5	1500	0.003	
Wb Thru	38	1600	0.030 *	0	0	38	1600	0.030 *	0	38	1600	0.030 *	7	45	1600	0.034 *	0	45	1600		
Wb Right	10	0		0	0	10	0	1751 1775	0	10	0	1960-044 K.O	0	45 10	0	-	0 0	10	0	-	
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100	
CULOS			0.752 C					0.757 C				0.757 C				1.063 F				0.633 B	

\* Key conflicting movement as a part of ICU 1 Counts conducted by NDS 2 Capacity expressed in veh/hour of green

#### LINSCOTT, LAW & GREENSPAN, ENGINEERS

20931 Burbank Blvd., Ste C, Woodland Hills, CA 91367 (818) 835.8648 Fax (818) 835.8649

N-S St: Moorpark Avenue

E-W St: Poindexter Avenue/1st Street

Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU5

#### INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Poindexter Avenue/1st Street Peak hr: PM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	AFFIC		EXISTING	PLUS PRO	JECT			EXIST. W/	ROJECT +	MITIGATION	<b>'FUTURE</b>	WITH REL	ATED PROJ	ECTS	'FUTURE WITH CUMULATIV			VE MITIGATION	
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2		
Novement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	
Vb Left	44	1500	0.029 *	0	0	44	1500	0.029 *	0	44	1500	0.029 *	12	56	1500	0.037	0	56	1500	0.037	
Nb Thru	410	1600	0.263	7	0	417	1600	0.268	0	417	1600	0.268	502	919	1600		Ő	919			
Nb Right	12	0	2	0	0	12	0		0	12	0		3	15	0	2	0	15			
Sb Left	7	1500	0.005	0	0	7	1500	0.005	0	7	1500	0.005	4	11	1500	0.007 *	0	11	1500	0.007	
Sb Thru	352	1600	0.358 *	3	0	355	1600	0.360 *	0	355	1600	0.360 *	278	633	1600	0.536	0	633	3200	0.268	
Sb Right	221	0		0	0	221	0	101	0	221	0	2	3	224	0	2	0	224	0		
Eb Left	273	1500	0.182 *	0	0	273	1500	0.182 *	0	273	1500	0.182 *	5	278	1500	0.185 *	0	278	0	0.090	
b Thru	42	1600	0.074	0	0	42	1600	0.074	0	42	1600	0.074	0	42	1600	0.080	0	42			
Eb Right	76	0	~	0	0	76	0	7.85 7.85	0	76	0	-	10	86	0	90.000.000 4	0 0	86		-	
Vb Left	6	1500	0.004	0	0	6	1500	0.004	0	6	1500	0.004	5	11	1500	0.007	0	11	1500	0.007 *	
Nb Thru	28	1600	0.022 *	0	0	28	1600	0.022 *	0	28	1600	0.022 *	0	28	1600	0.024 *	0	28		0.024	
Vb Right	7	0	2002 2012	0	0	7	0	32	0	7	0	ā	4	11	0	5	0	11	0		
fellow Allow	/ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *	
CU .OS			0.691 B					0.693 B				0.693 B				0.901 E				0.544 A	

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS 2 Capacity expressed in veh/hour of green

#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Walnut Street
E-W St:	High Street
Project:	Everett Street Terraces Project / 5-13-0055-1
File:	ICU6

Walnut Street @ Hi	gh Street	
Peak hr:	AM	Date:
Annual Growth:	2.00%	

02/08/2016

		EXIST. TRA	FFIC		EXISTING I	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	V'FUTURE	WITH REL	ATED PRO	JECTS	'FUTURE	WITH CUM	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio
Nb Left	0	0	• 000.0	0	0	C	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	0	0	0.000	0	0	C	0	0.000	0	0	0	0.000	0				0	0	0	100000000000000000000000000000000000000
Nb Right	0	0	and the second	0	0	C	0	100	0	0	0	-	0	0	0		0	Ő	Ő	-
Sb Left	12	0	0.007	0	0	12	0	0.007	0	12	0	0.007	5	17	0	0.010	0	17	0	0.010
Sb Thru	0	1600	0.015 *	0	0	0	1600	0.015 *	0	0	1600	0.015 *	0	0	1600	0.018 *	0		1600	0.018
Sb Right	12	0		0	0	12	0	9 <b>7</b> 9	0	12 0 12	0		0	0 12	0		Ō	0 12	0	-
Eb Left	11	0	0.007 *	0 9	0	11	0	0.007 *	0	11	0	0.007 *	0	11	0	0.007	0	11	0	0.007
Eb Thru	332	1600	0.215	9	0	341	1600	0.221	0	341	1600	0.221	87	416	1600		0	416	1600	0.268 *
Eb Right	1	0	2	0	0	1	0	1999-026-025 1999-026-025	0	1	0		0	1	0		0	1	0	-
Wb Left	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	372	1600	0.239 *	2	0	374	1600	0.240 *	0	374	1600	0.240 *	20	382	1600	0.246	0	382	1600	0.246
Wb Right	10	0	4	0	0	10	0		0	10	0	8	1	11	0	10.02102409	0	11	0	5
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *
CU ∟OS			0.360 A					0.361 A				0.361 A				0.385 A				0.385 A

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Walnut Street
E-W St:	High Street
Project:	Everett Street Terraces Project / 5-13-0055-1
File:	ICU6

Walnut Street @ High Street Peak hr: PM Date: Annual Growth: 2.00%

02/08/2016

		EXIST. TR	AFFIC		EXISTING I	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	<b>'FUTURE</b>	WITH REL	ATED PRO.	JECTS	'FUTURE WITH CUMULATIVE MITIGATION			
5	1	2		Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0	0.000	0	0	0	0.000	0	0		0.000	0	0	0	
Nb Right	0	0		0	0	0	0	1953	0	0		÷	0	0			0	0 0	0	
Sb Left	16	0	0.010	0	0	16	0	0.010	0	16	0	0.010	3	19	0	0.012	0	19	0	0.012
Sb Thru	0	1600	0.028 *	0	0	0	1600	0.028 *	0	0	1600	0.028 *	0				0	0	1600	0.030
Sb Right	29	0	×	0	0	29	0	Self.	0	16 0 29	0	9	0	0 29	0		0	29	0	-
Eb Left	41	0	0.026	0	0	41	0	0.026	0	41	0	0.026	0	41	0	0.026 *	0	41	0	0.026
Eb Thru	434	1600	0.298 *	4	0	438	1600	0.300 *	0	438	1600	0.300 *	85	481	1600	0.327	0	481	1600	
Eb Right	1	0	X	0	0	1	0	1000	0	1	0	-	0	1	0	H H	0	1	0	-
Wb Left	0	0	• 000.0	0	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000	0	0	0	0.000
Wb Thru	356	1600	0.247	9	0	365	1600	0.253	0	365	1600	0.253	109	445		0.307 *	0	445	1600	
Wb Right	40	0	u .	0	0	40	0		0	40	0	Ē	5	45	0		0	45	0	5
Yellow Allow	vance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100
CU _OS			0.426 A					0.428 A				0.428 A				0.462 A				0.462 A

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

#### INTERSECTION CAPACITY UTILIZATION

Spring Road Charles Street N-S St: E-W St: Everett Street Terraces Project / 5-13-0055-1 Project: File: ICU7

Spring Road @ Charles Street Peak hr: AM Date: Annual Growth: 2.00%

02/08/2016

		EXIST. TRA	FFIC		EXISTING I	PLUS PRO	JECT			EXIST. W/	ROJECT +	MITIGATION	V'FUTURE	WITH REL	ATED PRO	JECTS	'FUTURE	WITH CUM	<b>ULATIVE MI</b>	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	19	1500	0.013 *	0	0	19	1500	0.013 *	0	19	1500	0.013 *	1	20	1500	0.013 *	0	20	1500	0.013
Nb Thru	364	3200	0.118	0	0	364	3200	0.118	0		3200	0.118	41	372			0	372		
Nb Right	13	0		0	0	13		0.00	0		0	-	0	13			Ő	13		
Sb Left	7	1500	0.005	0	0	7	1500	0.005	0	7	1500	0.005	0	7	1500	0.005	0	7	1500	0.005
Sb Thru	949	3200	0.297 *	0	0	949		0.297 *	0	949	3200	0.297 *	127	966			Ő	966		
Sb Right	3	0	12 Defection	0	0	3	0	8 <del>4</del> 3	0	3	0	9. 19.	0	966 3	0		Ő	3		
Eb Left	4	0	0.003	0	0	4	0	0.003	0	4	0	0.003	0	4	0	0.003	0	4	0	0.003
Eb Thru	6	1600	0.040 *	0	0	6	1600	0.040 *	0	6	1600	0.040 *	0	6		0.042 *	0	6		
Eb Right	54	0	1	0	0	54	0	1251	0	54	0		3	57	0		0	57	0	
Wb Left	53	0	0.033 *	0	0	53	0	0.033 *	0	53	0	0.033 *	0	53	0	0.033 *	0	53	0	0.033
Wb Thru	14	1600	0.042	0	0	14	1600	0.042	0	14	1600	0.042	0	14		0.042	0 0 0			
Wb Right	5	1500	0.004	0	0	5	1500	0.004	0	5	1500	0.004	0	5	1500	0.004	0	14 5	1500	
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100
CU LOS			0.484 A					0.484 A				0.484 A				0.492 A				0.492 A

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS 2 Capacity expressed in veh/hour of green

#### INTERSECTION CAPACITY UTILIZATION

N-S St:	Spring Road
E-W St:	Charles Street
Project:	Everett Street Terraces Project / 5-13-0055-1
File:	ICU7

Spring Road @ Charles Street Peak hr: PM Date: Annual Growth: 2.00%

02/08/2016

		EXIST. TRA	AFFIC		EXISTING	PLUS PRO	JECT			EXIST. W/I	ROJECT +	MITIGATION	Y'FUTURE	WITH REL	ATED PRO.	IECTS	'FUTURE	WITH CUM	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2		Added	Total		V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	51	1500	0.034	0	0	51	1500	0.034	0	51	1500	0.034	3	54	1500	0.036	0	54	1500	0.036
Nb Thru	849	3200	0.280 *	0	0	849		0.280 *	0		3200	0.280 *	193	942	3200		o	942	3200	
Nb Right	46	0		0	0	46	0	1741	0	46	0	5	0	46	0	-	0	46	0	-
Sb Left	3	1500	0.002 *	0	0	3	1500	0.002 *	0	3	1500	0.002 *	0	3	1500	0.002 *	0	3	1500	0.002
Sb Thru	536	3200	0.168	0	0	536	3200	0.168	0	536	3200	0.168	90	549	3200	0.172	Ő	549	3200	0.172
Sb Right	3	0		0	0	3	0	( <b></b> )	0	3	0	3 <b>4</b>	0	3	0	2	0	3	0	-
Eb Left	7	0	0.005	0	0	7	0	0.005	0	7	0	0.005	0	7	0	0.005	0	7	0	0.005
Eb Thru	2	1600	0.037 *	0	0	2	1600	0.037 *	0	2	1600	0.037 *	0	2	1600	0.038 *	0	2	1600	
Eb Right	50	0	15	0	0	50		1571	0	50	0	-	2	2 52	0	-	0	52	0	-
Nb Left	25	0	0.016 *	0	0	25	0	0.016 *	0	25	0	0.016 *	0	25	0	0.016 *	0	25	0	0.016
Nb Thru	5	1600	0.019	0	0	5	1600	0.019	0	5	1600	0.019	0	5	1600	0.019	0	5	1600	
Wb Right	1	1500	0.001	0	0	1	1500	0.001	0	1	1500	0.001	0	1	1500	0.001	0	1		0.001
Yellow Allow	vance:		0.100 *					0.100 *				0.100 *				0.100 *	P.			0.100
CU LOS			0.435 A					0.435 A				0.435 A				0.465 A				0.465 A

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS 2 Capacity expressed in veh/hour of green

#### N-S St: Spring Road High Street/Princeton Avenue Everett Street Terraces Project / 5-13-0055-1 E-W St: Project: File: ICU8

#### INTERSECTION CAPACITY UTILIZATION

Spring Road @ Hig	h Street/Princeton Avenue
Peak hr:	AM
Annual Growth:	2.00%

02/08/2016

Date:

		EXIST. TRA	FFIC		EXISTING	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	V 'FUTURE	WITH REL	ATED PRO	JECTS	'FUTURE	WITH CUN	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total		V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume		Capacity	Ratio
Nb Left	133	1500	0.088	1	0	134	1500	0.089	0	134	1500	0.089	0	134	1500	0.089	0	134	1500	0.089
Nb Thru	277	3200	0.087	0	0	277	3200	0.087	0	277	3200	0.087	0	277	3200	0.087	0	277	3200	0.087
Nb Right	226	1500	0.151 *	0	0	226	1500	0.151 *	0	226	1500	0.151 *	84	310			0	310		
Sb Left	288	1500	0.192 *	0	0	288	1500	0.192 *	0	288	1500	0.192 *	98	386	1500	0.257 *	0	386	1500	0.257
Sb Thru	656	3200	0.213	0	0	656	3200	0.213	0	656	3200	0.213	9	665	3200	0.216	0	665	3200	0.216
Sb Right	27	0	a	0	0	27	0	5 <b>7</b> 5	0	27	0	200009409450 3 <del>2</del>	0	27	0	9 14	0	27	0	-
Eb Left	14	1500	0.009	0	0	14	1500	0.009	0	14	1500	0.009	4	18	1500	0.012	0	18	1500	0.012
Eb Thru	205	1600	0.128 *	4	0	209	1600	0.131 *	0	209	1600	0.131 *	65	274	1600	0.171 *	0	274	3200	0.122 *
Eb Right	110	1500	0.074	5	0	115	1500	0.077	0	115	1500	0.077	0	115			0	115		-
Wb Left	103	1500	0.069 *	0	0	103	1500	0.069 *	0	103	1500	0.069 *	13	116	1500	0.077 *	0	116	1500	0.077 *
Wb Thru	231	1600	0.145	1	0	232	1600	0.145	0	232	1600	0.145	47	279	1600	0.174	0	279	1600	0.174
Wb Right	103	1500	0.069	0	0	103	1500	0.069	0	103	1500	0.069	58	161	1500	0.107	0	161	1500	
Yellow Allow	ance:		0.100 *					0.100 *				0.100 *				0.100 *	A			0.100 *
ICU LOS			0.639 B					0.642 B			1	0.642 B				0.813 D				0.763 C

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS

2 Capacity expressed in veh/hour of green

### INTERSECTION CAPACITY UTILIZATION

N-S St: Spring Road E-W St: High Street/Princeton Avenue Project: Everett Street Terraces Project / 5-13-0055-1 File: ICU8

Spring Road @ High Street/Princeton Avenue Peak hr: PM Annual Growth: 2.00%

02/08/2016

Date:

		EXIST. TRA	AFFIC		EXISTING	PLUS PRO	JECT			EXIST. W/	PROJECT +	MITIGATION	<b>'FUTURE</b>	WITH REL	ATED PRO	IECTS	'FUTURE	WITH CUN	ULATIVE MI	TIGATION
	1	2	V/C	Added	Shifted	Total		V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	
Movement	Volume	Capacity	Ratio	Volume	Vol.	Volume	Capacity	Ratio	Volume		Capacity	Ratio	Volume		Capacity	Ratio	Volume		Capacity	Ratio
Nb Left	127	1500	0.085	5	0	132	1500	0.088	0	132	1500	0.088	15	147	1500	0.098	0	147	1500	0.098
Nb Thru	545	3200	0.170 *	0	0	545		0.170 *	0	545	3200	0.170 *	117	662	3200	0.207 *	0	662	3200	0.207
Nb Right	208	1500	0.139	0	0	208		0.139	0	208	1500	0.139	58	266	1500		0	266		
Sb Left	180	1500	0.120 *	0	0	180	1500	0.120 *	0	180	1500	0.120 *	7	187	1500	0.125 *	0	187	1500	0.125
Sb Thru	354	3200	0.124	0	0	354		0.124	0	354	3200	0.124	46	400	3200	0.138	0	400	3200	0.128
Sb Right	41	0	1	0	0	41	0	19=1	0	41	0	-	0	41	0	1	0	41	0	-
Eb Left	51	1500	0.034	0	0	51	1500	0.034	0	51	1500	0.034	0	51	1500	0.034	0	51	1500	0.034
Eb Thru	281	1600	0.176 *	2	0	283	1600	0.177 *	0	283	1600	0.177 *	91	374	1600	0.234 *	0	374	3200	0.158 *
Eb Right	129	1500	0.086	2	0	131	1500	0.088	0	131	1500	0.088	0	131	1500	0.088	0	131	0	-
Nb Left	150	1500	0.100 *	0	0	150	1500	0.100 *	0	150	1500	0.100 *	0	150	1500	0.100 *	0	150	1500	0.100 *
Nb Thru	240	1600	0.150	3	0	243	1600	0.152	0	243	1600	0.152	86	329	1600	0.206	0	329	1600	0.206
Wb Right	296	1500	0.197	0	0	296	1500	0.197	0	296	1500	0.197	36	332	1500	0.221	0	332	1500	
Yellow Allov	vance:		0.100 *					0.100 *				0.100 *				0.100 *				0.100 *
CU .OS			0.666 B					0.667 B			1	0.667 B				0.765 C				0.689 B

\*Key conflicting movement as a part of ICU 1 Counts conducted by NDS 2 Capacity expressed in veh/hour of green

LINSCOTT LAW & GREENSPAN

engineers

## TRAFFIC IMPACT STUDY EVERETT STREET TERRACES PROJECT City of Moorpark, California May 21, 2021

Prepared for: Everett Street Terraces 1001 Newbury Road

Thousand Oaks, CA 91320

LLG Ref. 5-13-0055-1



Prepared by:

Amrita Shankar Transportation Engineer I

Under the Supervision of:

David S. Shender, P.E. Principal

Linscott, Law & Greenspan, Engineers

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## **APPENDICES**

### APPENDIX

- A. Iteris Technical Memorandum
- B. Historical Traffic Count Data
- C. ICU and Levels of Service Explanation ICU Data Worksheets – AM and PM Peak Hours

# TRAFFIC IMPACT STUDY EVERETT STREET TERRACES PROJECT City of Moorpark, California

May 21, 2021

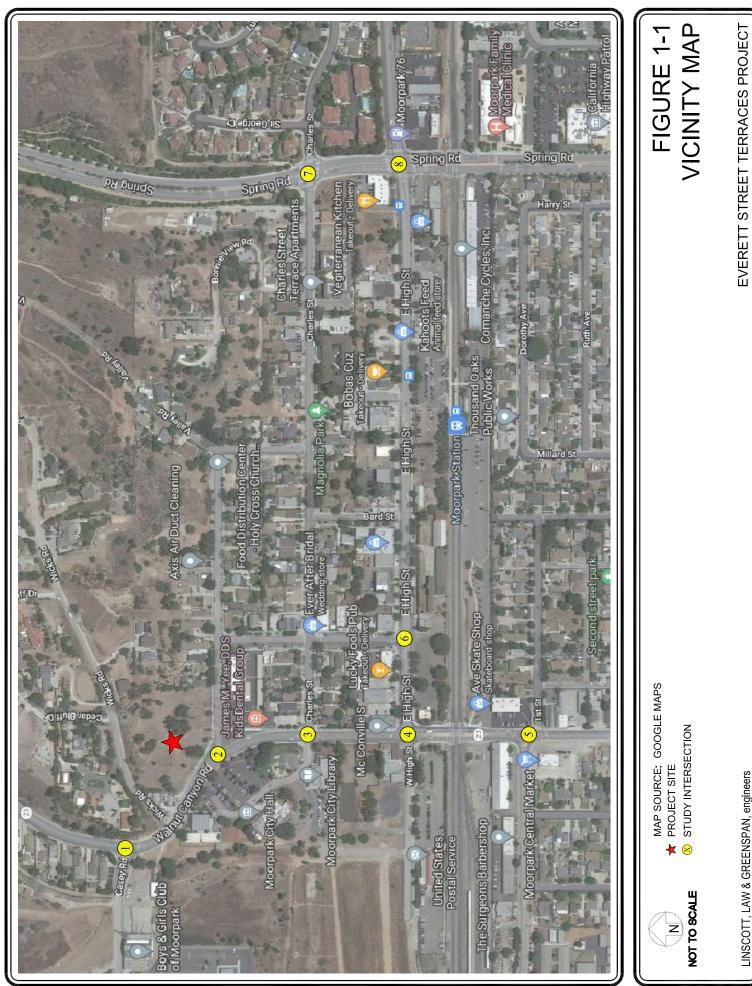
## **1.0** INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed Everett Street Terraces project (the "Project"). The proposed Project is located on the north side of Everett Street, east of Moorpark Avenue (the "Project Site") in the City of Moorpark, California. The proposed Project Site location and general vicinity are shown in *Figure 1–1*.

In compliance with the California Environmental Quality Act (CEQA), the City of Moorpark (the "City") is in the process of developing new traffic study guidelines to identify vehicle miles traveled (VMT) as the primary metric for evaluating a project's transportation impacts. Therefore, this traffic analysis provides an assessment of the Project's VMT transportation impact.

In addition, this traffic analysis follows the City of Moorpark's current traffic study guidelines (i.e., *Guidelines for Preparing Traffic and Circulation Studies*, 1993). This traffic analysis evaluates the potential project-related operational deficiencies associated with the proposed development at eight key intersections in the vicinity of the Project Site. The study intersections were determined in consultation with the City of Moorpark staff. The Intersection Capacity Utilization (ICU) method was used to determine volume-to-capacity ratios and corresponding Levels of Service (LOS) at the study intersections.

This study (i) presents a VMT assessment, (ii) presents existing traffic volumes, (iii) forecasts existing plus Project traffic volumes, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future cumulative traffic volumes with the proposed Project, (vi) determines future operations at the study intersections with Project-related traffic, and (vii) provides fair-share calculations toward cumulative improvement measures, where appropriate.



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# 2.0 **PROJECT DESCRIPTION**

## 2.1 Site Location

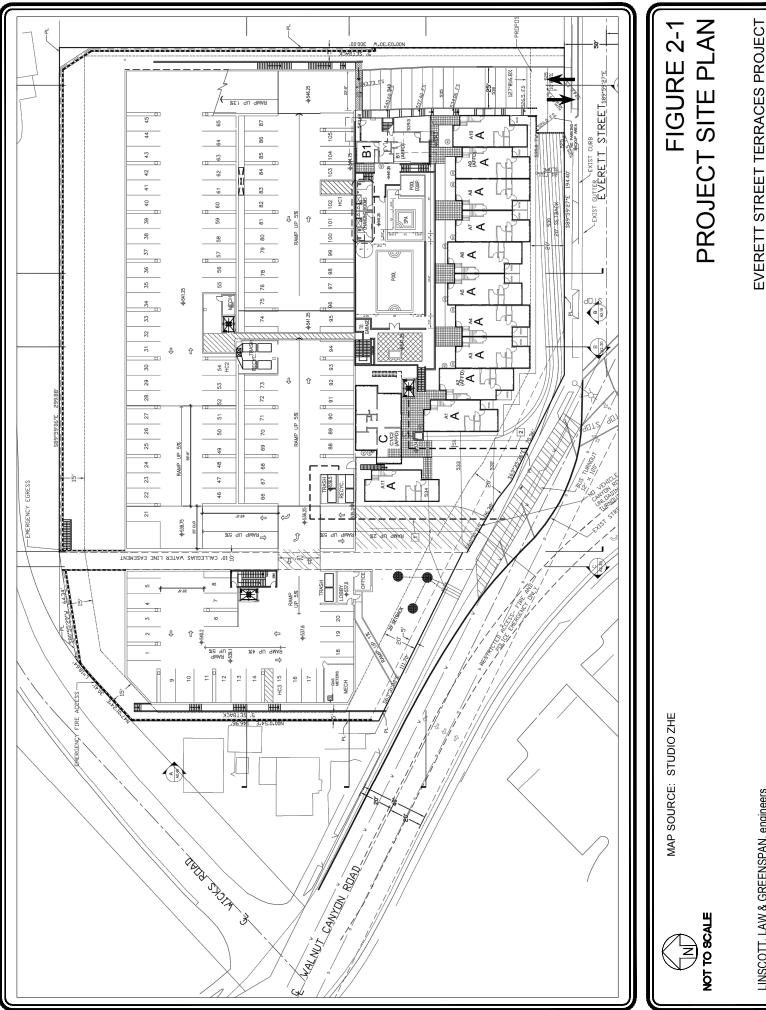
The proposed Project Site is located on the north side of Everett Street, east of Moorpark Avenue in the City of Moorpark. The Project Site is bounded by Wicks Road to the north, Everett Street to the south, residential uses to the east, and Moorpark Avenue to the west.

## 2.2 Existing Project Site

The Project Site is located at the northeast corner of the Everett Street / Moorpark Avenue intersection. The overall Project Site comprises approximately 2.4 acres and a portion of the site was previously occupied by six single-family homes. The six single-family homes have been removed to accommodate the proposed Project.

## 2.3 Proposed Project Description

The Project consists of the development of a residential condominium complex with 60 dwelling units. The condominium complex will consist of 2-bedroom and 3-bedroom units. The Project proposes to provide 153 vehicle parking spaces on-site. Construction and occupancy of the proposed Project is planned to be completed by the year 2024. The site plan for the proposed Project is illustrated in *Figure 2–1*.



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LINSCOTT, LAW & GREENSPAN, engineers

# 3.0 SITE ACCESS AND CIRCULATION

The site access scheme for the proposed Project is displayed in *Figure 2–1*. Descriptions of the existing site access and proposed Project site access and circulation schemes are provided in the following subsections.

## 3.1 Existing Site Access

Vehicular access to the existing Project Site is presently provided via multiple access points on Everett Street and Moorpark Avenue along the Project frontage. Two driveways are currently provided on the east side of Moorpark Avenue, which borders the Project Site to the west. Three driveways are currently provided on the north side of Everett Street, which borders the Project Site to the south. All existing driveways currently accommodate left-turn and right-turn ingress and egress turning movements.

## 3.2 Proposed Project Site Access and Circulation

The proposed Project Site access scheme is displayed in *Figure 2–1*. Vehicular access to the Project Site will be provided via one driveway on the north side of Everett Street at the most easterly portion of the Project Site. The driveway will accommodate full vehicular access (i.e., left-turn and right-turn ingress and egress turning movements). As noted in Section 10.3, a previous City of Moorpark Public Works Department Capital Project involves the widening of Moorpark Avenue to provide additional lanes between Casey Road and Third Street. No other roadway improvements or roadway realignments are proposed.

# 4.0 EXISTING STREET SYSTEM

## 4.1 Regional Highway System

Regional access to the Project Site is provided by the State Route 118 (Ronald Reagan) Freeway and State Route 23 (Moorpark) Freeway. Full freeway ramp connections are provided on both the State Route 118 and State Route 23 Freeways at Los Angeles Avenue. Brief descriptions of the State Route 118 Freeway and State Route 23 Freeway are provided in the following paragraphs.

*State Route 118 (Ronald Reagan) Freeway* is a major freeway connecting Moorpark with the San Fernando Valley and the Los Angeles Basin. In the vicinity of the Project, the State Route 118 Freeway provides two travel lanes in each direction. Both northbound and southbound ramps are provided on State Route 118 at Los Angeles Avenue.

*State Route 23 (Moorpark) Freeway* extends from the junction with the State Route 118 Freeway southerly to the US-101 (Ventura) Freeway in the City of Thousand Oaks. State Route 23 Freeway provides two to three travel lanes in each direction in the vicinity of the Project. Both northbound and southbound ramps are provided on State Route 23 at Los Angeles Avenue.

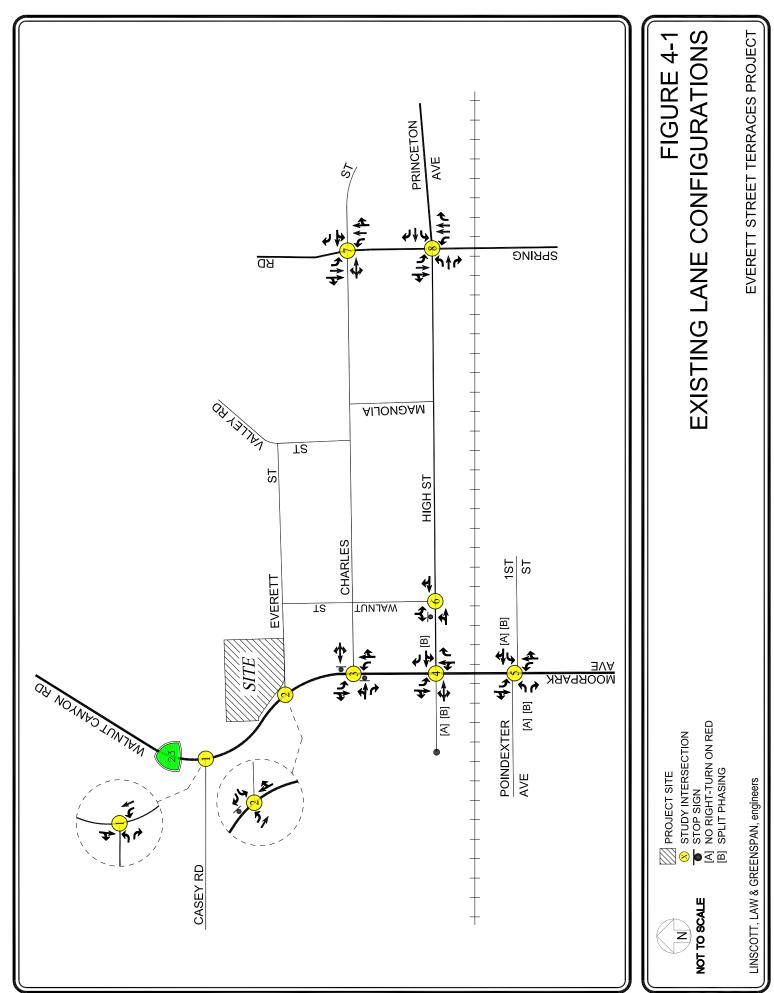
## 4.2 Local Street System

Immediate access to the Project Site is provided via Everett Street. The following eight study intersections were selected by City of Moorpark staff for analysis of potential impacts related to the proposed Project:

- 1. Walnut Canyon Road Moorpark Avenue / Casey Road
- 2. Moorpark Avenue / Everett Street
- 3. Moorpark Avenue / Charles Street
- 4. Moorpark Avenue / High Street
- 5. Moorpark Avenue / Poindexter Avenue 1<sup>st</sup> Street
- 6. Walnut Street / High Street
- 7. Spring Road / Charles Street
- 8. Spring Road / High Street Princeton Avenue

Five of the eight study intersections selected for analysis are currently controlled by traffic signals. The remaining three study intersections – Moorpark Avenue / Everett Street, Moorpark Avenue / Charles Street and Walnut Street / High Street – are currently controlled by stop signs. The existing lane configurations at the eight study intersections are displayed in *Figure 4–1*.

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## 4.3 Roadway Descriptions

Brief descriptions of the important roadways in the Project vicinity are provided in the following paragraphs.

*Walnut Canyon Road* is a north-south roadway located west of the Project Site. South of Casey Road, Walnut Canyon Road becomes Moorpark Avenue. One through travel lane is provided in each direction on Walnut Canyon Road in the Project vicinity. Curbside parking is prohibited along both sides of Walnut Canyon Road in the Project vicinity. Walnut Canyon Road is posted for a 40 miles per hour speed limit in the northbound direction and is posted for a 30 miles per hour speed limit in the southbound direction. However, in the Project vicinity, Walnut Canyon Road is posted for a 25 miles per hour speed limit to reflect a 25 miles per hour school zone. Walnut Canyon Road is a State highway (SR-23).

*Moorpark Avenue* is a north-south roadway that borders the Project Site to the west. North of Casey Road, Moorpark Avenue becomes Walnut Canyon Road. South of Los Angeles Avenue, Moorpark Avenue terminates just north of the Arroyo Simi River. One through travel lane is provided in each direction on Moorpark Avenue in the Project vicinity. A separate exclusive left-turn lane is provided in the northbound direction at the Casey Road intersection and in each direction at the Charles Street and Poindexter Avenue intersections. A separate exclusive left-turn lane is also provided in the southbound direction at the High Street intersection. A separate exclusive right-turn lane is provided in the northbound direction at the High Street intersection. Curbside parking is prohibited along both sides of Moorpark Avenue in the Project vicinity. Moorpark Avenue is posted for a 30 miles per hour speed limit. However, in the Project vicinity, Moorpark Avenue is posted for a 25 miles per hour speed limit to reflect a 25 miles per hour school zone. Moorpark Avenue is a State highway (SR-23).

*Walnut Street* is a north-south roadway that is located east of the Project Site. Walnut Street extends from Everett Street on the north to High Street on the south. One through travel lane is provided in each direction on Walnut Street in the Project vicinity. A shared left-turn/right-turn lane is provided in the southbound direction on Walnut Street at the High Street intersection. Parking is allowed along both sides of Walnut Street in the Project vicinity, except between Charles Street and High Street where two-hour angled parking is provided from 9:00 AM to 9:00 PM along both sides of the street. There is no posted speed limit on Walnut Street within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with the State of California Vehicle Code Section 22352(b)(1).

Spring Road is a north-south roadway that is located east of the Project Site. Spring Road extends from Walnut Canyon Road on the north to Tierra Rejada Road on the south. Two through travel lanes are provided in each direction on Spring Road north of Los Angeles Avenue. South of Los Angeles Avenue, one through travel lane is provided in each direction on Spring Road. Separate exclusive left-turn lanes are provided on Spring Road in each direction at the Charles Street and High Street – Princeton Avenue intersections. Curbside parking is prohibited along both sides of Spring Road in the Project vicinity. Separate exclusive bicycle lanes are provided in each direction along Spring Road, except between Flinn Avenue –  $2^{nd}$  Street and Los

Angeles Avenue. Spring Road is posted for a 45 miles per hour speed limit north of High Street – Princeton Avenue and is posted for a 40 miles per hour speed limit south of High Street – Princeton Avenue near the Project Site.

*Casey Road* is an east-west roadway that is located north of the Project Site. One through travel lane is provided in each direction on Casey Road in the Project vicinity. Separate left-turn and right-turn lanes are provided in the eastbound direction on Casey Road at the Moorpark Avenue – Walnut Canyon Road intersection. Curbside parking is prohibited along the north side of Casey Road in the Project vicinity. Curbside parking is prohibited along the south side of Casey Road from 10:00 PM to 6:00 AM in the Project vicinity. Casey Road is posted for a 25 miles per hour speed limit near the Project Site.

*Everett Street* is an east-west roadway that borders the Project Site to the south. Everett Street extends from Moorpark Avenue on the west to Magnolia Street – Valley Road on the east. One through travel lane is provided in each direction on Everett Street in the Project vicinity. Separate exclusive left-turn and right-turn lanes are provided in the westbound direction on Everett Street at the Moorpark Avenue intersection. Curbside parking is allowed along both sides of Everett Street within the Project study area. There is no posted speed limit on Everett Street within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with the State of California Vehicle Code Section 22352(b)(1).

*Charles Street* is an east-west roadway that is located south of the Project Site. One through travel lane is provided in each direction on Charles Street in the Project vicinity. Curbside parking is allowed along both sides of Charles Street within the Project study area. Charles Street is posted for a 25 miles per hour speed limit near the Project Site.

*High Street* is an east-west roadway that is located south of the Project Site. East of Spring Road, High Street becomes Princeton Avenue. High Street extends from just west of Moorpark Avenue to Spring Road on the east. One through travel lane is provided in each direction on High Street in the Project vicinity. A separate exclusive left-turn lane is provided in the eastbound direction on High Street at the Spring Road intersection. A separate exclusive right-turn lane is provided in the westbound direction on High Street at the Moorpark Avenue intersection and a separate exclusive right-turn lane is provided in the eastbound direction on High Street at the Spring Road intersection. Two-hour parking is provided from 6:00 AM to 6:00 PM along both sides of High Street from Moorpark Avenue to Spring Road in the Project vicinity. Separate exclusive bicycle lanes are provided in each direction along High Street between Moorpark Avenue and Spring Road. High Street is posted for a 30 miles per hour speed limit near the Project Site.

*Princeton Avenue* is an east-west roadway that is located south of the Project Site. West of Spring Road, Princeton Avenue becomes High Street. Princeton Avenue extends from Spring Road on the west to Campus Park Drive on the east. One through travel lane is provided in the eastbound direction on Princeton Avenue in the Project vicinity. Two through travel lanes are provided in the westbound direction on Princeton Avenue just east of Spring Road. Separate exclusive left-turn and right-turn lanes are provided in the westbound direction on Princeton

Avenue at the Spring Road intersection. Curbside parking is prohibited along both sides of Princeton Avenue in the Project vicinity. Princeton Avenue is posted for a 40 miles per hour speed limit near the Project Site.

*Poindexter Avenue* is an east-west roadway that is located south of the Project Site. One through travel lane is provided in each direction on Poindexter Avenue in the Project vicinity. Separate exclusive left-turn and right-turn lanes are provided in the eastbound direction on Poindexter Avenue at the Moorpark Avenue intersection. Curbside parking is prohibited along both sides of Poindexter Avenue in the Project vicinity. Separate exclusive bicycle lanes are provided in each direction along Poindexter Avenue in the Project vicinity. Poindexter Avenue is posted for 40 miles per hour speed limit. However, just west of Moorpark Avenue, Poindexter Avenue is posted for a 25 miles per hour speed limit to reflect a 25 miles per hour school zone.

*1<sup>st</sup> Street* is an east-west roadway that is located south of the Project Site. One through travel lane is provided in each direction on 1<sup>st</sup> Street in the Project vicinity. A separate exclusive left-turn lane is provided in the westbound direction on 1<sup>st</sup> Street at the Moorpark Avenue intersection. Curbside parking is allowed along both sides of 1st Street within the Project study area. There is no posted speed limit on 1<sup>st</sup> Street within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with the State of California Vehicle Code Section 22352(b)(1).

### 4.4 Public Bus Transit Service

Public bus transit service in the Project study area is currently provided by Moorpark City Transit, Moorpark Paratransit, Moorpark Senior Dial-A-Ride, and the Ventura County Transportation Commission (VCTC). A summary of the existing transit routes that have fixed timetables, including the transit route, destinations and peak hour headways, is presented in *Table 4–1*. The existing public transit routes in the proposed Project Site vicinity for weekday service are illustrated in *Figure 4–2*. The public transit route in the proposed Project Site vicinity for Saturday service is illustrated in *Figure 4–3* per the Moorpark City Transit Evaluation.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Moorpark City Transit Evaluation – Final Report, Nelson/Nygaard Consulting Associates, Inc., May 2017.

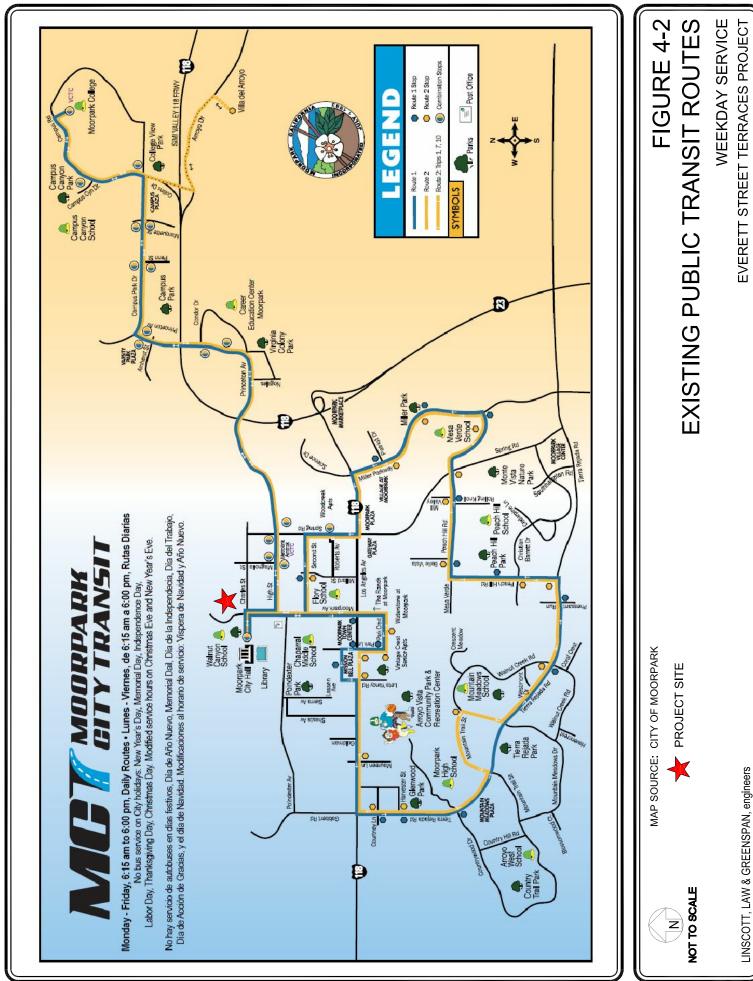
		ROADWAY(S)	DURI	NO. OF BUSES DURING PEAK HOUR	s OUR
ROUTE	DESTINATIONS	NEAR SITE	DIR	AM	PM
Moorpark City Transit Route 1	Roundtrip from Moorpark Collège (via Campus Park Drive, Princeton Avenue, High Street, Moorpark Avenue, Tierra Rejada Road, and Spring Road)	High Street, Moorpark Avenue, and Spring Road	EB WB	1 1	1 1
Moorpark City Transit Route 2	Roundtrip from Moorpark College (via Campus Park Drive, Princeton Avenue, High Street, Spring Road, Tierra Rejada Road, and Moorpark Avenue)	High Street, Moorpark Avenue, and Spring Road	EB WB	1 1	1 1
VCTC Route 70	Simi Valley to Thousand Oaks (via SR-118 Freeway, Princeton Avenue, High Street, Moorpark Avenue, Los Angeles Avenue, and SR-23 Freeway)	High Street, Moorpark Avenue	NB SB	1 0	0
VCTC Route 77	Simi Valley to Ventura (via SR-118 Freeway, Princeton Avenue, High Street, Los Angeles Avenue, Somis Road and US-101 Freeway)	High Street, Moorpark Avenue	EB WB	0	0 1
			Total	5	5

Table 4-1 EXISTING PUBLIC TRANSIT ROUTES [1]

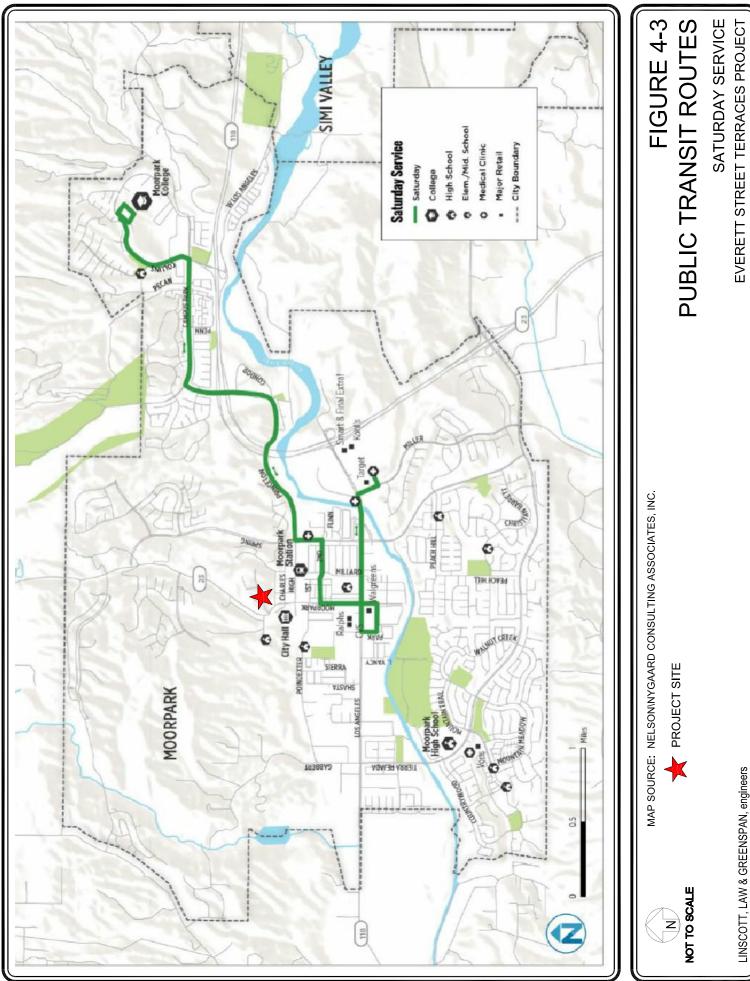
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[1] Sources: Moorpark City Transit website, 2021.
 Ventura County Transportation Commission (VCTC) website, 2021.

LINSCOTT, LAW & GREENSPAN, engineers



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# 5.0 VEHICLE MILES TRAVELED ASSESSMENT

## 5.1 Introduction

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round-trip) travel and is often estimated for a typical weekday for the purposes of measuring transportation impacts.

In September 2013, the Governor's Office signed Senate Bill 743 (SB 743), starting a process that fundamentally changes the way transportation impact analysis is conducted under the California Environmental Quality Act. Within the State's CEQA Guidelines, these changes include the elimination of auto delay, LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant traffic impacts. SB 743 identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of auto delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

The City is in the process of developing new traffic study guidelines to identify VMT as the primary metric for determining transportation impacts of development projects. The new guidelines will include VMT guidelines and thresholds for measuring transportation impacts under CEQA. It is LLG's understanding that the VMT guidelines will be prepared based on the recommendations provided in the technical advisory issued by the Governor's Office of Planning and Research (OPR).<sup>2</sup>

## 5.2 Project VMT

The transportation model consultant Iteris was engaged to prepare a calculation of VMT for purposes of evaluating the Project's VMT effect. The memorandum prepared by Iteris providing details of its VMT analysis of the Project is provided in *Appendix A*.

As indicated in the Iteris memorandum, the Ventura County Transportation Model (VCTM) was utilized to generate the VMT outputs. As the Project is a residential development, the appropriate VMT metric is calculated on a per capita basis, consistent with the OPR. As detailed in the Iteris memorandum, per capita VMT was determined at the Project Site, as well as on a Citywide basis. The comparison of the Project per capita VMT and the Citywide per capita VMT allows for an assessment of the relative VMT impacts of the Project.

<sup>&</sup>lt;sup>2</sup> Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

LINSCOTT, LAW & GREENSPAN, engineers

Based on the VCTM, the Project Site is located within Traffic Analysis Zone (TAZ) 60129101. As indicated in the Iteris memorandum, the TAZ-level daily VMT per capita for the Project was determined to be 19.58 miles per capita. It is noted that the calculation does not consider the VMT-reducing effects associated with the Project's location within a half-mile walking distance of the Moorpark Metrolink Station, which is considered to be a Major Transit Stop as defined by CEQA (Public Resources Code, §21064.3).

In addition to the Project per capita VMT, the Iteris memorandum provides the Citywide average daily VMT per capita, which was determined to be 20.54 miles.

Based on the findings in the Iteris memorandum and in consideration of the OPR technical advisory, the VMT impacts of the Project are determined to be less than significant based on:

- The Project's daily VMT per capita is calculated to be less than the Citywide average daily VMT per capita.
- The OPR technical advisory recommends that "lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT."

Based on the finding of a less than significant VMT impact for the Project, no mitigation measures are required or recommended.

# 6.0 TRAFFIC COUNTS

Due to the Covid-19 pandemic, traffic count data could not be collected at the study intersections. Therefore, historical data at the study intersections, with appropriate modifications, was utilized to represent current (pre-pandemic) traffic volume conditions. For this traffic analysis, the following techniques were used to estimate current year (2021) peak hour turning movement traffic volumes at the study intersections:

- <u>Walnut Canyon Road Moorpark Avenue / Casey Road, Moorpark Avenue / High Street, Moorpark Avenue / Poindexter Avenue 1<sup>st</sup> Street, Spring Road / High Street Princeton Avenue:</u> Peak hour traffic volume data collected at these intersections in 2019 and referenced from a related development project<sup>3</sup> (the Hitch Ranch study) were increased by a 1.0% annual traffic growth rate through the year 2021 to estimate current year traffic volumes. Further discussion of the annual traffic growth rate is provided in Section 8.0.
- Moorpark Avenue / Everett Street, Moorpark Avenue / Charles Street, Walnut Street / High Street, Spring Road / Charles Street: Peak hour traffic volume data at these intersections were referenced from a prior traffic study prepared for the Project in 2016.<sup>4</sup> The peak hour traffic volume data in the 2016 study was determined from peak hour traffic count data collected at these intersections in 2013. The traffic count data from 2013 was increased by a two (2.0%) annual traffic growth rate through the year 2016. The traffic during the AM and PM peak hours. It is estimated that trucks represent approximately 15 percent (15%) and 10 percent (10%) of the AM and PM peak hour traffic volumes, respectively, on Moorpark Avenue. The percentage of trucks, as well as a passenger car equivalent (PCE) factor of 3.0 was utilized to adjust the traffic volumes to reflect truck traffic along Moorpark Avenue and estimate the 2016 traffic volumes. The 2016 peak hour traffic yolume data at these intersections were then increased by a 1.0% annual traffic growth rate through the year 2021 to estimate current year traffic volumes.

The existing weekday AM and PM peak hour traffic volumes at the eight study intersections are summarized in *Table 6–1*. The existing traffic volumes at the study intersections during the AM and PM peak hours are shown in *Figures 6–1* and 6-2, respectively. Summary data worksheets of the historical traffic counts at the study intersections are contained in *Appendix B*.

<sup>&</sup>lt;sup>3</sup> Traffic Impact Analysis for the Proposed Hitch Ranch Specific Plan, Impact Sciences, August 2020.

<sup>&</sup>lt;sup>4</sup> Traffic Impact Study for the Everett Street Terraces Project, Linscott, Law & Greenspan, Engineers, February 2016.

LINSCOTT, LAW & GREENSPAN, engineers

### Table 6-1 **EXISTING TRAFFIC VOLUMES [1]**

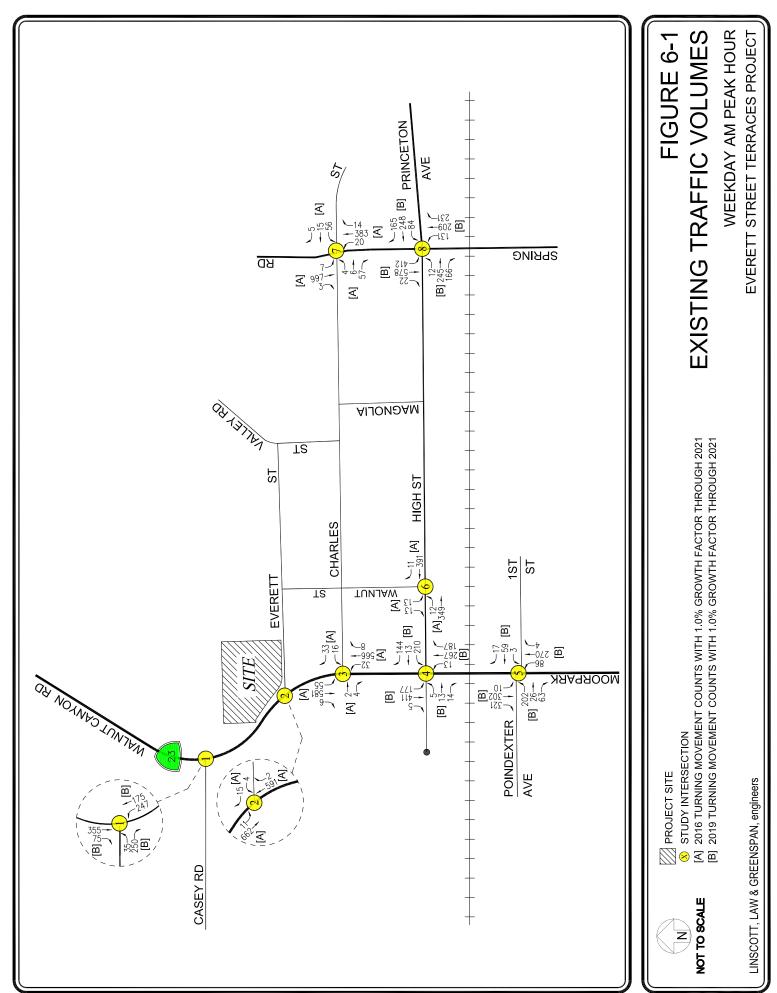
							20-May-21
					PEAK HOUR		PEAK HOUR
NO.	INTERSECTION	DATE	DIR	BEGAN	VOLUME [2], [3]	BEGAN	VOLUME [2], [3]
1	Manual Annual Walnut Courses Dead /	04/17/2019	ND	7.45	422	4:30	411
1	Moorpark Avenue - Walnut Canyon Road /	04/1//2019	NB SB	7:45	422	4:30	411 202
	Casey Road		SB EB		430 285		101
			WB		283		0
			WD		0		0
2	Moorpark Avenue /	06/12/2013	NB	7:30	593	4:30	347
	Everett Street		SB		673		291
			EB		0		0
			WB		19		15
3	Moorpark Avenue /	06/12/2013	NB	7:45	606	4:30	374
	Charles Street		SB		642		294
			EB		6		39
			WB		49		38
4	Moorpark Avenue /	04/17/2019	NB	7:45	467	5:00	623
	High Street		SB		593		313
			EB		32		65
			WB		367		412
5	Moorpark Avenue /	04/03/2019	NB	8:00	360	4:30	448
5	Poindexter Avenue - 1st Street	04/03/2019	SB	0.00	633	4.30	572
	Tomaexter Avenue - 1st Succi		EB		291		392
			WB		79		53
6	Walnut Street /	06/12/2013	NB	7:30	0	4:30	0
	High Street		SB		26		47
			EB		361		499
			WB		402		416
7	Spring St /	06/12/2013	NB	7:15	417	4:30	994
/	Charles St	00/12/2013	SB	/.13	1,007	4.30	569
	Charles St		EB		67		62
			WB		76		32
8	Spring Street /	04/03/2019	NB	7:45	571	4:30	1,076
	Princeton Avenue		SB		1,012		553
			EB		423		506
			WB		497		866

[1]

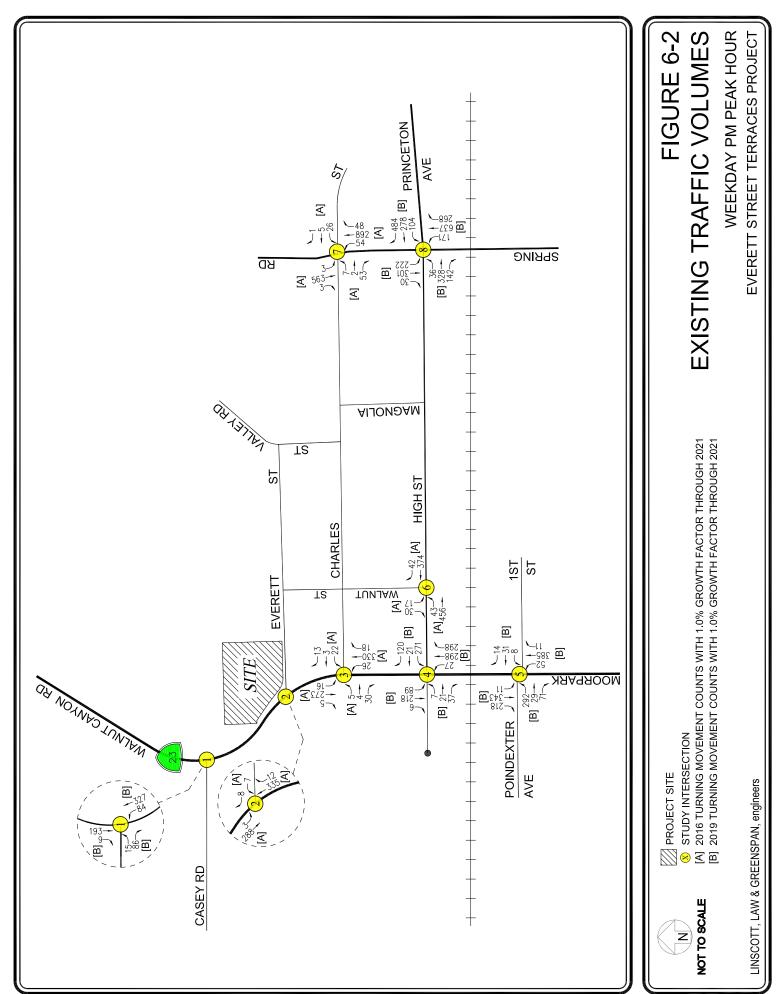
National Data & Surveying Services Traffic count data from 2013 was increased by a 2.0% annual traffic growth rate through the year 2016. The 2016 volumes were then increased by a 1.0% annual growth rate through the year 2021. Traffic count data from 2019 was increased by a 1.0% annual traffic growth rate through the year 2021. [2]

[3]

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# 7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic operational characteristics related to the proposed Project, a multistep process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound Project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the traffic effects of the proposed Project are isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast Project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

## 7.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed Project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 10<sup>th</sup> Edition, 2017. Traffic volumes expected to be generated by the proposed Project were based upon number of dwelling units. ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates were used to forecast the traffic volumes expected to be generated by the proposed Project.

The trip generation forecast for the proposed Project is summarized in *Table 7–1*. As presented in *Table 7-1*, the proposed Project is expected to generate a net increase of 28 vehicle trips (6 inbound trips and 22 outbound trips) during the AM peak hour. During the PM peak hour, the proposed Project is expected to generate a net increase of 34 vehicle trips (21 inbound trips and 13 outbound trips). Over a 24-hour period, the proposed Project is forecast to generate a net increase of 439 daily trip ends during a typical weekday (approximately 220 inbound trips and 219 outbound trips).

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Table 7-1 PROJECT TRIP GENERATION [1]	
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16-May-21

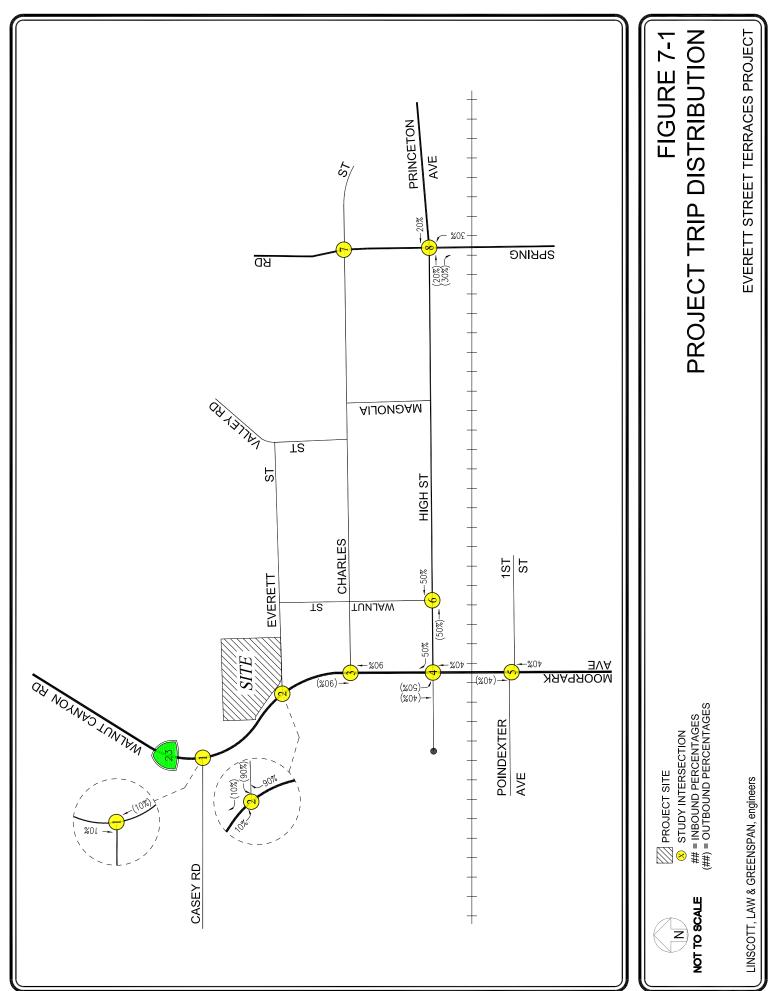
		DAILY	MM	AM PEAK HOUR	DUR	Μd	<b>PM PEAK HOUR</b>	DUR
		<b>TRIP ENDS [2]</b>	VC	<b>VOLUMES</b> [2]	[2]	V	<b>VOLUMES [2]</b>	[2]
LAND USE	SIZE	VOLUMES	IN	OUT	IN OUT TOTAL	IN	OUT	OUT TOTAL
<i>Proposed Project</i> Condominiums [3]	09 DN	439	9	22	28	21	13	34
NET PROJECT TRIPS		439	6	22	28	21	13	34

Source: ITE "Trip Generation Manual", 10th Edition, 2017.
 Trips are one-way traffic movements, entering or leaving.
 ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates.
 Daily Trip Rate: 7.32 trips/dwelling unit; 50% inbound/50% outbound
 AM Peak Hour Trip Rate: 0.46 trips/dwelling unit; 23% inbound/77% outbound
 PM Peak Hour Trip Rate: 0.56 trips/dwelling unit; 63% inbound/37% outbound

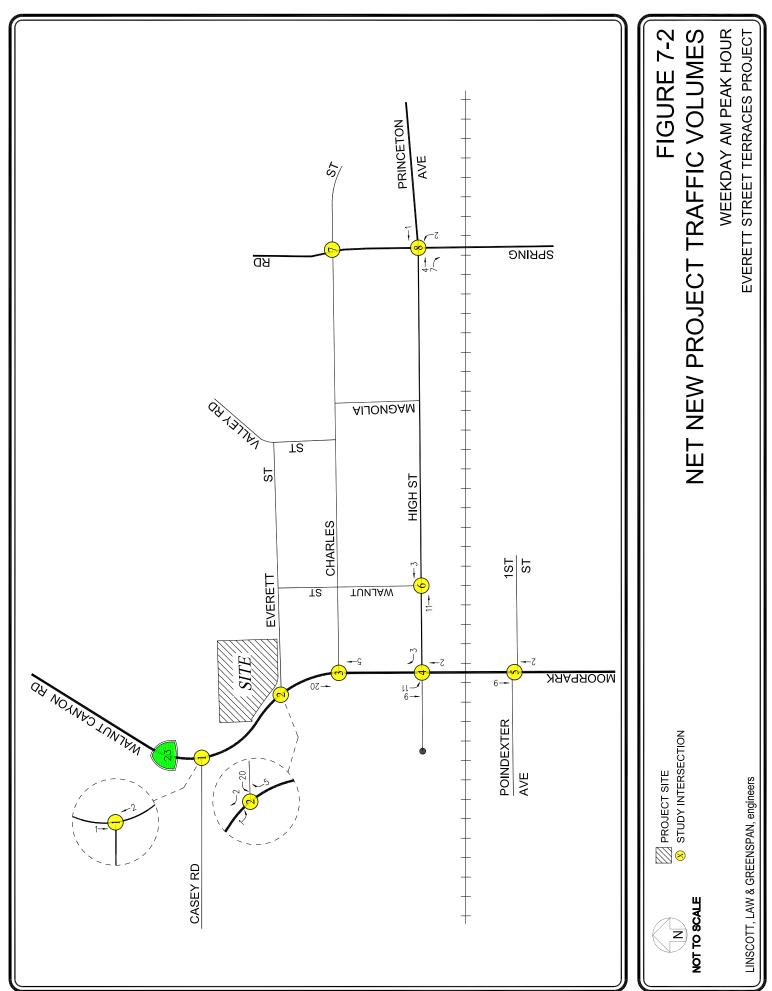
## 7.2 Project Traffic Distribution and Assignment

Project generated traffic was assigned to the local roadway system based on a traffic distribution pattern which accounted for the proposed Project land uses, the planned Project Site access schemes, existing traffic patterns, characteristics of the surrounding roadway system, and nearby population and employment centers.

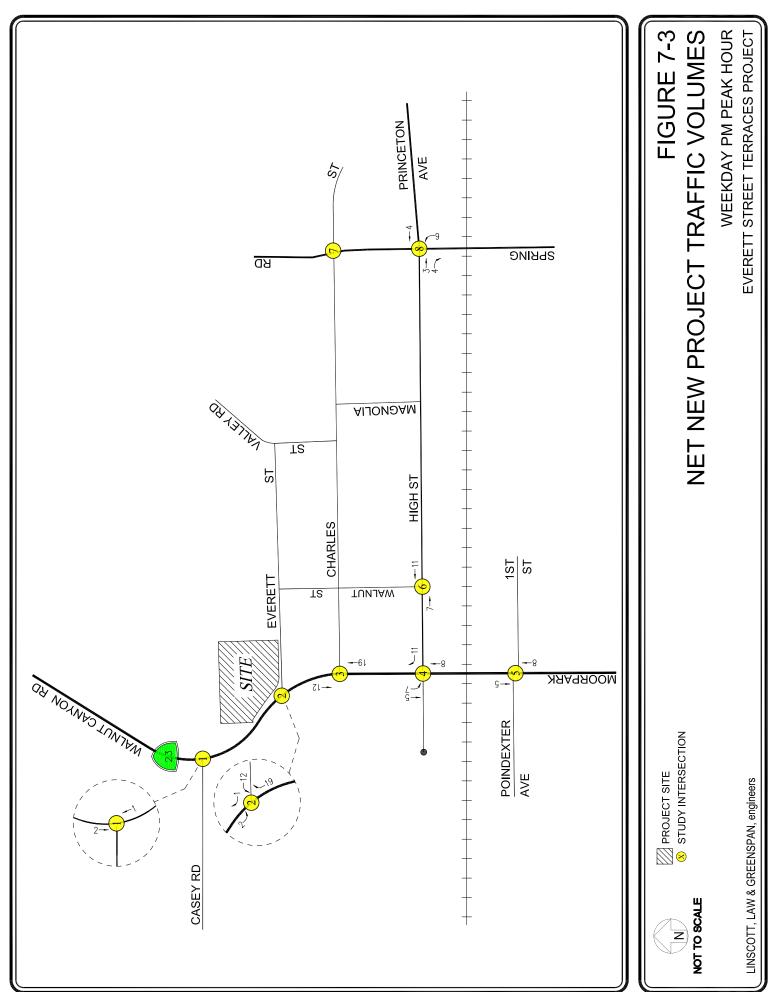
The general, directional traffic distribution patterns for the proposed Project are presented in *Figure 7–1*. The forecast net new weekday AM and PM peak hour traffic volumes at the study intersections associated with the proposed Project are presented in *Figures 7–2* and 7–3, respectively. The traffic volume assignments presented in *Figures 7–2* and 7–3 reflect the traffic distribution characteristics shown in *Figure 7–1* and the Project traffic generation forecast presented in *Table 7–1*.



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## 8.0 CUMULATIVE DEVELOPMENT PROJECTS

A forecast of on-street traffic conditions prior to occupancy of the Project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the Project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Moorpark Community Development Department. The list of related projects in the Project Site area is presented in *Table 8–1*. The location of the related projects is shown in *Figure 8–1*.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the ITE *Trip Generation Manual*. The related projects' respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in *Table 8–1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in *Figures 8–2* and *8–3*, respectively.

#### 8.1 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of 1.0 percent (1.0%) per year to the year 2024 (i.e., the anticipated year of Project build-out). The ambient growth factor was determined in accordance with the ambient growth factor of 1.0% identified in the Hitch Ranch study.

Table 8-1 RELATED PROJECTS LIST AND TRIP GENERATION [1]
--

						[1] NO.11							19-Apr-21
MAP	PROJECT NAME/	PROJECT	ADDRESS/	LAND HSE DATA	DATA	PROJECT DATA	DAILY TRIP ENDS [2]	WA NV	AM PEAK HOUR VOLUMES [2]	21 21	a -	PM PEAK HOUR VOLUMES [2]	OUR 121
NO.	4	STATUS	LOCATION	LAND-USE	SIZE	SOURCE	VOLUMES	Z	OUT	TOTAL	N	OUT	TOTAL
1	Pacific Arroyo	Approved	South of Los Angeles Avenue East of Maureen Lane	Single-Family Homes	284 DU	[3]	2,681	53	157	210	177	104	281
7	Vistas at Moorpark	Approved	East of Walnut Canyon Road North of Wicks Road	Single-Family Homes	110 DU	[3]	1,038	20	61	81	69	40	109
б	Canyon Crest	Approved	Marine View Drive East of Walnut Canyon Road at Championship Drive	Single-Family Homes	21 DU	[3]	198	4	12	16	13	∞	21
4	Essex Moorpark Apartments	Approved	South of Casey Road West of Walnut Canyon Road	Apartments	200 DU	[4]	1,464	21	11	92	71	41	112
5	Green Island Villas	Approved	635 Los Angeles Avenue	Condominiums	00 DN	[4]	505	7	25	32	25	14	39
9	Patriot Commerce Center	Approved	West of SR-23 Freeway East of Miller Parkway South of Moorpark Markeplace	Industrial Building	94,001 GSF	[5]	466	58	×	66	8	51	59
٢	TT 5906	Approved	North of Union Pacific Railroad Tracks West of Gabbert Road	Industrial Park	1,568,000 GSF	[9]	5,284	508	119	627	132	495	627
∞	Moorpark West Studios	Approved	Los Angeles Avenue West of SCE Substation	Offrice Production Sound Stages Security Personnel Trips	112,850 GSF 9 Stages	[7] [7]	1,242 1,836 30	153 nom.	21 nom.	174 nom. nom.	28 nom. nom.	140 nom. nom.	168 nom. nom.
6	Casey Road Senior Community	Approved	North of Casey Road West of Walnut Canyon Road	Senior Adult Housing	390 DU	[8]	1,443	27	51	78	56	45	101
10	High Street Station	Approved	226 High Street	Apartments Commercial	79 DU 13,656 GSF	[4] [9]	578 516	~ ~	28 5	36 13	28 25	16 27	44 52
Π	Hitch Ranch Specific Plan	Proposed	North of Union Pacific Railroad Tracks West of Terminus of Casey Road	Apartments Single-Family Homes Public Park	299 DU 456 DU 5 Acres	[10]	6,948	117	359	476	389	250	639
12	North Ranch	Proposed	5979 Gabbert Road	Single-Family Homes	139 DU	[3]	1,312	26	77	103	87	51	138
13	Beltramo Ranch	Proposed	South of Los Angeles Avenue East of Tierra Rejada Road West of Maureen Lane	Single-Family Homes	52 DU	[3]	491	10	28	38	32	19	51
14	4875 Spring Road Residential Project	Approved	4875 Spring Road	Condominiums	95 DU	[4]	695	10	34	4	33	20	53
15	Oakmont Senior Living	Under Construction	1.3960 Peach Hill Road	Senior Adult Housing	77 DU	[8]	285	5	10	15	11	6	20

► LLG Ref. 5-13-0005-1 Everett Street Terraces Project

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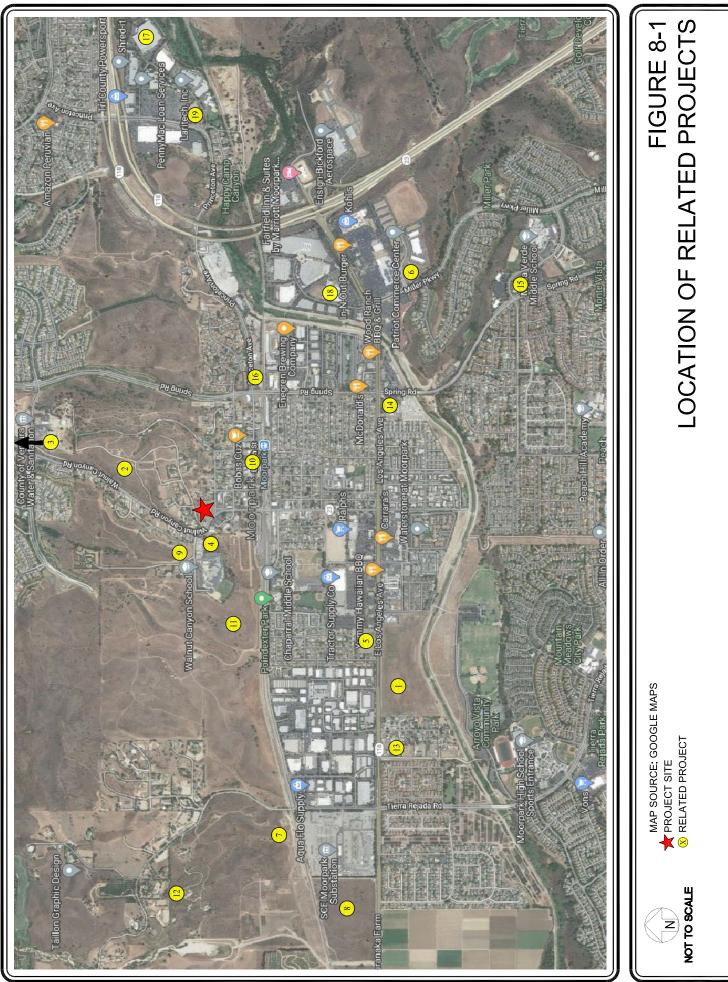
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# **RELATED PROJECTS LIST AND TRIP GENERATION [1]** Table 8-1 (Continued)

						PROJECT	DAILY	AM	AM PEAK HOUR	UR	PN	PM PEAK HOUR	UR	
X	MAP PROJECT NAME/	PROJECT	ADDRESS/	LAND USE DATA	DATA	DATA	TRIP ENDS [2]	)V	<b>VOLUMES [2]</b>	[]	7	<b>VOLUMES [2]</b>	2]	
Ż	NO. PROJECT NUMBER	STATUS	LOCATION	LAND-USE	SIZE	SOURCE	VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL	
1	16 13816 Princeton Avenue Auto Repair Shop Project	Proposed	13816 Princeton Avenue	Auto Repair Shop	5,492 GSF	[11]	68	8	ŝ	11	5	7	12	
1	7 6000 Condor Drive Warehousing/Distribution Facility	Proposed	6000 Condor Drive	Warehousing Distribution Warehouse	189,364 GSF (189,364) GSF	[12] [12],[13]	342 (329)	23 (29)	5 (16)	28 (45)	41 (12)	20 (37)	61 (49)	
-	18 400 Science Drive Industrial Project	Approved	400 Science Drive	Industrial Building	35,330 GSF	[5]	175	22	ŝ	25	ę	19	22	
1	19 5850 Condor Drive Industrial Project	Approved	5850 Condor Drive	Industrial Building	48,211 GSF	[5]	239	30	4	34	4	26	30	
TO	TOTAL						27,528	1,089	1,065	2,154	1,225	1,365	2,590	
0u	nom nominal													

Source: City of Moorpark Land Use and Development Projects Quarterly Status Report for August 2020.
 Trips are one-way traffic movements, entering or leaving.
 Trips are one-way traffic movements, entering or leaving.
 TFL Land Use Code 220 (Multifamily Housing [Low-Rise)) trip generation average rates.
 TFL Land Use Code 130 (Greneral Light Industria)) trip generation average rates.
 TFL Land Use Code 130 (Greneral Light Industria) trip generation average rates.
 TFL Land Use Code 130 (Industrial Park) trip generation average rates.
 TFL Land Use Code 130 (Industrial Park) trip generation average rates.
 TFL Land Use Code 130 (Industrial Park) trip generation average rates.
 TFL Land Use Code 130 (Restring Park) trip generation average rates.
 TFL Land Use Code 230 (Shopping Center) trip generation average rates.
 TE Land Use Code 320 (Shopping Center) trip generation average rates.
 TE Land Use Code 230 (Shopping Center) trip generation average rates.
 TE Land Use Code 933 (Automobile Parts and Service Rate) fragmeration average rates.
 TE Land Use Code 943 (Automobile Parts and Service Rate) trip generation average rates.
 TEL Land Use Code 150 (Warehousing Divieval average rates.
 TE Land Use Code 150 (Warehousing Divieval average rates.

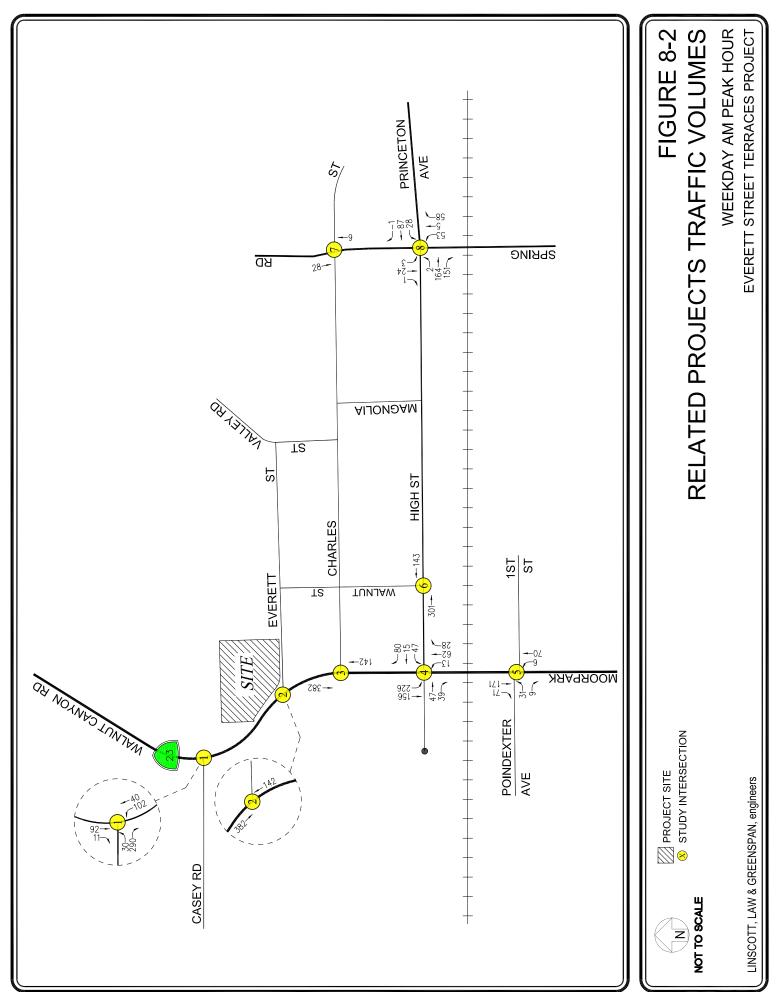
Everett Street Terraces Project LLG Ref. 5-13-0005-1



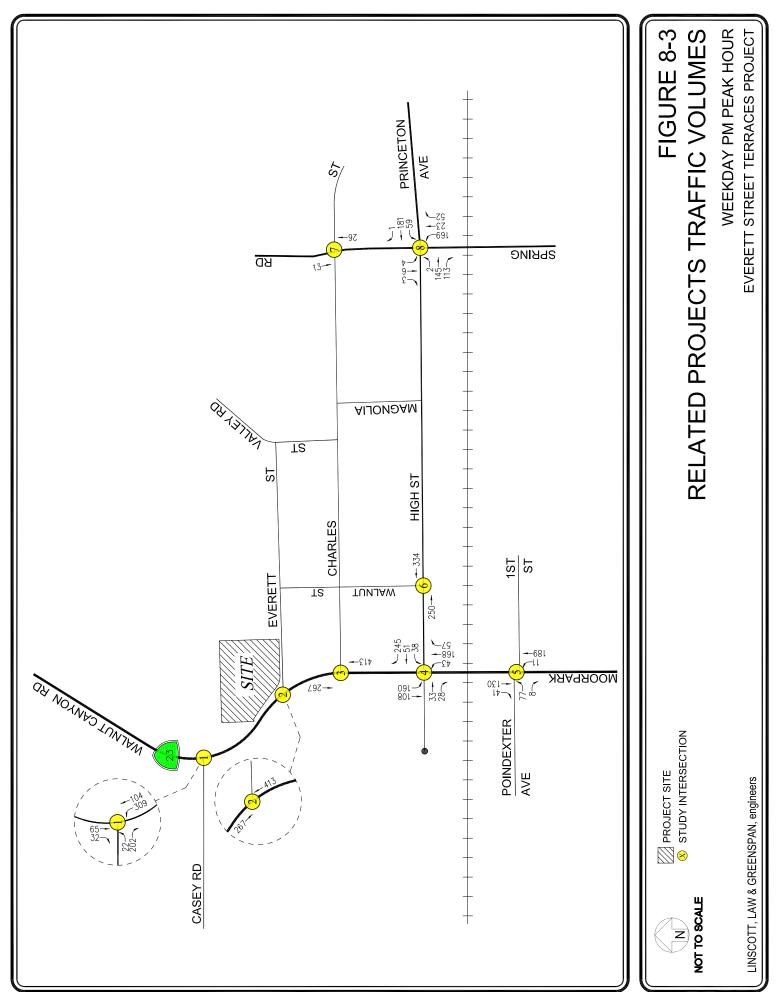
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EVERETT STREET TERRACES PROJECT

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## 9.0 TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

The eight study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis which determines Volume-to-Capacity (v/c) ratio on a critical lane basis. The overall intersection v/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. The Levels of Service vary from LOS A (free flow) to LOS F (jammed condition). As a design constraint for the City of Moorpark, it is intended that a LOS of C or better be maintained. A description of the ICU method and corresponding Levels of Service is provided in *Appendix C*.

#### 9.1 Intersection Operations Criteria

The relative effects of the added Project traffic volumes expected to be generated by the proposed Project during the AM and PM peak hours were evaluated based on analysis of future operating conditions at the eight study intersections, without and with the proposed Project. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c relationships and service level characteristics at each study intersection.

As the City is in the process of developing new traffic study guidelines, the potential effects of Project-generated traffic operations at each study intersection were identified using guidelines included in the City of Moorpark's *Guidelines for Preparing Traffic and Circulation Studies*, 1993. According to the City's guidelines, a LOS degradation of one level or greater attributable to the Project will be considered significant enough to require improvement measures. A LOS degradation of less than one level may be considered significant, depending on circumstances. As a design constraint, it is intended that a LOS of C or better be maintained.

Based on City of Moorpark criteria, lane capacities of 1,500 vehicles per hour (vph) for left-turn and right-turn lanes, 1,600 vph for through lanes, and 2,600 vph for dual left or right turn lanes were used in the ICU calculations. Additionally, a clearance interval of 0.10 is also included in the ICU calculations.

It is noted that the City's thresholds discussed above apply for the purpose of site circulation and conformance with the General Plan but are not intended for CEQA. The VMT assessment is presented in Section 5.0 herein for CEQA purposes.

#### 9.2 Traffic Analysis Scenarios

LOS calculations have been prepared for the following scenarios for the eight study intersections located within the City of Moorpark:

- (a) Existing (2021) conditions.
- (b) Condition (a) with completion and occupancy of the proposed Project.
- (c) Condition (b) with implementation of Project measures where necessary.
- (d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2024 and with completion and occupancy of the related projects (i.e., future cumulative baseline).
- (e) Condition (d) with completion and occupancy of the Project.
- (f) Condition (e) with implementation of cumulative improvement measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the eight study intersections.

Summaries of the v/c ratios and LOS values for the study intersections during the AM and PM peak hours are shown in *Table 9–1*. The ICU data worksheets for the analyzed intersections are contained in *Appendix C*.

Table 9-1 Summary of Volume to capacity ratios AND Levels of Service Am and PM Peak Hours

L			Ξ	F						F			3			a a		15-May-21
			TH VEAR 2021	2021	<b>YEAR 2021</b>	121	7		I <sup>2]</sup> YEAR 2024	124	YEAR 2024		Ŧ		<b>YEAR 2024</b>	024 Icl		
			EXISTING	DNI	EXISTING		CHANGE IN		FUTURE PRE-	PRE-	FUTURE	-	CHANGE IN		W/ PROJECT + CUMULATIVE		CHANGE IN	IMPR-
NO.	INTERSECTION	PEAK HOUR	DELAY OR V/C	LOS [a]	W/ PROJECT DELAY OR V/C LO	ECT LOS	DELAY OR V/C [(2)-(1)]	CRITERIA EXCEEDED [b]	PROJECT DELAY OR V/C LO	S [a]	W/ PROJECT DELAY OR V/C LO	s	DELAY OR V/C 1 [(4)-(3)]	CRITERIA EXCEEDED [b]	IMPROVEMENTS DELAY OR V/C LOS [a]	MENTS LOS [a]	DELAY OR V/C [(5)-(4)]	OVED
-	Walnut Canyon Road-Moorpark Avenue / Casey Road	AM PM	0.700 0.362	B	0.701 0.362	A C	0.001	ON ON	1.044 0.748	чIJ	1.044 0.749	C F	0.000 0.001	ON	0.807 0.581	DA	-0.237 -0.168	YES YES
7	Moorpark Avenue / Everett Street	MA PM	0.524 0.324	¥ 4	0.530 0.345	¥ ¥	0.006 0.021	ON N	0.775 0.589	A C	0.781 0.610	вС	0.006 0.021	ON NO	0.781 0.610	вC	0.000	N/A N/A
ŝ	Moorpark Avenue / Charles Street	AM PM	0.526 0.362	4	0.531 0.374	A A	0.005 0.012	ON NO	0.771 0.628	вC	0.783 0.640	рс	0.012 0.012	NO NO	0.783 0.640	вC	0.000	N/A N/A
4	Moorpark Avenue / High Street	AM PM	0.686 0.653	B	0.693 0.661	ВВ	0.007 0.008	ON NO	0.931 0.931	нц	0.938 0.939	цц	0.007 0.008	NO NO	0.766 0.793	cυ	-0.172 -0.146	YES YES
5	Moorpark Avenue / Poindexter Avenue - 1st Street	AM PM	0.834 0.917	DE	0.841 0.925	ED	0.007 0.008	ON NO	1.072 1.218	F	1.079 1.226	Ъ	0.007 0.008	NO NO	0.689 0.802	B	-0.390 -0.424	YES YES
9	Walnut Street / High Street	AM PM	0.375 0.441	A A	0.377 0.446	A A	0.002 0.005	ON NO	0.538 0.634	A B	0.544 0.641	AB	0.006 0.007	NO NO	0.544 0.641	A B	0.000	N/A N/A
7	Spring Road / Charles Street	AM PM	0.503 0.451	A A	0.503 0.451	A	0.000	0N NO	0.524 0.469	A A	0.524 0.469	V V	0.000	NO NO	0.524 0.469	A	0.000	N/A N/A
8	Spring Road / High Street - Princeton Avenue	AM PM	0.738 0.794	CC	0.740 0.794	υC	0.002 0.000	NO NO	0.919 0.886	D	0.921 0.888	D	0.002 0.002	NO NO	0.893	D	-0.028 -0.055	YES YES

LLG Ref. 5-13-0055-1 Everett Street Terraces Project

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[a] Signalized Intersection Levels of Service were based on the following criteria:

TOS	Α	В	С	D	ш	ц
V/C Ratio	<= 0.60	0.61-0.70	0.71-0.80	0.81-0.90	0.91-1.00	> 1.00

[b] According to the City of Moorpark, intersection operations are evaluated based on the following criteria: <u>Level of Service</u> <u>Project-Related Change in LOS</u> D/E/F Degradation of one level or greater

## 10.0 CITY OF MOORPARK TRAFFIC ANALYSIS

The traffic analysis prepared for the eight study intersections located within the City of Moorpark using the ICU methodology and application of the City of Moorpark traffic operations criteria is summarized in *Table 9-1*. The ICU data worksheets for the analyzed intersections are contained in *Appendix C*.

#### 10.1 Existing Conditions

#### 10.1.1 Existing Conditions

As indicated in column [1] of *Table 9–1*, seven of the eight study intersections located within the City of Moorpark are presently operating at LOS C or better during the AM and PM peak hours under existing conditions. The following intersection is presently operating at LOS D or worse during the peak hours shown below under existing conditions:

٠	Int. No. 5: Moorpark Avenue /	AM Peak Hour: $v/c = 0.834$ , LOS D
	Poindexter Avenue – 1 <sup>st</sup> Street	PM Peak Hour: $v/c = 0.917$ , LOS E

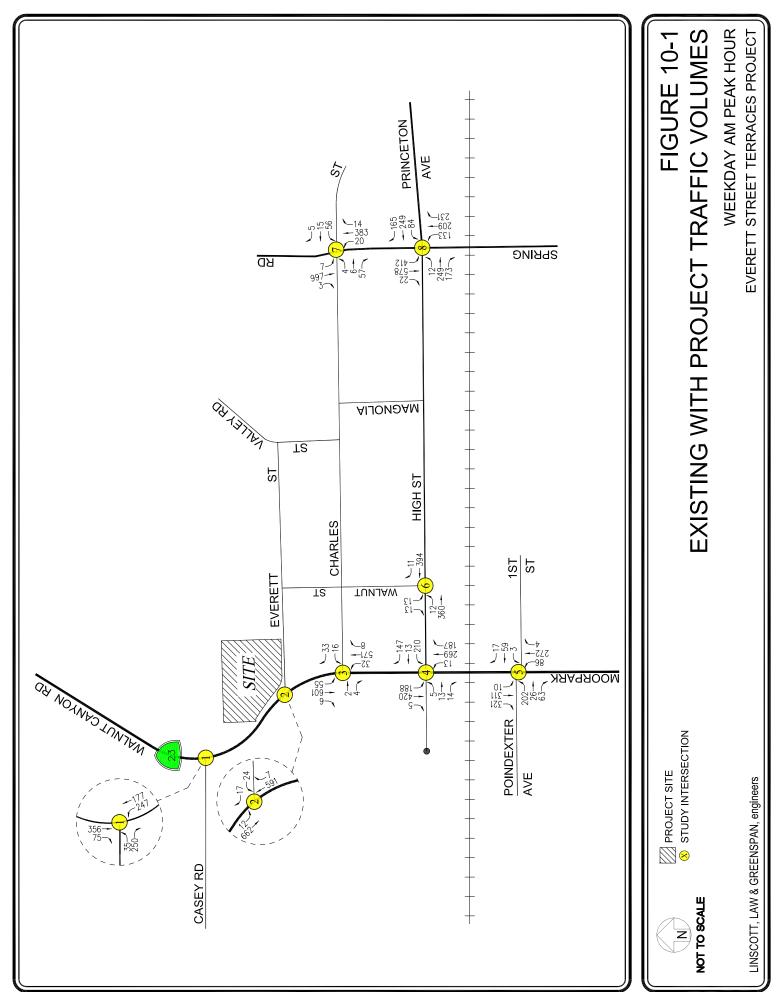
The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures* 6-1 and 6-2, respectively.

#### 10.1.2 Existing with Project Conditions

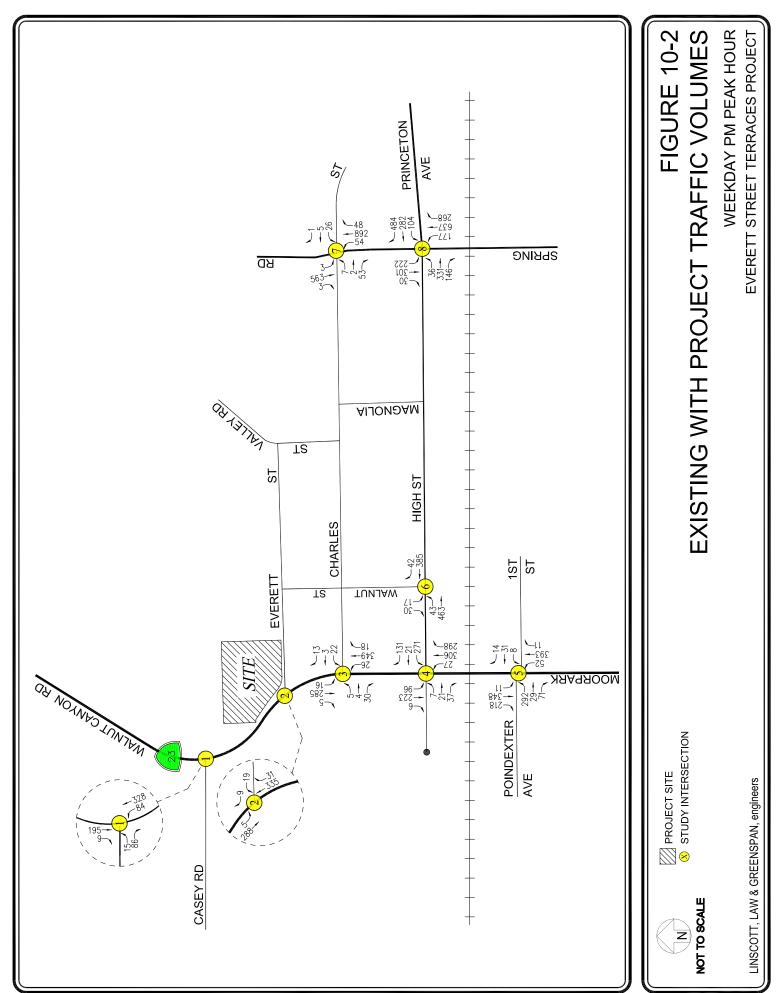
As shown in column [2] of *Table 9-1*, application of the City's operations criteria to the "Existing with Project" scenario indicates that Project-related traffic is not expected to exceed the traffic operations criteria at any of the eight study intersections. It is noted that the Walnut Canyon Road – Moorpark Avenue / Casey Road intersection degrades from LOS B to LOS C in the AM peak hour with the addition of Project-related traffic. However, since this intersection does not degrade to LOS D or worse, Project-related traffic is not expected to exceed the traffic operations criteria at this intersection. In addition, it is noted that while the Moorpark Avenue / Poindexter Avenue – 1st Street intersection remains at LOS D and LOS E in the AM and PM peak hours, respectively, Project-related traffic is not expected to exceed the traffic operations criteria since the LOS does not degrade by one level or greater from existing conditions.

Incremental, but not significant changes in the calculated v/c ratios are noted at the remaining six study intersections. Therefore, no measures are required or recommended with respect to these intersections under the "Existing with Project" conditions. The existing with project traffic volumes at the study intersections during the AM and PM peak hours are shown in *Figures 10–1* and *10–2*, respectively.

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#### **10.2 Future Conditions**

#### 10.2.1 Future Cumulative Baseline Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The v/c ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 8-1*.

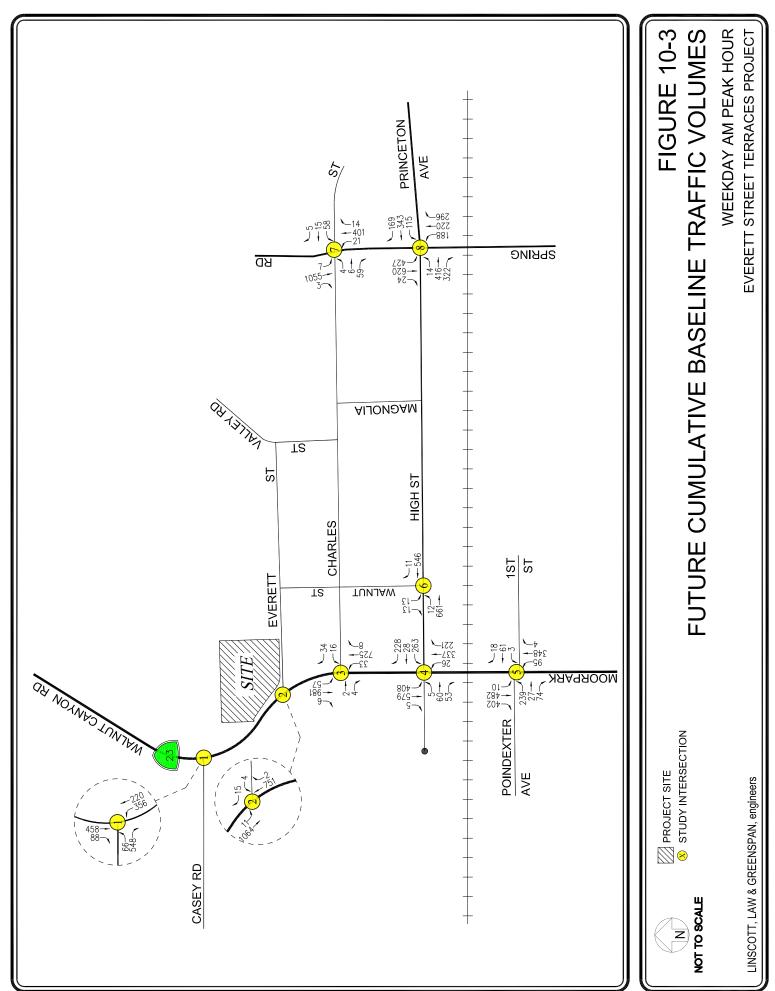
As presented in column [3] of *Table 9–1*, four of the eight study intersections located within the City of Moorpark are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions. The following study intersections are expected to operate at LOS D or worse during the peak hours shown below under future cumulative baseline conditions:

<ul> <li>Int. No. 1: Walnut Canyon Road - Moorpark Avenue / Casey Road</li> </ul>	AM Peak Hour: $v/c = 1.044$ , LOS F
<ul> <li>Int. No. 4: Moorpark Avenue /</li></ul>	AM Peak Hour: $v/c = 0.931$ , LOS E
High Street	PM Peak Hour: $v/c = 0.931$ , LOS E
<ul> <li>Int. No. 5: Moorpark Avenue /</li></ul>	AM Peak Hour: $v/c = 1.072$ , LOS F
Poindexter Avenue – 1 <sup>st</sup> Street	PM Peak Hour: $v/c = 1.218$ , LOS F
<ul> <li>Int. No. 8: Spring Road /</li></ul>	AM Peak Hour: $v/c = 0.919$ , LOS E
High Street – Princeton Avenue	PM Peak Hour: $v/c = 0.886$ , LOS D

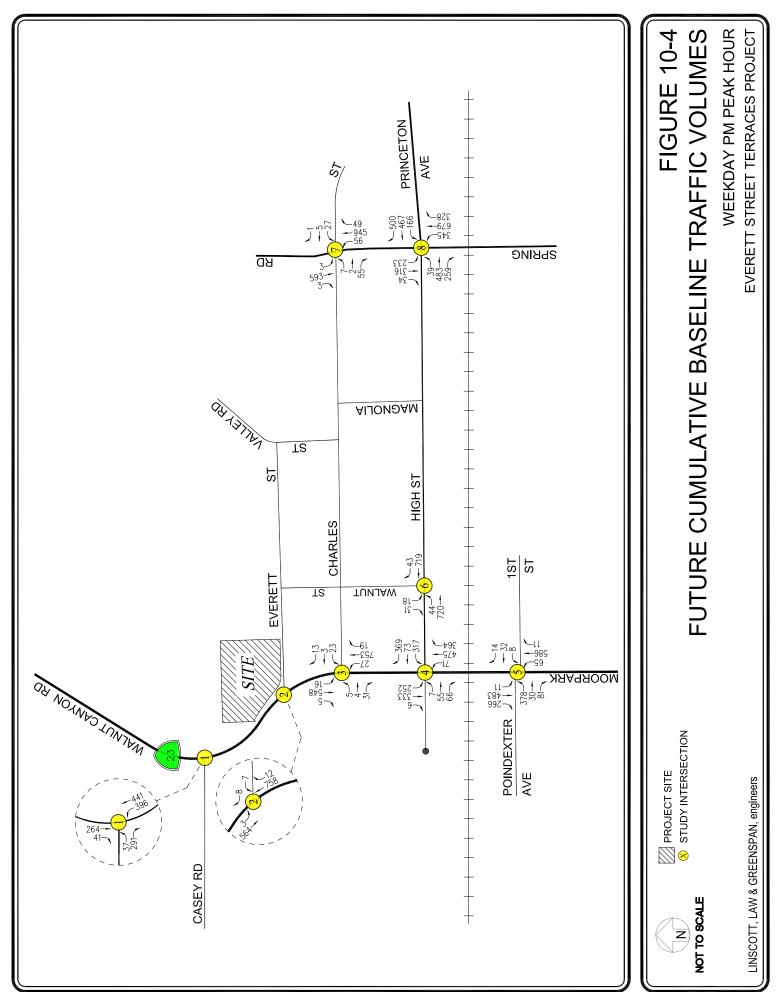
The future cumulative baseline (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 10–3* and *10–4*, respectively.

#### 10.2.2 Future Cumulative with Project Conditions

The "Future Cumulative with Project" conditions were forecast based on the addition of traffic generated by the Project plus the addition of ambient traffic and completion and occupancy of related projects. As shown in column [4] of *Table 9-1*, application of the City's operations criteria to the "Future Cumulative with Project" scenario indicates that Project-related traffic is not expected to exceed the traffic operations criteria at any of the eight study intersections. It is noted that the Moorpark Avenue / Everett Street intersection degrades from LOS A to LOS B in the PM peak hour with the addition of Project-related traffic. However, since this intersection does not degrade to LOS D or worse, Project-related traffic is not expected to exceed the traffic operations. In addition, it is noted that while the four study intersections noted above remain at LOS D or worse, Project-related traffic is not expected to the four study intersection.



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exceed the traffic operations criteria at these intersections since the LOS does not degrade by one level or greater from future cumulative baseline conditions.

The future cumulative with project (existing, ambient growth, related projects and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 10–5* and *10–6*, respectively.

#### **10.3** Future Cumulative Improvement Measures

As indicated in the previous section, four of the eight study intersections are anticipated to operate at LOS D or worse during the AM and/or PM peak hours under future cumulative baseline and "Future Cumulative with Project" conditions. While it has been concluded that Project-related traffic is not expected to exceed the traffic operations criteria at any of the eight study intersections, a review of potential improvement measures, which will improve the overall operating conditions at these locations, has been conducted. In general, off-site improvement measures identified for future cumulative conditions should not be the sole responsibility of an individual project, but rather the development may contribute towards the cost of implementation of such improvements based on the project's share or usage of the facilities being improved. It is recognized that as a design constraint for the City of Moorpark, it is intended that a LOS C or better be maintained to the extent possible. The cumulative improvement measures recommended at the study intersections are based on previous capital projects that have yet to be implemented and are described in the following paragraphs.

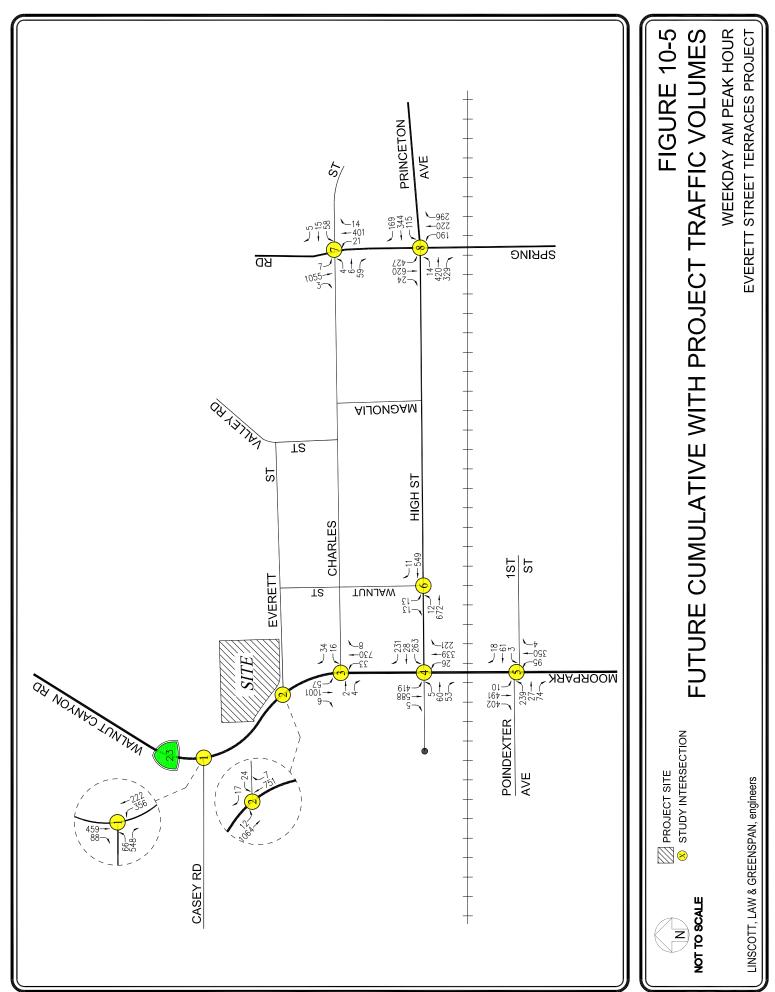
#### Intersection No. 1: Walnut Canyon Road – Moorpark Avenue / Casey Road

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure at the Walnut Canyon Road-Moorpark Avenue / Casey Road intersection includes the traffic signal modification to provide an eastbound right-turn overlap phase to coincide with the northbound left-turn phase.

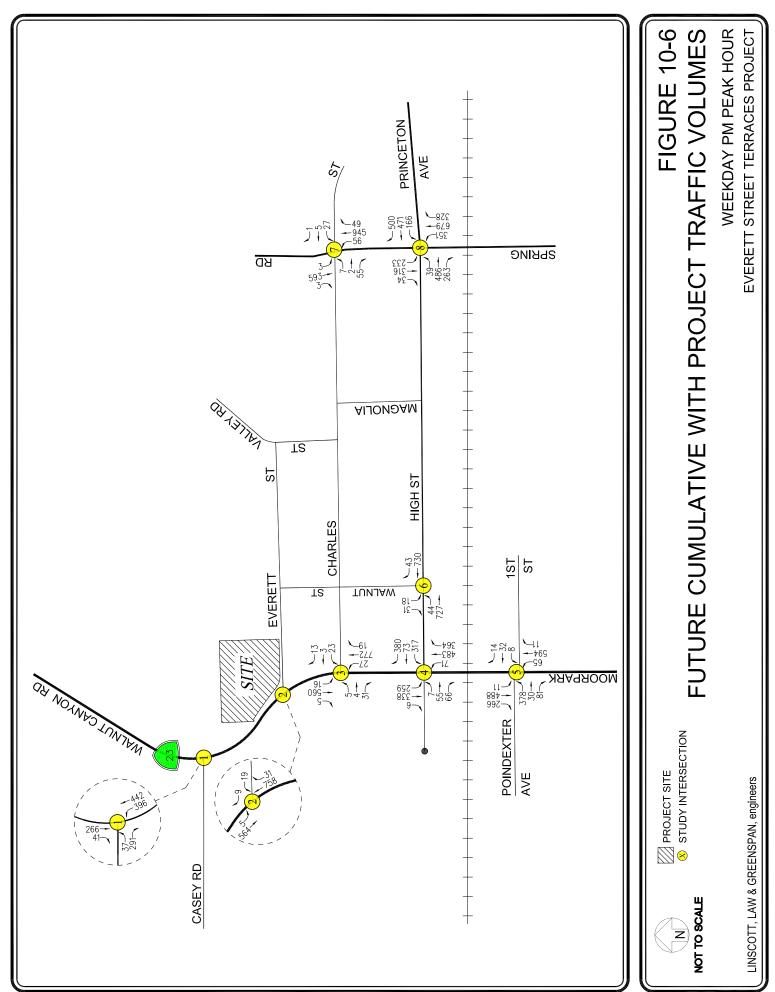
As shown in column [5] of *Table 9–1*, implementation of the recommended cumulative improvement measures is expected to improve the v/c ratio at this intersection to 0.807 (LOS D) from 1.044 (LOS F) during the AM peak hour under "Future Cumulative with Project" conditions.

#### Intersection No. 4: Moorpark Avenue / High Street

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure involves the widening of Moorpark Avenue to provide additional lanes between Casey Road and Third Street. The improvement measure at the Moorpark Avenue / High Street intersection includes the installation of additional northbound and southbound lanes as well as a traffic signal modification to provide a westbound right-turn overlap phase to coincide with the southbound left-turn phase. The resulting lane configurations on Moorpark Avenue at the



o:/0055/dwg/f10-5.dwg 05/13/2021 19:36:02 shankar llg exhibits color.ctb



o:/0055/dwg/f10-6.dwg 05/13/2021 19:44:22 shankar llg exhibits color.ctb

intersection on the northbound approach would consist of one shared left/through lane, one through lane and one right-turn only lane and on the southbound approach would consist of one left-turn only lane, one through lane and one shared through/right-turn lane.

As shown in column [5] of *Table 9–1*, implementation of the recommended cumulative improvement measures is expected to improve the v/c ratio at this intersection to 0.766 (LOS C) from 0.938 (LOS E) during the AM peak hour and to 0.793 (LOS C) from 0.939 (LOS E) during the PM peak hour under "Future Cumulative with Project" conditions.

#### Intersection No. 5: Moorpark Avenue / Poindexter Avenue – 1st Street

The cumulative improvement measure at this location consists of the implementation of a previous City of Moorpark Public Works Department Capital Project. The improvement measure involves the widening of Moorpark Avenue to provide additional lanes between Casey Road and Third Street. The improvement measure at the Moorpark Avenue / Poindexter Avenue – 1<sup>st</sup> Street intersection includes the installation of additional southbound and northbound lanes. The resulting lane configuration on Moorpark Avenue for both the southbound and northbound approaches to the intersection would consist of one left-turn lane, one through lane and one shared through/right-turn lane. In addition, the cumulative measure at this location would consist of the conversion of the eastbound right-turn only lane to a shared left/through/right-turn lane. The resulting lane configuration on Moorpark Avenue on the eastbound approach to the intersection would consist of one left-turn lane. The resulting lane configuration on Moorpark Avenue on the eastbound approach to the intersection would consist of one left-turn lane.

As shown in column [5] of *Table 9–1*, implementation of the recommended cumulative improvement measures is expected to improve the v/c ratio at this intersection to 0.689 (LOS B) from 1.079 (LOS F) during the AM peak hour and to 0.802 (LOS D) from 1.226 (LOS F) during the PM peak hour under "Future Cumulative with Project" conditions.

#### Intersection No. 8: Spring Road / High Street - Princeton Avenue

The cumulative improvement measure at this location consists of restriping the eastbound approach. The improvement involves restriping the eastbound right-turn only lane into a shared through and right-turn lane. The resulting lane configuration on High Street on the eastbound approach of the intersection would consist of one left-turn only lane, one through lane, and one shared through and right-turn lane.

As shown in column [5] of *Table 9–1*, implementation of the recommended cumulative improvement measures is expected to improve the v/c ratio at this intersection to 0.893 (LOS D) from 0.921 (LOS E) during the AM peak hour and to 0.833 (LOS D) from 0.888 (LOS D) during the PM peak hour under "Future Cumulative with Project" conditions.

#### LINSCOTT, LAW & GREENSPAN, engineers

## 11.0 FAIR SHARE ANALYSIS

The methodology and the calculations of the Project's pro-rata percentage at the study intersections which require cumulative regional improvements are summarized in *Table 11–1*. The method used for these calculations was based on the sum of the total weekday morning and afternoon (AM and PM) peak hours Project-generated traffic volumes on the approaches to each affected study intersection divided by the Project plus other development (related) projects traffic volumes on those same approaches for the same AM and PM peak hours. It should be noted that existing traffic volumes are not included in the calculations.

As shown in *Table 11–1*, the proposed Project's fair share contribution toward the cumulative regional improvements ranges from 0.5% at the Walnut Canyon Road – Moorpark Avenue / Casey Road intersection to 3.3% at the Moorpark Avenue / High Street intersection.

# Table 11-1 PRO-RATA PERCENTAGE OF CUMULATIVE IMPROVEMENT MEASURES

	Pro-Rata Pero	entage Metl	nodology	
	110-Mata 1 th	entage meti	iouoio <sub>6</sub> ,	
A project's pro-rata percentage of cumulative m AM and PM peak hour traffic volumes. The pro It should be noted that existing traffic and ambi	oject's percentage share	is derived by	dividing project traffic by project p	Ũ
	Project + Oth	Project Traff er Related Pr		
The following equation is provided to assist in roadway mitigation improvement measures:	calculating the project's	pro-rata perc	entage to implement	
	where:	Р	<ul> <li>Project's pro-rate percentag measure</li> </ul>	e for cumulative mitigation
$P = \frac{Vp}{Vp + Vc}$		Vp	<ul> <li>AM &amp; PM Peak Hour volu generated by the project</li> </ul>	me at the intersection
••••••				
		Vc	= Cumulative (other related p AM & PM Peak Hour traff	projects) ic volume at the intersection
	Study Interse		AM & PM Peak Hour traff	5 )
Intersection	<u>AM &amp; PM</u>		AM & PM Peak Hour traff	e volume at the intersection Percentage
Intersection	¥	ction(s) Calc	AM & PM Peak Hour traff ulations <u>Calculation</u>	Percentage <u>of Impact</u>
	<u>AM &amp; PM</u>	ction(s) Calc	AM & PM Peak Hour traff	Percentage <u>of Impact</u>
Walnut Canyon Road - Moorpark Avenue / Casey Road	<u>AM &amp; PM</u> <u>Traffic Volumes</u> Vp = <u>6</u>	ction(s) Calc I	AM & PM Peak Hour traff ulations $\frac{Calculation}{(6) + (1,299)}$	Percentage of Impact = 0.5 %
Walnut Canyon Road - Moorpark Avenue / Casey Road	$\frac{AM \& PM}{Traffic Volumes}$ $Vp = \frac{6}{Vc} = \frac{1,299}{Vc}$	ction(s) Calc I	AM & PM Peak Hour traff ulations <u>Calculation</u>	Percentage of Impact = 0.5 %
Walnut Canyon Road - Moorpark Avenue / Casey Road Moorpark Avenue /	$\frac{AM \& PM}{Traffic Volumes}$ $Vp = 6$ $Vc = 1,299$ $Vp = 56$	ction(s) Calc I I	AM & PM Peak Hour traff ulations $P = \frac{6}{(6) + (1,299)}$ $P = \frac{56}{(56) + (1,644)}$	Percentage of Impact = 0.5 %
Walnut Canyon Road - Moorpark Avenue / Casey Road Moorpark Avenue / High Street	$\frac{AM \& PM}{Traffic Volumes}$ $Vp = 6$ $Vc = 1,299$ $Vp = 56$ $Vc = 1,644$	ction(s) Calc I I	AM & PM Peak Hour traff ulations $\frac{Calculation}{(6) + (1,299)}$	Percentage of Impact = 0.5 % = 3.3 %
Walnut Canyon Road - Moorpark Avenue / Casey Road Moorpark Avenue / High Street Moorpark Avenue /	$\frac{AM \& PM}{Traffic Volumes}$ $Vp = 6$ $Vc = 1,299$ $Vp = 56$ $Vc = 1,644$ $Vp = 24$	ction(s) Calc I I I	AM & PM Peak Hour traff ulations $P = \frac{6}{(6) + (1,299)}$ $P = \frac{56}{(56) + (1,644)}$	Percentage <u>of Impact</u> = 0.5 % = 3.3 % = 2.9 % = 2.3 %

## 12.0 CONCLUSIONS

This traffic analysis has been conducted to identify and evaluate the potential impacts of traffic generated by the proposed Everett Street Terraces Project. The City is in the process of developing new traffic study guidelines that will include VMT guidelines and thresholds for measuring transportation impacts under CEQA. A VMT assessment has therefore been prepared in accordance with the Governor's OPR technical advisory. Based on the guidance provided in the OPR advisory, VMT impacts of the Project are determined to be less than significant.

The City's current traffic study guidelines require that a Level of Service (LOS) analysis be performed for the purpose of identifying potential operational deficiencies at intersections in the vicinity of the Project Site. Accordingly, eight intersections were analyzed to determine changes in operations following occupancy and utilization of the proposed Project. It is concluded that the proposed Project is not anticipated to exceed operations criteria from the City of Moorpark at any of the study intersections under existing conditions.

The Project, along with the identified cumulative development projects, is anticipated to contribute to the degradation of intersection operations in the future cumulative traffic conditions. Potential cumulative improvement measures have been identified that are anticipated to improve the operating conditions. It is anticipated that the proposed Project would contribute funds on a fair-share basis towards the implementation of the cumulative measures.

**APPENDIX A** 

**ITERIS TECHNICAL MEMORANDUM** 



2|3.488.0345 iteris.com 801 South Grand Avenue, Suite 750 Los Angeles, CA 90017

#### **TECHNICAL MEMORANDUM**

To: Linscott, Law, and Greenspan (LLG) Engineers

From: Iteris, Inc.

Date: April 27, 2021

RE: Everett Street Terraces Project – Vehicle Miles Traveled Outputs

#### **INTRODUCTION**

This memorandum presents Iteris' Vehicle Miles Traveled (VMT) analysis of the Everett Street Terraces project in the City of Moorpark. The Everett Street Terraces project consists of 60 residential condominium units. The project site is located at the northeast corner of the intersection of Moorpark Avenue and Everett Street.

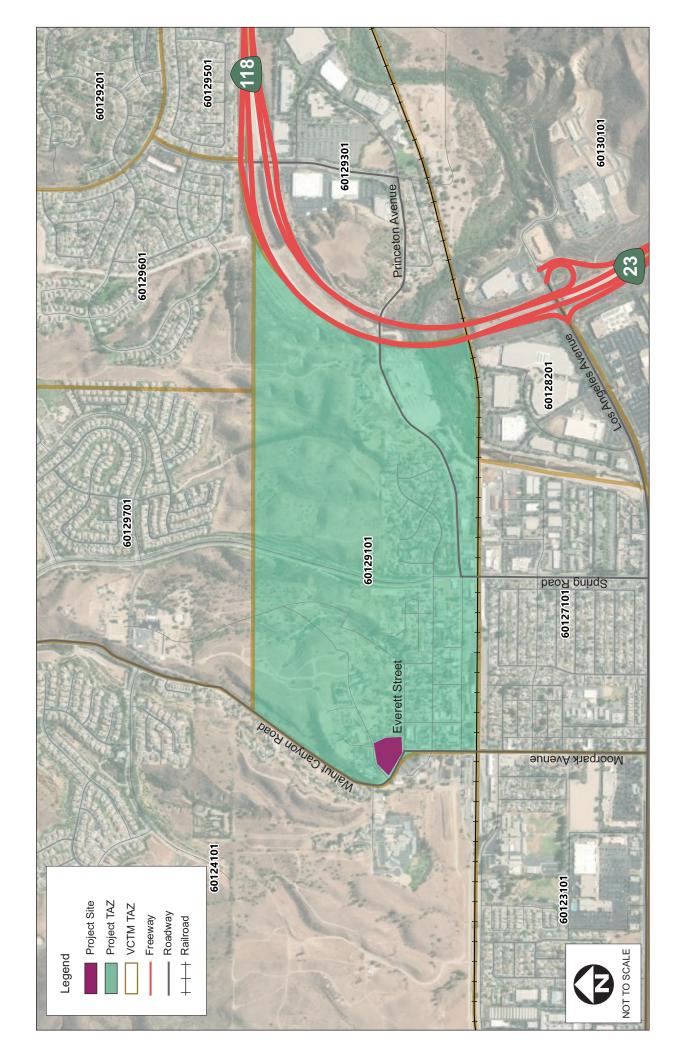
CEQA analysis for determining potential significant transportation impacts from vehicles transitioned in 2020 from an automobile delay or capacity measure to a Vehicle Miles Traveled (VMT) metric as required by Senate Bill (SB) 743. VMT is an area-wide performance measure which helps compare the overall performance of a project or project alternatives and is also used as a metric to ultimately assess the transportation environmental impacts of a project. VMT is generally calculated using a travel demand model that captures the movement of all trips over a highway network. For this analysis, the time period was defined as a 24 hour period on a typical weekday.

#### **METHODOLOGY**

Iteris utilized the Ventura County Transportation Model (VCTM) to generate VMT statistics. This land-use based model, which is a subarea model of the Southern California Association of Government's (SCAG) travel demand model, is consistent with the 2016 SCAG RTP/SCS travel-demand model assumptions. The model consists of a 2016 base year scenario and 2040 future year scenario. For the purposes of this analysis, the 2016 base year scenario was utilized.

The VCTM consists of a detailed traffic analysis zone (TAZ) structure in the City of Moorpark. The model consists of 19 TAZ's within the City. **Figure 1** shows the location of the proposed project's TAZ (60129101).





CEQA Transportation Analysis City of Moorpark





#### VMT ANALYSIS

The proposed project is residential, thus VMT will be reported as <u>Residential VMT per Capita</u>, calculated as such: Home-Based Production VMT / Residential Population. In order to determine the project's potential level of impact, a new VCTM scenario including the proposed project land use within TAZ 60129101 was prepared, utilizing the existing/baseline year of the model. From this new model scenario output, the following three metrics were calculated:

- Countywide average daily VMT per capita; and
- Citywide average daily VMT per capita; and
- Project TAZ-level daily VMT per capita.

The new VCTM scenario resulted in the following outputs:

- Countywide average daily VMT per capita, for use within this analysis only, is 15.62; and
- Citywide average daily VMT per capita, for use within this analysis only, is 20.54; and
- Project TAZ-level daily VMT per capita is 19.58.

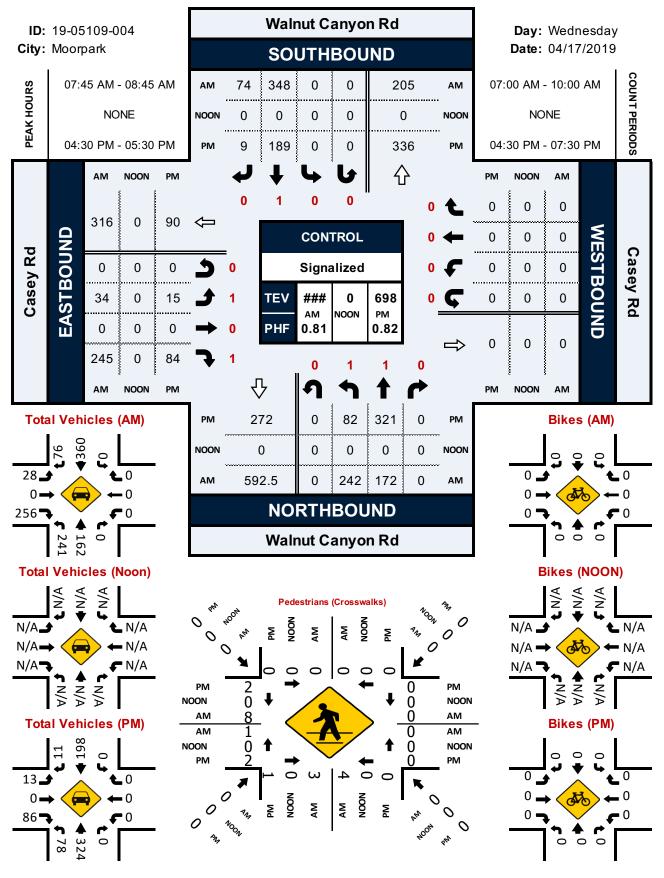


**APPENDIX B** 

HISTORICAL TRAFFIC COUNT DATA

# Walnut Canyon Rd & Casey Rd

#### Peak Hour Turning Movement Count



#### National Data & Surveying Services

Project ID: CA13\_5332\_002

#### Day: WEDNESDAY

City: (	City of Mo	orpark				А	м				Date:	6/12/2013	1
NS/EW Streets:	Мо	oorpark Av	e	Mo	oorpark Ave			Everett St		E	Everett St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID		EASTBOUN	ID	W	/ESTBOUN	ID	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	1	0	1	
7:00 AM		25	1	2	45					1		1	75
7:15 AM		26	1	0	56					1		1	85
7:30 AM		52	1	3	83					2		2	143
7:45 AM		128	0	1	100					1		3	233
8:00 AM		137	1	2	134					1		6	281
8:15 AM		91	0	3	140					0		2	236
8:30 AM		59	3	1	74					4		1	142
8:45 AM		44	0	0	39					3		0	86
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	562	7	12	671	0	0	0	0	13	0	16	1281
APPROACH %'s :	0.00%	98.77%	1.23%	1.76%	98.24%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	44.83%	0.00%	55.17%	
PEAK HR START TIME :	730	AM											TOTAL
PEAK HR VOL :	0	408	2	9	457	0	0	0	0	4	0	13	893
PEAK HR FACTOR :		0.743			0.815			0.000			0.607		0.794

CONTROL: 1-Way Stop (WB)

#### National Data & Surveying Services

Project ID: CA13\_5332\_002

#### Day: WEDNESDAY

City:	City of Mo	orpark				Р	м				Date:	6/12/2013	1
NS/EW Streets:	Mo	oorpark Av	e	Мо	oorpark Ave	е		Everett St		E	Everett St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID		EASTBOUN	ID	W	ESTBOUN	ID	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	0	0	1	0	1	
4:00 PM		51	2	0	46					3		0	102
4:15 PM		50	3	0	35					3		2	93
4:30 PM		56	2	1	56					2		1	118
4:45 PM		73	1	1	54					0		2	131
5:00 PM		60	2	1	56					2		3	124
5:15 PM		62	5	0	49					3		2	121
5:30 PM		53	2	0	43					3		2	103
5:45 PM		47	5	1	44					3		0	100
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	452	22	4	383	0	0	0	0	19	0	12	892
APPROACH %'s :	0.00%	95.36%	4.64%	1.03%	98.97%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	61.29%	0.00%	38.71%	I
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	0	251	10	3	215	0	0	0	0	7	0	8	494
PEAK HR FACTOR :		0.882			0.956			0.000			0.750		0.943

CONTROL: 1-Way Stop (WB)

#### National Data & Surveying Services

Project ID: CA13\_5332\_003

#### Day: WEDNESDAY

City: 0	City of Mo	orpark				A	Л				Date:	6/12/2013	i -
NS/EW Streets:	M	oorpark Av	е	Mo	oorpark Ave	Э	(	Charles St		(	Charles St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID	E	ASTBOUN	D	W	ESTBOUN	ID	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0.5	0.5	1	0	1	0	
7:00 AM	2	24	2	3	42	0		0	1	9	0	1	84
7:15 AM	4	27	4	2	56	0		0	1	8	0	1	103
7:30 AM	10	49	0	2	82	0		1	0	10	1	5	160
7:45 AM	16	115	0	15	84	1		0	0	6	0	12	249
8:00 AM	3	129	3	10	124	2		0	2	2	0	9	284
8:15 AM	5	85	1	14	122	2		1	0	1	0	5	236
8:30 AM	4	62	4	10	71	1		1	2	5	0	3	163
8:45 AM	5	43	1	0	41	1		0	2	4	0	1	98
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	49	534	15	56	622	7	0	3	8	45	1	37	1377
APPROACH %'s :	8.19%	89.30%	2.51%	8.18%	90.80%	1.02%	0.00%	27.27%	72.73%	54.22%	1.20%	44.58%	
PEAK HR START TIME :	745	AM											TOTAL
PEAK HR VOL :	28	391	8	49	401	6	0	2	4	14	0	29	932
PEAK HR FACTOR :		0.791			0.826			0.500			0.597		0.820

CONTROL: 2-Way Stop (EB,WB)

#### National Data & Surveying Services

Project ID: CA13\_5332\_003

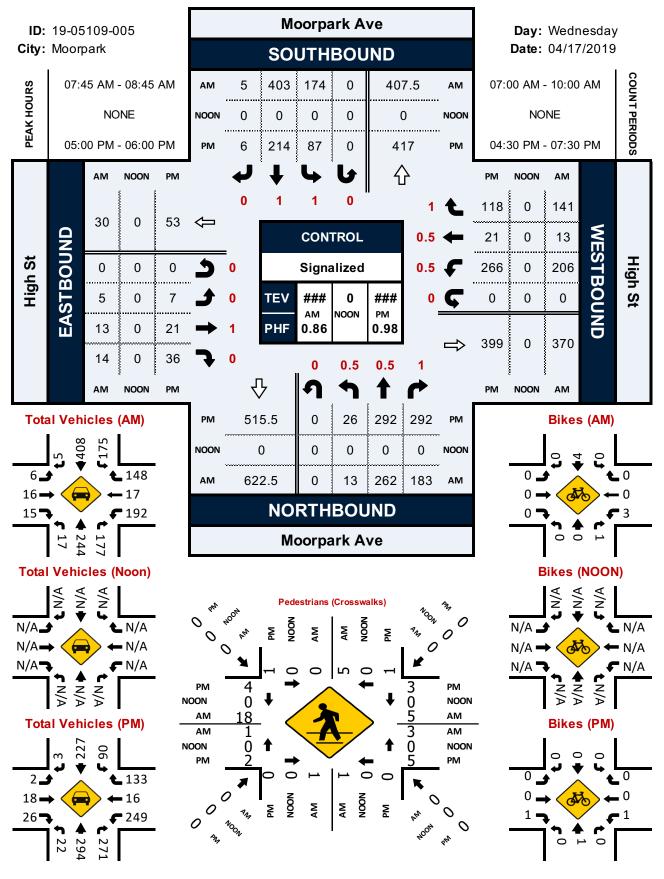
#### Day: WEDNESDAY

City: 0	City of Mo	orpark				PN	л				Date:	6/12/2013	3
NS/EW Streets:	Мо	oorpark Av	е	Mo	oorpark Av	е	(	Charles St		(	Charles St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID	E	ASTBOUN	D	W	ESTBOUN	ID	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	0.5	0.5	1	0	1	0	
4:00 PM	9	53	3	4	42	2	0	0	10	8	2	0	133
4:15 PM	5	51	3	3	36	2	1	2	11	5	0	1	120
4:30 PM	8	57	4	6	52	1	1	1	6	0	1	1	138
4:45 PM	8	66	6	6	45	2	2	1	11	10	1	6	164
5:00 PM	5	60	4	0	55	1	1	2	7	4	1	1	141
5:15 PM	3	64	2	2	52	1	1	0	3	6	0	3	137
5:30 PM	4	54	6	2	44	0	0	3	3	5	0	2	123
5:45 PM	4	49	5	3	43	1	1	3	17	5	0	3	134
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	46	454	33	26	369	10	7	12	68	43	5	17	1090
APPROACH %'s :	8.63%	85.18%	6.19%	6.42%	91.11%	2.47%	8.05%	13.79%	78.16%	66.15%	7.69%	26.15%	
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	24	247	16	14	204	5	5	4	27	20	3	11	580
PEAK HR FACTOR :		0.897			0.945			0.643			0.500		0.884

CONTROL: 2-Way Stop (EB,WB)

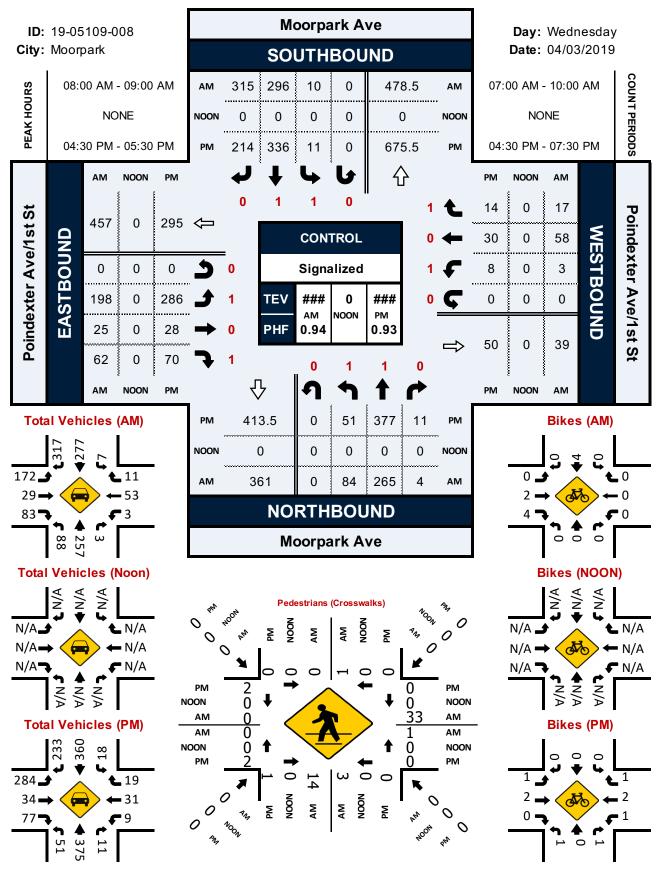
# Moorpark Ave & High St

#### Peak Hour Turning Movement Count



## Moorpark Ave & Poindexter Ave/1st St

## Peak Hour Turning Movement Count



## National Data & Surveying Services

Project ID: CA13\_5332\_006

Day: WEDNESDAY

City:	City of Mod	orpark				AN	Л				Date: 6	5/12/2013	3
NS/EW Streets:	V	Valnut St		١	Walnut St			High St			High St		
	NC	RTHBOU	ND	SC	UTHBOUI	ND	E	ASTBOUN	D	V	VESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0		0	1		4	1	33	0	0	62	0	101
7:15 AM	1		2	1		1	2	42	0	1	51	5	106
7:30 AM	0		0	1		3	2	76	0	0	104	3	189
7:45 AM	0		0	5		5	5	71	0	0	92	3	181
8:00 AM	0		0	2		1	2	93	0	0	90	2	190
8:15 AM	0		0	3		2	1	73	1	0	65	1	146
8:30 AM	0		0	4		3	0	67	0	0	75	3	152
8:45 AM	0		0	1		1	1	38	0	0	44	4	89
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	2	18	0	20	14	493	1	1	583	21	1154
APPROACH %'s :	33.33%	0.00%	66.67%	47.37%	0.00%	52.63%	2.76%	97.05%	0.20%	0.17%	96.36%	3.47%	
PEAK HR START TIME :	730 A	AM											TOTAL
PEAK HR VOL :	0	0	0	11	0	11	10	313	1	0	351	9	706
PEAK HR FACTOR :		0.000			0.550			0.853			0.841		0.929

CONTROL: 2-Way Stop (NB,SB)

## National Data & Surveying Services

Project ID: CA13\_5332\_006

Day: WEDNESDAY

City:	City of Mod	orpark				PN	Л				Date: 6	5/12/2013	3
NS/EW Streets:	١	Walnut St		١	Walnut St			High St			High St		
	NC	DRTHBOUI	ND	SC	UTHBOUI	ND	E	ASTBOUNI	)	V	VESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0			0		7	11	93	1	0	78	12	202
4:15 PM	0			1		6	5	92	0	0	83	4	191
4:30 PM	0			5		8	11	103	0	0	81	14	222
4:45 PM	0			6		6	10	103	0	0	<b>9</b> 5	9	229
5:00 PM	0			3		5	9	99	0	0	81	5	202
5:15 PM	1			1		8	9	104	1	0	78	10	212
5:30 PM	0			6		3	0	85	2	0	71	7	174
5:45 PM	0			1		4	3	94	0	2	59	6	169
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	0	0	23	0	47	58	773	4	2	626	67	1601
APPROACH %'s :	100.00%	0.00%	0.00%	32.86%	0.00%	67.14%	6.95%	92.57%	0.48%	0.29%	90.07%	9.64%	
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	1	0	0	15	0	27	39	409	1	0	335	38	865
PEAK HR FACTOR :		0.250			0.808			0.985			0.897		0.944

CONTROL: 2-Way Stop (NB,SB)

## National Data & Surveying Services

Project ID: CA13\_5332\_007

### Day: WEDNESDAY

City: 0	City of Mo	orpark				AN	Л				Date: 6	5/12/2013	3
NS/EW Streets:	:	Spring Rd		:	Spring Rd		(	Charles St		(	Charles St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID	E	ASTBOUN	D	V	/ESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1.5	0.5	1	2	0	0.5	0.5	0	0.5	0.5	1	
7:00 AM	7	58	2	0	113	1	0	1	13	10	3	1	209
7:15 AM	3	67	3	3	156	2	2	2	14	15	1	2	270
7:30 AM	3	53	4	1	190	0	0	0	10	14	2	2	279
7:45 AM	5	<b>65</b>	0	1	180	1	2	1	11	11	8	1	286
8:00 AM	7	79	5	2	162	0	0	3	16	10	2	0	286
8:15 AM	4	60	3	1	156	0	0	1	21	18	3	1	268
8:30 AM	2	75	4	1	151	1	3	1	24	8	1	1	272
8:45 AM	8	55	2	1	115	1	0	0	7	7	2	0	198
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	39	512	23	10	1223	6	7	9	116	93	22	8	2068
APPROACH %'s :	6.79%	89.20%	4.01%	0.81%	98.71%	0.48%	5.30%	6.82%	87.88%	75.61%	17.89%	6.50%	
PEAK HR START TIME :	715	AM											TOTAL
PEAK HR VOL :	18	264	12	7	688	3	4	6	51	50	13	5	1121
PEAK HR FACTOR :		0.808			0.914			0.803			0.850		0.980

CONTROL : Signalized

## National Data & Surveying Services

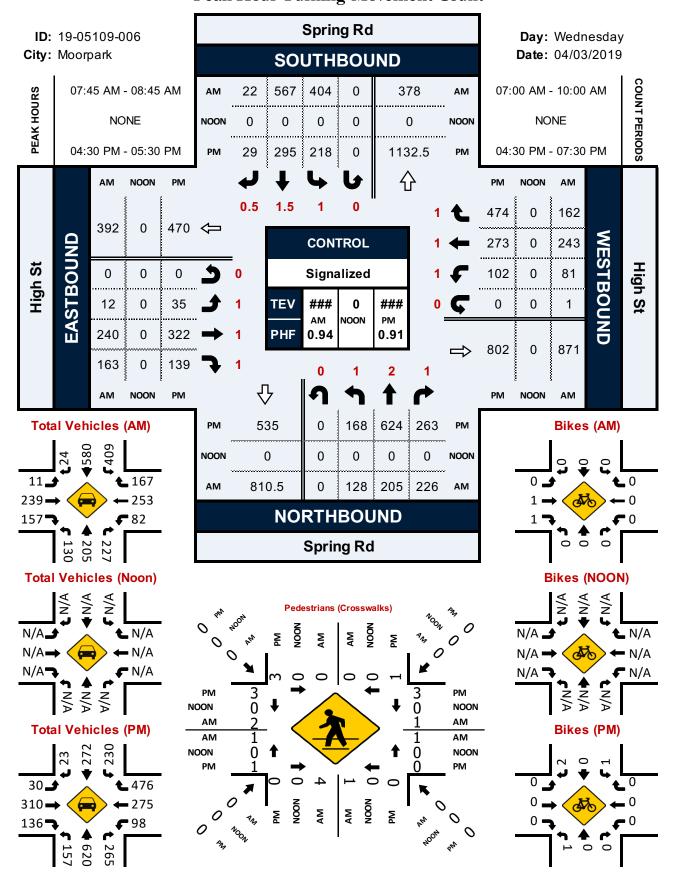
Project ID: CA13\_5332\_007

Day: WEDNESDAY

City:	City of Mo	orpark				Р	м				Date: 6	5/12/2013	3
NS/EW Streets:		Spring Rd		:	Spring Rd		(	Charles St		(	Charles St		
	N	ORTHBOUI	ND	SC	DUTHBOUN	ID	E	ASTBOUN	D	V	VESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ΕT	ER	WL	WT	WR	TOTAL
LANES:	1	1.5	0.5	1	2	0	0.5	0.5	0	0.5	0.5	1	
4:00 PM	2	135	9	1	71	1	0	0	9	7	1	1	237
4:15 PM	8	153	12	0	64	0	0	0	7	3	1	0	248
4:30 PM	8	162	9	0	121	0	1	1	15	6	0	1	324
4:45 PM	11	183	9	2	90	1	2	1	10	4	1	0	314
5:00 PM	15	153	9	0	109	2	2	0	14	5	2	0	311
5:15 PM	14	169	16	1	101	0	2	0	8	9	2	0	322
5:30 PM	8	156	13	0	99	1	4	3	9	7	0	2	302
5:45 PM	11	181	16	0	78	0	1	0	7	8	0	1	303
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	77	1292	93	4	733	5	12	5	79	49	7	5	2361
APPROACH %'s :	5.27%	88.37%	6.36%	0.54%	98.79%	0.67%	12.50%	5.21%	82.29%	80.33%	11.48%	8.20%	
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	48	667	43	3	421	3	7	2	47	24	5	1	1271
PEAK HR FACTOR :		0.933			0.882			0.824			0.682		0.981

CONTROL : Signalized

## Spring Rd & High St Peak Hour Turning Movement Count



APPENDIX C

ICU AND LEVELS OF SERVICE EXPLANATION ICU DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

### INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersect	ion Capacity Utilization Char	acteristics
Level of Service	Load Factor	Equivalent ICU
А	0.0	0.00 - 0.60
В	0.0 - 0.1	0.61 - 0.70
С	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
Ε	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

#### SERVICE LEVEL A

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

#### SERVICE LEVEL B

This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

#### SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

#### SERVICE LEVEL D

This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

### SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

#### SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

INTERSECTION CAPACITY UTILIZATION

		Walnut Canyon Road -	/alnut Canyon Road - Moorpaek Avenue @ Casey Road
N-S St:	Walnut Canyon Road - Moorpaek Avenue Peak hr:	Peak hr:	AM
E-W St:	Casey Road	Annual Growth:	1.0%
Project:	5-13-0055-1 Everett Street Terraces Project	t	
File:	ICU-1		

05/04/2021 2021 2024

Projection Year: Date of Count:

Date:

2024 W/PROJECT + IMPROVEMENTS 0.238 0.139 0.000 0.342 0.000 0.000 0.100 0.044 0.000 <mark>0.127</mark> 0.807 Ratio ۲/C 1500 1600 0 0 1600 0 0 1500 1500 000 2 Capacity 548 548 356 222 0 459 88 99 00 0 0 Volume Total 000 000 000 000 Volume Added 0.000 0.342 \* 0.000 \* 0.000 \* 0.100 \* 0.044 0.000 0.365 0.238 0.139 1.044 Ratio ۲/C 1500 1600 0 0 1600 0 0 1500 2 1500 000 Capacity 2024 W/PROJECT 356 222 0 0 459 88 66 0 548 000 Volume Total 0 0 0 0 C 0 00 000 Added Volume 0.000 0.341 \* 0.044 0.000 0.365 0.238 0.138 0.000 0.100 1.044 Ratio Š 0 1600 0 1500 1500 2 1500 1600 0 000 2024 WITHOUT PROJECT 0 Capacity 66 0 548 356 220 0 0 458 88 000 Volume Total 0 4 0 0 4 0 92 11 30 30 290 000 Volume Added 0.165 0.000 0.023 0.000 0.167 0.000 0.100 2021 W/PROJECT SITE TRAFFIC 0.701 C Capacity Ratio 2 V/C 0 1600 0 1500 1500 1600 1500 000 0 0 0 356 75 247 177 0 0 250 35 000 Volume Total - 0 0 0 10 0 0 00 0 00 Added Volume \* 0.165 0.109 0.000 0.269 0.023 0.000 0.167 0.000 0.100 Ratio 0.700 2021 EXIST. TRAFFIC 2 V/C 0 1600 0 1500 1500 1600 0 1500 000 Capacity 0 35 0 250 247 175 0 0 355 75 000 Volume Yellow Allowance: Eb Left Eb Thru Eb Right [3] Movement Wb Left Wb Thru Wb Right Nb Left Nb Thru Nb Right Sb Left Sb Thru Sb Right LOS

\* Key conflicting movement as a part of ICU

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Counts conducted by NDS
 Capacity expressed in veh/hour of green
 The improvement measure includes the traffic signal modification to provide an eastbound right-turn overlap phase to coincide with the northbound left-turn phase.

03:21 PM

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LINSCOTT, LAW & GREENSPAN, ENGINEERS	20931 Burbank Boulevard, Suite C, Woodland Hills, CA	(818) 835-8648 Fax (818) 835-8649

INTERSECTION CAPACITY UTILIZATION

05/04/2021 2021 2024 Date: Date of Count: Projection Year:

	2021 1	2021 EXIST. TRAFFIC 1 2 V/C	TRAFFIC 2 V/C	2021 Added	W/PROJI	2021 W/PROJECT SITE TRAFFIC ded Total 2 V/C	Z V/C	2024 Added	WITHOUT Total	2024 WITHOUT PROJECT ded Total 2	۲ ۲	2024 Added	2024 W/PROJECT Ided Total	ст 2	V/C	2024 Added	W/PROJE Total	CT + IMPRO 2	2024 W/PROJECT + IMPROVEMENTS Ided Total 2 V/C
- ut	Movement Volume	Capacity		Volume		Volume Capacity	Ratio	Volume	Volume	Volume Capacity			Volume	Capacity	Ratio	Volume		Capaci	
	84	1500	0.056	0	84			309	396	1500	0.264 *	0	396	1500	0.264 *	0	396	1500	0.264 *
	327	1600		-	328	3 1600	0.205 *	104	441			-	442	1600	0.276	0	442	1600	0.276
Nb Right	0	0		0	0			0	0			0	0	0		0	0	0	
	0	0			0	0		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	193	1600	0.126	N	195	5 1600	0.128	65	264	1600		2	266	1600		0	266	1600	0.192 *
Sb Right	6	O		0	6			32	41	0		0	41	0		0	41	0	
	15	1500		0	15	1500		22	37	1500	0.025	0	37	1500	0.025	0	37	1500	0.025
	0	0		0	0			0	0	0	0.000	0	0	0	0.000	0	0		0.000
Eb Right [3]	86	1500		0	86	3 1500	0.057 *	202	291	1500	0.194 *	0	291	1500	0.194 *	0	291	1500	0.000
	0	0		0	U			0	0		* 000.0	0	0	0	* 000.0		0	0	0.000
	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	0	D		0	J			0	0			0	0	0		0	0	0	
Yellow Allowance	:e:		0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
			0.362 A				0.362 A				0.748 C				0.749 C				0.581 A

Key conflicting movement as a part of ICU
 Counts conducted by NDS
 Capacity expressed in veh/hour of green
 The improvement measure includes the traffic signal modification to provide an eastbound right-turn overlap phase to coincide with the northbound left-turn phase.

03:21 PM

LINSCOTT, LAW & GREENSPAN, ENGINEERS 20931 Burbank Boulevard, Suite C, Woodland Hills, CA (818) 835-8648 Fax (818) 835-8649 INTERSECTION CAPACITY UTILIZATION

		Moorpark Avenue @ Everett Street	verett Street
N-S St:	N-S St: Moorpark Avenue	Peak hr:	AM
E-W St:	Everett Street	Annual Growth:	1.0%
Project:	5-13-0055-1 Everett Street Terraces Project		
File:	ICU-2		

05/04/2021	2021	2024
Date:	Date of Count:	Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	CT SITE TF	<b>3AFFIC</b>	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT	Ë	
	-	2	V/C	Added	Total	7	V/C	Added	Total	7	V/C	Added	Total	7	V/C
Movement Volume Capacity Ratio	Volume	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume 0	Capacity	Ratio
Nb Left Nb Thru Nb Right	0 591 2	0 1600 0	0.000 * 0.371 -	000	0 591 7	0 1600 0	0.000 * 0.374 -	142 0	0 751 2	0 1600 0	0.000 * 0.470 -	000	0 751 7	0 1600 0	0.000 * 0.474 -
Sb Left Sb Thru Sb Right	11 662 0	1500 1600 0	0.007 0.414 * -	-00	12 662 0	1500 1600 0	0.008 0.414 * -	0 382 0	11 1064 0	1500 1600 0	0.008 0.665 * -	-00	12 1064 0	1500 1600 0	0.008 0.665 *
Eb Left Eb Thru Eb Right	000	000	* 00000 0.000 -	000	000	000	0.000 0.000 -	000	000	000	* 000.0 0.000 -	000	000	000	000.0
Wb Left Wb Thru Wb Right	4 0 <del>[</del>	1500 0 1500	0.003 0.000 0.010 *	5 0 5 0	24 0 17	1500 0 1500	0.016 0.000 0.011	000	4 15	1500 0 1500	0.003 0.000 0.010 *	20 0 20	24 0 17	1500 0 1500	0.016 0.000 0.012
Yellow Allowance:	ance:		0.100 *				0.100 *				0.100 *				0.100 *
ICU LOS			0.524 A				0.530 A				0.775 C				0.781 C

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Everett Street Peak hr: PM Annual Growth: 1.0% N Moorpark Avenue Everett Street Terraces Project ICU-2 N-S St: E-W St: Project: File:

05/04/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	CT SITE TH	<b>AFFIC</b>	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT	31	
	-	2	2 V/C	Added	Total	7	V/C	Added	Total	2	V/C	Added	Total	7	V/C
Movement Volume		Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0 0.000		0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	335	1600	0.217 *	0	335	1600		413	758	1600	0.482 *	0	758	1600	0.493 *
Nb Right	12	0		,	31	0		0	12	0	ı	19	31	0	
Sb Left	e	1500		0	5	1500	0.003 *	0	n	1500	0.002 *	N	5	1500	0.003 *
Sb Thru	288	1600	0.180	0	288	1600	0.180	267	564	1600	0.352	0	564	1600	0.352
Sb Right	0	0		0	0	0	ı	0	0	0	ı	0	0	0	ı
Eb Left	0	0	* 000.0	0	0	0	0.000	0	0	0	* 000.0	0	0	0	0.000
Eb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	,	0	0	0	ı	0	0	0	ı	0	0	0	ı
Wb Left	7	1500	0.005	12	19	1500	0.013	0	7	1500	0.005	12	19	1500	0.013
Wb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	Ø	1500	0.005 *	-	თ	1500	0.006	0	ω	1500	0.005 *	-	6	1500	0.006
Yellow Allowance:	nce:		0.100 *				0.100 *				0.100 *				0.100 *
ICU LOS			0.324 A				0.345 A				0.589 A				0.610 B

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Charles Street Peak hr: AM Annual Growth: 1.0% Moorpark Avenue F Charles Street 5-13-0055-1 Everett Street Terraces Project ICU-3 N-S St: E-W St: Project: File:

05/04/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	<b>AFFIC</b>	2021	2021 W/PROJECT SITE TRAFFIC	CT SITE TI	RAFFIC	2024	WITHOUT	2024 WITHOUT PROJECT		2024	2024 W/PROJECT	ст	
	-	7	V/C	Added	Total	7	V/C	Added	Total	7	V/C	Added	Total	7	V/C
Movement Volume	Volume	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	32	•		0	32	1500		0	33	1500		0	33	1500	0.022
Nb Thru	566	1600	0.359 *	2	571	1600	0.362	142	725	1600	0.458	2	730	1600	0.461
Nb Right	8			0	80	0		0	8	0		0	8	0	
Sb Left	55			0	55	1500		0	57	1500		0		1500	0.038
Sb Thru	581	1600	0.367	20	601	1600	0.379 *	382	981	1600	0.617 *	20	1001	1600	0.629
Sb Right	9			0	9	0	ı	0	9	0		0	9	0	
Eb Left	0	0		0	0	0	0.000 *	0	0	0		0	0	0	0.000
Eb Thru	2	1600	0.001	0	N	1600	0.001	0	2	1600	0.001	0	0	1600	0.001
Eb Right	4	1500		0	4	1500	0.003	0	4	1500		0	4	1500	0.003
Wb Left	16		0.010	0	16	0		0	16	0		0	16	0	0.010
Wb Thru	0	16(	0.031 *	0	0	1600	0.031 *	0	0	1600	0.032 *	0	0	1600	0.032
Wb Right	33			0	g	0		0	34	0		0	34	0	
Yellow Allowance:	vance:		0.100 *				0.100 *				0.100 *				0.100 *
			0 500				1010				171				0 100
ros			A 8				A				0				C 0.703

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Charles Street PM Annual Growth: 1.0% N Moorpark Avenue F Charles Street 5-13-0055-1 Everett Street Terraces Project ICU-3 N-S St: E-W St: Project: File:

05/04/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	XT SITE TF	<b>AFFIC</b>	2024	WITHOUT	2024 WITHOUT PROJECT		2024	2024 W/PROJECT	ст	
	-	7	V/C	Added	Total	7	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement Volume	lume	Capacity	Ratio	Volume	Volume (	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	26	1500	0.017	0	26	1500	0.017	0	27	1500	0.018	0	27	1500	0.018
Nb Thru	330	1600	0.218 *	19	349	1600	0.229 *	413	753	1600	0.482 *	19	772	1600	0.494 *
Nb Right	18	0		0	18	0	ı	0	19	0	ı	0	19	0	
Sb Left	16	1500		0	16	1500	0.011 *	0	16	1500	0.011 *	0	16	1500	0.011 *
Sb Thru	273	1600	0.174	12	285	1600	0.181	267	548	1600	0.346	12	560	1600	0.353
Sb Right	2	0	,	0	5	0	ı	0	5	0	ı	0	5	0	
Eb Left	5	0	0.003	0	5	0	0.003	0	5 D	0	0.003	0	ъ С	0	0.003
Eb Thru	4	1600		0	4	1600	0.006	0	4	1600	0.006	0	4	1600	0.006
Eb Right	30	1500	0.020 *	0	30	1500	0.020 *	0	31	1500	0.021 *	0	31	1500	0.021 *
Wb Left	22	0	0.014 *		22	0	0.014 *	0	23	0	0.014 *	0	23	0	0.014 *
Wb Thru	e	1600	0.024	0	e	1600	0.024	0	e	1600	0.024	0	Ю	1600	0.024
Wb Right	13	0			13	0		0	13	0		0	13	0	
			* 0010				*								
			00				00-00-				00				0.100
ros Icu			0.362 A				0.374 A				0.628 B				0.640 B

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ High Street Peak hr: AM AM 1.0% Annual Growth: Moorpark Avenue High Street 5-13-0055-1 Everett Street Terraces Project ICU-4 N-S St: E-W St: Project: File:

05/05/2021 2021 2024

Projection Year: Date of Count:

Date:

\* 2024 W/PROJECT + IMPROVEMENTS 0.280 0.185 0.003 0.074 0.100 0.008 0.114 0.147 0.165 0.182 0.000 0.766 Ratio Ň U 1500 3200 3200 1500 0 0 1600 1600 1500 2 0 0 0 Capacity 419 588 5 53 53 Volume 26 339 221 263 28 231 Total 000 000 000 000 Volume Added 0.280 \* 0.371 \* \* \* \* 0.016 0.228 0.147 0.003 0.074 0.165 0.182 0.154 0.100 0.938 Ratio Ν ш 1600 1500 2 0 1500 1500 1600 0 0 1600 0 0 Volume Capacity 2024 W/PROJECT 419 588 5 26 339 221 5 53 53 263 28 231 Total 0 7 0 100 000 000 Volume Added \* \* 0.016 0.227 0.147 0.272 0.365 0.003 0.074 0.165 0.182 0.152 0.100 0.931 E Ratio Ň 1600 1500 1600 0 2024 WITHOUT PROJECT 2 0 0 1600 1500 Capacity С 1600 0 26 337 221 408 579 263 28 228 ŝ S 60 53 Volume Total 13 28 28 226 156 0 47 39 47 15 80 Volume Added \* \* \* 0.131 0.139 0.098 0.008 0.176 0.125 0.125 0.266 0.003 0.100 2021 W/PROJECT SITE TRAFFIC 0.693 Volume Capacity Ratio 2 VIC ۵ 1600 1500 1500 1600 0 1600 1600 1500 0 0 0 0 188 420 5 13 269 187 ი წ 4 210 13 147 Total 0 o 1 0 0 7 0 00 0 0 ო Added Volume \* Ratio 0.008 0.175 0.125 0.118 0.260 0.003 0.020 0.131 0.139 0.096 0.100 0.686 2021 EXIST. TRAFFIC 2/2 ш 2 1600 1500 1500 1600 0 0 1600 1500 1600 0 Capacity 0 0 177 411 5 ი 5 წ 13 267 187 Volume Yellow Allowance: Wb Left Wb Thru [3] Wb Right [4] Eb Left Eb Thru [3] Eb Right Movement Nb Left Nb Thru Nb Right Sb Left Sb Thru Sb Right Lo C

Key conflicting movement as a part of ICU

Counts conducted by NDS 1

2 ω4

Capacity expressed in veh/hour of green Eastbound and westbound operate with split phasing. The improvement measure includes the traffic signal modification to provide a westbound right-turn overlap phase to coincide with the southbound left-turn phase.

02:24 PM

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ High Street Peak hr: PM Annual Growth: 1.0% Noorpark Avenue P High Street 5-13-0055-1 Everett Street Terraces Project ICU-4 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

		2021	2021 EXIST. TRAFFIC	RAFFIC	2021	W/PROJ	2021 W/PROJECT SITE TRAFFIC	TRAFFIC	2024	2024 WITHOUT PROJECT	- PROJEC	F	2024	2024 W/PROJECT	ECT		2024	W/PROJE	CT + IMPI	2024 W/PROJECT + IMPROVEMENTS
It         Volume         Capacity         Ratio         Volume         Colume         Colume         Capacity         Ratio         Volume         Colume         Colume         Colume         Capacity         Ratio         Volume         Colume         Colume         Colume         Capacity         Ratio         Volume         Colume         Colume         Colume         Colume         Colume         Colume         Capacity         Ratio         Volume         Colume         Colume <t< th=""><th></th><th>-</th><th>7</th><th></th><th>Added</th><th>Total</th><th>2</th><th></th><th>Added</th><th>Total</th><th>7</th><th></th><th>Added</th><th>Total</th><th>2</th><th></th><th>Added</th><th></th><th>7</th><th></th></t<>		-	7		Added	Total	2		Added	Total	7		Added	Total	2		Added		7	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	nent	Volume	Capacity		Volume		Capacity	Ratio	Volume				Volume		Capacity		Volume		Capacity	
	Ŧ	27			0				43	71			0				0		0	0.022
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Þ	298		0.203 *	8			0.208	168	475	16(		8		·		•			0.173
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	н	298		0.199	0				57	364	·		0		,		0			0.243
		89	``		7		¢-		160	252	``		7		~	0.172			-	0.172
$ \left[ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Ъ	218			5		-		108	333	•		2		·		0			0.107
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ht	9			0				0	9	0		0				0			
$ \begin{bmatrix} 21 & 600 & 0.041 \\ 0 & -1$		7			0					7			0				0		0	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	u [3]	21			0					55			0				•			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ht	37			0					66			0				0			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Ļ	271			0				38				0				0			0.198
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	.n [3]	21			0		-		51				0		·		0			0.244
0.100 * 0.100	ht [4]	120			11		,		245		,		11	380	·		0			0.081
.653 0.661 0.931 C C C C C C C C C C C C C C C C C C C	Allowé	nce:		0.100 *				0.100 *				0.100 *					*			0.100
02:24 PM				0.653 B				0.661 B				0.931 E								
																			02:24 PM	

\* Key conflicting movement as a part of ICU

Counts conducted by NDS
 Counts conducted by NDS
 Capacity expressed in veh/hour of green
 Eastbound and westbound operate with split phasing.
 The improvement measure includes the traffic signal modification to provide a westbound right-turn overlap phase to coincide with the southbound left-turn phase.

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Poindexter Avenue - First Street Peak hr: AM Annual Growth: 1.0% Noorpark Avenue P Poindexter Avenue - First Street A 5-13-0055-1 Everett Street Terraces Project ICU-5 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	REFIC	2021	2021 W/PROJECT SITE TRAFFIC	CT SITE TI	RAFFIC	2024	2024 WITHOUT PROJECT	PROJEC	F	2024	2024 W/PROJECT	ц Ц		2024	W/PROJE	CT + IMPR	2024 W/PROJECT + IMPROVEMENTS
Movement	1 2 V/C Volume Capacity Ratio	2 Capacity	2 V/C ty Ratio	Added Volume	Total 2 V/C Volume Capacity Ratio	2 Capacity	V/C Ratio	Added Volume	Total 2 Volume Capacity	2 Capacity	V/C Ratio	Added Volume	Total Volume Capacity	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left Nb Thru Nb Right	86 270 4	1500 1600 0	0.057 * 0.171 -	0 7 0	86 272 4	1500 1600 0	0.057 * 0.173 -	6 70 0	95 348 4	1500 1600 0	0.063 * 0.220 -	070	95 350 4	1500 1600 0	0.063 * 0.221	000	95 350 4	1500 3200 0	0.063 * 0.111
Sb Left Sb Thru Sb Right	10 302 321	1500 1600 0	0.007 0.389 * -	000	10 311 321	1500 1600 0	0.007 0.395 * -	0 171 77	10 482 402	1500 1600 0	0.007 0.552 * -	000	10 491 402	1500 1600 0	0.007 0.558 * -	000	10 491 402	1500 3200 0	0.007 0.279 *
Eb Left Eb Thru [3] Eb Right	202 26 63	1500 0 1500	0.135 * 0.000 0.042	000	202 26 63	1500 0 1500	0.135 * 0.000 0.042	31 9 9	239 27 74	1500 0 1500	0.159 * 0.000 0.049	000	239 27 74	1500 0 1500	0.159 * 0.000 0.049	000	239 27 74	1500 1600 0	0.159 * 0.063 -
Wb Left Wb Thru [3] Wb Right	3 59 17	0 1600 1500	0.002 0.039 * 0.011	000	3 59 17	0 1600 1500	0.002 0.039 * 0.011	000	3 61 18	0 1600 1500	0.002 0.040 * 0.012	000	3 61 18	0 1600 1500	0.002 0.040 * 0.012	000	3 61 18	0 1600 1500	0.002 0.040 * 0.012
Yellow Allowance:	ince:		0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
lcu			0.834 D				0.841 D				1.072 F				1.079 F				0.689 B

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Eastbound and westbound operate with split phasing.

03:01 PM

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(010) 000-0040 Lax (010) 000-0048
0400-000 (010)

INTERSECTION CAPACITY UTILIZATION

Moorpark Avenue @ Poindexter Avenue - First Street Peak hr: PM Annual Growth: 1.0% N Moorpark Avenue P. P. Poindexter Avenue - First Street A 5-13-0055-1 Everett Street Terraces Project ICU-5 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	W/PROJE	2021 W/PROJECT SITE TRAFFIC	RAFFIC	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT	Ļ		2024	W/PROJEC	CT + IMPRC	2024 W/PROJECT + IMPROVEMENTS
	-	. 13		Added	Total	N :		Added	Total	. 7	2/2 7	Added		N :	×/C	Added			V/C
Movement Volume Capacity	olume	Capacity	Ratio	Volume	Volume	Volume Capacity	Katio	Volume	Volume Capacity	Capacity	Katio	Volume	Volume	Capacity	Katio	Volume	Volume	Capacity	Katio
Nb Left	52	1500	0.035 *	0	52	1500	0.035 *	1	65	1500	0.043 *	0	65	1500	0.043 *	0	65	1500	0.043 *
Nb Thru	385	1600		8	393	1600		189	586	1600	0.373	8	594	1600	0.378	0	594	3200	0.189
Nb Right	1	0		0	11	0	,	0	1	0	ı	0	1	0	1	0	1	0	
Sb Left	1	1500		0	11	1500		0	1	1500	0.008	0	5	1500	0.008	0	1	1500	0.008
Sb Thru	343	1600	0.351 *	5	348	1600	0.354 *	130	483	1600	0.468 *	5	488	1600	0.471 *	0	488	3200	0.236 *
Sb Right	218	0		0	218	0		41	266	0		0	266	0		0	266	0	
Eb Left	292	1500		0	292	1500		77	378	1500	0.252 *	0	378	1500	0.252 *	0	378	1500	0.252 *
Eb Thru [3]	29	0	0.000	0	29	0	0.000	0	30	0	0.000	0	30	0	0.000	0	30	1600	0.069
Eb Right	71	1500		0	71	1500	0.047	8	81	1500	0.054	0	81	1500	0.054	0	81	0	
Wb Left	8	0		0	80	0		0	80	0	0.005	0	80	0	0.005	0	80	0	0.005
Wb Thru [3]	31	1600		0	31	1600		0	32	1600	0.025 *	0	32	1600	0.025 *	0	32	1600	0.025 *
Wb Right	14	1500	0.009	0	14	1500	0.00	0	14	1500	0.010	0	14	1500	0.010	0	14	1500	0.010
	į						*				*				200 *				*
	2		0.100				0.100				0.00				001.0				0.10
ros Icu			0.917 E				0.925 E				1.218 F			_	1.226 F			D	0.802
															1				

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Eastbound and westbound operate with split phasing.

03:01 PM

INTERSECTION CAPACITY UTILIZATION

1.0% Walnut Street @ High Street AM Annual Growth: Peak hr: Walnut Street P High Street A 5-13-0055-1 Everett Street Terraces Project ICU-6 N-S St: E-W St: Project: File:

0.008 0.017 \* 0.008 0.428 \* 0.000.0 Ratio ٨c 0 1600 1600 2 000 0 0 0 Volume Volume Capacity 2024 W/PROJECT 12 672 0 000 13 13 Total Added 000 000 o <del>1</del> o \* 0.000 0.000 \* \* 0.008 0.017 0.008 0.421 Volume Volume Capacity Ratio Š . 2 2024 WITHOUT PROJECT 0 1600 1600 000 0 0 0 12 661 000 13 0 13 0 Total 0 301 Added 000 000 0 \* \* 0.000.0 0.008 0.016 0.008 2021 W/PROJECT SITE TRAFFIC Volume Volume Capacity Ratio 2 V/C , . 0 1600 00 0 1600 0 0 0 5 0 <u>5</u> 000 12 360 0 Total 000 000 0 0 Added Ξ 0.008 0.016 \* \* \* , 000.0 0.008 0.226 Movement Volume Capacity Ratio 2021 EXIST. TRAFFIC 2 VIC . 0 1600 000 1600 0 0 0

000

Nb Left Nb Thru Nb Right

~

0.000 \* 0.350

0 1600 0

549 11

0 0 0

0.000 \* 0.348

0 546 11

143 0

\*

0.000

0 1600 0

0 394 11

0 ~ 0

\*

0.000 0.251

0

12 349 0 0

Eb Left Eb Thru Eb Right

13 0 13

Sb Left Sb Thru Sb Right

1600 0

391 11

Wb Left Wb Thru Wb Right

0 1600 0

.

0.100 \*

0.100 \*

0.100 \*

0.100 \*

Yellow Allowance:

0.538

0.377

0.375

∢

LOS

∢

∢

0.544

∢

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

05/05/2021 2021 2024

Projection Year: Date of Count: Date:

INTERSECTION CAPACITY UTILIZATION

igh Street	РМ	1.0%		
Walnut Street @ High Street	Peak hr:	Annual Growth:	races Project	
	Walnut Street	High Street	5-13-0055-1 Everett Street Terraces Project	ICU-6
	N-S St:	E-W St:	Project:	File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	T SITE TF	REFIC	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT	ст	
	-	7	2 VIC	Added	Total	7	V/C	Added	Total	2	V/C	Added	Total	2	V/C
<b>Movement Volume</b>	Volume	Capacity	Ratio	Volume	Volume C	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	* 000.0	0	0	0	* 000.0	0	0	0	0.000 *	0	0	0	* 000.0
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0		0	0	0		0	0	0		0	0	0	
Sb Left	17	0	0.011	0	17	0	0.011	0	18	0	0.011	0	18	0	0.011
Sb Thru	0	1600 (	0.029 *	0	0	1600	0.029 *	0	0	1600		0	0	1600	0:030 *
Sb Right	30	0		0	30	0		0	31	0		0	31	0	
Eb Left	43		0.027	0	43	0	0.027	0	44	0	0.028 *	0	44	0	0.028 *
Eb Thru	456	1600	0.312 *	7	463	1600	0.316 *	250	720	1600	0.477	7	727	1600	0.482
Eb Right	0		·	0	0	0		0	0	0	ı	0	0	0	
Wb Left	0		* 000.0 0		0	0	* 000.0	0	0	0	0.000	0	0	0	0.00
Wb Thru	374		0.260	1	385	1600	0.267	334	719	1600		1	730	1600	0.483 *
Wb Right	42				42	0	ı	0	43	0	,	0	43	0	
Yellow Allowance:	/ance:		0.100 *				0.100 *				0.100 *				0.100 *
ICU LOS			0.441 A				0.446 A				0.634 B				0.641 B

INTERSECTION CAPACITY UTILIZATION

Spring Road @ Charles Street Peak hr: AM Annual Growth: 1.0% Spring Road P Charles Street A 5-13-0055-1 Everett Street Terraces Project ICU-7 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	T SITE T	REFIC	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT		
	٢	7	VIC	Added	Total	7	VIC	Added	Total	2	V/C	Added	Total	2	V/C
Movement Volume Capacity Ratio	Volume	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume	Volume Capacity	Ratio	Volume	Volume C	Capacity	Ratio
Nb Left	20			0	20	1500	0.013 *	0	21	1500	0.014 *	0	21	1500	0.014 *
Nb Thru	383	3200	0.124	0	383	3200	0.124	9	401	3200	0.130	0	401	3200	0.130
Nb Right	14			0	14	0	,	0	14	0	ı	0	14	0	
Sb Left	7	1500		0	7	1500		0	7	1500		0	7	1500	0.005
Sb Thru	266	3200	0.313 *	0	266	3200	0.313 *	28	1055	3200	0.331 *	0	1055	3200	0.331 *
Sb Right	Э			0	ю	0	ı	0	ю	0	ı	0	ю	0	ı
Eb Left	4	0	0.003	0	4	0		0	4	0	0.003	0	4	0	0.003
Eb Thru	9	1600	0.042 *	0	9	1600	0.042 *	0	9	1600	0.043 *	0	9	1600	0.043 *
Eb Right	57	0	1	0	57	0	,	0	59	0	ı	0	59	0	ı
Wb Left	56	0	0.035 *	0	56	0	0.035 *	0	58	0	0.036 *	0	58	0	0.036 *
Wb Thru	15	1600	0.044	0	15	1600	0.044	0	15	1600	0.046	0	15	1600	0.046
Wb Right	2	-		0	Ω	1500	0.003	0	Ð	1500	0.003	0	Ð	1500	0.003
Yellow Allowance:	ance:		0.100 *				0.100 *				0.100 *				0.100 *
ICU LOS			0.503 A				0.503 A				0.524 A			A	0.524

INTERSECTION CAPACITY UTILIZATION

Spring Road @ Charles Street Peak hr: PM Annual Growth: 1.0% Spring Road P Charles Street A 5-13-0055-1 Everett Street Terraces Project ICU-7 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

		2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	T SITE TF	<b>AFFIC</b>	2024	2024 WITHOUT PROJECT	PROJECT		2024	2024 W/PROJECT	1	
It Volume         Capacity         Ratio         Volume         Volume         Volume         Volume         Capacity         Ratio         Volume         Volume         Volume         Capacity         Ratio         Volume		-		VIC	Added	Total	2		Added	Total	2		Added	Total	2	V/C
	Movement Vol	lume	Capacity	Ratio	Volume	Volume (	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
	Nb Left	54	1500	0.036	0	54	1500	0.036	0	56	1500	0.037	0	56	1500	0.037
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Nb Thru	892	3200	0.294 *	0	892	3200	0.294 *	26	945	3200	0.311 *	0	945	3200	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Nb Right	48	0		0	48	0	ı	0	49	0	ı	0	49	0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sb Left	с	1500		0	ю	1500	0.002 *	0	Ю	1500	0.002 *	0	ю	1500	0.002 *
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sb Thru	563	3200		0	563	3200	0.177	13	593	3200	0.186	0	593	3200	0.186
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sb Right	с	0		0	с	0	·	0	с	0	1	0	с	0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Eb Left	7	0	0.004	0	7	0	0.004	0	7	0	0.005	0	7	0	0.005
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Eb Thru	2	1600	0.039 *	0	2	1600	0.039 *	0	2	1600	0.040 *	0	2	1600	0.040 *
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Eb Right	53	0		0	53	0		0	55	0		0	55	0	
$ \begin{array}{c ccccc} & & & & & & & & & & & & & & & & &$	Wb Left	26	0	0.016 *	0	26	0	0.016 *	0	27	0	0.017 *	0	27	0	0.017 *
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Wb Thru	5	1600	0.019	0	5	1600	0.019	0	5	1600	0.020	0	5	1600	0.020
0.100 * 0.100 * 0.100 * 0.100 * 0.100 * 0.100 * 0.100 A 0.469 A A A 0.469 A A A 0.469 A A A A A A A A A A A A A A A A A A A	Wb Right	-	1500	0.001	0	~	1500	0.001	0	-	1500	0.001	0	-	1500	0.001
0.100 * 0.100																
0.451 0.451 0.469 A A A	Yellow Allowand	:eo:		0.100 *				0.100 *				0.100 *				0.100 *
	SO1 ICU			0.451 A				0.451 A				0.469 A				

INTERSECTION CAPACITY UTILIZATION

Spring Road @ High Street - Princeton Avenue Peak hr: AM Annual Growth: 1.0% Spring Road P High Street - Princeton Avenue 5-13-0055-1 Everett Street Terraces Project ICU-8 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	2021	2021 EXIST. TRAFFIC	AFFIC	2021	2021 W/PROJECT SITE TRAFFIC	CT SITE TF	REFIC	2024	2024 WITHOUT PROJECT	PROJECT		2024 \	2024 W/PROJECT	-		2024	W/PROJE(	2024 W/PROJECT + IMPROVEMENTS	VEMENTS
	-	2	V/C	Added	Total	2	VIC	Added	Total	2	V/C	Added	Total	7	V/C	Added	Total	2	V/C
Movement Volume Capacity	Volume	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume Capacity	Capacity	Ratio	Volume	Volume C	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	131		0.087	2	133	1500	0.089	53	188	1500	0.125	2	190	1500	0.127	0	190	1500	0.127
Nb Thru	209	3200	0.065	0	209	3200	0.065	2	220	3200		0	220	3200	0.069	0	220	3200	0.069
Nb Right	231		0.154 *	0	231	1500	0.154 *	58	296	1500	0.197 *	0	296	1500	0.197 *	0	296	1500	0.197 *
Sb Left	412		0.275 *	0	412	1500	0.275 *	ę	427	1500	0.285 *	0	427	1500	0.285 *	0	427	1500	0.285 *
Sb Thru	578	3200	0.188	0	578	3200	0.188	24	620	3200	0.201	0	620	3200	0.201	0	620	3200	0.201
Sb Right	22	0	,	0	22	0		-	24	0	,	0	24	0	,	0	24	0	
Eb Left	12	•	0.008	0	12	1500	0.008	2	14	1500	0.010	0	14	1500	0.010	0	14	1500	0.010
Eb Thru	245	1600	0.153 *	4	249	1600	0.156 *	164	416	1600	0.260 *	4	420	1600	0.263 *	0	420	3200	0.234 *
Eb Right	166	·	0.111	7	173	1500	0.115	151	322	1500	0.215	7	329	1500	0.219	0	329	0	
Wb Left	84	·	0.056 *	0	84	1500		28	115	1500		0	115	1500	0.076 *	0	115	1500	0.076 *
Wb Thru	248	1600	0.155	-	249	1600	0.156	87	343	1600		-	344	1600	0.215	0	344	1600	0.215
Wb Right	165		0.110	0	165	1500		-	169	1500		0	169	1500	0.113	0	169	1500	0.113
Yellow Allowance:	ance:		0.100 *				0.100 *				0.100 *				0.100 *				0.100 *
ICU ICU			0.738 C				0.740 C				0.919 E			ш	0.921 E			Ω	0.893

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

03:28 PM

INTERSECTION CAPACITY UTILIZATION

Spring Road @ High Street - Princeton Avenue Peak hr: Annual Growth: 1.0% Spring Road P High Street - Princeton Avenue 5-13-0055-1 Everett Street Terraces Project ICU-8 N-S St: E-W St: Project: File:

05/05/2021 2021 2024 Date: Date of Count: Projection Year:

	0	2021 EXIST. TRAFFIC	T. TRAF	:FIC	2021	W/PROJE	2021 W/PROJECT SITE TRAFFIC	RAFFIC	2024	WITHOUT	2024 WITHOUT PROJECT	-	2024	2024 W/PROJECT	ст		2024	W/PROJE	CT + IMPR	2024 W/PROJECT + IMPROVEMENTS
Volume         Capacity         Ratio         Volume         Capacity         Ratio         Volume         Capacity         Ratio         Volume         Colume         Colume         Volume         Colume         Col		-		٨c	Added	Total	2		Added	Total	2		Added	Total	2	V/C	Added	Total	2	VIC
$ \int_{0}^{171} \left[ \begin{array}{cccccccccccccccccccccccccccccccccccc$	lovement Volur				Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity		Volume		Capacity	Ratio	Volume		Capacity	
637       3200       0199*       0       637       3200       0199*       0       679       3200       01212         268       1500       0179*       0       288       1500       0179*       52       320       0199*       0       679       3200       0219         208       1500       0179*       0       288       1500       0148*       4       233       1500       0219*       0       328       1500       0219*       0       328       1500       0219*       0       328       1500       0219*       0       328       1500       0219*       0       328       1500       0116*       0       328       1500       0115*       0       348       300       0115*       0       348       300       0115*       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348       0       0       348	b Left	-		114	9	177			169	345	1500		9	351	1500	0.234	0		1500	0.234
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		.,		0.199 *	0	637			23	679	3200	0.212	0	679	3200	0.212	0		3200	0.212
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		-		.179	0	268			52	328	1500	0.219 *	0	328	1500				1500	0.219
$ \label{eq:constraints} \  \  \  \  \  \  \  \  \  \  \  \  \ $		-		.148 *	0	222	1500		4	233	1500		0	233	1500				1500	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		.,		0.103	0	301	3200		9	316	3200		0	316	3200		0		3200	0.109
36       1500       0.024 *       0       36       1500       0.024 *       0       39       1500       0026 *       0       39       1500         328       1600       0.207 *       145       433       1600       0.207 *       145       486       1600       0.304 *       0       38       1500         328       1600       0.207 *       145       483       1600       0.304 *       0       38       1500         142       1500       0.069       7       145       263       1500       0.173 *       0       486       1600       0.204 *       0       263       200       160       200 *       166       160       0.174 *       0       166       160       0.111 *       0       166       160       0.111 *       0       166       1500       0.111 *       0       166       160       0.111 *       0       166       1500       166       1500       0.111 *       0       166       1500       0.111 *       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160       160		30		,	0	30	0	ı	3	34	0	,	0	34	0		0		0	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				.024 *	0	36		0.024 *	2	39	1500		0	39	1500	0.026	0		1500	0.026
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				0.205	S	331		0.207	145	483	1600	0.302 *	ę	486	1600				3200	0.234
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				0.095	4	146		0.097	113	259	1500	0.173	4	263	1500	0.176	0		0	
278       1600       0.174       14       71       1600       0.295       0       471       1600       171       1600         484       1500       0.323       1       500       1500       0.333       0       6       71       1600         484       1500       0.323       1       500       1500       0.333       0       500       150	o Left			.069	0	104	1500		59	166	``		0	166	1500				· ·	0.111
484       1500       0.333       0       484       1500       0.333       0       500         wance:       0.100*       <	o Thru			0.174	4	282	1600		181	467			4	471	1600	0.295	0			0.295
0.100 * 0.100	o Right	``		.323 *	0	484	1500	0.323 *	-	500	1500	0.333	0	500	1500	0.333	0		1500	0.333
0.794 0.886 D 0.888 D	llow Allowance:		0	.100 *				0.100 *				0.100 *				0.100 *				0.100
0.794 0.794 0.886 0.888 D																				
	∩ S		° 0	1.794				0.794 C				0.886 D								

\* Key conflicting movement as a part of ICU
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green

03:28 PM