

Appendix I

Traffic Impact Analysis

Traffic Impact Analysis for 3175 Ball Road



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This traffic study report has been prepared under the supervision of a California Registered Traffic Engineer.



1. Introduction

1.1 Background

ADVANTEC Consulting Engineers (ADVANTEC) prepared this report to document the traffic study findings for the proposed eleven-unit apartment on a 0.35-acre parcel, 3175 Ball Road, at the northeast corner of the Ball Road and Western Avenue intersection in the City of Anaheim.

The scope and methodologies used for this traffic study were developed in consultation with the City of Anaheim. Tasks undertaken for this traffic analysis include definition of study approach, determination of existing and future traffic conditions, traffic trip distribution and traffic evaluation for the proposed development.

On December 28, 2018, the California Natural Resources Agency adopted revised CEQA Guidelines. Among the changes to the guidelines was the removal of vehicle delay and LOS from consideration for transportation impacts under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on vehicle miles traveled. Lead agencies are allowed to continue using their current impact criteria, or to opt into the revised transportation guidelines. However, the new guidelines must be used starting July 1, 2020, as required in CEQA section 15064.3. The City is in the process of updating its transportation impact criteria to be consistent with the CEQA revisions. As a result, the guidelines have not been adopted as of the date of this document, and analysis of vehicle LOS remains the appropriate method for determining a project's transportation impact per the City's General Plan.

In January 2020, State courts stated that under section 21099, subdivision (b)(2), existing law is that "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment" under CEQA, except for roadway capacity projects. While this project does not create a significant impact through LOS or delay, for the purposes of this recent court decision, this project was also screened for VMT analysis.

For the VMT screening analysis, the project was analyzed using the example screening criteria identified in the "Technical Advisory on Evaluating Transportation Impacts in CEQA", dated December 2018 from the Governor's Office of Planning and Research (OPR). A project's proximity to high quality transit is one of the screening thresholds that could be used for determining if a VMT analysis is required. CEQA Section 15064.3, subdivision (b)(1) states that lead agencies should generally presume that certain projects, including residential, will have a less than significant impact on VMT within one half mile of a fixed stop along a high quality transit corridor. The Public Resources Code 21155 defines a high quality transit corridor as a fixed route bus corridor with headways of 15 minutes or less during peak commute hours. The proposed project is located within one half mile to bus stops on Beach Boulevard at Ball Road. The peak hour headways for buses on Beach Boulevard are 15 minutes or less. Therefore, this project could be screened from a VMT analysis, and could be presumed a less than significant impact on VMT, per the OPR Technical Advisory.

1.2 Study Area

The following five existing intersections are within the project limits:

1. *Western Avenue/Ball Road (Signalized)*
2. *Western Avenue/Orange Avenue (Signalized)*
3. *Western Avenue/W. Cerritos Avenue (Signalized)*
4. *S. Beach Boulevard/Ball Road (Signalized)*
5. *S. Knott Avenue/Ball Road (Signalized)*

The following street segments are within the project limits:

- *Ball Road – S. Knott Avenue to Western Avenue*
- *Ball Road – Western Avenue to S. Beach Boulevard*
- *Western Avenue – W. Cerritos Avenue to Ball Road*
- *Western Avenue – Ball Road to Orange Avenue*

The site location and study area are shown in **Figure 1**.

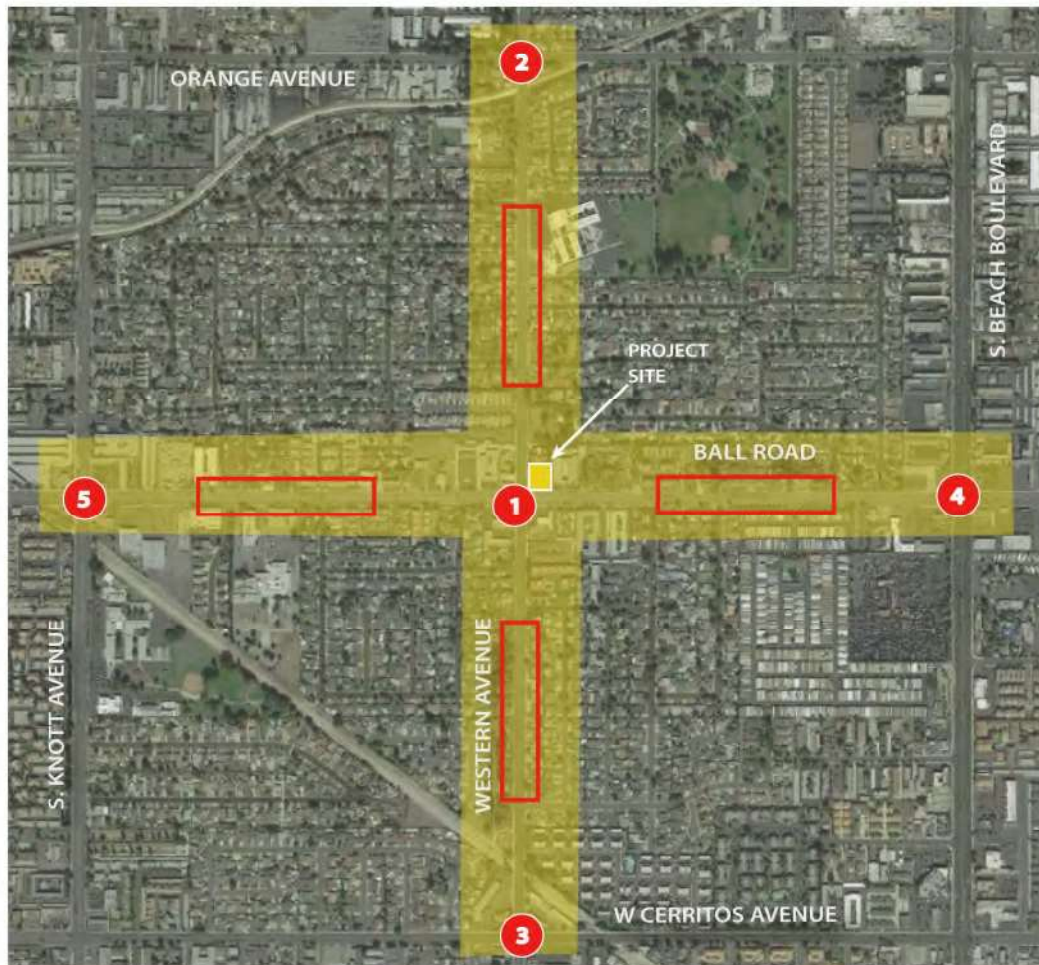


FIGURE 1
SITE LOCATION AND STUDY AREA

1.3 Study Methodology

ADVANTEC prepared this report after discussions with City staff in determining the approach and methodology utilized in this study. Coordination with City staff was conducted to achieve consensus on assumptions such as study scenarios and traffic growth. The following describes the methodology utilized for this report as discussed with City staff.

Weekday morning and afternoon peak-hour traffic operations were evaluated at each of the study intersections for the following scenarios:

- *Existing Conditions (2019)*
- *Existing Conditions + Project (2019)*
- *Opening Year (Existing + Approved Projects) (2021)*
- *Opening Year + Project (Existing + Approved Projects + Project) (2021)*
- *General Plan Buildout Base Conditions (2035)*
- *General Plan Buildout Conditions + Project (2035)*

Average Daily Traffic (ADT) operations were also evaluated for the study street segments.

Existing Period Conditions

Street segment ADT counts were collected on Thursday November 2nd. Weekday peak hour turning movements, pedestrian and bicycle counts were collected on Tuesday October 10th between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM.

Future Conditions

Future volumes were derived from the Anaheim Traffic Analysis Model (ATAM).

Level of Service Methodology

Intersection Capacity Utilization (ICU) methodology was utilized to determine levels of service for intersections and street segments in this study.

Level of Service (LOS) values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is defined as the operating “capacity” of a roadway.

Table 1 summarizes the LOS definitions for signalized intersections.

Arterial Roadway Segment V/C Analysis

The arterial roadway criteria for the City of Anaheim involve the use of ADT Volume to Capacity (V/C) ratios. LOS C (V/C not to exceed 0.80) is the performance standard that has been adopted for the study area circulation system by the City of Anaheim. If a road segment exceeds this daily threshold, then the peak hours are analyzed for this segment. If the peak hour v/c is greater than 0.90, then a deficiency exists on that segment.

Table 2 presents the level of service definitions for arterial roadway segments.



Table 1: Intersection Capacity Utilization Level of Service Definitions

LOS Grade	Range of V/C Ratio	Description of Intersection Operations
A	0.0 – 0.60	There are no signal cycles that are fully loaded, and few are even close to loaded. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.
B	0.61 – 0.70	Stable operation is maintained. An occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.71 – 0.80	Stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles.
D	0.81 – 0.90	Encompasses a zone of increasing restriction approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	0.91 – 1.00	Represents the most vehicles that any particular intersection approach can accommodate. At capacity ($V/C = 1.00$), there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).
F	> 1.00	Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable. V/C values are highly variable, because full utilization of the approach may be prevented by outside conditions.
Notes: The Intersection Capacity Utilization (ICU) method to analyze intersection operating conditions uses the volume-to-capacity ratio (V/C) for each movement during a traffic signal phase. The V/C ratio is the ratio of existing or projected traffic volumes to an intersection's design capacity. The V/C ratio represents the percentage of the capacity utilized. The range of V/C ratios representing each LOS letter grade is from the City of Anaheim's General Plan Circulation Element (May 2004).		

Table 2: Roadway Segment Level of Service Definitions

LOS Letter Grade	V/C Ratio	Description of Roadway Operations
A	0.0 – 0.60	Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.
B	0.61 - 0.70	Characterized by reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.
C	0.71 – 0.80	Stable operation. The ability to maneuver and change lanes at midsegment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.
D	0.81 – 0.90	Characterized by less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.
E	0.91 – 1.00	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.
F	>1.00	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.
	Notes: Roadway segment LOS is defined by arterial type and V/C ratio and, therefore, varies from street to street. See Table A-4-1: Arterial Highways MPAH Capacity Values from the "Guidance for Administration of the Orange County Master Plan of Arterial Highways" in the appendix of this study. Source of roadway segment LOS descriptions: Guidance for Administration of the Orange County Master Plan of Arterial Highways (August 2017).	

2. Existing Conditions (Year 2019)

2.1 Existing Roadways

Figure 2 depicts the lane geometrics and traffic control for the project at the study intersections. The following is a description of the streets within the project limits:

Western Avenue – Western Avenue is a north-south secondary arterial providing two travel lanes in each direction. The posted speed limit is 40 miles per hour.

Beach Boulevard – Beach Boulevard is a north-south major arterial providing four lanes in each direction. Beach Boulevard is also State Route 39 (SR 39). The posted speed limit is 45 miles per hour.

Orange Avenue – Orange Avenue is an east-west secondary arterial providing two travel lanes in each direction. The posted speed limit is 40 miles per hour.

Cerritos Avenue – Cerritos Avenue is an east-west secondary arterial providing two travel lanes in each direction. The posted speed limit is 40 miles per hour.

Ball Road – Ball Road is an east-west primary arterial providing two travel lanes in each direction. The posted speed limit is 40 miles per hour.

Knott Avenue – Knott Avenue is a north-south secondary arterial providing two travel lanes in each direction. The posted speed limit is 40 miles per hour.

2.2 Existing Peak Hour Traffic Volumes

Peak hour intersection turning movement counts were collected between the hours of 7:00AM to 9:00AM and 4:00PM to 6:00PM. Peak hour turning movement counts were collected on Tuesday October 10th. **Figure 3** depicts the morning and afternoon peak hour traffic volumes. Vehicle classification counts were also conducted for the same study periods and are provided along with detailed peak hour traffic counts in appendices of this report.



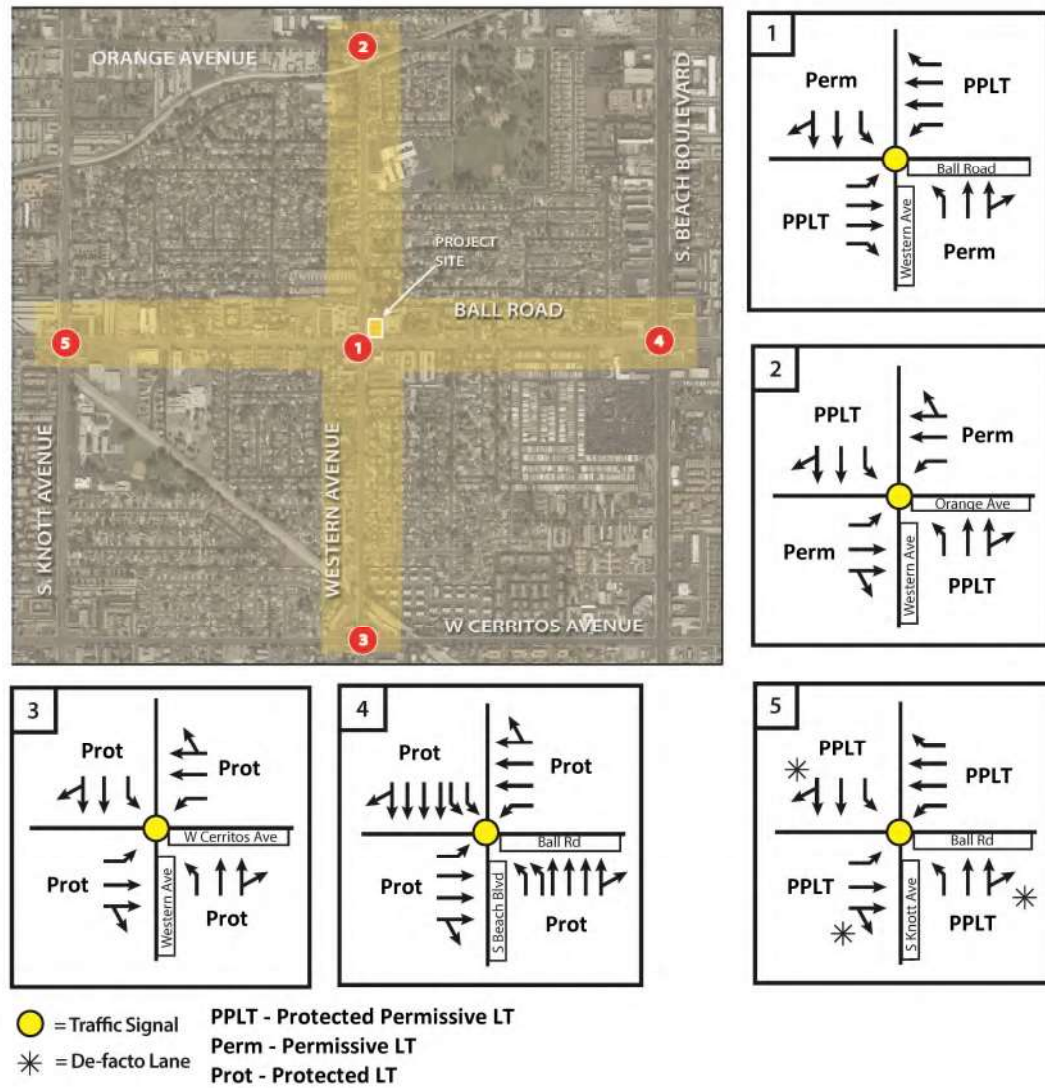


Figure 2: Existing Intersection Lane Configuration and Control

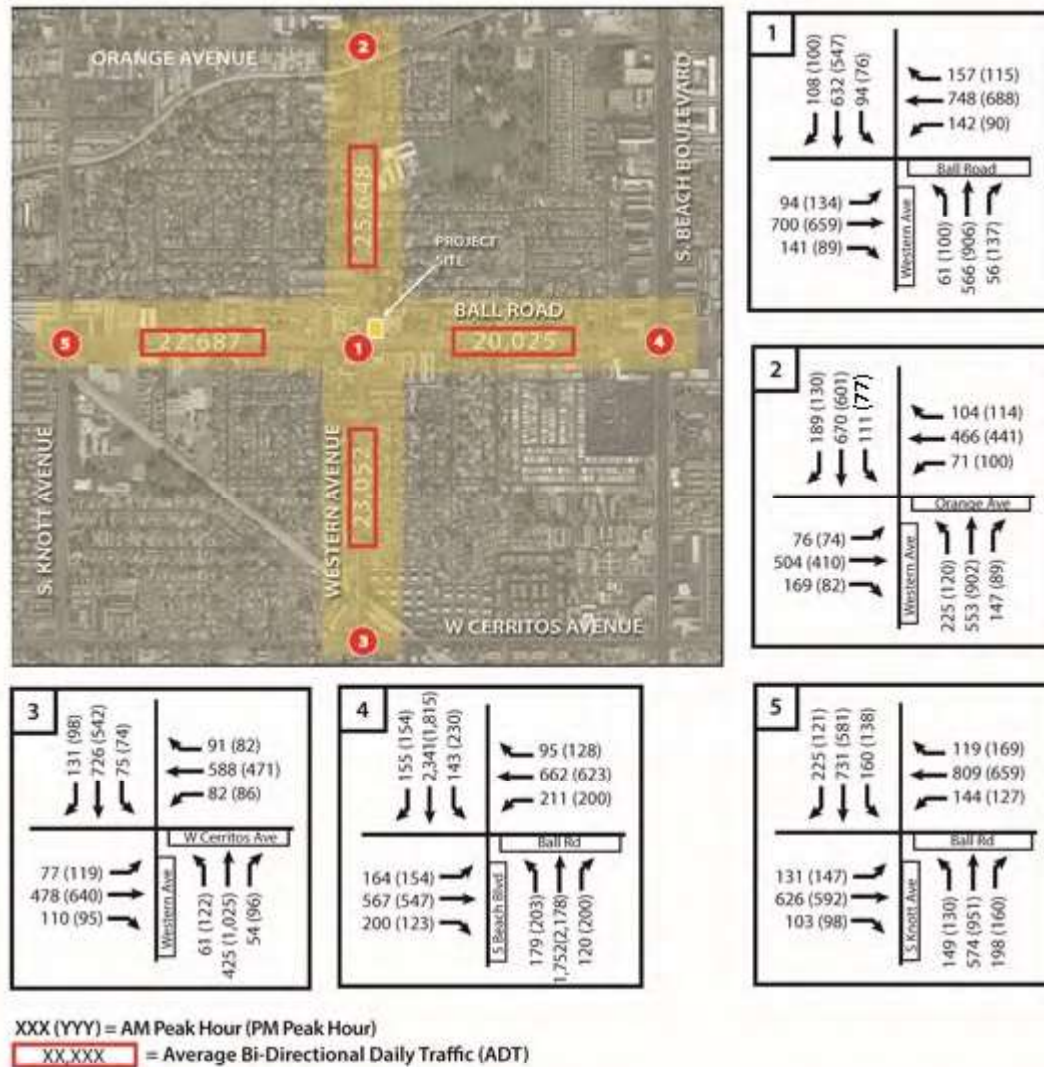


Figure 3: Existing Traffic Volumes

2.3 Existing Transit and Bicycle Facilities

Within the study limits OCTA provides the following bus routes: on Knott Avenue - Route 25, on Beach Boulevard - Route 29 and on Ball Road – Route 46. Bus Route 25 operates in both directions on Knott Avenue, Route 29 both directions on Beach Boulevard and Route 46 both directions along Ball Road. A westbound Route 46 nearside bus stop exists at the NE corner of Ball Road/Western Avenue intersection. Project construction and improvements need to be coordinated with OCTA bus stops and zones.

Figure 4 depicts the OCTA bus routes and stops within the study limits as well as bicycle facilities.

2.4 Existing & Project Trash Pickup Services

Existing trash pickup services are provided by Republic Services for residential properties in the area. The project will provide a “pull-in/back-out” driveway access for trash trucks to the apartment complex. This driveway will be provided on the eastside of Western Avenue Northerly of Ball road. This pull-in/back-out access matches other residential trash pickup access on Western Avenue directly adjacent to the project site.

2.5 Existing Conditions Level of Service

Table 3 summarizes the existing LOS of the study area intersections under this scenario and **Table 4** presents the existing LOS for the study area roadway segments.

Table 3: Existing Intersection Peak Hour Levels of Service

Intersection		Existing Conditions			
		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.594	A	0.683	B
2	Western Avenue / Orange Avenue	0.675	B	0.590	A
3	Western Avenue / W. Cerritos Avenue	0.583	A	0.690	B
4	Ball Road / S. Beach Boulevard	0.748	C	0.720	C
5	Ball Road / S. Knott Avenue	0.668	B	0.691	B

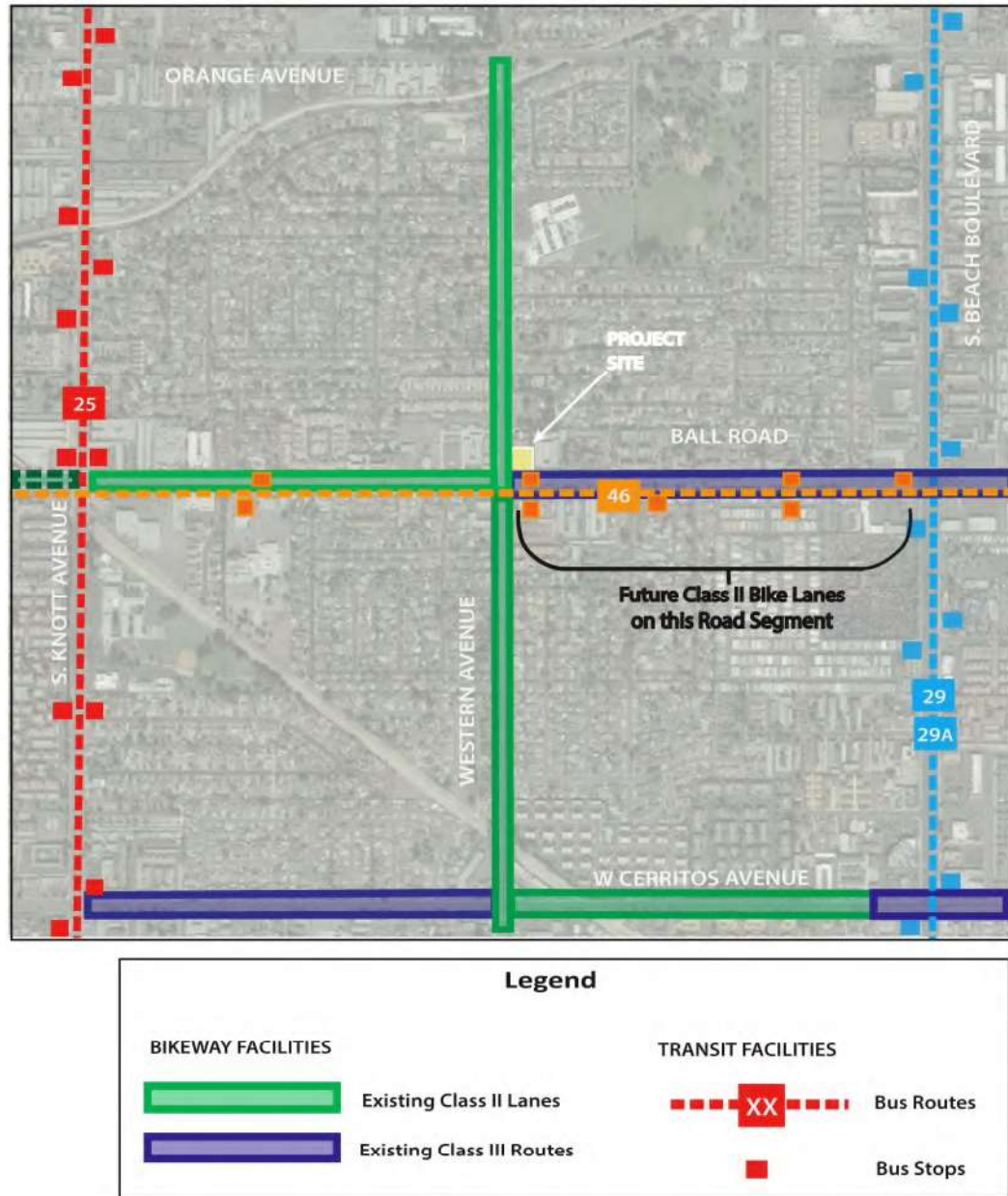


Figure 4: Existing Transit and Bikeway Facilities

Table 4: Existing Roadway Segment Levels of Service

Street	Segment	General Plan Classification	Arterial Type [1]	Daily Capacity [2]	Existing Conditions		
					ADT Volume [3]	Volume to Capacity Ratio (V/C)	Level of Service (LOS) [4]
Ball Road	E. of Western Ave	Primary Arterial	4-Lane Divided	37,500	20,025	0.53	A
Ball Road	W. of Western Ave	Primary Arterial	4-Lane Divided	37,500	22,687	0.60	B
Western Avenue	N. of Ball Rd	Secondary Arterial	4-Lane Divided	37,500	25,648	0.68	B
Western Avenue	S. of Ball Rd	Secondary Arterial	4-Lane Divided	37,500	23,052	0.61	B
Notes: [1] For purposes of analyzing roadway segments, the Arterial Type is consistent with the General Plan classification and the classification system described in "Guidance for Administration of the Orange County Master Plan of Arterial Highways" (Section 3.4 Primary Arterial and Section 3.5 Secondary Arterial on Page 11). Both the City of Anaheim General Plan Circulation Element (May 2004) and the MPAH define Secondary Arterials as four-lane undivided roadways, but Western Avenue (classified as a Secondary Arterial in the General Plan) is configured as a four-lane divided arterial with a painted continuous two-way left turn lane median which is considered a divided arterial. Therefore, this study analyzes Western Avenue as a 4-lane divided arterial. [2] Daily roadway segment capacities are from "Guidance for Administration of the Orange County Master Plan of Arterial Highways", Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix. [3] Average daily traffic (ADT) volume counts were conducted on November 1, 2017. Raw count data is included in the appendix. [4] Level of Service (LOS) for roadway segments are based on the ADT volume ranges presented in Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix. Source: ADVANTEC Consulting Engineers, Inc., 2019.							

3. Opening Year Conditions (Year 2021)

This section presents an analysis of the 2021 opening year of the project. The scenario analyzes conditions of the addition of traffic generated by development projects that have been approved by the City of Anaheim, but not yet built and/or occupied. An ambient growth rate of 1% per year was used on existing volumes to estimate base volumes for opening year conditions. **Figure 5** shows the location of the approved projects relative to the study area. Details about the approved projects are located in the appendix.

3.1 Estimated Trip Generation of Approved Projects

Table 5 presents the estimated peak hour trip generation of the approved projects in the vicinity of the Project.

3.2 Existing + Approved Projects Traffic Volumes

Figure 6 presents the AM and PM peak hour traffic volumes generated by the approved projects assigned to the study intersections. The list of approved projects was obtained from the City of Anaheim Development Activity Website. **Figure 7** presents existing plus approved project traffic volumes.



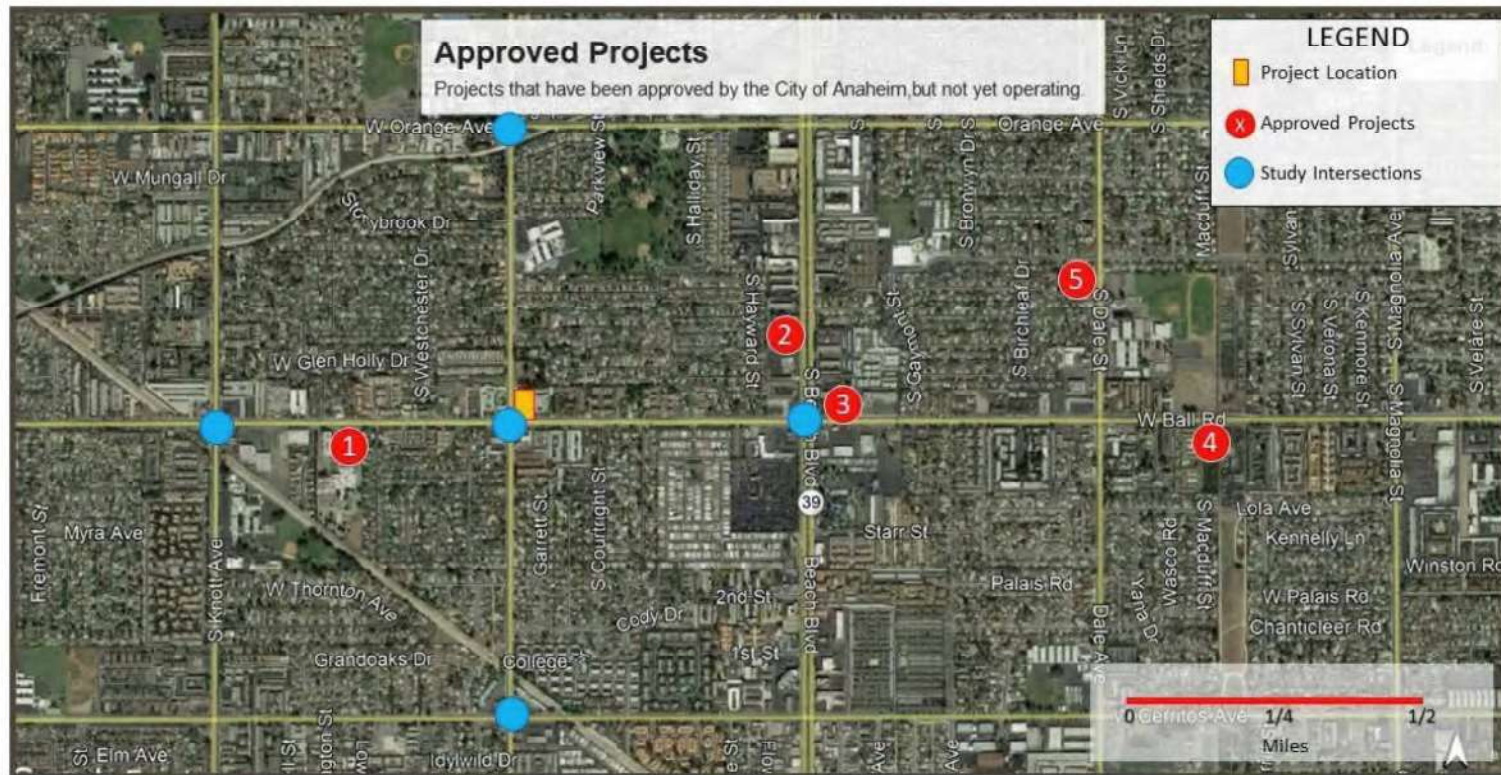


Figure 5: Location of Approved Projects

Table 5: Estimated Trip Generation of Approved Projects in Vicinity of Project

#	Project Name	Location	Land Use	Size	Units	Daily Trips	AM Peak Hour			PM Peak Hour		
							In	Out	Total	In	Out	Total
1	Aceport College	3340 Ball Rd	Medical Office	1,511	Sq. Ft.	56	3	1	4	1	4	5
2	Community Center	907 Beach Blvd	Community Center	13,600	Sq. Ft.	88	2	1	3	7	2	9
3	Anaheim Express Wash	924 Beach Blvd	Self-Service Carwash	4,992	Sq. Ft.	280	0	0	0	35	35	70
4	Bonanni Townhomes	2730 Ball Rd	Townhomes	41	Units	240	3	15	18	14	7	21
5	Tien Le Subdivision	807 Dale Road	Single Family Dwellings	2	Units	20	1	1	2	1	1	2
Total						684	9	18	27	58	49	107

3.3 Existing + Approved Projects w/o Project Intersection Levels of Service

Table 6 summarizes the LOS for each study intersection under Existing + Approved Projects conditions and compares the results to existing conditions.

**Table 6: Comparison of Existing Conditions with Existing + Approved Projects
Intersection Peak Hour Levels of Service**

Intersection		Existing Conditions				Existing + Approved Projects			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.594	A	0.683	B	0.619	B	0.727	C
2	Western Avenue / Orange Avenue	0.675	B	0.590	A	0.701	C	0.620	B
3	Western Avenue / W. Cerritos Avenue	0.583	A	0.690	B	0.605	B	0.719	C
4	Ball Road / S. Beach Boulevard	0.748	C	0.720	C	0.777	C	0.756	C
5	Ball Road / S. Knott Avenue	0.668	B	0.691	B	0.694	B	0.721	C

3.4 Existing + Approved Projects w/o Project Roadway Segment Levels of Service

Table 7 summarizes the roadway segment levels of service under Existing + Approved Projects conditions and compares the results to existing conditions.



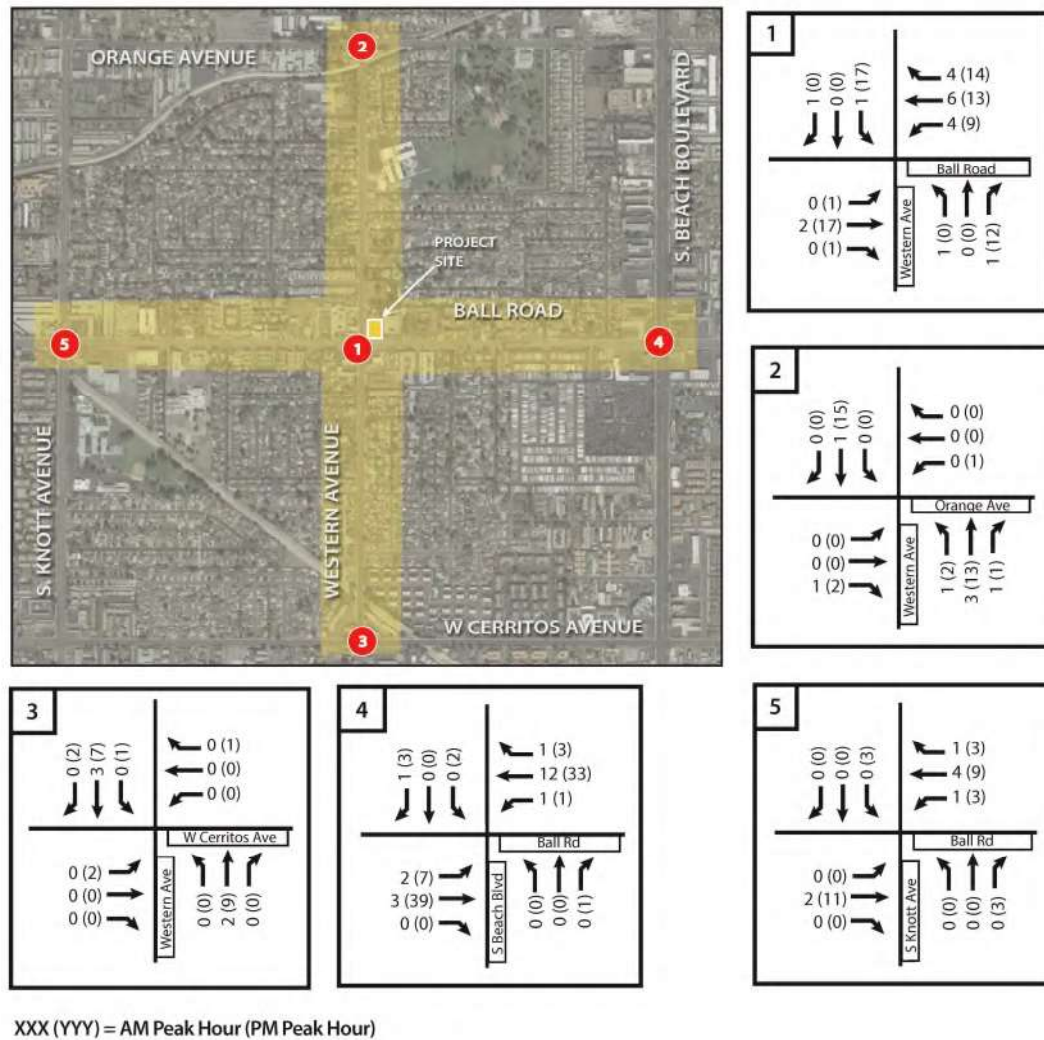


Figure 6: Approved Projects-Only Traffic Volumes

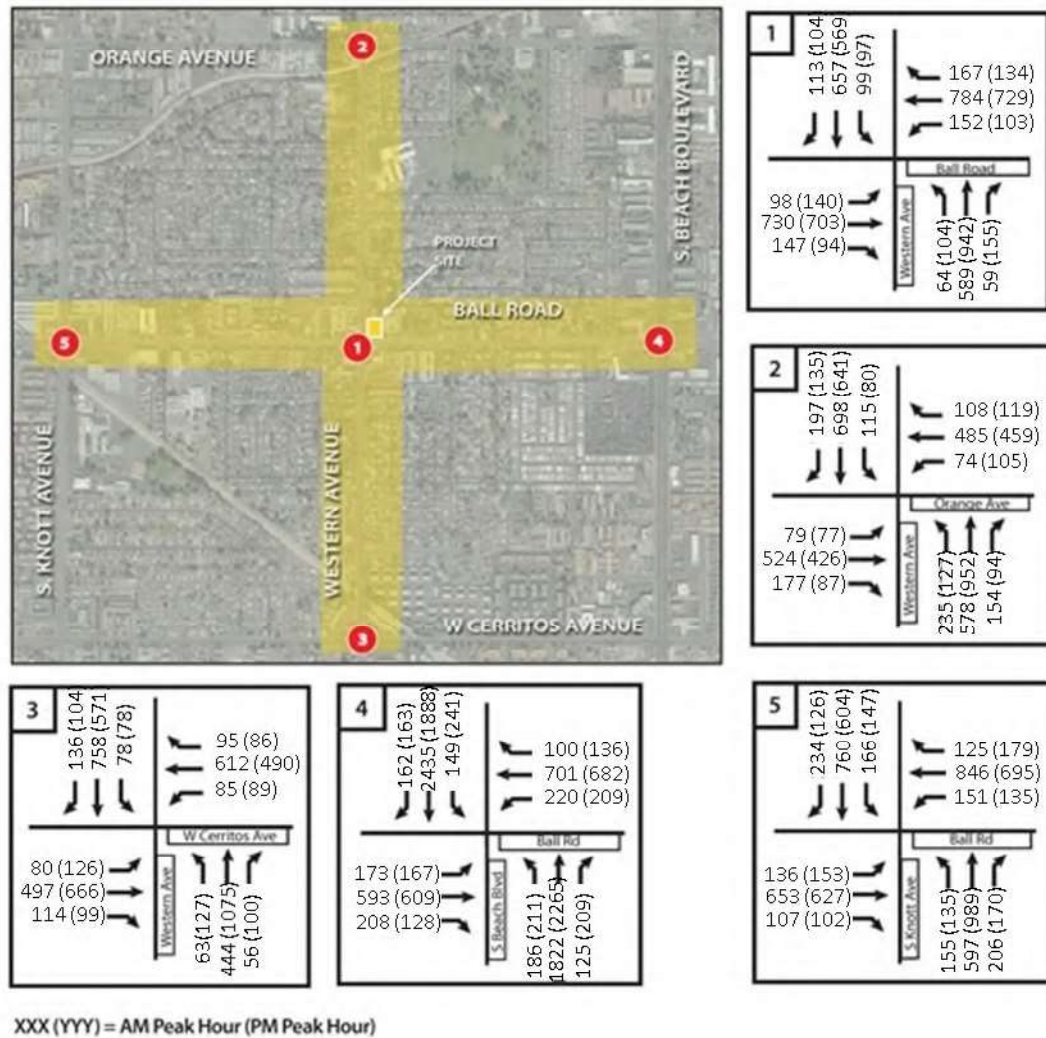


Figure 7: Existing + Approved Projects Traffic Volumes

Table 7: Comparison of Existing and Existing + Project Roadway Segment Levels of Service

Street	Segment	Daily Capacity [1]	Existing Conditions			Existing + Approved Projects Conditions		
			ADT Volume	Volume to Capacity Ratio (V/C)	Level of Service (LOS)	ADT Volume [2]	Volume to Capacity Ratio (V/C)	Level of Service (LOS)
Ball Road	E. of Western Ave	37,500	20,025	0.53	A	20,515	0.55	A
Ball Road	W. of Western Ave	37,500	22,687	0.60	B	22,909	0.61	B
Western Avenue	N. of Ball Rd	37,500	25,648	0.68	B	25,812	0.69	B
Western Avenue	S. of Ball Rd	37,500	23,052	0.61	B	23,208	0.62	B
Notes: [1] Daily roadway segment capacities are from "Guidance for Administration of the Orange County Master Plan of Arterial Highways", Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix. [2] See appendix for forecasts of average daily trips generated by Approved Projects. Source: ADVANTEC Consulting Engineers, Inc., 2019.								

4. General Plan Buildout Conditions (Year 2035)

4.1 General Plan Buildout w/o Project Traffic Projections

Traffic projections reflecting buildout of the City of Anaheim General Plan (Year 2035) were derived from the Anaheim Traffic Analysis Model (ATAM) provided by the City of Anaheim. The projected traffic volumes under the General Plan Buildout are depicted in **Figure 8**.

4.2 General Plan Buildout w/o Project Levels of Service

Table 8 summarizes the LOS for each study intersection in the General Plan Buildout scenario.

Table 8: General Plan Buildout Without Project Intersection Peak Hour Levels of Service

Intersection		General Plan Buildout			
		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.710	C	0.763	C
2	Western Avenue / Orange Avenue	0.704	C	0.580	A
3	Western Avenue / W. Cerritos Avenue	0.671	B	0.682	B
4	Ball Road / S. Beach Boulevard	0.824	D	0.796	C
5	Ball Road / S. Knott Avenue	0.744	C	0.897	D



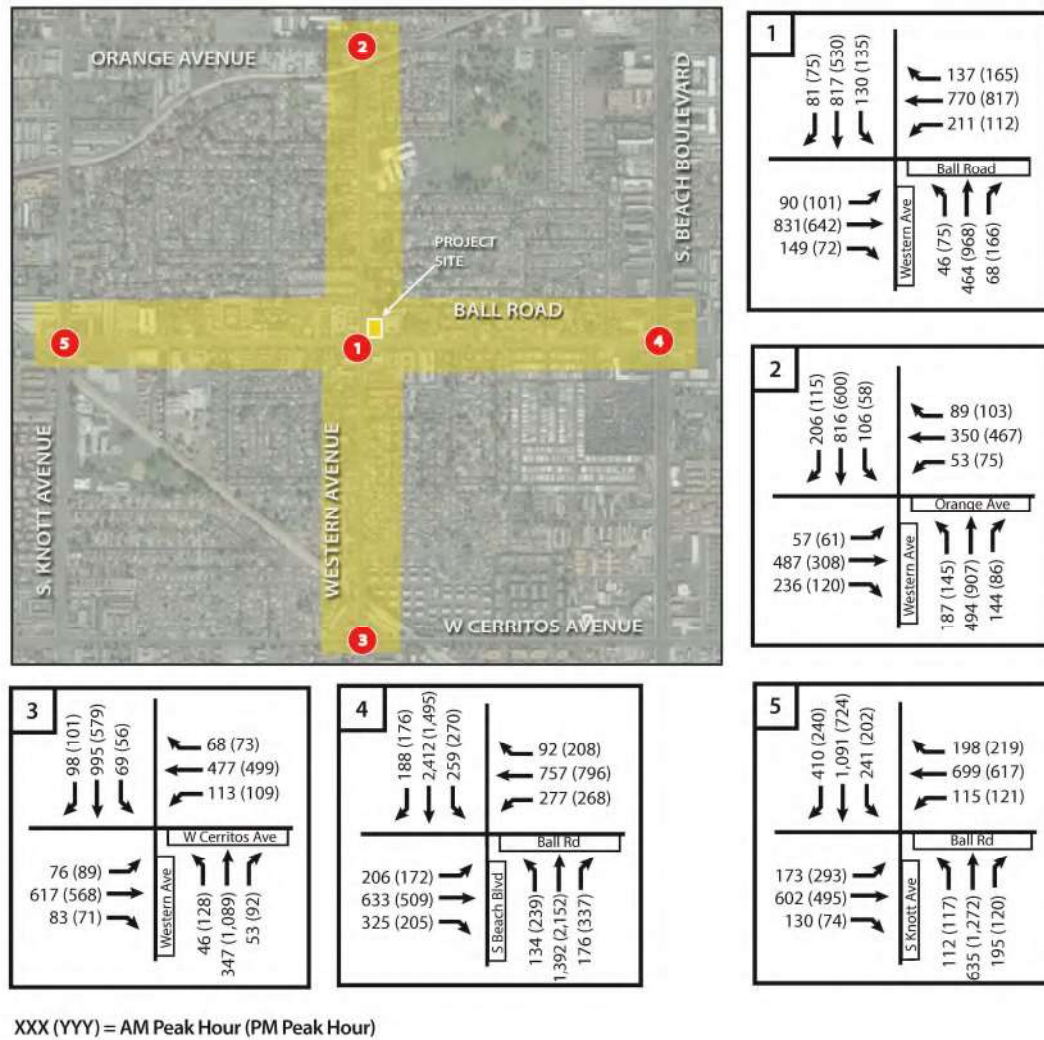


Figure 8: General Plan Buildout (2035) Traffic Volumes

5. Project Impacts

This section evaluates the potential impacts of the Project. It describes the estimated Project trip generation, distribution and assignment of Project traffic and analyzes the impacts on intersections and roadway levels of service under Existing, Opening Year and General Plan Buildout conditions.

5.1 Project Description

The proposed Project is located at the northeast corner of Ball Road and Western Avenue on a 0.35-acre site which was formerly occupied by a service station and is currently vacant and fenced enclosed. The property is zoned for commercial land uses and the applicant proposes a General Plan Amendment to zone the property for multi-family residential. Two driveways to the property exists on Ball Road and two driveways located on Western Avenue.

The proposed Project is an eleven-unit two story apartment building which proposes a right in/right out only driveway on Ball. **Figure 9** shows the Project's site plan illustrating the ground floor layout of the building and the proposed driveways.

5.2 Project Trip Generation

Table 9 presents the estimated daily, AM and PM peak hour trip generation of the proposed Project.

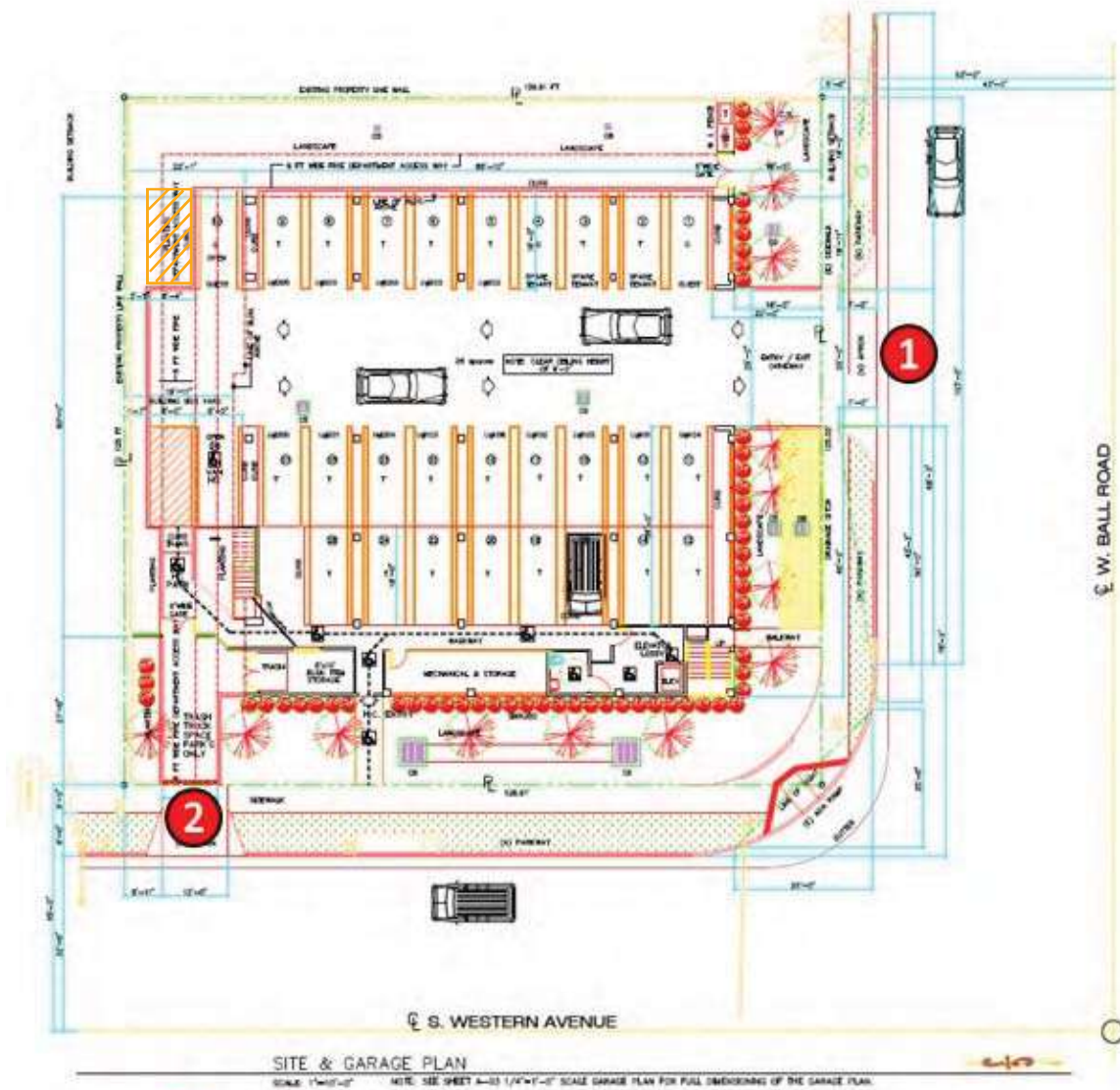
Table 9: Estimated Project Trip Generation

ITE LU Code	Land Use	Size / Units	Trip Generation Rates [1]						
			Average Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
220	Apartment	n/a	6.65	0.10	0.41	0.51	0.40	0.22	0.62
ITE LU Code	Land Use	Size / Units	Estimated Project Trip Generation						
			Average Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
220	Apartment	11	74	1	5	6	4	2	6
Notes:									
[1] Source of trip generation rates: Trip Generation, 9th Edition. Institute of Transportation Engineers.									

5.3 Trip Distribution

The estimated trips generated by the proposed Project have been distributed to the surrounding street network sound engineering judgement of the existing travel patterns derived from traffic counts. **Figure 10** shows the AM and PM peak hour distribution of Project trips to the study intersections.





- 1** The Ball Road driveway is proposed as a vehicular entrance/exit.
- 2** The Western Avenue driveway is proposed as a trash pickup entrance/exit only.

Figure 9: Project Site Plan



Figure 10: Project Trip Distribution

5.4 Trip Assignment

Figure 11 depicts the Project-only traffic volumes assigned to the study intersections and the Project driveways based on the trip distribution described above. Note that the traffic analysis assumes the Ball Road driveway is restricted to right-turn-in/right-turn-out only operation and, therefore, inbound Project traffic approaching from the east is assumed to make a U-turn at the intersection of Ball Road. and Beach Boulevard.

5.5 Existing + Project Levels of Service

Table 10 summarizes the resulting LOS at the study intersections with the addition of Project traffic to existing traffic volumes and compares it to existing conditions. **Table 11** summarizes the resulting roadway segment levels of service with the addition of Project daily traffic to existing daily segment volumes.

Table 10: Comparison of Existing and Existing + Project Intersection Peak Hour Levels of Service

Intersection		Existing Conditions				Existing + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.594	A	0.683	B	0.595	A	0.684	B
2	Western Avenue / Orange Avenue	0.675	B	0.590	A	0.675	B	0.591	A
3	Western Avenue / W. Cerritos Avenue	0.583	A	0.690	B	0.584	A	0.690	B
4	Ball Road / S. Beach Boulevard	0.748	C	0.720	C	0.748	C	0.720	C
5	Ball Road / S. Knott Avenue	0.668	B	0.691	B	0.668	B	0.691	B

5.6 Opening Year

Table 12 summarizes the resulting level of service at the study intersections with the addition of Project traffic to Existing + Approved Projects traffic volumes and compares it to Existing + Approved Projects conditions. **Table 13** summarizes the resulting roadway segment levels of service with the addition of Project daily traffic to Existing + Approved Projects daily segment volumes.



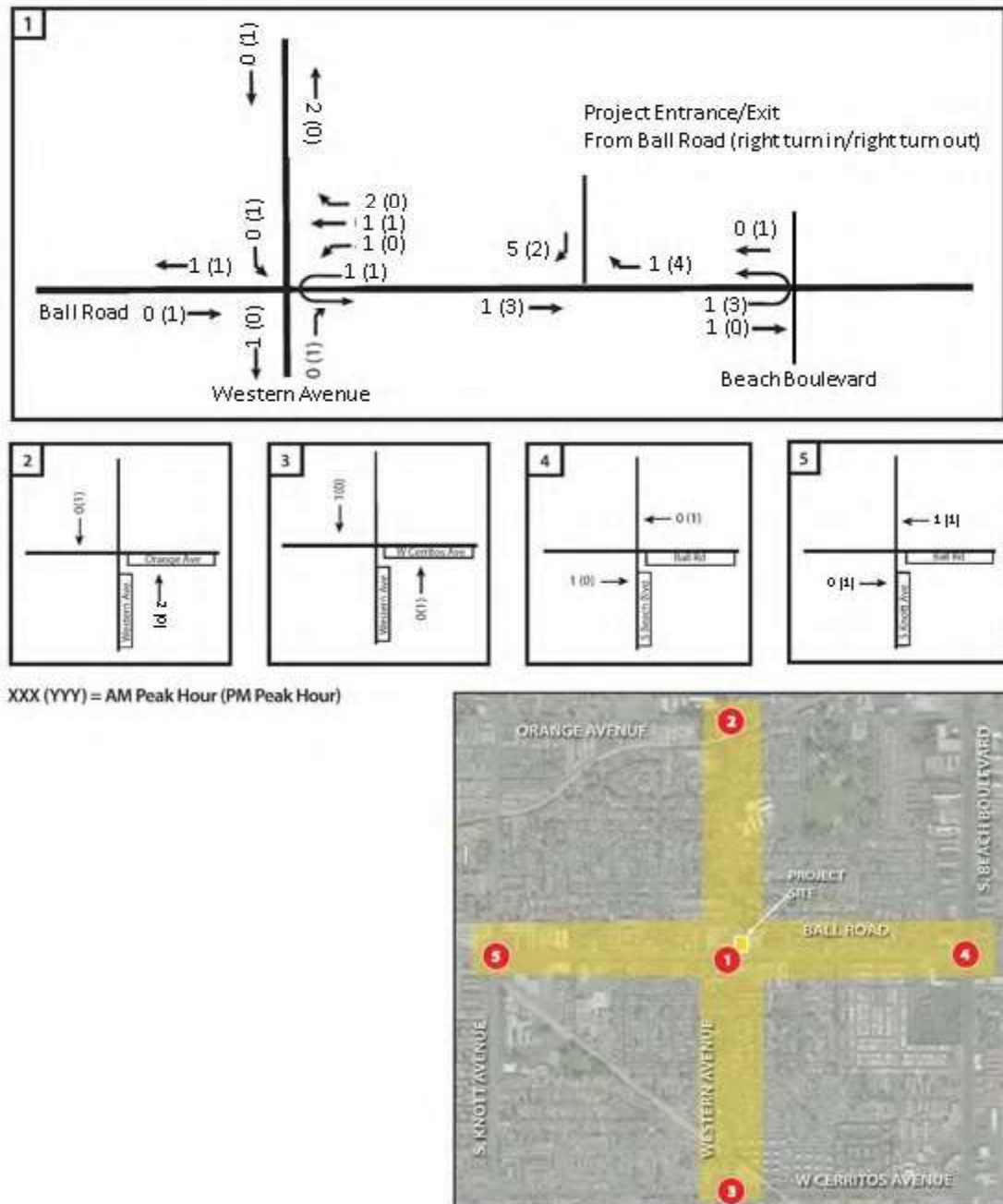


Figure 11: Project-Only Traffic Volumes

Table 11: Comparison of Existing and Existing + Project Roadway Segment Levels of Service

Street	Segment	Arterial Type [1]	Daily Capacity [2]	Existing Conditions			Existing + Project Conditions		
				ADT Volume [3]	V/C Ratio	LOS [4]	ADT Volume [3]	V/C Ratio	LOS [4]
Ball Road	E. of Western Ave	4-Lane Divided	37,500	20,025	0.53	A	20,044	0.53	A
Ball Road	W. of Western Ave	4-Lane Divided	37,500	22,687	0.60	B	22,709	0.61	B
Western Avenue	N. of Ball Rd	4-Lane Divided	37,500	25,648	0.68	B	25,666	0.68	B
Western Avenue	S. of Ball Rd	4-Lane Divided	37,500	23,052	0.61	B	23,070	0.62	B

Notes:

[1] For purposes of analyzing roadway segments, the Arterial Type is consistent with the General Plan classification and the classification system described in "Guidance for Administration of the Orange County Master Plan of Arterial Highways" (Section 3.4 Primary Arterial and Section 3.5 Secondary Arterial on Page 11). Both the City of Anaheim General Plan Circulation Element (May 2004) and the MPAH define Secondary Arterials as four-lane undivided roadways, but Western Avenue (classified as a Secondary Arterial in the General Plan) is configured as a four-lane divided arterial with a painted continuous two-way left turn lane median which is considered a divided arterial. Therefore, this study analyzes Western Avenue as a 4-lane divided arterial.

[2] Daily roadway segment capacities are from "Guidance for Administration of the Orange County Master Plan of Arterial Highways", Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix.

[3] Average daily traffic (ADT) volume counts were conducted on November 1, 2017. Raw count data is included in the appendix. See appendix for computation of Project generated daily link volumes.

[4] Level of Service (LOS) for roadway segments are based on the ADT volume ranges presented in Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix.

Source: ADVANTEC Consulting Engineers, Inc., 2019.

Table 12: Comparison of Existing + Approved Projects and Existing + Approved Projects + Project Intersection Peak Hour Levels of Service

Intersection		Existing + Approved Projects Conditions				Existing + Approved + Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.619	B	0.727	C	0.620	B	0.727	C
2	Western Avenue / Orange Avenue	0.701	C	0.620	B	0.701	C	0.620	B
3	Western Avenue / W. Cerritos Avenue	0.605	B	0.719	C	0.605	B	0.719	C
4	Ball Road / S. Beach Boulevard	0.777	C	0.756	C	0.777	C	0.756	C
5	Ball Road / S. Knott Avenue	0.694	B	0.721	C	0.694	B	0.722	C



**Table 13: Comparison of Existing + Approved Projects and
Existing + Approved Projects + Project Roadway Segment Levels of Service**

Street	Segment	Daily Capacity [1]	Existing + Approved Projects Conditions			Existing + Approved Projects + Project Conditions		
			ADT Volume	Volume to Capacity Ratio (V/C)	Level of Service (LOS)	ADT Volume [2]	Volume to Capacity Ratio (V/C)	Level of Service (LOS)
Ball Road	E. of Western Ave	37,500	20,515	0.55	A	20,533	0.55	B
Ball Road	W. of Western Ave	37,500	22,909	0.61	B	22,931	0.61	B
Western Avenue	N. of Ball Rd	37,500	25,812	0.69	B	25,830	0.69	B
Western Avenue	S. of Ball Rd	37,500	23,208	0.62	B	23,226	0.62	B
Notes: [1] Daily roadway segment capacities are from "Guidance for Administration of the Orange County Master Plan of Arterial Highways", Table A-4-1: Arterial Highways MPAH Capacity Values. This table is included in the appendix. [2] See appendix for forecasts of average daily trips generated by Approved Projects and the Proposed Project. Source: ADVANTEC Consulting Engineers, Inc., 2019.								

5.7 General Plan Buildout with Project Levels of Service

Table 14 summarizes the resulting level of service at the study intersections with the addition of Project traffic to General Plan Buildout traffic volumes and compares it to the without Project conditions. **Table 15** summarizes the resulting roadway segment levels of service with the addition of Project daily traffic to the General Plan Buildout conditions daily segment volumes.

**Table 14: Comparison of General Plan Buildout w/o Project and General Plan Buildout + Project
Intersection Peak Hour Levels of Service**

Intersection		General Plan Buildout w/o Project				General Plan Buildout + Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
1	Ball Road / Western Avenue	0.710	C	0.763	C	0.711	C	0.764	C
2	Western Avenue / Orange Avenue	0.704	C	0.580	A	0.704	C	0.580	A
3	Western Avenue / W. Cerritos Avenue	0.671	B	0.682	B	0.671	B	0.683	B
4	Ball Road / S. Beach Boulevard	0.824	D	0.796	C	0.825	D	0.796	C
5	Ball Road / S. Knott Avenue	0.744	C	0.897	D	0.736	C	0.897	D



**Table 15: Comparison of General Plan Buildout With and Without Project
Roadway Segment Levels of Service**

Street	Segment	Arterial Type	Daily Capacity	General Plan Buildout Without Project			General Plan Buildout Plus Project		
				ADT Volume [1]	Volume to Capacity Ratio (V/C)	Level of Service (LOS)	ADT Volume	Volume to Capacity Ratio (V/C)	Level of Service (LOS)
Ball Road	E. of Western Ave	4-Lane Divided	37,500	25,000	0.67	B	25,019	0.67	B
Ball Road	W. of Western Ave	4-Lane Divided	37,500	22,100	0.59	A	22,122	0.59	A
Western Avenue	N. of Ball Rd	4-Lane Divided	37,500	26,400	0.70	B	26,418	0.70	B
Western Avenue	S. of Ball Rd	4-Lane Divided	37,500	28,300	0.75	C	28,318	0.76	C
Notes: [1] General Plan Buildout forecasts provided by the City of Anaheim Transportation and Traffic Division (December 2017). Source: ADVANTEC Consulting Engineers, Inc., 2019.									

6. Conclusions and Recommendations

The following are the conclusions made from the analysis conducted for this report.

- The AM and PM peak hour Project trip generation will not impact Level of Service for Existing, Opening year, and General Plan Buildout Conditions for the area's intersection and roadway segments.
- Coordination with OCTA Bus Stop and Zones on any operational impacts to the existing WB Route 46 bus stop at the NE corner of the ball Road/Western Avenue intersection.
- Coordination with Republic Services on pull-in/back-out trash truck operation with the driveway access on the eastside of Western Avenue northerly of Ball Road. Trash truck pull-in/back-out operations shall match the existing pull-in/back-out on adjacent residential properties.



Appendices



City of Anaheim
N/S: Western Avenue
E/W: Ball Road
Weather: Clear

File Name : 01_ANA WEBA AM
Site Code :
Start Date : 10/10/2017
Page No : 1

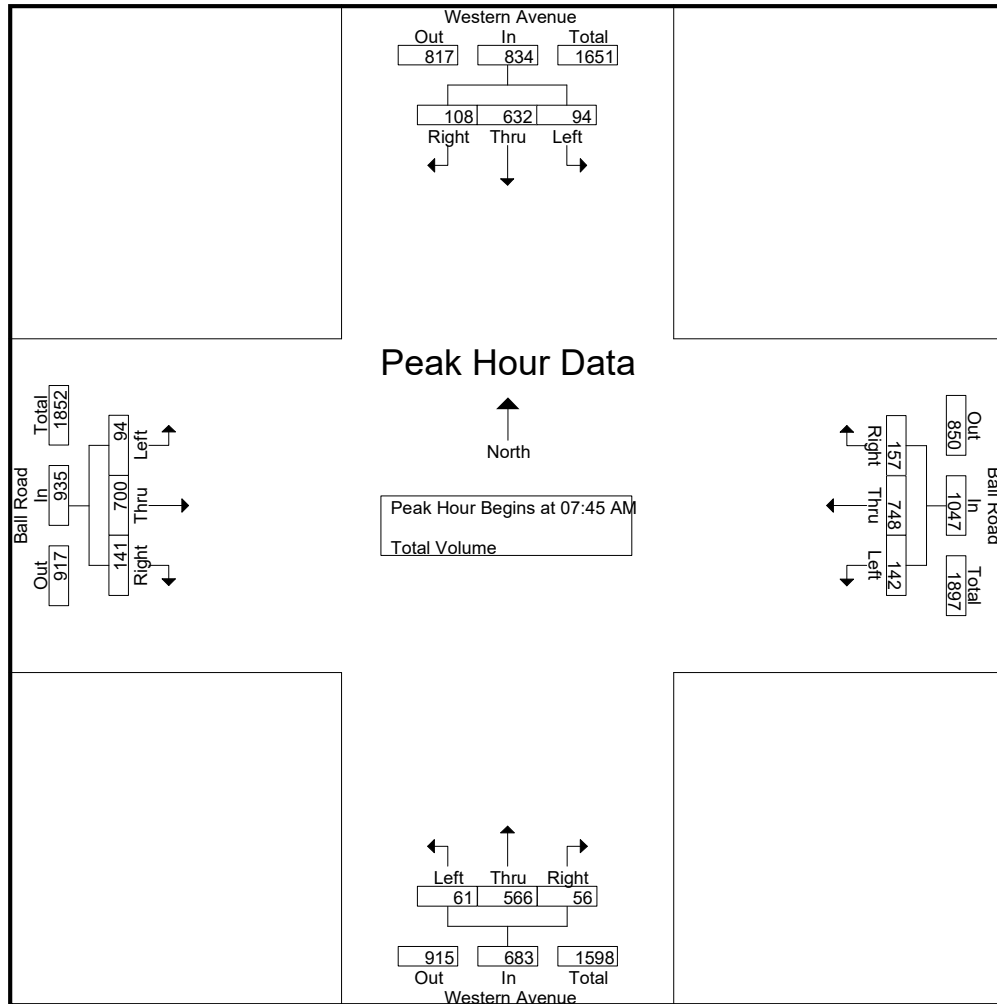
Groups Printed- Total Volume

	Western Avenue Southbound				Ball Road Westbound				Western Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	155	17	184	28	136	9	173	15	94	14	123	18	152	25	195	675
07:15 AM	9	133	21	163	28	203	14	245	14	88	13	115	17	204	26	247	770
07:30 AM	18	164	30	212	30	197	20	247	12	98	13	123	24	189	39	252	834
07:45 AM	12	122	21	155	41	191	32	264	15	145	20	180	24	199	60	283	882
Total	51	574	89	714	127	727	75	929	56	425	60	541	83	744	150	977	3161
08:00 AM	20	177	20	217	33	204	49	286	15	127	14	156	19	176	23	218	877
08:15 AM	26	137	33	196	31	204	53	288	11	157	10	178	27	173	26	226	888
08:30 AM	36	196	34	266	37	149	23	209	20	137	12	169	24	152	32	208	852
08:45 AM	16	114	27	157	29	154	19	202	10	62	11	83	23	151	20	194	636
Total	98	624	114	836	130	711	144	985	56	483	47	586	93	652	101	846	3253
Grand Total	149	1198	203	1550	257	1438	219	1914	112	908	107	1127	176	1396	251	1823	6414
Apprch %	9.6	77.3	13.1		13.4	75.1	11.4		9.9	80.6	9.5		9.7	76.6	13.8		
Total %	2.3	18.7	3.2	24.2	4	22.4	3.4	29.8	1.7	14.2	1.7	17.6	2.7	21.8	3.9	28.4	

	Western Avenue Southbound				Ball Road Westbound				Western Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	12	122	21	155	41	191	32	264	15	145	20	180	24	199	60	283	882
08:00 AM	20	177	20	217	33	204	49	286	15	127	14	156	19	176	23	218	877
08:15 AM	26	137	33	196	31	204	53	288	11	157	10	178	27	173	26	226	888
08:30 AM	36	196	34	266	37	149	23	209	20	137	12	169	24	152	32	208	852
Total Volume	94	632	108	834	142	748	157	1047	61	566	56	683	94	700	141	935	3499
% App. Total	11.3	75.8	12.9		13.6	71.4	15		8.9	82.9	8.2		10.1	74.9	15.1		
PHF	.653	.806	.794	.784	.866	.917	.741	.909	.763	.901	.700	.949	.870	.879	.588	.826	.985

City of Anaheim
N/S: Western Avenue
E/W: Ball Road
Weather: Clear

File Name : 01_ANA WEBA AM
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				07:45 AM				07:15 AM			
+0 mins.	20	177	20	217	30	197	20	247	15	145	20	180	17	204	26	247
+15 mins.	26	137	33	196	41	191	32	264	15	127	14	156	24	189	39	252
+30 mins.	36	196	34	266	33	204	49	286	11	157	10	178	24	199	60	283
+45 mins.	16	114	27	157	31	204	53	288	20	137	12	169	19	176	23	218
Total Volume	98	624	114	836	135	796	154	1085	61	566	56	683	84	768	148	1000
% App. Total	11.7	74.6	13.6		12.4	73.4	14.2		8.9	82.9	8.2		8.4	76.8	14.8	
PHF	.681	.796	.838	.786	.823	.975	.726	.942	.763	.901	.700	.949	.875	.941	.617	.883

City of Anaheim
N/S: Western Avenue
E/W: Ball Road
Weather: Clear

File Name : 01_ANA WEBA PM
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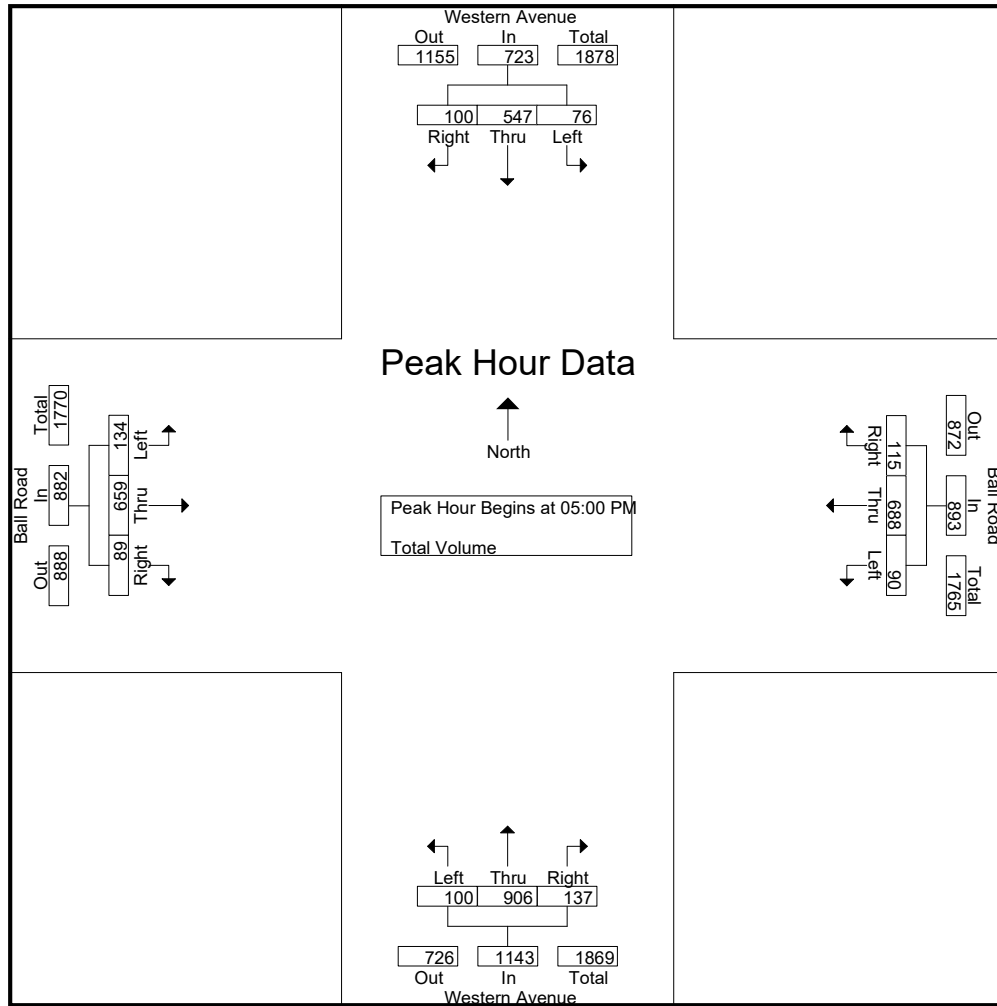
Groups Printed- Total Volume

	Western Avenue Southbound				Ball Road Westbound				Western Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	22	133	12	167	21	146	20	187	20	208	29	257	20	170	18	208	819
04:15 PM	8	92	19	119	24	143	33	200	20	172	20	212	30	167	24	221	752
04:30 PM	27	128	23	178	17	164	26	207	30	222	30	282	35	164	27	226	893
04:45 PM	21	119	21	161	29	203	28	260	26	202	30	258	37	147	24	208	887
Total	78	472	75	625	91	656	107	854	96	804	109	1009	122	648	93	863	3351
05:00 PM	16	131	28	175	19	148	16	183	29	230	33	292	30	161	23	214	864
05:15 PM	20	132	19	171	17	196	45	258	26	207	40	273	35	185	23	243	945
05:30 PM	21	151	28	200	25	145	26	196	24	249	38	311	36	151	23	210	917
05:45 PM	19	133	25	177	29	199	28	256	21	220	26	267	33	162	20	215	915
Total	76	547	100	723	90	688	115	893	100	906	137	1143	134	659	89	882	3641
Grand Total	154	1019	175	1348	181	1344	222	1747	196	1710	246	2152	256	1307	182	1745	6992
Apprch %	11.4	75.6	13		10.4	76.9	12.7		9.1	79.5	11.4		14.7	74.9	10.4		
Total %	2.2	14.6	2.5	19.3	2.6	19.2	3.2	25	2.8	24.5	3.5	30.8	3.7	18.7	2.6	25	

	Western Avenue Southbound				Ball Road Westbound				Western Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	16	131	28	175	19	148	16	183	29	230	33	292	30	161	23	214	864
05:15 PM	20	132	19	171	17	196	45	258	26	207	40	273	35	185	23	243	945
05:30 PM	21	151	28	200	25	145	26	196	24	249	38	311	36	151	23	210	917
05:45 PM	19	133	25	177	29	199	28	256	21	220	26	267	33	162	20	215	915
Total Volume	76	547	100	723	90	688	115	893	100	906	137	1143	134	659	89	882	3641
% App. Total	10.5	75.7	13.8		10.1	77	12.9		8.7	79.3	12		15.2	74.7	10.1		
PHF	.905	.906	.893	.904	.776	.864	.639	.865	.862	.910	.856	.919	.931	.891	.967	.907	.963

City of Anaheim
N/S: Western Avenue
E/W: Ball Road
Weather: Clear

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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				05:00 PM				04:30 PM			
+0 mins.	16	131	28	175	17	164	26	207	29	230	33	292	35	164	27	226
+15 mins.	20	132	19	171	29	203	28	260	26	207	40	273	37	147	24	208
+30 mins.	21	151	28	200	19	148	16	183	24	249	38	311	30	161	23	214
+45 mins.	19	133	25	177	17	196	45	258	21	220	26	267	35	185	23	243
Total Volume	76	547	100	723	82	711	115	908	100	906	137	1143	137	657	97	891
% App. Total	10.5	75.7	13.8		9	78.3	12.7		8.7	79.3	12		15.4	73.7	10.9	
PHF	.905	.906	.893	.904	.707	.876	.639	.873	.862	.910	.856	.919	.926	.888	.898	.917

Location: Anaheim
 N/S: Western Avenue
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Western Avenue	East Leg Ball Road	South Leg Western Avenue	West Leg Ball Road	TOTAL
7:00 AM	1	0	0	2	3
7:15 AM	1	0	5	0	6
7:30 AM	2	11	3	1	17
7:45 AM	1	9	5	3	18
8:00 AM	6	10	2	6	24
8:15 AM	8	14	5	18	45
8:30 AM	0	4	1	2	7
8:45 AM	0	6	0	1	7
TOTAL VOLUMES:	19	54	21	33	127

	North Leg Western Avenue	East Leg Ball Road	South Leg Western Avenue	West Leg Ball Road	TOTAL
4:00 PM	2	2	1	1	6
4:15 PM	1	2	4	1	8
4:30 PM	5	4	2	2	13
4:45 PM	1	3	7	8	19
5:00 PM	1	6	0	6	13
5:15 PM	3	10	4	3	20
5:30 PM	0	2	2	1	5
5:45 PM	4	1	0	2	7
TOTAL VOLUMES:	17	30	20	24	91

Location: Anaheim
 N/S: Western Avenue
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

BICYCLES

	North Leg Western Avenue	East Leg Ball Road	South Leg Western Avenue	West Leg Ball Road	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	3	4	0	0	7
7:30 AM	0	0	0	1	1
7:45 AM	1	1	0	0	2
8:00 AM	2	1	1	1	5
8:15 AM	0	7	3	3	13
8:30 AM	0	1	0	1	2
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	7	14	4	7	32

	North Leg Western Avenue	East Leg Ball Road	South Leg Western Avenue	West Leg Ball Road	TOTAL
4:00 PM	0	4	5	2	11
4:15 PM	2	1	1	0	4
4:30 PM	0	3	1	2	6
4:45 PM	0	1	1	0	2
5:00 PM	2	3	0	0	5
5:15 PM	2	1	1	0	4
5:30 PM	1	0	2	3	6
5:45 PM	0	1	3	0	4
TOTAL VOLUMES:	7	14	14	7	42

City of Anaheim
N/S: Western Avenue
E/W: Orange Avenue
Weather: Clear

File Name : 02_ANA WEOR AM
Site Code :
Start Date : 10/10/2017
Page No : 1

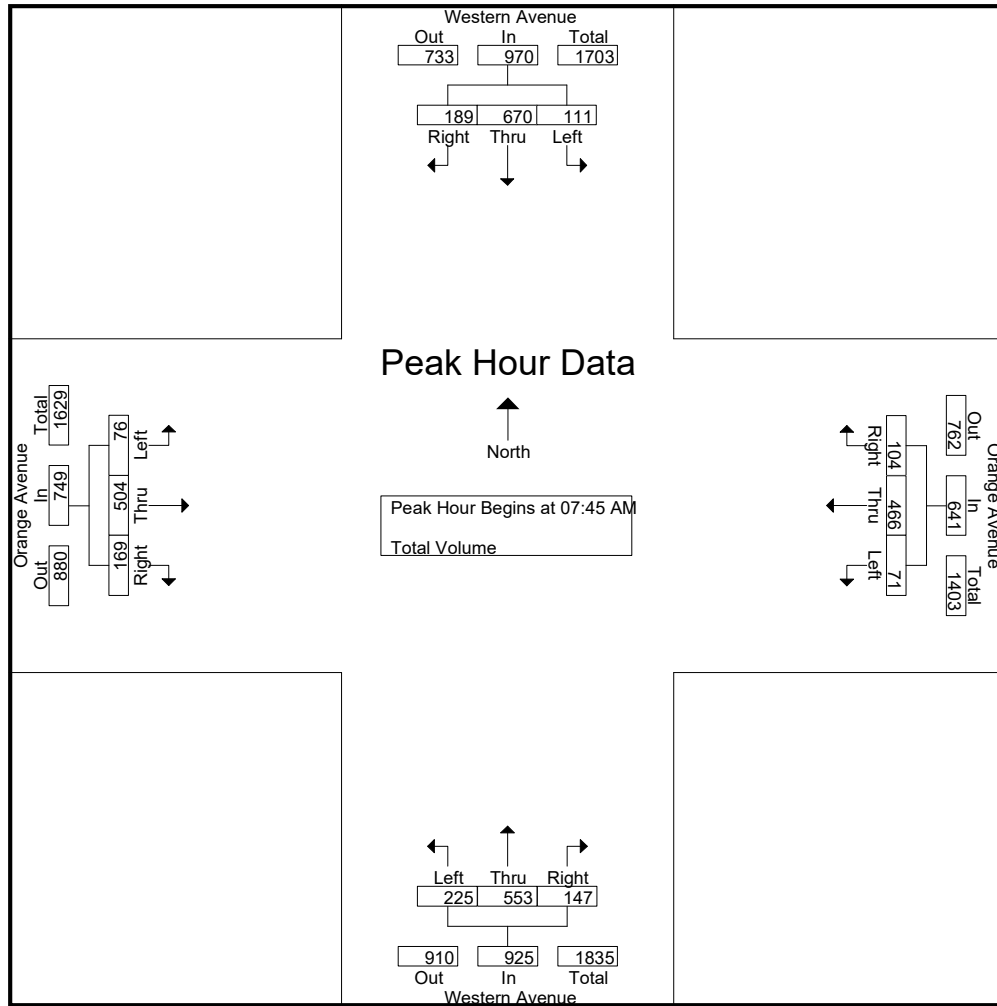
Groups Printed- Total Volume

	Western Avenue Southbound				Orange Avenue Westbound				Western Avenue Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	138	12	167	11	98	15	124	11	99	11	121	7	73	14	94	506
07:15 AM	13	129	22	164	9	142	13	164	11	107	15	133	14	114	24	152	613
07:30 AM	17	158	33	208	13	114	19	146	17	109	12	138	14	116	26	156	648
07:45 AM	15	134	35	184	17	114	10	141	36	139	29	204	11	125	37	173	702
Total	62	559	102	723	50	468	57	575	75	454	67	596	46	428	101	575	2469
08:00 AM	24	182	38	244	20	101	10	131	63	118	49	230	21	113	49	183	788
08:15 AM	23	166	46	235	15	119	45	179	68	146	44	258	18	124	36	178	850
08:30 AM	49	188	70	307	19	132	39	190	58	150	25	233	26	142	47	215	945
08:45 AM	22	151	17	190	11	98	20	129	18	94	15	127	35	137	23	195	641
Total	118	687	171	976	65	450	114	629	207	508	133	848	100	516	155	771	3224
Grand Total	180	1246	273	1699	115	918	171	1204	282	962	200	1444	146	944	256	1346	5693
Apprch %	10.6	73.3	16.1		9.6	76.2	14.2		19.5	66.6	13.9		10.8	70.1	19		
Total %	3.2	21.9	4.8	29.8	2	16.1	3	21.1	5	16.9	3.5	25.4	2.6	16.6	4.5	23.6	

	Western Avenue Southbound				Orange Avenue Westbound				Western Avenue Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	134	35	184	17	114	10	141	36	139	29	204	11	125	37	173	702
08:00 AM	24	182	38	244	20	101	10	131	63	118	49	230	21	113	49	183	788
08:15 AM	23	166	46	235	15	119	45	179	68	146	44	258	18	124	36	178	850
08:30 AM	49	188	70	307	19	132	39	190	58	150	25	233	26	142	47	215	945
Total Volume	111	670	189	970	71	466	104	641	225	553	147	925	76	504	169	749	3285
% App. Total	11.4	69.1	19.5		11.1	72.7	16.2		24.3	59.8	15.9		10.1	67.3	22.6		
PHF	.566	.891	.675	.790	.888	.883	.578	.843	.827	.922	.750	.896	.731	.887	.862	.871	.869

City of Anaheim
N/S: Western Avenue
E/W: Orange Avenue
Weather: Clear

File Name : 02_ANA WEOR AM
Site Code :
Start Date : 10/10/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				08:00 AM			
+0 mins.	24	182	38	244	17	114	10	141	36	139	29	204	21	113	49	183
+15 mins.	23	166	46	235	20	101	10	131	63	118	49	230	18	124	36	178
+30 mins.	49	188	70	307	15	119	45	179	68	146	44	258	26	142	47	215
+45 mins.	22	151	17	190	19	132	39	190	58	150	25	233	35	137	23	195
Total Volume	118	687	171	976	71	466	104	641	225	553	147	925	100	516	155	771
% App. Total	12.1	70.4	17.5		11.1	72.7	16.2		24.3	59.8	15.9		13	66.9	20.1	
PHF	.602	.914	.611	.795	.888	.883	.578	.843	.827	.922	.750	.896	.714	.908	.791	.897

City of Anaheim
N/S: Western Avenue
E/W: Orange Avenue
Weather: Clear

File Name : 02_ANA WEOR PM
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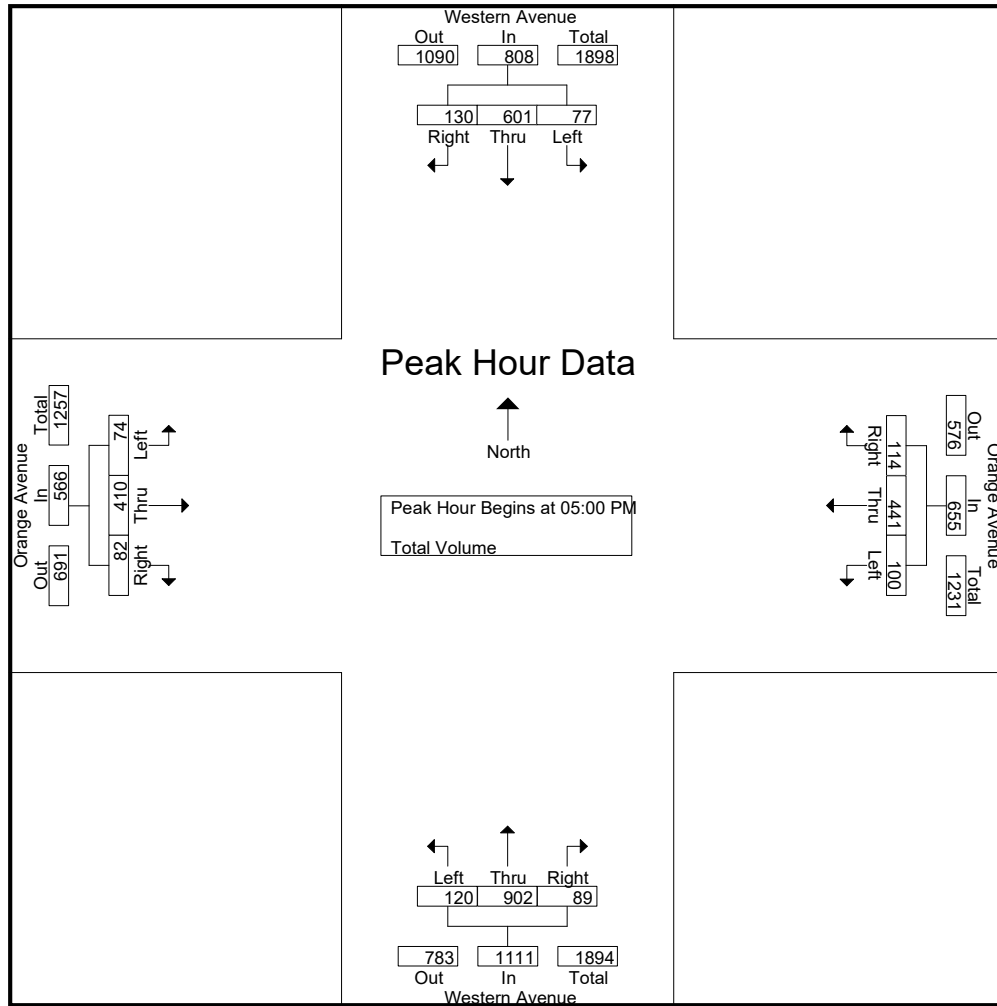
Groups Printed- Total Volume

	Western Avenue Southbound				Orange Avenue Westbound				Western Avenue Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	24	136	24	184	18	97	36	151	13	183	15	211	14	132	16	162	708
04:15 PM	25	118	18	161	18	100	27	145	27	213	21	261	18	125	17	160	727
04:30 PM	17	138	27	182	17	95	28	140	22	198	24	244	20	92	16	128	694
04:45 PM	23	159	29	211	8	109	26	143	28	234	25	287	25	112	24	161	802
Total	89	551	98	738	61	401	117	579	90	828	85	1003	77	461	73	611	2931
05:00 PM	21	149	36	206	14	100	33	147	21	203	27	251	14	106	24	144	748
05:15 PM	18	142	31	191	30	96	20	146	35	229	19	283	24	121	20	165	785
05:30 PM	13	151	26	190	30	126	26	182	27	219	26	272	24	103	18	145	789
05:45 PM	25	159	37	221	26	119	35	180	37	251	17	305	12	80	20	112	818
Total	77	601	130	808	100	441	114	655	120	902	89	1111	74	410	82	566	3140
Grand Total	166	1152	228	1546	161	842	231	1234	210	1730	174	2114	151	871	155	1177	6071
Apprch %	10.7	74.5	14.7		13	68.2	18.7		9.9	81.8	8.2		12.8	74	13.2		
Total %	2.7	19	3.8	25.5	2.7	13.9	3.8	20.3	3.5	28.5	2.9	34.8	2.5	14.3	2.6	19.4	

	Western Avenue Southbound				Orange Avenue Westbound				Western Avenue Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	21	149	36	206	14	100	33	147	21	203	27	251	14	106	24	144	748
05:15 PM	18	142	31	191	30	96	20	146	35	229	19	283	24	121	20	165	785
05:30 PM	13	151	26	190	30	126	26	182	27	219	26	272	24	103	18	145	789
05:45 PM	25	159	37	221	26	119	35	180	37	251	17	305	12	80	20	112	818
Total Volume	77	601	130	808	100	441	114	655	120	902	89	1111	74	410	82	566	3140
% App. Total	9.5	74.4	16.1		15.3	67.3	17.4		10.8	81.2	8		13.1	72.4	14.5		
PHF	.770	.945	.878	.914	.833	.875	.814	.900	.811	.898	.824	.911	.771	.847	.854	.858	.960

City of Anaheim
N/S: Western Avenue
E/W: Orange Avenue
Weather: Clear

File Name : 02_ANA WEOR PM
Site Code :
Start Date : 10/10/2017
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	21	149	36	206	14	100	33	147	21	203	27	251	25	112	24	161
+15 mins.	18	142	31	191	30	96	20	146	35	229	19	283	14	106	24	144
+30 mins.	13	151	26	190	30	126	26	182	27	219	26	272	24	121	20	165
+45 mins.	25	159	37	221	26	119	35	180	37	251	17	305	24	103	18	145
Total Volume	77	601	130	808	100	441	114	655	120	902	89	1111	87	442	86	615
% App. Total	9.5	74.4	16.1		15.3	67.3	17.4		10.8	81.2	8		14.1	71.9	14	
PHF	.770	.945	.878	.914	.833	.875	.814	.900	.811	.898	.824	.911	.870	.913	.896	.932

Location: Anaheim
 N/S: Western Avenue
 E/W: Orange Avenue



Date: 10/10/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Western Avenue	East Leg Orange Avenue	South Leg Western Avenue	West Leg Orange Avenue	TOTAL
7:00 AM	2	3	1	5	11
7:15 AM	5	3	6	2	16
7:30 AM	9	3	9	13	34
7:45 AM	9	16	16	7	48
8:00 AM	11	12	17	20	60
8:15 AM	63	27	27	37	154
8:30 AM	107	24	9	63	203
8:45 AM	10	6	3	3	22
TOTAL VOLUMES:	216	94	88	150	548

	North Leg Western Avenue	East Leg Orange Avenue	South Leg Western Avenue	West Leg Orange Avenue	TOTAL
4:00 PM	8	2	2	5	17
4:15 PM	5	4	5	11	25
4:30 PM	2	0	2	11	15
4:45 PM	8	1	17	19	45
5:00 PM	5	4	0	2	11
5:15 PM	7	4	4	6	21
5:30 PM	6	9	3	2	20
5:45 PM	1	0	3	3	7
TOTAL VOLUMES:	42	24	36	59	161

Location: Anaheim
 N/S: Western Avenue
 E/W: Orange Avenue



Date: 10/10/2017
 Day: Tuesday

BICYCLES

	North Leg Western Avenue	East Leg Orange Avenue	South Leg Western Avenue	West Leg Orange Avenue	TOTAL
7:00 AM	0	0	2	2	4
7:15 AM	1	1	0	2	4
7:30 AM	1	0	1	0	2
7:45 AM	0	1	2	0	3
8:00 AM	0	0	1	0	1
8:15 AM	3	3	3	6	15
8:30 AM	4	1	0	5	10
8:45 AM	0	0	1	1	2
TOTAL VOLUMES:	9	6	10	16	41

	North Leg Western Avenue	East Leg Orange Avenue	South Leg Western Avenue	West Leg Orange Avenue	TOTAL
4:00 PM	1	1	2	2	6
4:15 PM	0	0	1	2	3
4:30 PM	1	2	2	1	6
4:45 PM	1	2	2	3	8
5:00 PM	1	3	2	2	8
5:15 PM	0	1	1	1	3
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	1	1
TOTAL VOLUMES:	4	9	10	13	36

City of Anaheim
N/S: Western Avenue
E/W: West Cerritos Avenue
Weather: Clear

File Name : 03_ANA WECE AM
Site Code :
Start Date : 10/10/2017
Page No : 1

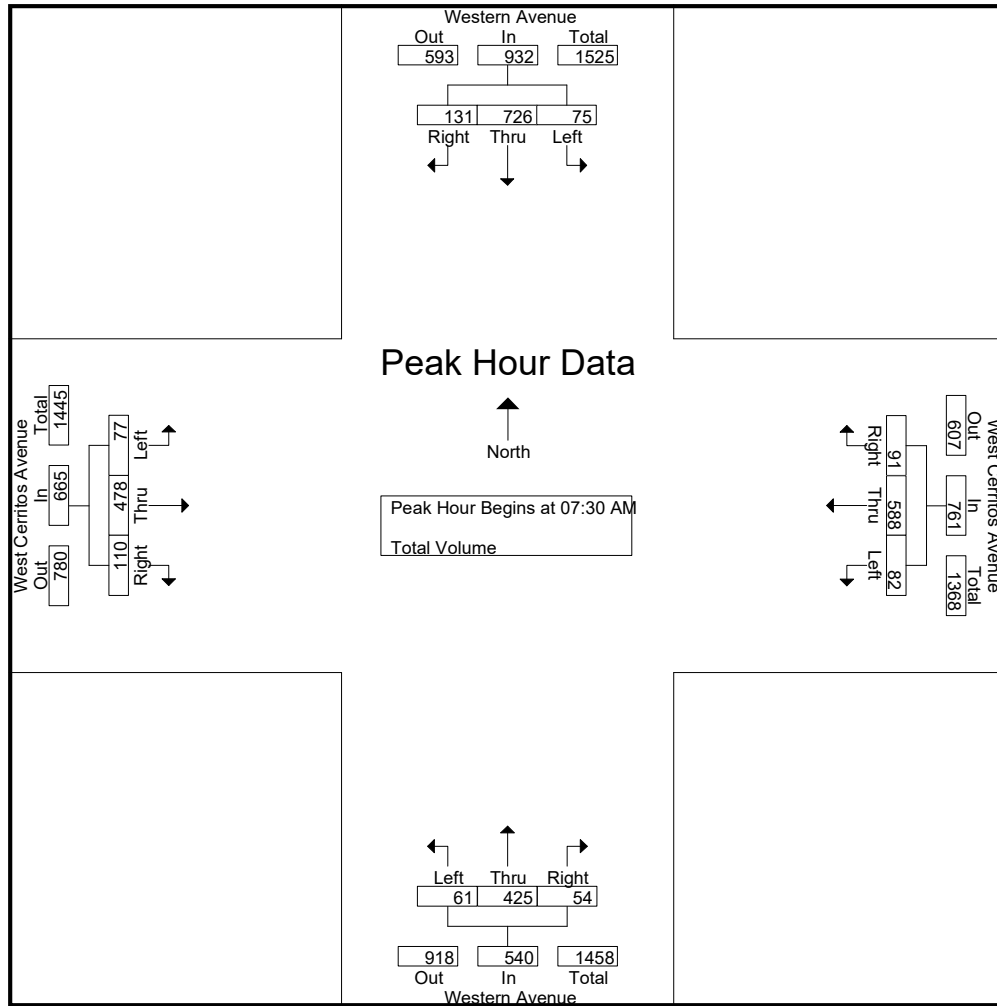
Groups Printed- Total Volume

	Western Avenue Southbound				West Cerritos Avenue Westbound				Western Avenue Northbound				West Cerritos Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	165	16	190	18	102	8	128	10	75	12	97	10	106	31	147	562
07:15 AM	20	209	22	251	23	139	10	172	11	99	15	125	12	122	23	157	705
07:30 AM	14	165	30	209	26	152	15	193	10	78	11	99	12	119	21	152	653
07:45 AM	19	201	48	268	26	153	17	196	22	140	18	180	20	127	28	175	819
Total	62	740	116	918	93	546	50	689	53	392	56	501	54	474	103	631	2739
08:00 AM	13	166	25	204	17	151	35	203	15	89	15	119	18	118	46	182	708
08:15 AM	29	194	28	251	13	132	24	169	14	118	10	142	27	114	15	156	718
08:30 AM	20	191	33	244	15	100	17	132	12	103	7	122	20	86	24	130	628
08:45 AM	12	169	27	208	23	105	14	142	13	68	17	98	10	96	29	135	583
Total	74	720	113	907	68	488	90	646	54	378	49	481	75	414	114	603	2637
Grand Total	136	1460	229	1825	161	1034	140	1335	107	770	105	982	129	888	217	1234	5376
Apprch %	7.5	80	12.5		12.1	77.5	10.5		10.9	78.4	10.7		10.5	72	17.6		
Total %	2.5	27.2	4.3	33.9	3	19.2	2.6	24.8	2	14.3	2	18.3	2.4	16.5	4	23	

	Western Avenue Southbound				West Cerritos Avenue Westbound				Western Avenue Northbound				West Cerritos Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	14	165	30	209	26	152	15	193	10	78	11	99	12	119	21	152	653
07:45 AM	19	201	48	268	26	153	17	196	22	140	18	180	20	127	28	175	819
08:00 AM	13	166	25	204	17	151	35	203	15	89	15	119	18	118	46	182	708
08:15 AM	29	194	28	251	13	132	24	169	14	118	10	142	27	114	15	156	718
Total Volume	75	726	131	932	82	588	91	761	61	425	54	540	77	478	110	665	2898
% App. Total	8	77.9	14.1		10.8	77.3	12		11.3	78.7	10		11.6	71.9	16.5		
PHF	.647	.903	.682	.869	.788	.961	.650	.937	.693	.759	.750	.750	.713	.941	.598	.913	.885

City of Anaheim
N/S: Western Avenue
E/W: West Cerritos Avenue
Weather: Clear

File Name : 03_ANA WECE AM
Site Code :
Start Date : 10/10/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:45 AM				07:15 AM			
+0 mins.	19	201	48	268	23	139	10	172	22	140	18	180	12	122	23	157
+15 mins.	13	166	25	204	26	152	15	193	15	89	15	119	12	119	21	152
+30 mins.	29	194	28	251	26	153	17	196	14	118	10	142	20	127	28	175
+45 mins.	20	191	33	244	17	151	35	203	12	103	7	122	18	118	46	182
Total Volume	81	752	134	967	92	595	77	764	63	450	50	563	62	486	118	666
% App. Total	8.4	77.8	13.9		12	77.9	10.1		11.2	79.9	8.9		9.3	73	17.7	
PHF	.698	.935	.698	.902	.885	.972	.550	.941	.716	.804	.694	.782	.775	.957	.641	.915

City of Anaheim
N/S: Western Avenue
E/W: West Cerritos Avenue
Weather: Clear

File Name : 03_ANA WECE PM
Site Code :
Start Date : 10/10/2017
Page No : 1

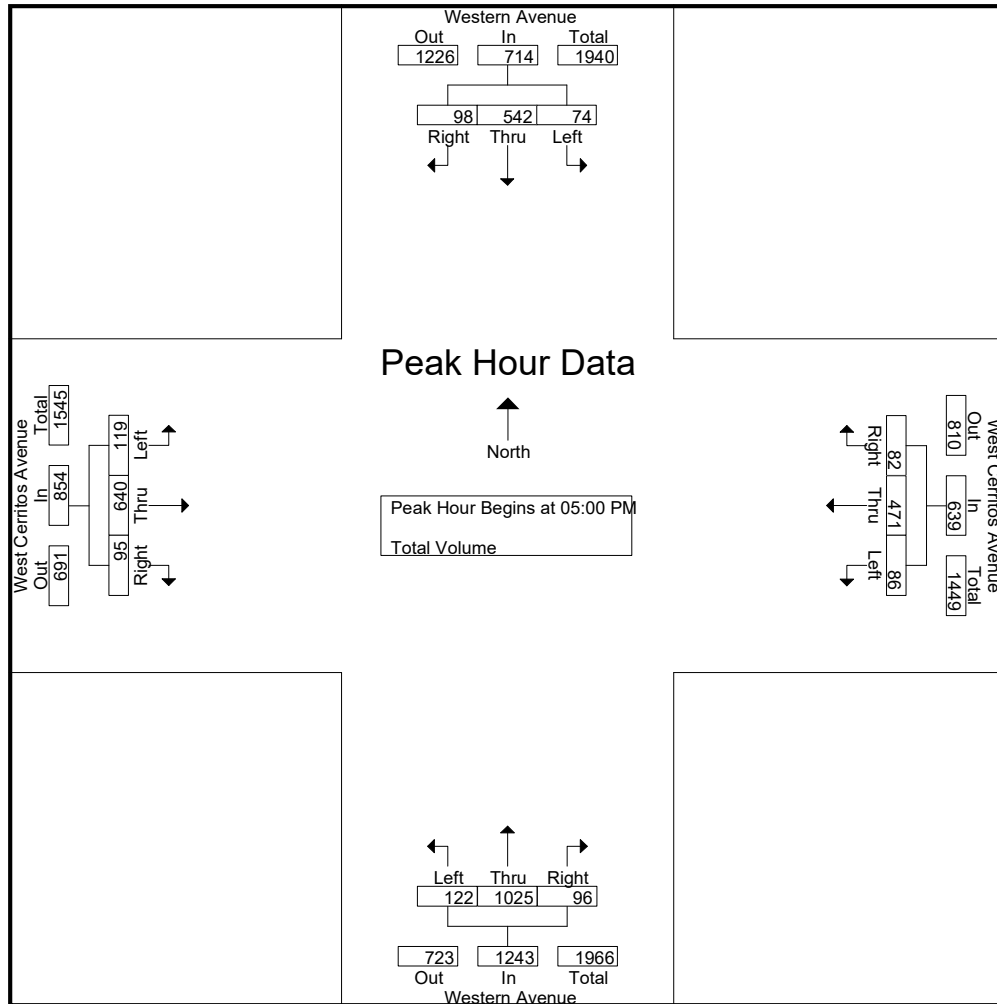
Groups Printed- Total Volume

	Western Avenue Southbound				West Cerritos Avenue Westbound				Western Avenue Northbound				West Cerritos Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	17	112	21	150	17	102	20	139	17	207	27	251	26	141	18	185	725
04:15 PM	26	119	13	158	18	98	19	135	23	212	32	267	18	108	32	158	718
04:30 PM	14	116	23	153	20	107	22	149	21	213	28	262	32	147	24	203	767
04:45 PM	22	145	22	189	13	103	12	128	31	245	19	295	35	128	26	189	801
Total	79	492	79	650	68	410	73	551	92	877	106	1075	111	524	100	735	3011
05:00 PM	16	127	19	162	23	135	24	182	25	243	25	293	31	187	29	247	884
05:15 PM	16	128	34	178	21	111	17	149	36	275	20	331	32	146	25	203	861
05:30 PM	22	144	24	190	19	119	20	158	27	240	24	291	27	166	24	217	856
05:45 PM	20	143	21	184	23	106	21	150	34	267	27	328	29	141	17	187	849
Total	74	542	98	714	86	471	82	639	122	1025	96	1243	119	640	95	854	3450
Grand Total	153	1034	177	1364	154	881	155	1190	214	1902	202	2318	230	1164	195	1589	6461
Apprch %	11.2	75.8	13		12.9	74	13		9.2	82.1	8.7		14.5	73.3	12.3		
Total %	2.4	16	2.7	21.1	2.4	13.6	2.4	18.4	3.3	29.4	3.1	35.9	3.6	18	3	24.6	

	Western Avenue Southbound				West Cerritos Avenue Westbound				Western Avenue Northbound				West Cerritos Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	16	127	19	162	23	135	24	182	25	243	25	293	31	187	29	247	884
05:15 PM	16	128	34	178	21	111	17	149	36	275	20	331	32	146	25	203	861
05:30 PM	22	144	24	190	19	119	20	158	27	240	24	291	27	166	24	217	856
05:45 PM	20	143	21	184	23	106	21	150	34	267	27	328	29	141	17	187	849
Total Volume	74	542	98	714	86	471	82	639	122	1025	96	1243	119	640	95	854	3450
% App. Total	10.4	75.9	13.7		13.5	73.7	12.8		9.8	82.5	7.7		13.9	74.9	11.1		
PHF	.841	.941	.721	.939	.935	.872	.854	.878	.847	.932	.889	.939	.930	.856	.819	.864	.976

City of Anaheim
N/S: Western Avenue
E/W: West Cerritos Avenue
Weather: Clear

File Name : 03_ANA WECE PM
Site Code :
Start Date : 10/10/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	22	145	22	189	23	135	24	182	25	243	25	293	35	128	26	189
+15 mins.	16	127	19	162	21	111	17	149	36	275	20	331	31	187	29	247
+30 mins.	16	128	34	178	19	119	20	158	27	240	24	291	32	146	25	203
+45 mins.	22	144	24	190	23	106	21	150	34	267	27	328	27	166	24	217
Total Volume	76	544	99	719	86	471	82	639	122	1025	96	1243	125	627	104	856
% App. Total	10.6	75.7	13.8		13.5	73.7	12.8		9.8	82.5	7.7		14.6	73.2	12.1	
PHF	.864	.938	.728	.946	.935	.872	.854	.878	.847	.932	.889	.939	.893	.838	.897	.866

Location: Anaheim
 N/S: Western Avenue
 E/W: West Cerritos Avenue



Date: 10/10/2017
 Day: Tuesday

PEDESTRIANS

	North Leg Western Avenue	East Leg West Cerritos Avenue	South Leg Western Avenue	West Leg West Cerritos Avenue	TOTAL
7:00 AM	0	0	2	0	2
7:15 AM	0	5	0	1	6
7:30 AM	0	0	7	1	8
7:45 AM	1	1	0	1	3
8:00 AM	1	7	4	4	16
8:15 AM	1	0	2	2	5
8:30 AM	2	16	6	4	28
8:45 AM	1	0	1	0	2
TOTAL VOLUMES:	6	29	22	13	70

	North Leg Western Avenue	East Leg West Cerritos Avenue	South Leg Western Avenue	West Leg West Cerritos Avenue	TOTAL
4:00 PM	0	0	1	1	2
4:15 PM	1	1	5	2	9
4:30 PM	0	0	2	2	4
4:45 PM	1	4	3	2	10
5:00 PM	2	3	5	2	12
5:15 PM	0	4	1	2	7
5:30 PM	0	2	2	0	4
5:45 PM	0	4	2	0	6
TOTAL VOLUMES:	4	18	21	11	54

Location: Anaheim
 N/S: Western Avenue
 E/W: West Cerritos Avenue



Date: 10/10/2017
 Day: Tuesday

BICYCLES

	North Leg Western Avenue	East Leg West Cerritos Avenue	South Leg Western Avenue	West Leg West Cerritos Avenue	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	1	1
7:45 AM	1	0	0	0	1
8:00 AM	4	2	1	0	7
8:15 AM	0	6	0	2	8
8:30 AM	0	1	0	0	1
8:45 AM	0	0	2	0	2
TOTAL VOLUMES:	6	10	3	3	22

	North Leg Western Avenue	East Leg West Cerritos Avenue	South Leg Western Avenue	West Leg West Cerritos Avenue	TOTAL
4:00 PM	0	1	0	1	2
4:15 PM	0	2	0	0	2
4:30 PM	1	4	1	0	6
4:45 PM	1	5	0	0	6
5:00 PM	0	1	2	3	6
5:15 PM	1	2	1	0	4
5:30 PM	0	2	1	1	4
5:45 PM	1	1	1	0	3
TOTAL VOLUMES:	4	18	6	5	33

City of Anaheim
N/S: South Beach Boulevard
E/W: Ball Road
Weather: Clear

File Name : 04_ANA BEBA AM
Site Code :
Start Date : 10/10/2017
Page No : 1

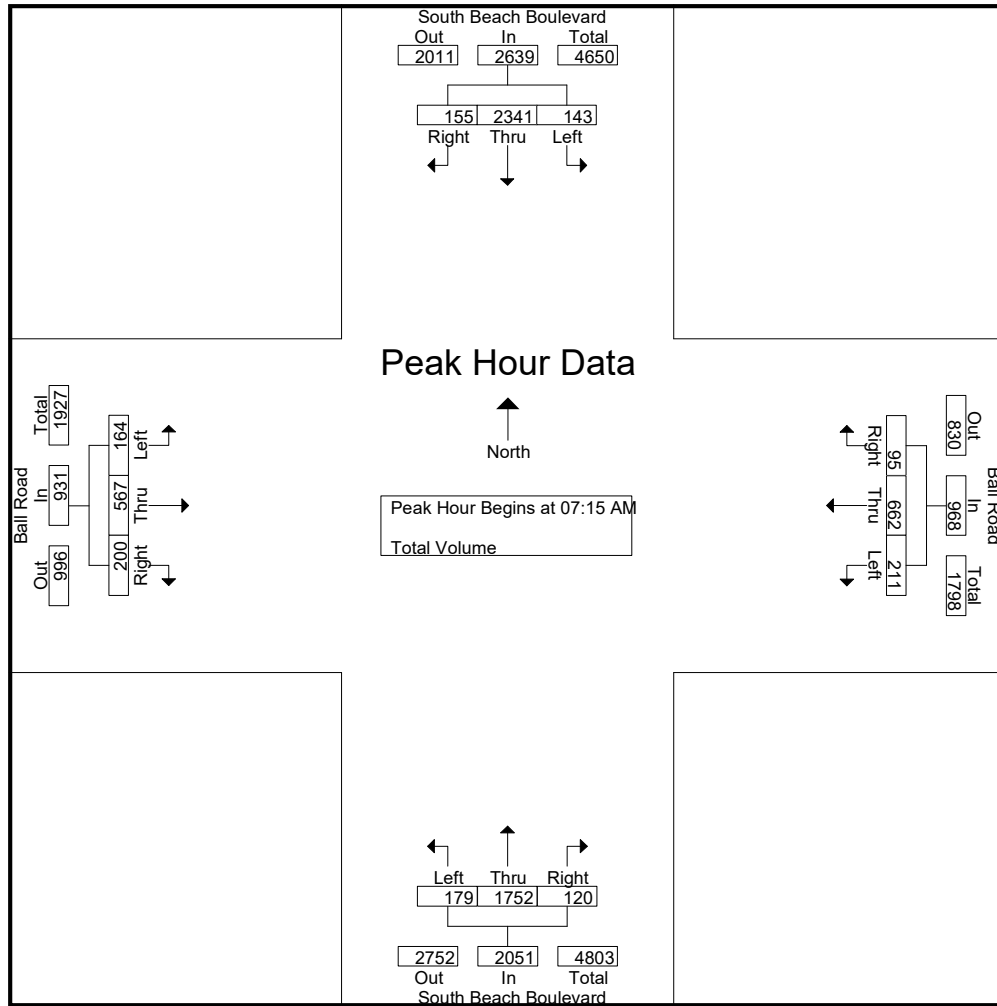
Groups Printed- Total Volume

	South Beach Boulevard Southbound				Ball Road Westbound				South Beach Boulevard Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	29	513	24	566	37	133	26	196	18	349	23	390	47	117	53	217	1369
07:15 AM	23	573	42	638	62	161	21	244	21	425	28	474	44	131	50	225	1581
07:30 AM	36	559	25	620	49	152	34	235	58	472	35	565	48	146	49	243	1663
07:45 AM	48	638	43	729	43	167	20	230	46	415	26	487	41	140	49	230	1676
Total	136	2283	134	2553	191	613	101	905	143	1661	112	1916	180	534	201	915	6289
08:00 AM	36	571	45	652	57	182	20	259	54	440	31	525	31	150	52	233	1669
08:15 AM	49	496	44	589	73	202	39	314	38	365	36	439	47	137	41	225	1567
08:30 AM	48	539	47	634	43	116	24	183	32	402	30	464	41	152	36	229	1510
08:45 AM	36	458	31	525	65	139	25	229	50	306	25	381	37	116	41	194	1329
Total	169	2064	167	2400	238	639	108	985	174	1513	122	1809	156	555	170	881	6075
Grand Total	305	4347	301	4953	429	1252	209	1890	317	3174	234	3725	336	1089	371	1796	12364
Apprch %	6.2	87.8	6.1		22.7	66.2	11.1		8.5	85.2	6.3		18.7	60.6	20.7		
Total %	2.5	35.2	2.4	40.1	3.5	10.1	1.7	15.3	2.6	25.7	1.9	30.1	2.7	8.8	3	14.5	

	South Beach Boulevard Southbound				Ball Road Westbound				South Beach Boulevard Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	23	573	42	638	62	161	21	244	21	425	28	474	44	131	50	225	1581
07:30 AM	36	559	25	620	49	152	34	235	58	472	35	565	48	146	49	243	1663
07:45 AM	48	638	43	729	43	167	20	230	46	415	26	487	41	140	49	230	1676
08:00 AM	36	571	45	652	57	182	20	259	54	440	31	525	31	150	52	233	1669
Total Volume	143	2341	155	2639	211	662	95	968	179	1752	120	2051	164	567	200	931	6589
% App. Total	5.4	88.7	5.9		21.8	68.4	9.8		8.7	85.4	5.9		17.6	60.9	21.5		
PHF	.745	.917	.861	.905	.851	.909	.699	.934	.772	.928	.857	.908	.854	.945	.962	.958	.983

City of Anaheim
N/S: South Beach Boulevard
E/W: Ball Road
Weather: Clear

File Name : 04_ANA BEBA AM
Site Code :
Start Date : 10/10/2017
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	23	573	42	638	49	152	34	235	21	425	28	474	44	131	50	225
+15 mins.	36	559	25	620	43	167	20	230	58	472	35	565	48	146	49	243
+30 mins.	48	638	43	729	57	182	20	259	46	415	26	487	41	140	49	230
+45 mins.	36	571	45	652	73	202	39	314	54	440	31	525	31	150	52	233
Total Volume	143	2341	155	2639	222	703	113	1038	179	1752	120	2051	164	567	200	931
% App. Total	5.4	88.7	5.9		21.4	67.7	10.9		8.7	85.4	5.9		17.6	60.9	21.5	
PHF	.745	.917	.861	.905	.760	.870	.724	.826	.772	.928	.857	.908	.854	.945	.962	.958

City of Anaheim
N/S: South Beach Boulevard
E/W: Ball Road
Weather: Clear

File Name : 04_ANA BEBA PM
Site Code :
Start Date : 10/10/2017
Page No : 1

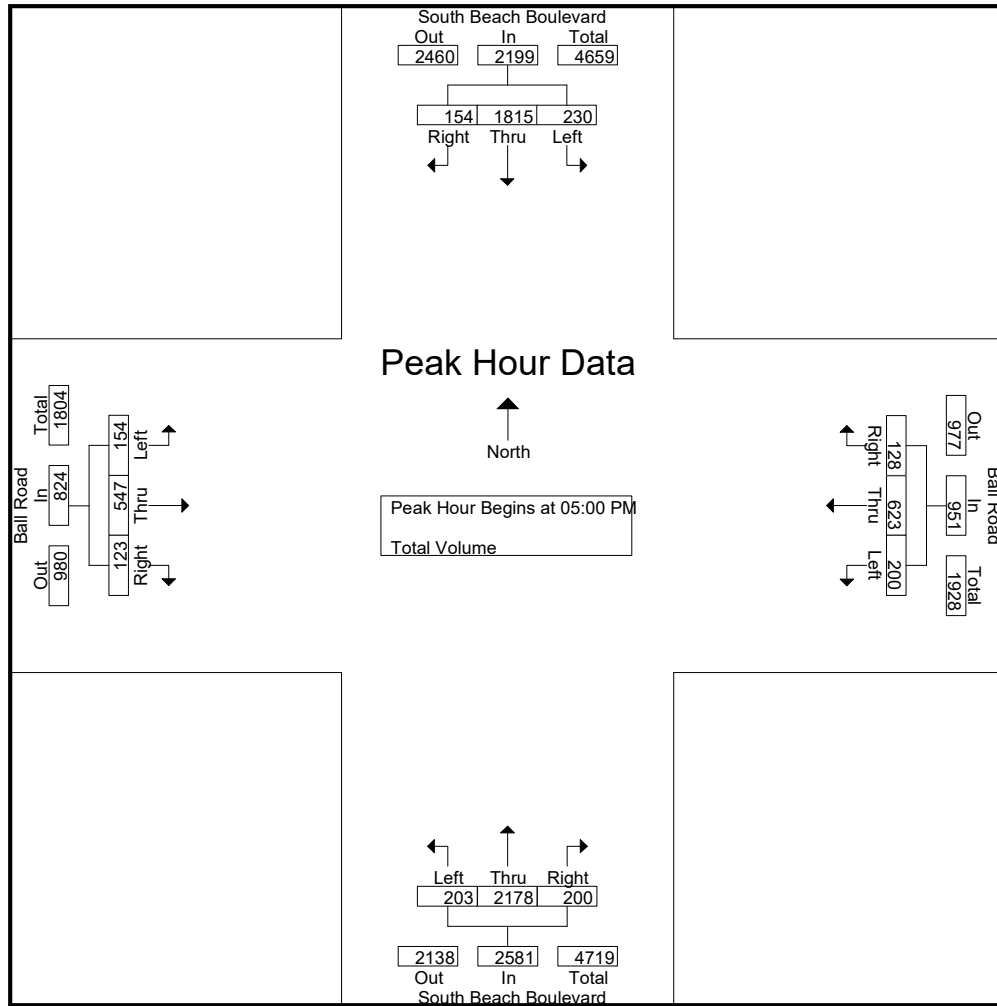
Groups Printed- Total Volume

	South Beach Boulevard Southbound				Ball Road Westbound				South Beach Boulevard Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	41	374	28	443	39	114	24	177	60	472	43	575	29	135	44	208	1403
04:15 PM	45	379	34	458	54	148	37	239	57	455	37	549	39	128	42	209	1455
04:30 PM	56	419	44	519	37	137	30	204	61	492	47	600	40	135	35	210	1533
04:45 PM	55	379	43	477	43	176	43	262	53	492	50	595	33	141	35	209	1543
Total	197	1551	149	1897	173	575	134	882	231	1911	177	2319	141	539	156	836	5934
05:00 PM	58	405	29	492	60	146	33	239	42	538	48	628	31	137	35	203	1562
05:15 PM	63	459	40	562	41	161	26	228	60	588	47	695	49	167	35	251	1736
05:30 PM	52	485	36	573	60	162	36	258	43	498	53	594	39	141	29	209	1634
05:45 PM	57	466	49	572	39	154	33	226	58	554	52	664	35	102	24	161	1623
Total	230	1815	154	2199	200	623	128	951	203	2178	200	2581	154	547	123	824	6555
Grand Total	427	3366	303	4096	373	1198	262	1833	434	4089	377	4900	295	1086	279	1660	12489
Apprch %	10.4	82.2	7.4		20.3	65.4	14.3		8.9	83.4	7.7		17.8	65.4	16.8		
Total %	3.4	27	2.4	32.8	3	9.6	2.1	14.7	3.5	32.7	3	39.2	2.4	8.7	2.2	13.3	

	South Beach Boulevard Southbound				Ball Road Westbound				South Beach Boulevard Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	58	405	29	492	60	146	33	239	42	538	48	628	31	137	35	203	1562
05:15 PM	63	459	40	562	41	161	26	228	60	588	47	695	49	167	35	251	1736
05:30 PM	52	485	36	573	60	162	36	258	43	498	53	594	39	141	29	209	1634
05:45 PM	57	466	49	572	39	154	33	226	58	554	52	664	35	102	24	161	1623
Total Volume	230	1815	154	2199	200	623	128	951	203	2178	200	2581	154	547	123	824	6555
% App. Total	10.5	82.5	7		21	65.5	13.5		7.9	84.4	7.7		18.7	66.4	14.9		
PHF	.913	.936	.786	.959	.833	.961	.889	.922	.846	.926	.943	.928	.786	.819	.879	.821	.944

City of Anaheim
N/S: South Beach Boulevard
E/W: Ball Road
Weather: Clear

File Name : 04_ANA BEBA PM
Site Code :
Start Date : 10/10/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				04:30 PM			
+0 mins.	58	405	29	492	43	176	43	262	42	538	48	628	40	135	35	210
+15 mins.	63	459	40	562	60	146	33	239	60	588	47	695	33	141	35	209
+30 mins.	52	485	36	573	41	161	26	228	43	498	53	594	31	137	35	203
+45 mins.	57	466	49	572	60	162	36	258	58	554	52	664	49	167	35	251
Total Volume	230	1815	154	2199	204	645	138	987	203	2178	200	2581	153	580	140	873
% App. Total	10.5	82.5	7		20.7	65.3	14		7.9	84.4	7.7		17.5	66.4	16	
PHF	.913	.936	.786	.959	.850	.916	.802	.942	.846	.926	.943	.928	.781	.868	1.000	.870

Location: Anaheim
 N/S: South Beach Boulevard
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

PEDESTRIANS

	North Leg South Beach Boulevard	East Leg Ball Road	South Leg South Beach Boulevard	West Leg Ball Road	TOTAL
7:00 AM	5	4	4	3	16
7:15 AM	3	5	0	3	11
7:30 AM	0	3	6	1	10
7:45 AM	4	7	10	5	26
8:00 AM	2	4	6	3	15
8:15 AM	2	3	5	4	14
8:30 AM	0	4	9	4	17
8:45 AM	6	1	2	5	14
TOTAL VOLUMES:	22	31	42	28	123

	North Leg South Beach Boulevard	East Leg Ball Road	South Leg South Beach Boulevard	West Leg Ball Road	TOTAL
4:00 PM	7	11	12	6	36
4:15 PM	3	7	4	4	18
4:30 PM	3	3	4	5	15
4:45 PM	2	0	2	2	6
5:00 PM	4	14	4	3	25
5:15 PM	5	3	14	6	28
5:30 PM	9	4	9	7	29
5:45 PM	8	3	4	2	17
TOTAL VOLUMES:	41	45	53	35	174

Location: Anaheim
 N/S: South Beach Boulevard
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

BICYCLES

	North Leg South Beach Boulevard	East Leg Ball Road	South Leg South Beach Boulevard	West Leg Ball Road	TOTAL
7:00 AM	3	0	4	1	8
7:15 AM	1	0	2	0	3
7:30 AM	0	0	1	1	2
7:45 AM	0	1	3	2	6
8:00 AM	1	0	1	0	2
8:15 AM	1	1	0	1	3
8:30 AM	0	2	1	0	3
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	7	4	12	5	28

	North Leg South Beach Boulevard	East Leg Ball Road	South Leg South Beach Boulevard	West Leg Ball Road	TOTAL
4:00 PM	0	1	6	1	8
4:15 PM	2	2	2	1	7
4:30 PM	0	0	2	0	2
4:45 PM	2	1	4	0	7
5:00 PM	1	0	2	0	3
5:15 PM	3	0	4	0	7
5:30 PM	1	2	4	3	10
5:45 PM	2	1	4	1	8
TOTAL VOLUMES:	11	7	28	6	52

City of Anaheim
N/S: South Knott Avenue
E/W: Ball Road
Weather: Clear

File Name : 05_ANA KNBA AM
Site Code :
Start Date : 10/10/2017
Page No : 1

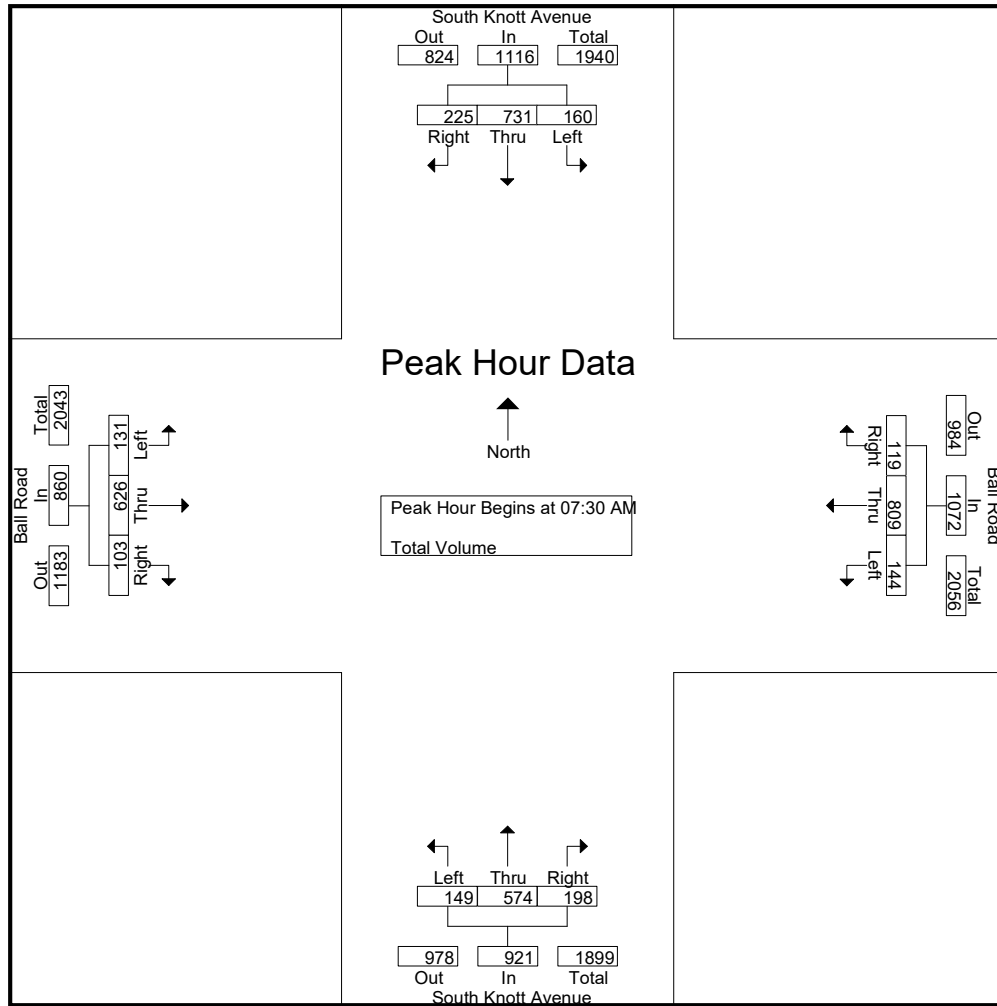
Groups Printed- Total Volume

	South Knott Avenue Southbound				Ball Road Westbound				South Knott Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	39	188	36	263	27	134	20	181	13	111	16	140	14	138	23	175	759
07:15 AM	38	190	45	273	35	209	17	261	23	117	47	187	21	164	25	210	931
07:30 AM	38	217	57	312	52	173	27	252	41	139	64	244	29	163	17	209	1017
07:45 AM	36	176	56	268	45	216	28	289	45	160	74	279	35	161	27	223	1059
Total	151	771	194	1116	159	732	92	983	122	527	201	850	99	626	92	817	3766
08:00 AM	43	163	69	275	15	189	35	239	33	130	27	190	31	146	27	204	908
08:15 AM	43	175	43	261	32	231	29	292	30	145	33	208	36	156	32	224	985
08:30 AM	51	233	30	314	24	164	30	218	16	150	19	185	22	148	20	190	907
08:45 AM	43	182	42	267	21	144	36	201	20	108	25	153	24	98	28	150	771
Total	180	753	184	1117	92	728	130	950	99	533	104	736	113	548	107	768	3571
Grand Total	331	1524	378	2233	251	1460	222	1933	221	1060	305	1586	212	1174	199	1585	7337
Apprch %	14.8	68.2	16.9		13	75.5	11.5		13.9	66.8	19.2		13.4	74.1	12.6		
Total %	4.5	20.8	5.2	30.4	3.4	19.9	3	26.3	3	14.4	4.2	21.6	2.9	16	2.7	21.6	

	South Knott Avenue Southbound				Ball Road Westbound				South Knott Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	38	217	57	312	52	173	27	252	41	139	64	244	29	163	17	209	1017
07:45 AM	36	176	56	268	45	216	28	289	45	160	74	279	35	161	27	223	1059
08:00 AM	43	163	69	275	15	189	35	239	33	130	27	190	31	146	27	204	908
08:15 AM	43	175	43	261	32	231	29	292	30	145	33	208	36	156	32	224	985
Total Volume	160	731	225	1116	144	809	119	1072	149	574	198	921	131	626	103	860	3969
% App. Total	14.3	65.5	20.2		13.4	75.5	11.1		16.2	62.3	21.5		15.2	72.8	12		
PHF	.930	.842	.815	.894	.692	.876	.850	.918	.828	.897	.669	.825	.910	.960	.805	.960	.937

City of Anaheim
N/S: South Knott Avenue
E/W: Ball Road
Weather: Clear

File Name : 05_ANA KNBA AM
Site Code :
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	38	190	45	273	52	173	27	252	41	139	64	244	29	163	17	209
+15 mins.	38	217	57	312	45	216	28	289	45	160	74	279	35	161	27	223
+30 mins.	36	176	56	268	15	189	35	239	33	130	27	190	31	146	27	204
+45 mins.	43	163	69	275	32	231	29	292	30	145	33	208	36	156	32	224
Total Volume	155	746	227	1128	144	809	119	1072	149	574	198	921	131	626	103	860
% App. Total	13.7	66.1	20.1		13.4	75.5	11.1		16.2	62.3	21.5		15.2	72.8	12	
PHF	.901	.859	.822	.904	.692	.876	.850	.918	.828	.897	.669	.825	.910	.960	.805	.960

City of Anaheim
N/S: South Knott Avenue
E/W: Ball Road
Weather: Clear

File Name : 05_ANA KNBA PM
Site Code :
Start Date : 10/10/2017
Page No : 1

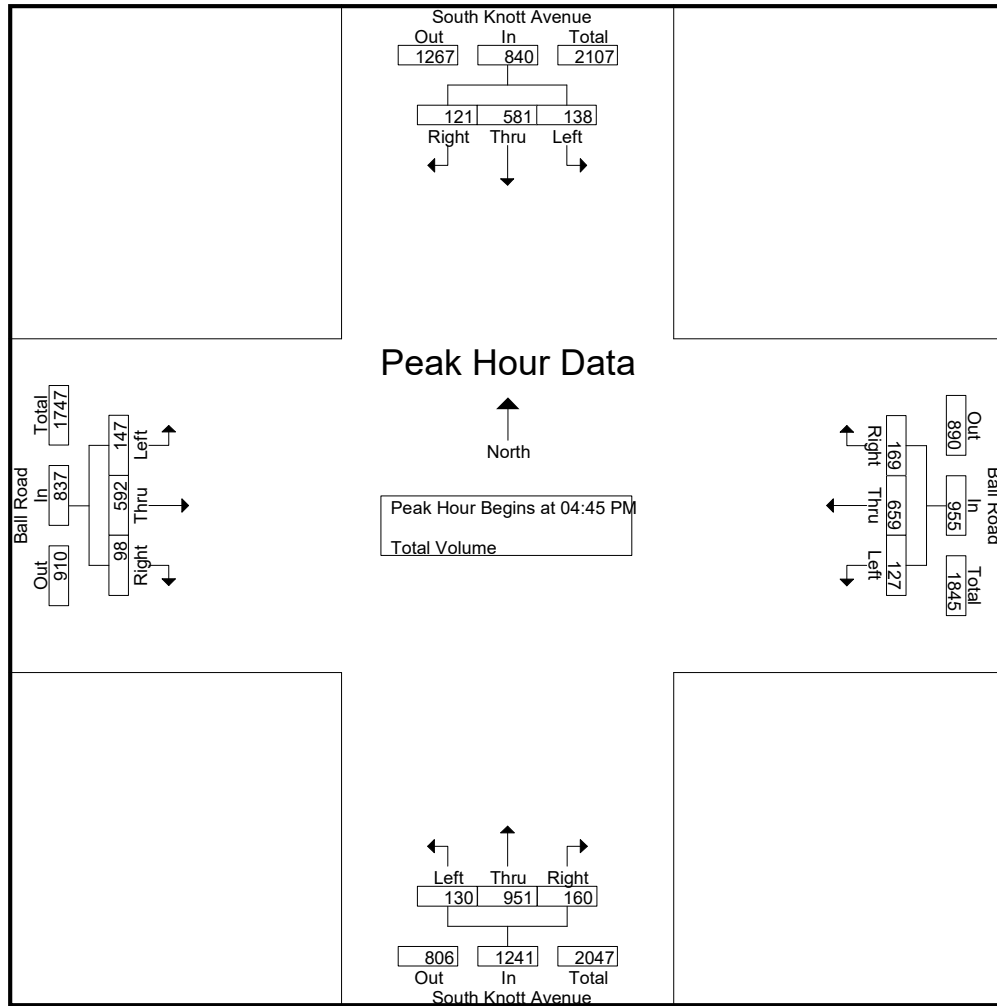
Groups Printed- Total Volume

	South Knott Avenue Southbound				Ball Road Westbound				South Knott Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	31	143	23	197	27	111	36	174	19	212	47	278	35	149	27	211	860
04:15 PM	33	144	28	205	26	139	39	204	32	187	42	261	36	138	23	197	867
04:30 PM	32	168	26	226	35	143	32	210	26	227	50	303	33	133	14	180	919
04:45 PM	28	139	26	193	26	177	46	249	35	225	33	293	36	161	27	224	959
Total	124	594	103	821	114	570	153	837	112	851	172	1135	140	581	91	812	3605
05:00 PM	43	152	38	233	36	150	46	232	32	262	45	339	40	130	21	191	995
05:15 PM	31	141	29	201	38	179	44	261	33	209	44	286	35	152	20	207	955
05:30 PM	36	149	28	213	27	153	33	213	30	255	38	323	36	149	30	215	964
05:45 PM	31	146	24	201	28	169	43	240	34	199	53	286	33	134	25	192	919
Total	141	588	119	848	129	651	166	946	129	925	180	1234	144	565	96	805	3833
Grand Total	265	1182	222	1669	243	1221	319	1783	241	1776	352	2369	284	1146	187	1617	7438
Apprch %	15.9	70.8	13.3		13.6	68.5	17.9		10.2	75	14.9		17.6	70.9	11.6		
Total %	3.6	15.9	3	22.4	3.3	16.4	4.3	24	3.2	23.9	4.7	31.8	3.8	15.4	2.5	21.7	

	South Knott Avenue Southbound				Ball Road Westbound				South Knott Avenue Northbound				Ball Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	28	139	26	193	26	177	46	249	35	225	33	293	36	161	27	224	959
05:00 PM	43	152	38	233	36	150	46	232	32	262	45	339	40	130	21	191	995
05:15 PM	31	141	29	201	38	179	44	261	33	209	44	286	35	152	20	207	955
05:30 PM	36	149	28	213	27	153	33	213	30	255	38	323	36	149	30	215	964
Total Volume	138	581	121	840	127	659	169	955	130	951	160	1241	147	592	98	837	3873
% App. Total	16.4	69.2	14.4		13.3	69	17.7		10.5	76.6	12.9		17.6	70.7	11.7		
PHF	.802	.956	.796	.901	.836	.920	.918	.915	.929	.907	.889	.915	.919	.919	.817	.934	.973

City of Anaheim
N/S: South Knott Avenue
E/W: Ball Road
Weather: Clear

File Name : 05_ANA KNBA PM
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Start Date : 10/10/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	33	144	28	205	26	177	46	249	35	225	33	293	36	161	27	224
+15 mins.	32	168	26	226	36	150	46	232	32	262	45	339	40	130	21	191
+30 mins.	28	139	26	193	38	179	44	261	33	209	44	286	35	152	20	207
+45 mins.	43	152	38	233	27	153	33	213	30	255	38	323	36	149	30	215
Total Volume	136	603	118	857	127	659	169	955	130	951	160	1241	147	592	98	837
% App. Total	15.9	70.4	13.8		13.3	69	17.7		10.5	76.6	12.9		17.6	70.7	11.7	
PHF	.791	.897	.776	.920	.836	.920	.918	.915	.929	.907	.889	.915	.919	.919	.817	.934

Location: Anaheim
 N/S: South Knott Avenue
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

PEDESTRIANS

	North Leg South Knott Avenue	East Leg Ball Road	South Leg South Knott Avenue	West Leg Ball Road	TOTAL
7:00 AM	1	8	4	0	13
7:15 AM	4	4	3	2	13
7:30 AM	6	8	0	0	14
7:45 AM	7	9	2	4	22
8:00 AM	4	15	3	6	28
8:15 AM	5	5	6	4	20
8:30 AM	0	2	1	5	8
8:45 AM	0	3	2	0	5
TOTAL VOLUMES:	27	54	21	21	123

	North Leg South Knott Avenue	East Leg Ball Road	South Leg South Knott Avenue	West Leg Ball Road	TOTAL
4:00 PM	1	2	1	2	6
4:15 PM	6	3	1	4	14
4:30 PM	1	4	4	4	13
4:45 PM	1	2	3	4	10
5:00 PM	1	6	1	2	10
5:15 PM	5	9	2	6	22
5:30 PM	5	7	3	2	17
5:45 PM	3	7	2	3	15
TOTAL VOLUMES:	23	40	17	27	107

Location: Anaheim
 N/S: South Knott Avenue
 E/W: Ball Road



Date: 10/10/2017
 Day: Tuesday

BICYCLES

	North Leg South Knott Avenue	East Leg Ball Road	South Leg South Knott Avenue	West Leg Ball Road	TOTAL
7:00 AM	0	0	0	1	1
7:15 AM	1	1	0	2	4
7:30 AM	0	0	0	5	5
7:45 AM	1	1	1	1	4
8:00 AM	3	2	0	1	6
8:15 AM	1	0	0	2	3
8:30 AM	0	1	0	1	2
8:45 AM	1	0	1	0	2
TOTAL VOLUMES:	7	5	2	13	27

	North Leg South Knott Avenue	East Leg Ball Road	South Leg South Knott Avenue	West Leg Ball Road	TOTAL
4:00 PM	1	1	1	2	5
4:15 PM	1	1	1	1	4
4:30 PM	2	0	2	1	5
4:45 PM	2	0	1	1	4
5:00 PM	0	0	0	2	2
5:15 PM	5	2	2	3	12
5:30 PM	1	2	1	0	4
5:45 PM	1	0	2	2	5
TOTAL VOLUMES:	13	6	10	12	41

Counts Unlimited, Inc.

City of Anaheim
Ball Road
E/ Western Avenue
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

ANA002
Site Code: 141-17730

Start Time	11/2/2017 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		24	174			9	41				
12:15		29	166			5	88				
12:30		15	188			15	78				
12:45		14	151	82	679	2	109	31	316	113	995
01:00		11	171			13	78				
01:15		14	168			7	67				
01:30		5	185			10	115				
01:45		10	192	40	716	0	79	30	339	70	1055
02:00		8	220			6	115				
02:15		6	243			7	108				
02:30		9	263			14	185				
02:45		9	276	32	1002	1	68	28	476	60	1478
03:00		9	235			5	95				
03:15		10	258			14	87				
03:30		12	235			23	12				
03:45		14	260	45	988	3	29	45	223	90	1211
04:00		24	251			33	46				
04:15		31	233			45	94				
04:30		23	220			43	50				
04:45		34	253	112	957	39	165	160	355	272	1312
05:00		32	232			58	121				
05:15		51	257			112	200				
05:30		70	202			158	137				
05:45		81	246	234	937	133	95	461	553	695	1490
06:00		97	185			136	60				
06:15		125	230			171	39				
06:30		121	198			266	60				
06:45		192	167	535	780	239	32	812	191	1347	971
07:00		195	151			291	15				
07:15		254	136			280	16				
07:30		280	144			299	79				
07:45		234	117	963	548	203	45	1073	155	2036	703
08:00		169	104			281	7				
08:15		158	86			216	20				
08:30		141	107			232	38				
08:45		124	109	592	406	159	62	888	127	1480	533
09:00		96	109			114	14				
09:15		122	100			147	86				
09:30		117	86			146	67				
09:45		110	96	445	391	133	43	540	210	985	601
10:00		114	66			119	46				
10:15		117	65			134	45				
10:30		130	63			94	27				
10:45		127	49	488	243	148	32	495	150	983	393
11:00		123	38			127	21				
11:15		172	22			94	11				
11:30		164	25			38	14				
11:45		161	27	620	112	86	29	345	75	965	187
Total		4188	7759	4188	7759	4908	3170	4908	3170	9096	10929
Combined Total		11947		11947		8078		8078		20025	
AM Peak	-	07:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	963	-	-	-	1109	-	-	-	-	-
P.H.F.		0.860				0.927					
PM Peak	-	-	02:30	-	-	-	04:45	-	-	-	-
Vol.	-	-	1032	-	-	-	623	-	-	-	-
P.H.F.			0.935				0.779				
Percentage		35.1%	64.9%			60.8%	39.2%				
ADT/AADT		ADT 20,025		AADT 20,025							

Counts Unlimited, Inc.

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City of Anaheim
Ball Road
W/ Western Avenue
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

ANA001
Site Code: 141-17730

Start Time	02-Nov-17 Thu	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		18	186			21	133				
12:15		27	145			19	160				
12:30		16	164			18	145				
12:45		16	140	77	635	6	153	64	591	141	1226
01:00		10	167			15	165				
01:15		13	148			13	148				
01:30		7	175			17	182				
01:45		14	187	44	677	9	188	54	683	98	1360
02:00		8	189			12	187				
02:15		5	243			8	184				
02:30		9	250			13	179				
02:45		10	229	32	911	11	172	44	722	76	1633
03:00		9	225			13	184				
03:15		9	217			11	206				
03:30		11	227			10	183				
03:45		14	236	43	905	12	177	46	750	89	1655
04:00		23	234			15	206				
04:15		27	199			27	171				
04:30		26	213			32	194				
04:45		32	235	108	881	25	238	99	809	207	1690
05:00		41	238			37	208				
05:15		51	236			47	241				
05:30		64	190			75	252				
05:45		70	225	226	889	76	212	235	913	461	1802
06:00		105	167			102	181				
06:15		153	201			139	158				
06:30		154	177			177	158				
06:45		209	161	621	706	190	154	608	651	1229	1357
07:00		240	159			286	103				
07:15		301	124			282	111				
07:30		326	141			222	132				
07:45		253	114	1120	538	162	95	952	441	2072	979
08:00		183	116			170	87				
08:15		150	103			158	82				
08:30		136	93			188	86				
08:45		124	93	593	405	134	78	650	333	1243	738
09:00		125	112			134	86				
09:15		126	92			135	81				
09:30		127	79			143	75				
09:45		107	79	485	362	129	65	541	307	1026	669
10:00		130	74			139	58				
10:15		126	57			131	67				
10:30		144	63			134	49				
10:45		121	48	521	242	138	46	542	220	1063	462
11:00		129	35			143	38				
11:15		154	37			148	40				
11:30		150	22			127	30				
11:45		151	26	584	120	153	28	571	136	1155	256
Total		4454	7271	4454	7271	4406	6556	4406	6556	8860	13827
Combined Total		11725		11725		10962		10962		22687	
AM Peak	-	07:00	-	-	-	06:45	-	-	-	-	-
Vol.	-	1120	-	-	-	980	-	-	-	-	-
P.H.F.		0.859				0.857					
PM Peak	-	-	02:15	-	-	-	04:45	-	-	-	-
Vol.	-	-	947	-	-	-	939	-	-	-	-
P.H.F.			0.947				0.932				
Percentage		38.0%	62.0%			40.2%	59.8%				
ADT/AADT		ADT 22,687	AADT 22,687								

Counts Unlimited, Inc.

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City of Anaheim
Western Avenue
N/ Ball Road
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

ANA003
Site Code: 141-17730

Start Time	02-Nov-17 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		22	206			22	206				
12:15		20	201			20	201				
12:30		13	182			13	182				
12:45		12	154	67	743	12	154	67	743	134	1486
01:00		10	203			10	203				
01:15		9	225			9	225				
01:30		10	210			10	210				
01:45		14	203	43	841	14	203	43	841	86	1682
02:00		5	211			5	211				
02:15		9	235			9	235				
02:30		8	204			8	204				
02:45		12	295	34	945	12	295	34	945	68	1890
03:00		11	258			11	258				
03:15		5	291			5	291				
03:30		13	371			13	371				
03:45		12	326	41	1246	12	326	41	1246	82	2492
04:00		11	342			11	342				
04:15		32	308			32	308				
04:30		34	342			34	342				
04:45		28	280	105	1272	28	280	105	1272	210	2544
05:00		38	328			38	328				
05:15		54	292			54	292				
05:30		65	338			65	338				
05:45		56	277	213	1235	56	277	213	1235	426	2470
06:00		81	295			81	295				
06:15		114	285			114	285				
06:30		104	248			104	248				
06:45		121	275	420	1103	121	275	420	1103	840	2206
07:00		199	225			199	225				
07:15		234	193			234	193				
07:30		168	156			168	156				
07:45		180	123	781	697	180	123	781	697	1562	1394
08:00		127	161			127	161				
08:15		99	97			99	97				
08:30		103	126			103	126				
08:45		85	99	414	483	85	99	414	483	828	966
09:00		98	121			98	121				
09:15		96	72			96	72				
09:30		100	78			100	78				
09:45		98	83	392	354	98	83	392	354	784	708
10:00		89	72			89	72				
10:15		109	65			109	65				
10:30		130	60			130	60				
10:45		104	43	432	240	104	43	432	240	864	480
11:00		108	45			108	45				
11:15		143	38			143	38				
11:30		159	31			159	31				
11:45		166	33	576	147	166	33	576	147	1152	294
Total		3518	9306	3518	9306	3518	9306	3518	9306	7036	18612
Combined Total		12824		12824		12824		12824		25648	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	781	-	-	-	781	-	-	-	-	-
P.H.F.		0.834				0.834					
PM Peak	-	-	03:30	-	-	-	03:30	-	-	-	-
Vol.	-	-	1347	-	-	-	1347	-	-	-	-
P.H.F.			0.908				0.908				
Percentage		27.4%	72.6%			27.4%	72.6%				
ADT/AADT		ADT 25,648	AADT 25,648								

Counts Unlimited, Inc.

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City of Anaheim
Western Avenue
S/ Ball Road
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

ANA004
Site Code: 141-17730

Start Time	02-Nov-17 Thu	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		25	203			7	123				
12:15		23	203			7	110				
12:30		6	208			4	117				
12:45		10	174	64	788	8	119	26	469	90	1257
01:00		8	219			5	128				
01:15		13	243			6	142				
01:30		12	231			7	154				
01:45		11	237	44	930	6	123	24	547	68	1477
02:00		8	250			2	147				
02:15		10	235			8	159				
02:30		8	226			9	219				
02:45		13	319	39	1030	4	168	23	693	62	1723
03:00		14	281			6	182				
03:15		9	327			11	167				
03:30		9	370			21	191				
03:45		19	360	51	1338	10	188	48	728	99	2066
04:00		10	368			27	191				
04:15		31	325			45	214				
04:30		25	353			39	202				
04:45		27	325	93	1371	39	234	150	841	243	2212
05:00		36	310			66	229				
05:15		44	313			109	251				
05:30		63	339			140	212				
05:45		57	310	200	1272	103	172	418	864	618	2136
06:00		77	301			119	162				
06:15		93	324			153	176				
06:30		90	264			212	145				
06:45		119	250	379	1139	185	122	669	605	1048	1744
07:00		169	230			219	120				
07:15		198	219			243	112				
07:30		118	143			241	87				
07:45		160	131	645	723	220	78	923	397	1568	1120
08:00		101	158			226	76				
08:15		106	116			156	71				
08:30		82	129			121	67				
08:45		89	110	378	513	114	78	617	292	995	805
09:00		84	125			93	56				
09:15		78	69			94	66				
09:30		87	75			100	60				
09:45		85	90	334	359	86	51	373	233	707	592
10:00		84	64			80	60				
10:15		103	66			115	36				
10:30		109	53			83	31				
10:45		101	38	397	221	105	23	383	150	780	371
11:00		104	47			94	27				
11:15		181	38			109	24				
11:30		183	36			80	17				
11:45		179	25	647	146	102	25	385	93	1032	239
Total		3271	9830	3271	9830	4039	5912	4039	5912	7310	15742
Combined Total		13101		13101		9951		9951		23052	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	647	-	-	-	930	-	-	-	-	-
P.H.F.	-	0.817				0.957					
PM Peak	-	-	03:15	-	-	-	04:45	-	-	-	-
Vol.	-	-	1425	-	-	-	926	-	-	-	-
P.H.F.	-	-	0.963				0.922				
Percentage		25.0%	75.0%			40.6%	59.4%				
ADT/AADT		ADT 23,052		AADT 23,052							

APPENDIX B

OCTA ROADWAY CLASSIFICATIONS AND CAPACITIES

2.2 ROADWAY ANALYSIS METHODOLOGY

Table 6 presents the daily capacity of roadways in the City of Anaheim, based on functional classifications employed in the Orange County Transportation Authority (OCTA) "Guidance for Administration of the Orange County Master Plan of Arterial Highways". Average daily traffic (ADT) represents the total number of vehicles (both directions) traveling on a roadway segment throughout the course of a typical 24 hour period. Arterial level of service analyses were conducted by calculating the V/C ratio of the Study Area arterial segment based on the daily volume of traffic on the roadway and the daily traffic capacity for the corresponding facility size, configuration, and type.

Table 6 – Roadway Classification and Capacity (ADT)

Typical Arterial		Level of Service						Asymmetric Capacity/Added Lane			
		A	B	C	D	E	F	C	D	E	F
8	Lanes Divided	45,000	52,500	60,000	67,500	75,000	--	7,500	8,400	9,400	--
6	Lanes Divided	33,900	39,400	45,000	50,600	56,300	--	7,500	8,400	9,400	--
4	Lanes Divided	22,500	26,300	30,000	33,800	37,500	--	7,500	8,400	9,400	--
2	Lanes Divided	9,000	12,000	15,000	20,000	22,000	--	--	--	--	--
4	Lanes Undivided	15,000	17,500	20,000	22,500	25,000	--	5,000	5,600	6,300	--
2	Lanes Undivided	7,500	8,000	10,000	11,300	12,500	--	5,000	5,600	6,300	--

Asymmetric lane capacities are calculated by dividing ADT values by the number of lanes per arterial type.

Source: OCTA Guidance for Administration of the Orange County Master Plan of Arterial Highways.

APPENDIX C

EXISTING CONDITIONS TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE CALCULATIONS (AM PEAK HOUR)

Scenario Report

Scenario:	Default Scenario
Command:	Default Command
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment AM Peak Hour
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	225		554 147	111		670 189	76		504 169	71		466 104
2 BALL RD / WES	61		566 56	94		632 108	94		700 141	144		749 158
3 WESTERN AVE /	61		425 54	75		727 131	77		478 110	82		588 91
4 BALL RD / BEA	179		1752 120	143		2341 155	165		568 200	211		662 95
5 BALL RD / KNO	149		574 198	160		731 225	131		626 103	144		810 119

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 35 Level Of Service: B

Street Name: WESTERN AVE W ORANGE AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 225 554 147 111 670 189 76 504 169 71 466 104

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 225 554 147 111 670 189 76 504 169 71 466 104

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 225 554 147 111 670 189 76 504 169 71 466 104

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 225 554 147 111 670 189 76 504 169 71 466 104

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 225 554 147 111 670 189 76 504 169 71 466 104

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.58 0.42 1.00 1.56 0.44 1.00 1.50 0.50 1.00 1.64 0.36

Final Sat.: 1700 2687 713 1700 2652 748 1700 2546 854 1700 2780 620

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.13 0.21 0.21 0.07 0.25 0.25 0.04 0.20 0.20 0.04 0.17 0.17

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 29 Level Of Service: A

Street Name: WESTERN AVE BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|-----|

Control: Permitted Permitted Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 61 566 56 94 632 108 94 700 141 144 749 158

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 61 566 56 94 632 108 94 700 141 144 749 158

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 61 566 56 94 632 108 94 700 141 144 749 158

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 61 566 56 94 632 108 94 700 141 144 749 158

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 61 566 56 94 632 108 94 700 141 144 749 158

-----|-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.82 0.18 1.00 1.71 0.29 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3094 306 1700 2904 496 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.04 0.18 0.18 0.06 0.22 0.22 0.06 0.21 0.08 0.08 0.22 0.09

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.583

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 28 Level Of Service: A

Street Name: WESTERN AVE CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 61 425 54 75 727 131 77 478 110 82 588 91

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 61 425 54 75 727 131 77 478 110 82 588 91

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 61 425 54 75 727 131 77 478 110 82 588 91

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 61 425 54 75 727 131 77 478 110 82 588 91

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 61 425 54 75 727 131 77 478 110 82 588 91

-----|-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.77 0.23 1.00 1.69 0.31 1.00 1.63 0.37 1.00 1.73 0.27

Final Sat.: 1700 3017 383 1700 2881 519 1700 2764 636 1700 2944 456

-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.04 0.14 0.14 0.04 0.25 0.25 0.05 0.17 0.17 0.05 0.20 0.20

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD*****
Cycle (sec): 150 Critical Vol./Cap. (X): 0.748
Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Street Name:		S BEACH BLVD						BALL RD								
Approach:		North Bound			South Bound			East Bound			West Bound					
Movement:		L	T	R	L	T	R	L	T	R	L	T	R			
Control:		Protected			Protected			Protected			Protected					
Rights:		Include			Include			Include			Include					
Min. Green:		0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:		2	0	3	1	0	2	0	3	1	0	1	0	2	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR												
Base Vol:	179	1752	120	143	2341	155	165	568	200	211	662	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	1752	120	143	2341	155	165	568	200	211	662	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1752	120	143	2341	155	165	568	200	211	662	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1752	120	143	2341	155	165	568	200	211	662	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	179	1752	120	143	2341	155	165	568	200	211	662	95

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.74	0.26	2.00	3.75	0.25	1.00	2.22	0.78	1.00	2.62	0.38
Final Sat.:	3400	6364	436	3400	6378	422	1700	3772	1328	1700	4460	640

Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.28	0.04	0.37	0.37	0.10	0.15	0.15	0.12	0.15	0.15
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name: S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 149 574 198 160 731 225 131 626 103 144 810 119

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 149 574 198 160 731 225 131 626 103 144 810 119

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 149 574 198 160 731 225 131 626 103 144 810 119

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 149 574 198 160 731 225 131 626 103 144 810 119

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 149 574 198 160 731 225 131 626 103 144 810 119

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.09 0.17 0.12 0.09 0.22 0.13 0.08 0.18 0.06 0.08 0.24 0.07

Crit Moves: ****

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX D

EXISTING CONDITIONS TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE CALCULATIONS (PM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment PM Peak Hour
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	120		902 89	77		601 130	74		410 82	100		441 114
2 BALL RD / WES	100		906 137	76		547 100	134		659 89	90		688 115
3 WESTERN AVE /	122		1025 96	74		542 98	119		640 95	86		471 82
4 BALL RD / BEA	203		2178 200	230		1815 154	154		547 123	200		623 128
5 BALL RD / KNO	130		951 160	138		581 121	147		592 98	127		659 169

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.590

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 20.6

Optimal Cycle: 28 Level Of Service: A

Street Name:

WESTERN AVE

W ORANGE AVE

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Prot+Permit

Prot+Permit

Permitted

Permitted

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 120 902 89 77 601 130 74 410 82 100 441 114

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 120 902 89 77 601 130 74 410 82 100 441 114

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 120 902 89 77 601 130 74 410 82 100 441 114

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 120 902 89 77 601 130 74 410 82 100 441 114

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 120 902 89 77 601 130 74 410 82 100 441 114

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.82 0.18 1.00 1.64 0.36 1.00 1.67 0.33 1.00 1.59 0.41

Final Sat.: 1700 3095 305 1700 2795 605 1700 2833 567 1700 2702 698

Capacity Analysis Module:

Vol/Sat: 0.07 0.29 0.29 0.05 0.21 0.22 0.04 0.14 0.14 0.06 0.16 0.16

Crit Moves: **** **** **** ****

Green/Cycle: 0.15 0.51 0.51 0.08 0.45 0.45 0.08 0.25 0.25 0.10 0.28 0.28

Volume/Cap: 0.48 0.57 0.57 0.57 0.48 0.48 0.58 0.57 0.57 0.57 0.58 0.58

Delay/Veh: 31.4 13.3 16.4 38.2 15.3 16.2 38.9 25.8 28.8 36.0 24.5 26.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 31.4 13.3 16.4 38.2 15.3 16.2 38.9 25.8 28.8 36.0 24.5 26.7

DesignQueue: 6 14 14 4 12 12 4 11 11 5 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.683

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.0

Optimal Cycle: 35 Level Of Service: B

Street Name: WESTERN AVE

BALL RD

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

-----|-----|-----|-----|

Control: Permitted

Permitted

Prot+Permit

Prot+Permit

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 2 0 1

1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 100 906 137 76 547 100 134 659 89 90 688 115

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 100 906 137 76 547 100 134 659 89 90 688 115

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 100 906 137 76 547 100 134 659 89 90 688 115

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 100 906 137 76 547 100 134 659 89 90 688 115

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 100 906 137 76 547 100 134 659 89 90 688 115

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 1.69 0.31 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2953 447 1700 2874 526 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.06 0.31 0.31 0.04 0.19 0.19 0.08 0.19 0.05 0.05 0.20 0.07

Crit Moves: ****

Green/Cycle: 0.12 0.46 0.46 0.07 0.40 0.40 0.12 0.33 0.33 0.09 0.30 0.30

Volume/Cap: 0.47 0.67 0.67 0.67 0.47 0.47 0.67 0.58 0.16 0.58 0.67 0.22

Delay/Veh: 32.6 17.0 21.5 44.2 17.2 18.2 38.0 21.9 18.2 37.6 24.6 20.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.6 17.0 21.5 44.2 17.2 18.2 38.0 21.9 18.2 37.6 24.6 20.0

DesignQueue: 5 17 17 4 11 11 7 13 3 5 14 5

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.690

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.3

Optimal Cycle: 36 Level Of Service: B

Street Name: WESTERN AVE

CERRITOS AVE

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Protected

Protected

Protected

Protected

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 122 1025 96 74 542 98 119 640 95 86 471 82

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 122 1025 96 74 542 98 119 640 95 86 471 82

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 122 1025 96 74 542 98 119 640 95 86 471 82

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 122 1025 96 74 542 98 119 640 95 86 471 82

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 122 1025 96 74 542 98 119 640 95 86 471 82

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.83 0.17 1.00 1.69 0.31 1.00 1.74 0.26 1.00 1.70 0.30

Final Sat.: 1700 3109 291 1700 2879 521 1700 2961 439 1700 2896 504

Capacity Analysis Module:

Vol/Sat: 0.07 0.33 0.33 0.04 0.19 0.19 0.07 0.22 0.22 0.05 0.16 0.16

Crit Moves: **** **** **** ****

Green/Cycle: 0.15 0.49 0.49 0.06 0.40 0.40 0.12 0.32 0.32 0.08 0.28 0.28

Volume/Cap: 0.47 0.67 0.67 0.67 0.47 0.47 0.59 0.67 0.67 0.67 0.59 0.59

Delay/Veh: 30.8 15.8 22.9 45.1 17.2 18.3 35.3 24.0 30.6 43.4 24.9 28.5

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 30.8 15.8 22.9 45.1 17.2 18.3 35.3 24.0 30.6 43.4 24.9 28.5

DesignQueue: 6 17 17 4 11 11 6 15 15 4 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.720

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 31.0

Optimal Cycle: 52 Level Of Service: C

Street Name: S BEACH BLVD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 203 2178 200 230 1815 154 154 547 123 200 623 128

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 203 2178 200 230 1815 154 154 547 123 200 623 128

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 203 2178 200 230 1815 154 154 547 123 200 623 128

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 203 2178 200 230 1815 154 154 547 123 200 623 128

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 203 2178 200 230 1815 154 154 547 123 200 623 128

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.66 0.34 2.00 3.69 0.31 1.00 2.45 0.55 1.00 2.49 0.51

Final Sat.: 3400 6228 572 3400 6268 532 1700 4164 936 1700 4231 869

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.06 0.35 0.35 0.07 0.29 0.29 0.09 0.13 0.13 0.12 0.15 0.15

Crit Moves: ****

Green/Cycle: 0.10 0.50 0.50 0.10 0.49 0.49 0.13 0.19 0.19 0.17 0.22 0.22

Volume/Cap: 0.59 0.70 0.70 0.70 0.59 0.59 0.67 0.70 0.70 0.70 0.67 0.67

Delay/Veh: 51.5 23.0 27.7 55.2 21.2 23.5 52.6 46.0 52.0 50.6 42.7 47.3

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 51.5 23.0 27.7 55.2 21.2 23.5 52.6 46.0 52.0 50.6 42.7 47.3

DesignQueue: 8 27 27 9 22 22 11 16 16 14 17 17

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.691

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.1

Optimal Cycle: 36 Level Of Service: B

Street Name: S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 130 951 160 138 581 121 147 592 98 127 659 169

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 130 951 160 138 581 121 147 592 98 127 659 169

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 130 951 160 138 581 121 147 592 98 127 659 169

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 130 951 160 138 581 121 147 592 98 127 659 169

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 130 951 160 138 581 121 147 592 98 127 659 169

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.08 0.28 0.09 0.08 0.17 0.07 0.09 0.17 0.06 0.07 0.19 0.10

Crit Moves: **** **** **** ****

Green/Cycle: 0.17 0.41 0.41 0.12 0.37 0.37 0.13 0.29 0.29 0.12 0.29 0.29

Volume/Cap: 0.46 0.67 0.23 0.67 0.46 0.19 0.67 0.60 0.20 0.60 0.67 0.35

Delay/Veh: 29.9 19.2 14.6 38.2 18.7 16.5 37.5 24.2 20.6 35.2 25.6 21.9

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 29.9 19.2 14.6 38.2 18.7 16.5 37.5 24.2 20.6 35.2 25.6 21.9

DesignQueue: 6 17 5 7 11 4 7 12 4 6 14 7

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX E

EXISTING CONDITIONS AND EXISTING + PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION
LEVEL OF SERVICE CALCULATIONS
(AM PEAK HOUR)

Scenario Report

Scenario:	Default Scenario
Command:	Default Command
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment AM Peak Hour
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Trip Generation Report

Forecast for Apartment AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		11.00	Project (Apart	0.10	0.41	1	5	6	100.0
	Zone 1 Subtotal					1	5	6	100.0
TOTAL						1	5	6	100.0

Trip Distribution Report

Percent Of Trips AM Peak Hour Distribution

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	15.0	14.0	19.0	21.0	4.0	5.0	6.0	4.0	2.0	3.0	4.0

To Gates	
12	
Zone	-----
1	3.0

Turning Movement Report
Apartment AM Peak Hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	225	554	147	111	670	189	76	504	169	71	466	104	3286
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	225	555	147	111	670	189	76	504	169	71	466	104	3287
#2 BALL RD / WESTERN AVE													
Base	61	566	56	94	632	108	94	700	141	144	749	158	3503
Added	0	0	0	0	0	0	0	0	0	2	1	1	4
Total	61	566	56	94	632	108	94	700	141	146	750	159	3507
#3 WESTERN AVE / CERRITOS AVE													
Base	61	425	54	75	727	131	77	478	110	82	588	91	2899
Added	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	61	425	54	75	728	131	77	478	110	82	588	91	2900
#4 BALL RD / BEACH BLVD													
Base	179	1752	120	143	2341	155	165	568	200	211	662	95	6591
Added	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	179	1752	120	143	2341	155	166	569	200	211	662	95	6593
#5 BALL RD / KNOTT RD													
Base	149	574	198	160	731	225	131	626	103	144	810	119	3970
Added	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	149	574	198	160	731	225	131	626	103	144	811	119	3971
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	5	0	0	0	0	0	1	6
Total	0	0	0	0	0	5	0	0	0	0	0	1	6

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1	WESTERN AVE /	225	554	147	111	670	189	76	504	169	71	466	104
2	BALL RD / WES	61	566	56	94	632	108	94	700	141	144	749	158
3	WESTERN AVE /	61	425	54	75	727	131	77	478	110	82	588	91
4	BALL RD / BEA	179	1752	120	143	2341	155	165	568	200	211	662	95
5	BALL RD / KNO	149	574	198	160	731	225	131	626	103	144	810	119

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	225		555 147	111		670 189	76		504 169	71		466 104
2 BALL RD / WES	61		566 56	94		632 108	94		700 141	146		750 159
3 WESTERN AVE /	61		425 54	75		728 131	77		478 110	82		588 91
4 BALL RD / BEA	179		1752 120	143		2341 155	166		569 200	211		662 95
5 BALL RD / KNO	149		574 198	160		731 225	131		626 103	144		811 119

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	B xxxxx	0.675	B xxxxx	0.675	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	A xxxxx	0.594	A xxxxx	0.595	+ 0.001 V/C
# 3 WESTERN AVE / CERRITOS AVE	A xxxxx	0.583	A xxxxx	0.584	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C xxxxx	0.748	C xxxxx	0.748	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	B xxxxx	0.668	B xxxxx	0.668	+ 0.000 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.675

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 35 Level Of Service: B

Street Name:

WESTERN AVE

W ORANGE AVE

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Prot+Permit					Prot+Permit					Permitted					Permitted				
Rights:	Include					Include					Include					Include				
Min. Green:	0		0		0	0		0		0	0		0		0	0		0		0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	225	554	147	111	670	189	76	504	169	71	466	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	225	554	147	111	670	189	76	504	169	71	466	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	554	147	111	670	189	76	504	169	71	466	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	554	147	111	670	189	76	504	169	71	466	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	225	554	147	111	670	189	76	504	169	71	466	104

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.58	0.42	1.00	1.56	0.44	1.00	1.50	0.50	1.00	1.64	0.36
Final Sat.:	1700	2687	713	1700	2652	748	1700	2546	854	1700	2780	620

Capacity Analysis Module:

Vol/Sat:	0.13	0.21	0.21	0.07	0.25	0.25	0.04	0.20	0.20	0.04	0.17	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 35 Level Of Service: B

Street Name:	WESTERN AVE						W ORANGE AVE						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	225	554	147	111	670	189	76	504	169	71	466	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	225	554	147	111	670	189	76	504	169	71	466	104
Added Vol:	0	1	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	555	147	111	670	189	76	504	169	71	466	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	555	147	111	670	189	76	504	169	71	466	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	555	147	111	670	189	76	504	169	71	466	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	225	555	147	111	670	189	76	504	169	71	466	104

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.58	0.42	1.00	1.56	0.44	1.00	1.50	0.50	1.00	1.64	0.36
Final Sat.:	1700	2688	712	1700	2652	748	1700	2546	854	1700	2780	620

Capacity Analysis Module:

Vol/Sat:	0.13	0.21	0.21	0.07	0.25	0.25	0.04	0.20	0.20	0.04	0.17	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 29 Level Of Service: A

Street Name:	WESTERN AVE						BALL RD													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Permitted						Permitted						Prot+Permit							
Rights:	Include						Include						Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	61	566	56	94	632	108	94	700	141	144	749	158
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	566	56	94	632	108	94	700	141	144	749	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	566	56	94	632	108	94	700	141	144	749	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	566	56	94	632	108	94	700	141	144	749	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	566	56	94	632	108	94	700	141	144	749	158

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.71	0.29	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3094	306	1700	2904	496	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.04	0.18	0.18	0.06	0.22	0.22	0.06	0.21	0.08	0.08	0.22	0.09
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 29 Level Of Service: A

Street Name:	WESTERN AVE						BALL RD													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R					
Control:	Permitted						Permitted						Prot+Permit							
Rights:	Include						Include						Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	61	566	56	94	632	108	94	700	141	144	749	158
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	566	56	94	632	108	94	700	141	144	749	158
Added Vol:	0	0	0	0	0	0	0	0	0	2	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	566	56	94	632	108	94	700	141	146	750	159
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	566	56	94	632	108	94	700	141	146	750	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	566	56	94	632	108	94	700	141	146	750	159
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	566	56	94	632	108	94	700	141	146	750	159

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.71	0.29	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3094	306	1700	2904	496	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.04	0.18	0.18	0.06	0.22	0.22	0.06	0.21	0.08	0.09	0.22	0.09
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.583

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 28 Level Of Service: A

Street Name:

WESTERN AVE

CERRITOS AVE

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0		0		0	0		0		0	0		0		0	0		0		0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	61	425	54	75	727	131	77	478	110	82	588	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	425	54	75	727	131	77	478	110	82	588	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	425	54	75	727	131	77	478	110	82	588	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	425	54	75	727	131	77	478	110	82	588	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	425	54	75	727	131	77	478	110	82	588	91

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.77	0.23	1.00	1.69	0.31	1.00	1.63	0.37	1.00	1.73	0.27
Final Sat.:	1700	3017	383	1700	2881	519	1700	2764	636	1700	2944	456

Capacity Analysis Module:

Vol/Sat:	0.04	0.14	0.14	0.04	0.25	0.25	0.05	0.17	0.17	0.05	0.20	0.20
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.584
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 28 Level Of Service: A

WESTERN AVE					CERRITOS AVE														
North Bound					South Bound					East Bound					West Bound				
Approach:					Approach:					Approach:					Approach:				
Movement:					Movement:					Movement:					Movement:				
L - T - R					L - T - R					L - T - R					L - T - R				
Control:					Control:					Control:					Control:				
Protected					Protected					Protected					Protected				
Rights:					Rights:					Rights:					Rights:				
Include					Include					Include					Include				
Min. Green:					Min. Green:					Min. Green:					Min. Green:				
0 0 0					0 0 0					0 0 0					0 0 0				
Lanes:					Lanes:					Lanes:					Lanes:				
1 0 1 1 0					1 0 1 1 0					1 0 1 1 0					1 0 1 1 0				

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	61	425	54	75	727	131	77	478	110	82	588	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	425	54	75	727	131	77	478	110	82	588	91
Added Vol:	0	0	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	425	54	75	728	131	77	478	110	82	588	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	425	54	75	728	131	77	478	110	82	588	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	425	54	75	728	131	77	478	110	82	588	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	61	425	54	75	728	131	77	478	110	82	588	91

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.77	0.23	1.00	1.69	0.31	1.00	1.63	0.37	1.00	1.73	0.27
Final Sat.:	1700	3017	383	1700	2881	519	1700	2764	636	1700	2944	456

Capacity Analysis Module:

Vol/Sat:	0.04	0.14	0.14	0.04	0.25	0.25	0.05	0.17	0.17	0.05	0.20	0.20
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap. (X): 0.748

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 56 Level Of Service: C

Street Name:

S BEACH BLVD

BALL RD

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0		0		0	0		0		0	0		0		0	0		0		0
Lanes:	2	0	3	1	0	2	0	3	1	0	1	0	2	1	0	1	0	2	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	179	1752	120	143	2341	155	165	568	200	211	662	95
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	1752	120	143	2341	155	165	568	200	211	662	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1752	120	143	2341	155	165	568	200	211	662	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1752	120	143	2341	155	165	568	200	211	662	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	179	1752	120	143	2341	155	165	568	200	211	662	95

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.74	0.26	2.00	3.75	0.25	1.00	2.22	0.78	1.00	2.62	0.38
Final Sat.:	3400	6364	436	3400	6378	422	1700	3772	1328	1700	4460	640

Capacity Analysis Module:

Vol/Sat:	0.05	0.28	0.28	0.04	0.37	0.37	0.10	0.15	0.15	0.12	0.15	0.15
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.748

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 56 Level Of Service: C

Street Name: S BEACH BLVD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 179 1752 120 143 2341 155 165 568 200 211 662 95

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 179 1752 120 143 2341 155 165 568 200 211 662 95

Added Vol: 0 0 0 0 0 0 1 1 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 179 1752 120 143 2341 155 166 569 200 211 662 95

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 179 1752 120 143 2341 155 166 569 200 211 662 95

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 179 1752 120 143 2341 155 166 569 200 211 662 95

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 179 1752 120 143 2341 155 166 569 200 211 662 95

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.74 0.26 2.00 3.75 0.25 1.00 2.22 0.78 1.00 2.62 0.38

Final Sat.: 3400 6364 436 3400 6378 422 1700 3774 1326 1700 4460 640

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.05 0.28 0.28 0.04 0.37 0.37 0.10 0.15 0.15 0.12 0.15 0.15

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name:

S KNOTT RD

BALL RD

Approach:

North Bound

South Bound

East Bound

West Bound

Movement:

L - T - R

L - T - R

L - T - R

L - T - R

Control:

Prot+Permit

Prot+Permit

Prot+Permit

Prot+Permit

Rights:

Include

Include

Include

Include

Min. Green:

0 0 0

0 0 0

0 0 0

0 0 0

Lanes:

1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 149 574 198 160 731 225 131 626 103 144 810 119

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 149 574 198 160 731 225 131 626 103 144 810 119

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 149 574 198 160 731 225 131 626 103 144 810 119

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 149 574 198 160 731 225 131 626 103 144 810 119

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 149 574 198 160 731 225 131 626 103 144 810 119

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.09 0.17 0.12 0.09 0.22 0.13 0.08 0.18 0.06 0.08 0.24 0.07

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name:

S KNOTT RD

BALL RD

Approach:

North Bound

South Bound

East Bound

West Bound

Movement:

L - T - R

L - T - R

L - T - R

L - T - R

Control:

Prot+Permit

Prot+Permit

Prot+Permit

Prot+Permit

Rights:

Include

Include

Include

Include

Min. Green:

0 0 0

0 0 0

0 0 0

0 0 0

Lanes:

1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 149 574 198 160 731 225 131 626 103 144 810 119

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 149 574 198 160 731 225 131 626 103 144 810 119

Added Vol: 0 0 0 0 0 0 0 0 0 0 1 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 149 574 198 160 731 225 131 626 103 144 811 119

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 149 574 198 160 731 225 131 626 103 144 811 119

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 149 574 198 160 731 225 131 626 103 144 811 119

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 149 574 198 160 731 225 131 626 103 144 811 119

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.09 0.17 0.12 0.09 0.22 0.13 0.08 0.18 0.06 0.08 0.24 0.07

Crit Moves: ****

Project Trips Report
Apartment AM Peak Hour

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
Zone #1:												
1 WESTERN AVE /	0		1 0	0		0 0	0		0 0	0		0 0
2 BALL RD / WES	0		0 0	0		0 0	0		0 0	2		1 1
3 WESTERN AVE /	0		0 0	0		1 0	0		0 0	0		0 0
4 BALL RD / BEA	0		0 0	0		0 0	1		1 0	0		0 0
5 BALL RD / KNO	0		0 0	0		0 0	0		0 0	0		1 0

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX F

EXISTING CONDITIONS AND EXISTING + PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION
LEVEL OF SERVICE CALCULATIONS
(PM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment PM Peak Hour
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Trip Generation Report

Forecast for Apartment PM Peak hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total % Of Trips Total
1		11.00	Project (Apart	0.40	0.22	4	2	6 100.0
	Zone 1 Subtotal					4	2	6 100.0
TOTAL						4	2	6 100.0

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Trip Distribution Report

Percent Of Trips PM Peak Hour Distribution Inbound

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	15.0	25.0	15.0	18.0	4.0	3.0	3.0	3.0	2.0	3.0	4.0

To Gates	
12	
Zone	-----
1	5.0

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report
Apartment PM Peak hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	120	902	89	77	601	130	74	410	82	100	441	114	3140
Added	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	120	903	89	77	602	130	74	410	82	100	441	114	3142
#2 BALL RD / WESTERN AVE													
Base	100	906	137	76	547	100	134	659	89	90	688	115	3641
Added	0	0	1	1	0	0	0	1	0	1	1	1	6
Total	100	906	138	77	547	100	134	660	89	91	689	116	3647
#3 WESTERN AVE / CERRITOS AVE													
Base	122	1025	96	74	542	98	119	640	95	86	471	82	3450
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	122	1026	96	74	542	98	119	640	95	86	471	82	3451
#4 BALL RD / BEACH BLVD													
Base	203	2178	200	230	1815	154	154	547	123	200	623	128	6555
Added	0	0	0	0	0	0	3	0	0	0	1	0	4
Total	203	2178	200	230	1815	154	157	547	123	200	624	128	6559
#5 BALL RD / KNOTT RD													
Base	130	951	160	138	581	121	147	592	98	127	659	169	3873
Added	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	130	951	160	138	581	121	147	593	98	127	659	169	3874
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	2	0	0	0	0	0	4	6
Total	0	0	0	0	0	2	0	0	0	0	0	4	6

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	120		902 89	77	601	130	74	410	82	100	441	114
2 BALL RD / WES	100	906	137	76	547	100	134	659	89	90	688	115
3 WESTERN AVE /	122	1025	96	74	542	98	119	640	95	86	471	82
4 BALL RD / BEA	203	2178	200	230	1815	154	154	547	123	200	623	128
5 BALL RD / KNO	130	951	160	138	581	121	147	592	98	127	659	169

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	120		903 89	77		602 130	74		410 82	100		441 114
2 BALL RD / WES	100		906 138	77		547 100	134		660 89	91		689 116
3 WESTERN AVE /	122		1026 96	74		542 98	119		640 95	86		471 82
4 BALL RD / BEA	203		2178 200	230		1815 154	157		547 123	200		624 128
5 BALL RD / KNO	130		951 160	138		581 121	147		593 98	127		659 169

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	A	19.5	0.590	A	19.5	0.591	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	B	22.2	0.683	B	22.3	0.684	+ 0.001 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	21.0	0.690	B	21.0	0.690	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	31.2	0.720	C	31.2	0.720	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	B	24.2	0.691	B	24.2	0.691	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.590
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 20.6
Optimal Cycle: 28 Level Of Service: A

WESTERN AVE						W ORANGE AVE					
North Bound			South Bound			East Bound			West Bound		
Approach:	L - T - R		L - T - R		L - T - R		L - T - R		L - T - R		
Control:	Prot+Permit		Prot+Permit		Permitted		Permitted		Permitted		
Rights:	Include		Include		Include		Include		Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	0	1	1	0	

Volume Module:	>> Count	Date:	10 Oct 2017	<< PM	PEAK HOUR
Base Vol:	120	902	89	77	601
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	902	89	77	601
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	120	902	89	77	601
Reduct Vol:	0	0	0	0	0
Reduced Vol:	120	902	89	77	601
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Vol.:	120	902	89	77	601

Saturation Flow Module:	Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.64	0.36	1.00	1.67	0.33	1.00	1.59	0.41
Final Sat.:	1700	3095	305	1700	2795	605	1700	2833	567	1700	2702	698

Capacity Analysis Module:	Vol/Sat:	0.07	0.29	0.29	0.05	0.21	0.22	0.04	0.14	0.14	0.06	0.16	0.16
Crit Moves:	****				****			****			****		
Green/Cycle:	0.15	0.51	0.51	0.08	0.45	0.45	0.08	0.25	0.25	0.10	0.28	0.28	
Volume/Cap:	0.48	0.57	0.57	0.57	0.48	0.48	0.58	0.57	0.57	0.57	0.58	0.58	
Delay/Veh:	31.4	13.3	16.4	38.2	15.3	16.2	38.9	25.8	28.8	36.0	24.5	26.7	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	31.4	13.3	16.4	38.2	15.3	16.2	38.9	25.8	28.8	36.0	24.5	26.7	
DesignQueue:	6	14	14	4	12	12	4	11	11	5	12	12	

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.591
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 20.6
Optimal Cycle: 28 Level Of Service: A

Street Name:	WESTERN AVE						W ORANGE AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			Added Vol:			EXISTING:			Initial Fut:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Vol.:											
	120	902	89	77	601	130	1.00	1.00	1.00	120	902	89	0	1	0	0	0	0	120	903	89	1.00	1.00	1.00	120	903	89	0	0	0	120	903	89	1.00	1.00	1.00	120	903	89												
	74	410	82	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	74	410	82	1.00	1.00	1.00	1.00	1.00	1.00	74	410	82	0	0	0	74	410	82	1.00	1.00	1.00	74	410	82												
	100	441	114	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	100	441	114	1.00	1.00	1.00	1.00	1.00	1.00	100	441	114	0	0	0	100	441	114	1.00	1.00	1.00	100	441	114												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
	120	903	89	77	602	130	1.00	1.00	1.00	120	903	89	0	0	0	120	903	89	1.00	1.00	1.00	1.00	1.00	1.00	120	903	89	0	0	0	120	903	89	1.00	1.00	1.00	120	903	89	1.00	1.00	1.00	120	903	89						
	74	410	82	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	74	410	82	1.00	1.00	1.00	1.00	1.00	1.00	74	410	82	0	0	0	74	410	82	1.00	1.00	1.00	74	410	82	1.00	1.00	1.00	74	410	82						
	100	441	114	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	100	441	114	1.00	1.00	1.00	1.00	1.00	1.00	100	441	114	0	0	0	100	441	114	1.00	1.00	1.00	100	441	114	1.00	1.00	1.00	100	441	114						
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
	120	903	89	77	602	130	1.00	1.00	1.00	120	903	89	0	0	0	120	903	89	1.00	1.00	1.00	1.00	1.00	1.00	120	903	89	0	0	0	120	903	89	1.00	1.00	1.00	120	903	89	1.00	1.00	1.00	120	903	89	1.00	1.00	1.00	120	903	89
	74	410	82	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	74	410	82	1.00	1.00	1.00	1.00	1.00	1.00	74	410	82	0	0	0	74	410	82	1.00	1.00	1.00	74	410	82	1.00	1.00	1.00	74	410	82	1.00	1.00	1.00	74	410	82
	100	441	114	100	441	114	1.00	1.00	1.00	0	0	0	0	0	0	100	441	114	1.00	1.00	1.00	1.00	1.00	1.00	100	441	114	0	0	0	100	441	114	1.00	1.00	1.00	100	441	114	1.00	1.00	1.00	100	441	114	1.00	1.00	1.00	100	441	114
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Saturation Flow Module:	Sat/Lane:			Adjustment:			Lanes:			Final Sat.:		
	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.82	0.18	1.00	1.64	0.36	1.00	1.67	0.33	1.00	1.59	0.41
	1700	3095	305	1700	2796	604	1700	2833	567	1700	2702	698

Capacity Analysis Module:	Vol/Sat:			Crit Moves:			Green/Cycle:			Volume/Cap:			Delay/Veh:			Delay Adj:			AdjDel/Veh:			DesignQueue:		
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.57	0.57	31.4	13.3	16.4
	0.07	0.29	0.29	0.05	0.22	0.22	0.04	0.14	0.14	0.06	0.16	0.16	0.15	0.51	0.51	0.08	0.25	0.25	0.48	0.				

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.683

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.0

Optimal Cycle: 35 Level Of Service: B

Street Name:

WESTERN AVE

BALL RD

Approach:

North Bound

South Bound

East Bound

West Bound

Movement:

L - T - R

L - T - R

L - T - R

L - T - R

Control:

Permitted

Permitted

Prot+Permit

Prot+Permit

Rights:

Include

Include

Include

Include

Min. Green:

0 0 0

0 0 0

0 0 0

0 0 0

Lanes:

1 0 1 1 0

1 0 1 1 0

1 0 2 0 1

1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 100 906 137 76 547 100 134 659 89 90 688 115

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 100 906 137 76 547 100 134 659 89 90 688 115

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 100 906 137 76 547 100 134 659 89 90 688 115

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 100 906 137 76 547 100 134 659 89 90 688 115

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 100 906 137 76 547 100 134 659 89 90 688 115

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 1.69 0.31 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2953 447 1700 2874 526 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.06 0.31 0.31 0.04 0.19 0.19 0.08 0.19 0.05 0.05 0.20 0.07

Crit Moves: **** **** **** ****

Green/Cycle: 0.12 0.46 0.46 0.07 0.40 0.40 0.12 0.33 0.33 0.09 0.30 0.30

Volume/Cap: 0.47 0.67 0.67 0.67 0.47 0.47 0.67 0.58 0.16 0.58 0.67 0.22

Delay/Veh: 32.6 17.0 21.5 44.2 17.2 18.2 38.0 21.9 18.2 37.6 24.6 20.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.6 17.0 21.5 44.2 17.2 18.2 38.0 21.9 18.2 37.6 24.6 20.0

DesignQueue: 5 17 17 4 11 11 7 13 3 5 14 5

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.684
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.0
Optimal Cycle: 36 Level Of Service: B

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	2	0	1	1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	WESTERN AVE			BALL RD								
Base Vol:	100	906	137	76	547	100	134	659	89	90	688	115
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	906	137	76	547	100	134	659	89	90	688	115
Added Vol:	0	0	1	1	0	0	0	1	0	1	1	1
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	906	138	77	547	100	134	660	89	91	689	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	906	138	77	547	100	134	660	89	91	689	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	906	138	77	547	100	134	660	89	91	689	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	100	906	138	77	547	100	134	660	89	91	689	116

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.69	0.31	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2951	449	1700	2874	526	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.31	0.31	0.05	0.19	0.19	0.08	0.19	0.05	0.05	0.20	0.07
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.46	0.46	0.07	0.40	0.40	0.12	0.33	0.33	0.09	0.30	0.30
Volume/Cap:	0.47	0.67	0.67	0.67	0.47	0.47	0.67	0.59	0.16	0.59	0.67	0.22
Delay/Veh:	32.6	17.1	21.6	44.1	17.2	18.2	38.1	22.0	18.2	37.6	24.6	20.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.6	17.1	21.6	44.1	17.2	18.2	38.1	22.0	18.2	37.6	24.6	20.1
DesignQueue:	5	17	17	4	11	11	7	13	3	5	14	5

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.690
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.3
Optimal Cycle: 36 Level Of Service: B

Street Name:	WESTERN AVE						CERRITOS AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	1	1	0	0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	WESTERN AVE NB			WESTERN AVE SB			CERRITOS AVE EB			CERRITOS AVE WB		
Base Vol:	122	1025	96	74	542	98	119	640	95	86	471	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	1025	96	74	542	98	119	640	95	86	471	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	1025	96	74	542	98	119	640	95	86	471	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	1025	96	74	542	98	119	640	95	86	471	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	122	1025	96	74	542	98	119	640	95	86	471	82

Saturation Flow Module:	WESTERN AVE NB			WESTERN AVE SB			CERRITOS AVE EB			CERRITOS AVE WB		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.69	0.31	1.00	1.74	0.26	1.00	1.70	0.30
Final Sat.:	1700	3109	291	1700	2879	521	1700	2961	439	1700	2896	504

Capacity Analysis Module:	WESTERN AVE NB			WESTERN AVE SB			CERRITOS AVE EB			CERRITOS AVE WB		
Vol/Sat:	0.07	0.33	0.33	0.04	0.19	0.19	0.07	0.22	0.22	0.05	0.16	0.16
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.49	0.49	0.06	0.40	0.40	0.12	0.32	0.32	0.08	0.28	0.28
Volume/Cap:	0.47	0.67	0.67	0.67	0.47	0.47	0.59	0.67	0.67	0.67	0.59	0.59
Delay/Veh:	30.8	15.8	22.9	45.1	17.2	18.3	35.3	24.0	30.6	43.4	24.9	28.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	15.8	22.9	45.1	17.2	18.3	35.3	24.0	30.6	43.4	24.9	28.5
DesignQueue:	6	17	17	4	11	11	6	15	15	4	12	12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.690

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.3

Optimal Cycle: 36 Level Of Service: B

Street Name:

WESTERN AVE

CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

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Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 122 1025 96 74 542 98 119 640 95 86 471 82

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 122 1025 96 74 542 98 119 640 95 86 471 82

Added Vol: 0 1 0 0 0 0 0 0 0 0 0 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 122 1026 96 74 542 98 119 640 95 86 471 82

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 122 1026 96 74 542 98 119 640 95 86 471 82

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 122 1026 96 74 542 98 119 640 95 86 471 82

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 122 1026 96 74 542 98 119 640 95 86 471 82

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.83 0.17 1.00 1.69 0.31 1.00 1.74 0.26 1.00 1.70 0.30

Final Sat.: 1700 3109 291 1700 2879 521 1700 2961 439 1700 2896 504

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.07 0.33 0.33 0.04 0.19 0.19 0.07 0.22 0.22 0.05 0.16 0.16

Crit Moves: **** **** **** ****

Green/Cycle: 0.15 0.49 0.49 0.06 0.40 0.40 0.12 0.32 0.32 0.08 0.28 0.28

Volume/Cap: 0.47 0.67 0.67 0.67 0.47 0.47 0.59 0.67 0.67 0.67 0.59 0.59

Delay/Veh: 30.8 15.8 22.9 45.2 17.2 18.3 35.3 24.0 30.7 43.4 24.9 28.5

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 30.8 15.8 22.9 45.2 17.2 18.3 35.3 24.0 30.7 43.4 24.9 28.5

DesignQueue: 6 17 17 4 11 11 6 15 15 4 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.720

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 31.0

Optimal Cycle: 52 Level Of Service: C

Street Name:

S BEACH BLVD

BALL RD

Approach:

North Bound

South Bound

East Bound

West Bound

Movement:

L - T - R

L - T - R

L - T - R

L - T - R

Control: Protected

Protected

Protected

Protected

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 2 0 3 1 0

2 0 3 1 0

1 0 2 1 0

1 0 2 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 203 2178 200 230 1815 154 154 547 123 200 623 128

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 203 2178 200 230 1815 154 154 547 123 200 623 128

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 203 2178 200 230 1815 154 154 547 123 200 623 128

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 203 2178 200 230 1815 154 154 547 123 200 623 128

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 203 2178 200 230 1815 154 154 547 123 200 623 128

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.66 0.34 2.00 3.69 0.31 1.00 2.45 0.55 1.00 2.49 0.51

Final Sat.: 3400 6228 572 3400 6268 532 1700 4164 936 1700 4231 869

Capacity Analysis Module:

Vol/Sat: 0.06 0.35 0.35 0.07 0.29 0.29 0.09 0.13 0.13 0.12 0.15 0.15

Crit Moves: ****

Green/Cycle: 0.10 0.50 0.50 0.10 0.49 0.49 0.13 0.19 0.19 0.17 0.22 0.22

Volume/Cap: 0.59 0.70 0.70 0.70 0.59 0.59 0.67 0.70 0.70 0.70 0.67 0.67

Delay/Veh: 51.5 23.0 27.7 55.2 21.2 23.5 52.6 46.0 52.0 50.6 42.7 47.3

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 51.5 23.0 27.7 55.2 21.2 23.5 52.6 46.0 52.0 50.6 42.7 47.3

DesignQueue: 8 27 27 9 22 22 11 16 16 14 17 17

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.720

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 31.1

Optimal Cycle: 52 Level Of Service: C

Street Name:	S BEACH BLVD					BALL RD														
Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	1	0	2	0	3	1	0	1	0	2	1	0	1	0	2	1	0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	S BEACH BLVD					BALL RD						
Base Vol:	203	2178	200	230	1815	154	154	547	123	200	623	128
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	2178	200	230	1815	154	154	547	123	200	623	128
Added Vol:	0	0	0	0	0	0	3	0	0	0	1	0
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	203	2178	200	230	1815	154	157	547	123	200	624	128
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	2178	200	230	1815	154	157	547	123	200	624	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	2178	200	230	1815	154	157	547	123	200	624	128
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	203	2178	200	230	1815	154	157	547	123	200	624	128

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.66	0.34	2.00	3.69	0.31	1.00	2.45	0.55	1.00	2.49	0.51
Final Sat.:	3400	6228	572	3400	6268	532	1700	4164	936	1700	4232	868

Capacity Analysis Module:

Vol/Sat:	0.06	0.35	0.35	0.07	0.29	0.29	0.09	0.13	0.13	0.12	0.15	0.15
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.50	0.50	0.10	0.49	0.49	0.14	0.19	0.19	0.17	0.22	0.22
Volume/Cap:	0.59	0.70	0.70	0.70	0.59	0.59	0.68	0.70	0.70	0.70	0.68	0.68
Delay/Veh:	51.5	23.0	27.7	55.2	21.2	23.5	52.7	46.0	52.0	50.6	42.9	47.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.5	23.0	27.7	55.2	21.2	23.5	52.7	46.0	52.0	50.6	42.9	47.8
DesignQueue:	8	27	27	9	22	22	12	16	16	14	17	17

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.691

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.1

Optimal Cycle: 36 Level Of Service: B

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 130 951 160 138 581 121 147 592 98 127 659 169

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 130 951 160 138 581 121 147 592 98 127 659 169

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 130 951 160 138 581 121 147 592 98 127 659 169

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 130 951 160 138 581 121 147 592 98 127 659 169

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 130 951 160 138 581 121 147 592 98 127 659 169

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.08 0.28 0.09 0.08 0.17 0.07 0.09 0.17 0.06 0.07 0.19 0.10

Crit Moves: **** **** **** ****

Green/Cycle: 0.17 0.41 0.41 0.12 0.37 0.37 0.13 0.29 0.29 0.12 0.29 0.29

Volume/Cap: 0.46 0.67 0.23 0.67 0.46 0.19 0.67 0.60 0.20 0.60 0.67 0.35

Delay/Veh: 29.9 19.2 14.6 38.2 18.7 16.5 37.5 24.2 20.6 35.2 25.6 21.9

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 29.9 19.2 14.6 38.2 18.7 16.5 37.5 24.2 20.6 35.2 25.6 21.9

DesignQueue: 6 17 5 7 11 4 7 12 4 6 14 7

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap. (X): 0.691
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.1
Optimal Cycle: 36 Level Of Service: B

Street Name:	S KNOTT RD						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	2	1	1	0	2	0	2	1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	S KNOTT RD			S KNOTT RD			BALL RD			BALL RD		
Base Vol:	130	951	160	138	581	121	147	592	98	127	659	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	951	160	138	581	121	147	592	98	127	659	169
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	951	160	138	581	121	147	593	98	127	659	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	951	160	138	581	121	147	593	98	127	659	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	951	160	138	581	121	147	593	98	127	659	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	130	951	160	138	581	121	147	593	98	127	659	169

Saturation Flow Module:	S KNOTT RD			S KNOTT RD			BALL RD			BALL RD		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:	S KNOTT RD			S KNOTT RD			BALL RD			BALL RD		
Vol/Sat:	0.08	0.28	0.09	0.08	0.17	0.07	0.09	0.17	0.06	0.07	0.19	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.17	0.41	0.41	0.12	0.37	0.37	0.13	0.29	0.29	0.12	0.29	0.29
Volume/Cap:	0.46	0.67	0.23	0.67	0.46	0.19	0.67	0.60	0.20	0.60	0.67	0.35
Delay/Veh:	29.9	19.2	14.6	38.2	18.7	16.5	37.5	24.2	20.6	35.2	25.6	21.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.9	19.2	14.6	38.2	18.7	16.5	37.5	24.2	20.6	35.2	25.6	21.9
DesignQueue:	6	17	5	7	11	4	7	12	4	6	14	7

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Project Trips Report
Apartment PM Peak hour

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
Zone #1:												
1 WESTERN AVE /	0		1 0	0		1 0	0		0 0	0		0 0
2 BALL RD / WES	0		0 1	1		0 0	0		1 0	1		1 1
3 WESTERN AVE /	0		1 0	0		0 0	0		0 0	0		0 0
4 BALL RD / BEA	0		0 0	0		0 0	3		0 0	0		1 0
5 BALL RD / KNO	0		0 0	0		0 0	0		1 0	0		0 0

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX F2

PROJECT ONLY TRAFFIX MODEL PROJECTIONS AND LINK VOLUMES (AVERAGE DAILY TRAFFIC)

Scenario Report

Scenario:	Default Scenario
Command:	PROJECT ONLY
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	PROJECT ONLY
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Trip Generation Report

Forecast for Apartment AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		1.00	APARTMENTS	37.00	37.00	37	37	74	100.0
	Zone 1 Subtotal					37	37	74	100.0
TOTAL						37	37	74	100.0

Trip Distribution Report

Percent Of Trips AM Peak Hour Distribution

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	15.0	14.0	19.0	21.0	4.0	5.0	6.0	4.0	2.0	3.0	4.0

To Gates	
12	
Zone	-----
1	3.0

Link Volume Report
Apartment AM Peak Hour

Volume Type	NB Link			SB Link			EB Link			WB Link			Total Volume
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
#1 WESTERN AVE / ORANGE AVE													
Base	926	910	1836	970	734	1704	749	880	1629	641	762	1403	6572
Added	8	8	16	5	5	10	1	1	2	2	2	4	32
Total	934	918	1852	975	739	1714	750	881	1631	643	764	1407	6604
#2 BALL RD / WESTERN AVE													
Base	683	917	1600	834	818	1652	935	918	1853	1051	850	1901	7006
Added	9	18	27	9	9	18	10	10	20	37	28	65	130
Total	692	935	1627	843	827	1670	945	928	1873	1088	878	1966	7136
#3 WESTERN AVE / CERRITOS AVE													
Base	540	919	1459	933	593	1526	665	780	1445	761	607	1368	5798
Added	7	7	14	9	9	18	1	1	2	1	1	2	36
Total	547	926	1473	942	602	1544	666	781	1447	762	608	1370	5834
#4 BALL RD / BEACH BLVD													
Base	2051	2752	4803	2639	2012	4651	933	996	1929	968	831	1799	13182
Added	2	2	4	1	30	31	38	9	47	6	6	12	94
Total	2053	2754	4807	2640	2042	4682	971	1005	1976	974	837	1811	13276
#5 BALL RD / KNOTT RD													
Base	921	978	1899	1116	824	1940	860	1184	2044	1073	984	2057	7940
Added	1	1	2	1	1	2	8	8	16	10	10	20	40
Total	922	979	1901	1117	825	1942	868	1192	2060	1083	994	2077	7980
#6 PROJECT ENTRANCE/EXIT													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	37	37	74	0	37	37	37	0	37	148
Total	0	0	0	37	37	74	0	37	37	37	0	37	148

Project Trips Report
Apartment AM Peak Hour

Node Intersection	Northbound			Southbound			Eastbound			Westbound						
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R				
Zone #1:																
1 WESTERN AVE /	1		5	2	0		5	0	0	0	1		2	0		0
2 BALL RD / WES	0		0	9	9		0	0	0	10	0		18	10		9
3 WESTERN AVE /	0		7	0	1		7	1	1	0	0		0	0		1
4 BALL RD / BEA	2		0	0	0		0	1	30	6	2		0	6		0
5 BALL RD / KNO	0		0	1	1		0	0	0	8	0		1	8		1

APPENDIX G

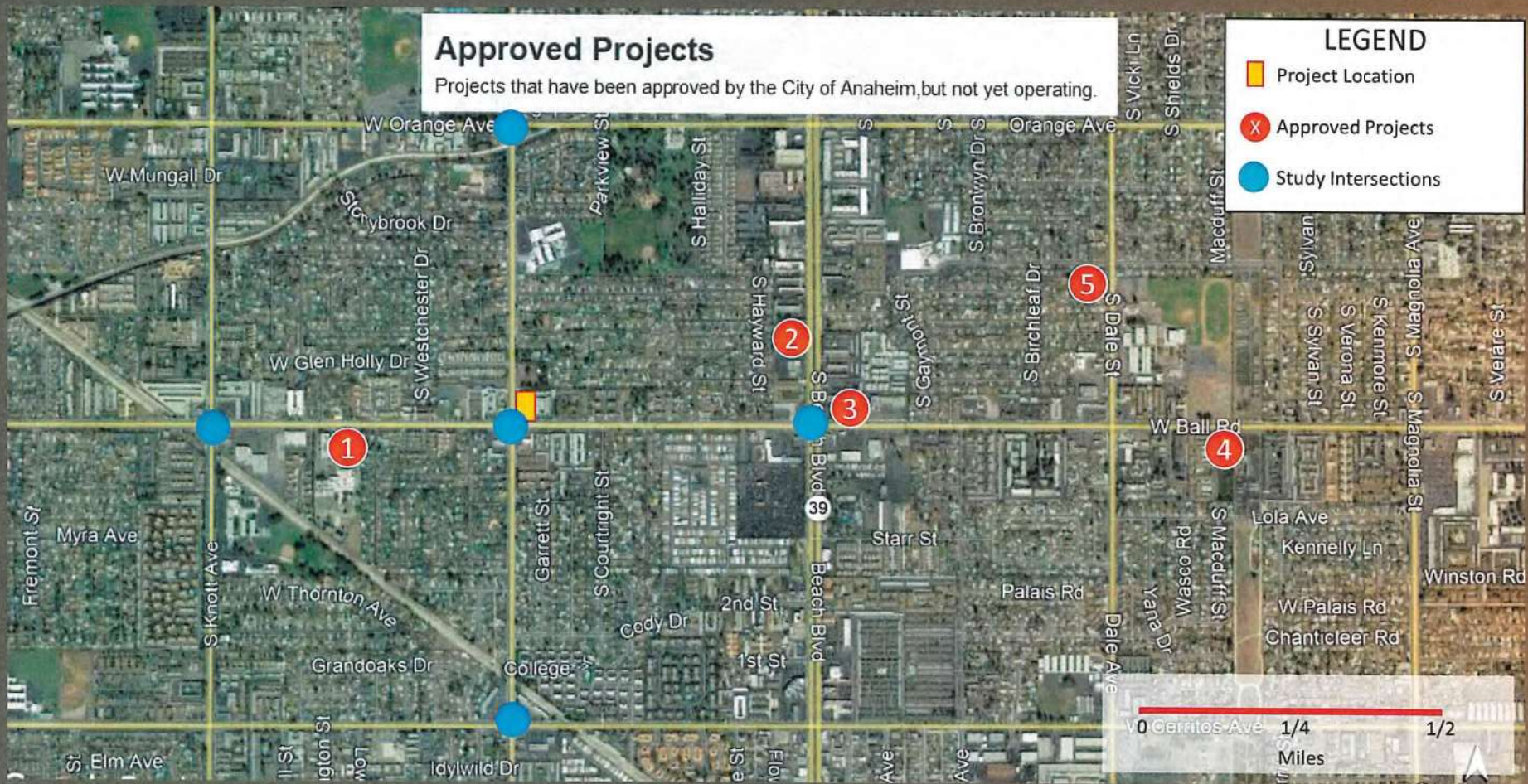
LIST OF APPROVED PROJECTS AND APPROVED PROJECTS ESTIMATED TRIP GENERATION

Approved Projects

Projects that have been approved by the City of Anaheim, but not yet operating.

LEGEND

-  Project Location
-  Approved Projects
-  Study Intersections



APPROVED PROJECT #1

Aceport College, Inc.

DEV2016-00115

Address: 3340 W BALL RD A



City of Anaheim, Eagle Aerial

Description

To permit a medical massage therapy school within an existing medical office complex.

Phase: Approved

Applicant: Danny D Kim

2135997979

Planner

Lindsay H Ortega

714-765-4934

lortega@anaheim.net

Upcoming Meetings

None currently scheduled

Close

APPROVED PROJECT #2

Community Center
DEV2013-00087

Address: 907 S BEACH BLVD



Description

The applicant requests a determination of substantial conformance by the Planning Commission to approve amended exhibits for a previously-approved community center and banquet hall.

Phase: Approved

Applicant: Max H Aranki, 5627880982

Planner

Lindsay H Ortega

714-765-4934

lortega@anaheim.net

APPROVED PROJECT #3

Anaheim Express Wash
DEV2016-00010

Address: 924-926 S BEACH BLVD



Description

The following land use entitlements are being requested: (i) a conditional use permit to construct a new automotive washing facility and permit alterations to two legal nonconforming freestanding pole signs - and (ii) a variance to allow fewer parking spaces than required by the Zoning Code.

Phase: Under Construction

Applicant: Robert Mcelroy, 415-887-8028

Planner
Lisandro Orozco
714-765-5381
lorozco@anaheim.net

APPROVED PROJECT #4

Ball Road Townhomes – Bonanni
DEV2016-00100

Address: 2730 W BALL RD



Description

The applicant requests approval of the following zoning entitlements: (i) a conditional use permit to permit the construction of a 41-unit* single-family attached residential project with modified development standards and density bonus incentives - and, (ii) a tentative tract map to establish a 1-lot, 41*-unit condominium subdivision. * The number of units has been reduced from 42 to 41 subsequent to advertisement for this item.

Phase: Approved

Applicant: Chris Segesman, 714-892-0123

Planner

Nicholas J Taylor

714-765-4323

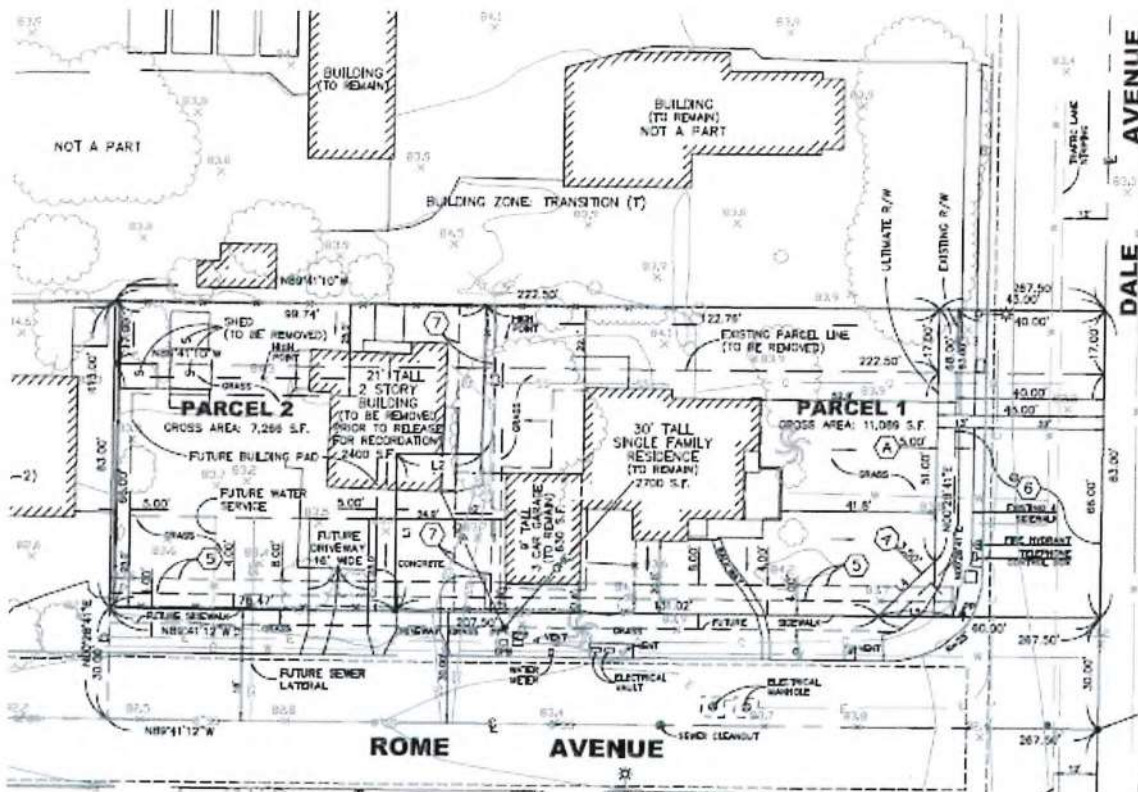
njtaylor@anaheim.net

APPROVED PROJECT #5

807 S Dale Single Family Homes

DEV2016-00048

Address: 807-807 1/2 S DALE AVE



Description

The following land use entitlements are being requested: (1) to reclassify the property from the T (Transition) Zone to the RS-2 (Single-Family Residential) Zone - and, (2) a tentative parcel map to subdivide the property into two parcels.

Phase: Approved

Applicant: Tien Le, 714-227-7274

Planner

Lindsay H Ortega

714-765-4934

lortega@anaheim.net

Project 3175 Ball Rd TIA

Trip generation for Automated Car Wash

Designed by _____ Date _____ Job No. 0.0000

Checked by _____ Date Date Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation 9th Edition, Average Rate Equations

Land Use Code - 948 Automated Car Wash

Independent Variable - 1,000 Sq Ft

Number of Units (X) - 4.992

T = Trip Ends

Peak Hour Adjacent Street Traffic One Hour Between 7 and 9 AM

AM Peak

T = (X) * *

Trip Ends Per 1,000 Sq Ft

T = 0

Trip Ends

Directional Distribution:

0% Entering

0% Exiting

0 Entering

0 Exiting

Peak Hour Adjacent Street Traffic One Hour Between 4 and 6 PM

PM Peak

T = (X) * 14.12

Trip Ends Per 1,000 Sq Ft

T = 70

Trip Ends

Directional Distribution:

50% Entering

50% Exiting

35 Entering

35 Exiting

Weekday

Daily Weekday

T = (X) * *

Trip Ends Per 1,000 Sq Ft

T = 0

Trip Ends

Directional Distribution:

50% Entering

50% Exiting

0 Entering

0 Exiting

Non-Pass-By Trip Percentage

AM 100%

PM 100%

Non-Pass-By Trip Volumes

AM Peak

0 Entering

0 Exiting

PM Peak

35 Entering

35 Exiting

Note: Rounding may occur in calculations

Project 3175 Ball Rd TIA

Trip generation for Lodge/Fraternal Organization

Designed by _____ Date _____ Job No. 0.0000

Checked by _____ Date Date Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE *Trip Generation 9th Edition*, Average Rate Equations

Land Use Code - **591** Lodge/Fraternal Organization

Independent Variable - Member(s)

Number of Units (X) - 300

T = Trip Ends

Peak Hour Adjacent Street Traffic One Hour Between 7 and 9 AM

AM Peak

$T = (X) * 0.01$

T = 3

Trip Ends Per Member(s)
Trip Ends

Directional Distribution:

0% Entering	0% Exiting
0 Entering	0 Exiting

Peak Hour Adjacent Street Traffic One Hour Between 4 and 6 PM

PM Peak

$T = (X) * 0.03$

T = 9

Trip Ends Per Member(s)
Trip Ends

Directional Distribution:

0% Entering	0% Exiting
0 Entering	0 Exiting

Weekday

Daily Weekday

$T = (X) * 0.29$

T = 88

Trip Ends Per Member(s)
Trip Ends

Directional Distribution:

50% Entering	50% Exiting
44 Entering	44 Exiting

Non-Pass-By Trip Percentage

AM 100%

PM 100%

Non-Pass-By Trip Volumes

AM Peak

PM Peak

0 Entering

0 Entering

3 Exiting

9 Exiting

Note: Rounding may occur in calculations

Project 3175 Ball Rd TIA

Trip generation for Medical-Dental Office Building

Designed by

Date

Job No.

0.0000

Checked by

Date

Date

Sheet No.

1

of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation 9th Edition, Average Rate Equations

Land Use Code - 720 Medical-Dental Office Building

Independent Variable - 1,000 Sq Ft

Number of Units (X) - 1.511

T = Trip Ends

Peak Hour Adjacent Street Traffic One Hour Between 7 and 9 AM

AM Peak

T = (X) * 2.39

Trip Ends Per 1,000 Sq Ft

Directional Distribution:

79% Entering

21% Exiting

T = 4

Trip Ends

3 Entering

1 Exiting

Peak Hour Adjacent Street Traffic One Hour Between 4 and 6 PM

PM Peak

T = (X) * 3.57

Trip Ends Per 1,000 Sq Ft

Directional Distribution:

28% Entering

72% Exiting

T = 5

Trip Ends

1 Entering

4 Exiting

Weekday

Daily Weekday

T = (X) * 36.13

Trip Ends Per 1,000 Sq Ft

Directional Distribution:

50% Entering

50% Exiting

T = 56

Trip Ends

28 Entering

28 Exiting

Non-Pass-By Trip Percentage

AM 100%

PM 100%

Non-Pass-By Trip Volumes

AM Peak

3 Entering

1 Exiting

PM Peak

1 Entering

4 Exiting

Note: Rounding may occur in calculations

Project 3175 Ball Rd TIA

Trip generation for Single-Family Detached Housing

Designed by

Date

Job No.

0.0000

Checked by

Date

Date

Sheet No.

1

of

1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation 9th Edition, Average Rate Equations

Land Use Code - 210 Single-Family Detached Housing

Independent Variable - Dwelling Unit(s)

Number of Units (X) - 2

T = Trip Ends

Peak Hour Adjacent Street Traffic One Hour Between 7 and 9 AM

AM Peak

$T = (X) * 0.75$

Trip Ends Per Dwelling Unit(s)

T = 2

Trip Ends

Directional Distribution:

25% Entering

75% Exiting

1 Entering

1 Exiting

Peak Hour Adjacent Street Traffic One Hour Between 4 and 6 PM

PM Peak

$T = (X) * 1.00$

Trip Ends Per Dwelling Unit(s)

T = 2

Trip Ends

Directional Distribution:

63% Entering

37% Exiting

1 Entering

1 Exiting

Weekday

Daily Weekday

$T = (X) * 9.52$

Trip Ends Per Dwelling Unit(s)

T = 20

Trip Ends

Directional Distribution:

50% Entering

50% Exiting

10 Entering

10 Exiting

Non-Pass-By Trip Percentage

AM 100%

PM 100%

Non-Pass-By Trip Volumes

AM Peak

1 Entering

1 Exiting

PM Peak

1 Entering

1 Exiting

Note: Rounding may occur in calculations

Project 3175 Ball Rd TIA

Trip generation for Residential Condominium/Townhouse

Designed by _____ Date _____ Job No. 0.0000

Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation 9th Edition, Average Rate Equations

Land Use Code - 230 Residential Condominium/Townhouse

Independent Variable - Dwelling Unit(s)

Number of Units (X) - 41

T = Trip Ends

Peak Hour Adjacent Street Traffic One Hour Between 7 and 9 AM

AM Peak

$T = (X) * 0.44$

T = 18

Trip Ends Per Dwelling Unit(s)

Trip Ends

Directional Distribution:

17% Entering

83% Exiting

3 Entering

15 Exiting

Peak Hour Adjacent Street Traffic One Hour Between 4 and 6 PM

PM Peak

$T = (X) * 0.52$

T = 21

Trip Ends Per Dwelling Unit(s)

Trip Ends

Directional Distribution:

67% Entering

33% Exiting

14 Entering

7 Exiting

Weekday

Daily Weekday

$T = (X) * 5.81$

T = 240

Trip Ends Per Dwelling Unit(s)

Trip Ends

Directional Distribution:

50% Entering

50% Exiting

120 Entering

120 Exiting

Non-Pass-By Trip Percentage

AM 100%

PM 100%

Non-Pass-By Trip Volumes

AM Peak

3 Entering

15 Exiting

PM Peak

14 Entering

7 Exiting

Note: Rounding may occur in calculations

APPENDIX H

EXISTING + APPROVED PROJECTS TRAFFIX MODEL PROJECTIONS AND
INTERSECTION LEVEL OF SERVICE CALCULATIONS
(AM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING + APPROVED PROJECTS AM PEAK HOUR
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report
Apartment AM Peak Hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	235	578	154	115	698	197	79	524	177	74	485	108	3424
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	235	578	154	115	698	197	79	524	177	74	485	108	3424
#2 BALL RD / WESTERN AVE													
Base	64	589	59	99	657	113	98	730	147	152	784	167	3660
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	64	589	59	99	657	113	98	730	147	152	784	167	3660
#3 WESTERN AVE / CERRITOS AVE													
Base	63	444	56	78	758	136	80	497	114	85	612	95	3019
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	63	444	56	78	758	136	80	497	114	85	612	95	3019
#4 BALL RD / BEACH BLVD													
Base	186	1822	125	149	2435	162	173	593	208	220	701	100	6873
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	186	1822	125	149	2435	162	173	593	208	220	701	100	6873
#5 BALL RD / KNOTT RD													
Base	155	597	206	166	760	234	136	653	107	151	846	125	4136
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	155	597	206	166	760	234	136	653	107	151	846	125	4136

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1	WESTERN AVE /	235	578	154	115	698	197	79	524	177	74	485	108
2	BALL RD / WES	64	589	59	99	657	113	98	730	147	152	784	167
3	WESTERN AVE /	63	444	56	78	758	136	80	497	114	85	612	95
4	BALL RD / BEA	186	1822	125	149	2435	162	173	593	208	220	701	100
5	BALL RD / KNO	155	597	206	166	760	234	136	653	107	151	846	125

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	C	25.1	0.701	C	25.1	0.701	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	B	22.3	0.619	B	22.3	0.619	+ 0.000 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	20.0	0.605	B	20.0	0.605	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	32.4	0.777	C	32.4	0.777	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	B	24.8	0.694	B	24.8	0.694	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.701

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 24.0

Optimal Cycle: 37 Level Of Service: C

Street Name: WESTERN AVE

W ORANGE AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 226 556 148 111 671 189 76 504 170 71 466 104

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 235 578 154 115 698 197 79 524 177 74 485 108

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 235 578 154 115 698 197 79 524 177 74 485 108

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 235 578 154 115 698 197 79 524 177 74 485 108

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 235 578 154 115 698 197 79 524 177 74 485 108

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.58 0.42 1.00 1.56 0.44 1.00 1.50 0.50 1.00 1.64 0.36

Final Sat.: 1700 2685 715 1700 2653 747 1700 2542 858 1700 2780 620

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.14 0.22 0.22 0.07 0.26 0.26 0.05 0.21 0.21 0.04 0.17 0.17

Crit Moves: **** **** ****

Green/Cycle: 0.20 0.45 0.45 0.14 0.38 0.38 0.08 0.30 0.30 0.06 0.29 0.29

Volume/Cap: 0.69 0.48 0.48 0.48 0.69 0.69 0.61 0.69 0.69 0.69 0.61 0.61

Delay/Veh: 32.3 15.3 16.0 31.8 21.2 24.4 39.8 25.5 28.7 46.2 24.6 27.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.3 15.3 16.0 31.8 21.2 24.4 39.8 25.5 28.7 46.2 24.6 27.7

DesignQueue: 11 12 12 6 16 16 4 14 14 4 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.619

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.6

Optimal Cycle: 30 Level Of Service: B

Street Name: WESTERN AVE

BALL RD

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted					Permitted					Prot+Permit					Prot+Permit				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	62	566	57	95	632	109	94	702	141	146	754	161
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	64	589	59	99	657	113	98	730	147	152	784	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	589	59	99	657	113	98	730	147	152	784	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	589	59	99	657	113	98	730	147	152	784	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	64	589	59	99	657	113	98	730	147	152	784	167

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.71	0.29	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3089	311	1700	2900	500	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.04	0.19	0.19	0.06	0.23	0.23	0.06	0.21	0.09	0.09	0.23	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.06	0.34	0.34	0.10	0.38	0.38	0.10	0.36	0.36	0.15	0.41	0.41
Volume/Cap:	0.60	0.56	0.56	0.56	0.60	0.60	0.57	0.60	0.24	0.60	0.57	0.24
Delay/Veh:	41.2	21.3	25.7	35.9	19.9	22.9	36.2	20.8	17.4	33.4	18.0	15.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.2	21.3	25.7	35.9	19.9	22.9	36.2	20.8	17.4	33.4	18.0	15.1
DesignQueue:	3	12	12	5	14	14	5	14	5	7	14	6

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.605

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 20.7

Optimal Cycle: 29 Level Of Service: B

Street Name: WESTERN AVE

CERRITOS AVE

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Protected

Protected

Protected

Protected

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 61 427 54 75 729 131 77 478 110 82 588 91

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 63 444 56 78 758 136 80 497 114 85 612 95

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 63 444 56 78 758 136 80 497 114 85 612 95

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 63 444 56 78 758 136 80 497 114 85 612 95

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 63 444 56 78 758 136 80 497 114 85 612 95

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.78 0.22 1.00 1.70 0.30 1.00 1.63 0.37 1.00 1.73 0.27

Final Sat.: 1700 3018 382 1700 2882 518 1700 2764 636 1700 2944 456

Capacity Analysis Module:

Vol/Sat: 0.04 0.15 0.15 0.05 0.26 0.26 0.05 0.18 0.18 0.05 0.21 0.21

Crit Moves: ****

Green/Cycle: 0.06 0.39 0.39 0.12 0.45 0.45 0.08 0.34 0.34 0.10 0.36 0.36

Volume/Cap: 0.58 0.38 0.38 0.38 0.58 0.58 0.58 0.53 0.53 0.53 0.58 0.58

Delay/Veh: 40.6 16.8 17.5 31.6 16.3 18.5 38.6 20.8 22.3 35.7 20.8 24.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 40.6 16.8 17.5 31.6 16.3 18.5 38.6 20.8 22.3 35.7 20.8 24.0

DesignQueue: 3 9 9 4 15 15 4 12 12 4 13 13

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.777

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 31.7

Optimal Cycle: 62 Level Of Service: C

Street Name:

S BEACH BLVD

BALL RD

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Protected

Protected

Protected

Protected

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 2 0 3 1 0

2 0 3 1 0

1 0 2 1 0

1 0 2 1 0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 179 1752 120 143 2341 156 166 570 200 212 674 96

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 186 1822 125 149 2435 162 173 593 208 220 701 100

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 186 1822 125 149 2435 162 173 593 208 220 701 100

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 186 1822 125 149 2435 162 173 593 208 220 701 100

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 186 1822 125 149 2435 162 173 593 208 220 701 100

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.74 0.26 2.00 3.75 0.25 1.00 2.22 0.78 1.00 2.63 0.37

Final Sat.: 3400 6364 436 3400 6375 425 1700 3775 1325 1700 4464 636

Capacity Analysis Module:

Vol/Sat: 0.05 0.29 0.29 0.04 0.38 0.38 0.10 0.16 0.16 0.13 0.16 0.16

Crit Moves: ****

Green/Cycle: 0.07 0.50 0.50 0.08 0.50 0.50 0.15 0.21 0.21 0.17 0.23 0.23

Volume/Cap: 0.76 0.58 0.58 0.58 0.76 0.76 0.69 0.76 0.76 0.76 0.69 0.69

Delay/Veh: 61.7 20.8 23.3 53.9 24.2 33.6 52.0 46.4 51.5 53.5 42.2 49.5

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 61.7 20.8 23.3 53.9 24.2 33.6 52.0 46.4 51.5 53.5 42.2 49.5

DesignQueue: 7 22 22 6 30 30 13 18 18 16 18 18

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.694

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.9

Optimal Cycle: 36 Level Of Service: B

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 149 574 198 160 731 225 131 628 103 145 813 120

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 155 597 206 166 760 234 136 653 107 151 846 125

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 155 597 206 166 760 234 136 653 107 151 846 125

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 155 597 206 166 760 234 136 653 107 151 846 125

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 155 597 206 166 760 234 136 653 107 151 846 125

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.09 0.18 0.12 0.10 0.22 0.14 0.08 0.19 0.06 0.09 0.25 0.07

Crit Moves: **** **** ****

Green/Cycle: 0.13 0.30 0.30 0.17 0.33 0.33 0.12 0.33 0.33 0.15 0.37 0.37

Volume/Cap: 0.68 0.59 0.41 0.59 0.68 0.42 0.68 0.58 0.19 0.58 0.68 0.20

Delay/Veh: 37.0 23.7 21.9 32.0 23.4 20.3 38.5 21.8 18.4 32.6 21.6 16.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 37.0 23.7 21.9 32.0 23.4 20.3 38.5 21.8 18.4 32.6 21.6 16.7

DesignQueue: 8 12 8 8 15 9 7 13 4 7 16 4

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX I

**EXISTING + APPROVED PROJECTS TRAFFIX MODEL PROJECTIONS AND
INTERSECTION LEVEL OF SERVICE CALCULATIONS
(PM PEAK HOUR)**

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING + APPROVED PROJECTS PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	127	952	94	80	641	135	77	426	87	105	459	119	3301
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	127	952	94	80	641	135	77	426	87	105	459	119	3301
#2 BALL RD / WESTERN AVE													
Base	104	942	155	97	569	104	140	703	94	103	729	134	3874
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	104	942	155	97	569	104	140	703	94	103	729	134	3874
#3 WESTERN AVE / CERRITOS AVE													
Base	127	1075	100	78	571	104	126	666	99	89	490	86	3611
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	127	1075	100	78	571	104	126	666	99	89	490	86	3611
#4 BALL RD / BEACH BLVD													
Base	211	2265	209	241	1888	163	167	609	128	209	682	136	6910
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	211	2265	209	241	1888	163	167	609	128	209	682	136	6910
#5 BALL RD / KNOTT RD													
Base	135	989	170	147	604	126	153	627	102	135	695	179	4061
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	135	989	170	147	604	126	153	627	102	135	695	179	4061

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	127	952	94	80	641	135	77	426	87	105	459	119
2 BALL RD / WES	104	942	155	97	569	104	140	703	94	103	729	134
3 WESTERN AVE /	127	1075	100	78	571	104	126	666	99	89	490	86
4 BALL RD / BEA	211	2265	209	241	1888	163	167	609	128	209	682	136
5 BALL RD / KNO	135	989	170	147	604	126	153	627	102	135	695	179

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	B	19.6	0.620	B	19.6	0.620	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	23.6	0.727	C	23.6	0.727	+ 0.000 V/C
# 3 WESTERN AVE / CERRITOS AVE	C	21.7	0.719	C	21.7	0.719	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	32.5	0.756	C	32.5	0.756	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	C	25.0	0.721	C	25.0	0.721	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.620

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.0

Optimal Cycle: 30 Level Of Service: B

Street Name: WESTERN AVE

W ORANGE AVE

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Prot+Permit

Prot+Permit

Permitted

Permitted

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

1 0 1 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 122 915 90 77 616 130 74 410 84 101 441 114

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 127 952 94 80 641 135 77 426 87 105 459 119

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 127 952 94 80 641 135 77 426 87 105 459 119

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 127 952 94 80 641 135 77 426 87 105 459 119

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 127 952 94 80 641 135 77 426 87 105 459 119

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.82 0.18 1.00 1.65 0.35 1.00 1.66 0.34 1.00 1.59 0.41

Final Sat.: 1700 3096 304 1700 2808 592 1700 2822 578 1700 2702 698

Capacity Analysis Module:

Vol/Sat: 0.07 0.31 0.31 0.05 0.23 0.23 0.05 0.15 0.15 0.06 0.17 0.17

Crit Moves: ****

Green/Cycle: 0.15 0.51 0.51 0.08 0.45 0.45 0.08 0.25 0.25 0.10 0.28 0.28

Volume/Cap: 0.51 0.60 0.60 0.60 0.51 0.51 0.60 0.59 0.59 0.59 0.60 0.60

Delay/Veh: 31.9 13.7 17.6 39.4 15.6 16.7 39.7 26.2 29.6 36.7 24.8 27.4

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 31.9 13.7 17.6 39.4 15.6 16.7 39.7 26.2 29.6 36.7 24.8 27.4

DesignQueue: 6 15 15 4 13 13 4 11 11 5 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.727

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.1

Optimal Cycle: 40 Level Of Service: C

Street Name: WESTERN AVE

BALL RD

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Permitted

Permitted

Prot+Permit

Prot+Permit

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 1 1 0

1 0 1 1 0

1 0 2 0 1

1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 100 906 149 93 547 100 135 676 90 99 701 129

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 104 942 155 97 569 104 140 703 94 103 729 134

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 104 942 155 97 569 104 140 703 94 103 729 134

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 104 942 155 97 569 104 140 703 94 103 729 134

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 104 942 155 97 569 104 140 703 94 103 729 134

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.72 0.28 1.00 1.69 0.31 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2920 480 1700 2874 526 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.06 0.32 0.32 0.06 0.20 0.20 0.08 0.21 0.06 0.06 0.21 0.08

Crit Moves: ****

Green/Cycle: 0.13 0.45 0.45 0.08 0.41 0.41 0.12 0.32 0.32 0.09 0.30 0.30

Volume/Cap: 0.49 0.71 0.71 0.71 0.49 0.49 0.71 0.64 0.17 0.64 0.71 0.26

Delay/Veh: 32.7 18.3 24.0 45.2 17.1 18.3 40.5 23.2 18.7 39.3 25.6 20.5

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.7 18.3 24.0 45.2 17.1 18.3 40.5 23.2 18.7 39.3 25.6 20.5

DesignQueue: 5 18 18 5 12 12 7 14 4 5 15 5

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.719

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.9

Optimal Cycle: 39 Level Of Service: C

Street Name: WESTERN AVE CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 122 1034 96 75 549 100 121 640 95 86 471 83

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 127 1075 100 78 571 104 126 666 99 89 490 86

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 127 1075 100 78 571 104 126 666 99 89 490 86

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 127 1075 100 78 571 104 126 666 99 89 490 86

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 127 1075 100 78 571 104 126 666 99 89 490 86

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.83 0.17 1.00 1.69 0.31 1.00 1.74 0.26 1.00 1.70 0.30

Final Sat.: 1700 3111 289 1700 2876 524 1700 2961 439 1700 2891 509

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.07 0.35 0.35 0.05 0.20 0.20 0.07 0.22 0.22 0.05 0.17 0.17

Crit Moves: **** **** **** ****

Green/Cycle: 0.15 0.49 0.49 0.07 0.40 0.40 0.12 0.32 0.32 0.07 0.27 0.27

Volume/Cap: 0.49 0.70 0.70 0.70 0.49 0.49 0.62 0.70 0.70 0.70 0.62 0.62

Delay/Veh: 31.1 16.3 24.9 47.2 17.3 18.5 36.1 24.7 32.8 45.4 25.5 29.9

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 31.1 16.3 24.9 47.2 17.3 18.5 36.1 24.7 32.8 45.4 25.5 29.9

DesignQueue: 6 18 18 4 12 12 6 15 15 5 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap. (X): 0.756

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 32.4

Optimal Cycle: 58 Level Of Service: C

Street Name: S BEACH BLVD

BALL RD

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Protected

Protected

Protected

Protected

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 2 0 3 1 0

2 0 3 1 0

1 0 2 1 0

1 0 2 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 203 2178 201 232 1815 157 161 586 123 201 656 131

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 211 2265 209 241 1888 163 167 609 128 209 682 136

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 211 2265 209 241 1888 163 167 609 128 209 682 136

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 211 2265 209 241 1888 163 167 609 128 209 682 136

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 211 2265 209 241 1888 163 167 609 128 209 682 136

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.66 0.34 2.00 3.68 0.32 1.00 2.48 0.52 1.00 2.50 0.50

Final Sat.: 3400 6225 575 3400 6259 541 1700 4215 885 1700 4251 849

Capacity Analysis Module:

Vol/Sat: 0.06 0.36 0.36 0.07 0.30 0.30 0.10 0.14 0.14 0.12 0.16 0.16

Crit Moves: ****

Green/Cycle: 0.10 0.49 0.49 0.10 0.49 0.49 0.14 0.19 0.19 0.17 0.22 0.22

Volume/Cap: 0.62 0.74 0.74 0.74 0.62 0.62 0.72 0.74 0.74 0.74 0.72 0.72

Delay/Veh: 52.3 24.3 30.4 56.8 22.1 25.0 54.6 46.3 54.2 52.7 43.3 49.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 52.3 24.3 30.4 56.8 22.1 25.0 54.6 46.3 54.2 52.7 43.3 49.7

DesignQueue: 8 29 29 9 24 24 12 17 17 15 18 18

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.7
Optimal Cycle: 40 Level Of Service: C

Street Name: S KNOTT RD BALL RD
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1
-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR
Base Vol: 130 951 163 141 581 121 147 603 98 130 668 172
Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04
Initial Bse: 135 989 170 147 604 126 153 627 102 135 695 179
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 135 989 170 147 604 126 153 627 102 135 695 179
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 135 989 170 147 604 126 153 627 102 135 695 179
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 135 989 170 147 604 126 153 627 102 135 695 179
-----|-----|-----|-----|

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700
-----|-----|-----|-----|

Capacity Analysis Module:
Vol/Sat: 0.08 0.29 0.10 0.09 0.18 0.07 0.09 0.18 0.06 0.08 0.20 0.11
Crit Moves: **** **** **** ****
Green/Cycle: 0.16 0.41 0.41 0.12 0.37 0.37 0.13 0.29 0.29 0.13 0.29 0.29
Volume/Cap: 0.48 0.71 0.24 0.71 0.48 0.20 0.71 0.63 0.21 0.63 0.71 0.36
Delay/Veh: 30.2 20.0 14.8 39.5 18.9 16.6 39.0 24.7 20.6 36.2 26.1 22.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 30.2 20.0 14.8 39.5 18.9 16.6 39.0 24.7 20.6 36.2 26.1 22.0
DesignQueue: 6 17 6 7 11 4 8 13 4 7 14 7

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX J

EXISTING + APPROVED PROJECTS + PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE
CALCULATIONS
(AM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING + APPROVED PROJECTS + PROJECT AM PEAK HOUR
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report
Apartment AM Peak Hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	235	578	154	115	698	197	79	524	177	74	485	108	3424
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	235	579	154	115	698	197	79	524	177	74	485	108	3425
#2 BALL RD / WESTERN AVE													
Base	64	589	59	99	657	113	98	730	147	152	784	167	3660
Added	0	0	0	0	0	0	0	0	0	2	1	1	4
Total	64	589	59	99	657	113	98	730	147	154	785	168	3664
#3 WESTERN AVE / CERRITOS AVE													
Base	63	444	56	78	758	136	80	497	114	85	612	95	3019
Added	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	63	444	56	78	759	136	80	497	114	85	612	95	3020
#4 BALL RD / BEACH BLVD													
Base	186	1822	125	149	2435	162	173	593	208	220	701	100	6873
Added	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	186	1822	125	149	2435	162	174	594	208	220	701	100	6875
#5 BALL RD / KNOTT RD													
Base	155	597	206	166	760	234	136	653	107	151	846	125	4136
Added	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	155	597	206	166	760	234	136	653	107	151	847	125	4137
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	5	0	0	0	0	0	1	6
Total	0	0	0	0	0	5	0	0	0	0	0	1	6

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	235		578 154	115		698 197	79		524 177	74		485 108
2 BALL RD / WES	64		589 59	99		657 113	98		730 147	152		784 167
3 WESTERN AVE /	63		444 56	78		758 136	80		497 114	85		612 95
4 BALL RD / BEA	186		1822 125	149		2435 162	173		593 208	220		701 100
5 BALL RD / KNO	155		597 206	166		760 234	136		653 107	151		846 125

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1	WESTERN AVE /	235	579	154	115	698	197	79	524	177	74	485	108
2	BALL RD / WES	64	589	59	99	657	113	98	730	147	154	785	168
3	WESTERN AVE /	63	444	56	78	759	136	80	497	114	85	612	95
4	BALL RD / BEA	186	1822	125	149	2435	162	174	594	208	220	701	100
5	BALL RD / KNO	155	597	206	166	760	234	136	653	107	151	847	125

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection		Base		Future		Change in
		Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 WESTERN AVE / ORANGE AVE	C	25.1	0.701	C 25.1	0.701	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	B	22.3	0.619	B 22.3	0.620	+ 0.001 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	20.0	0.605	B 20.0	0.605	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	32.4	0.777	C 32.4	0.777	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	B	24.8	0.694	B 24.8	0.694	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.701

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 24.0

Optimal Cycle: 37 Level Of Service: C

Street Name:

WESTERN AVE

W ORANGE AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 226 556 148 111 671 189 76 504 170 71 466 104

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 235 578 154 115 698 197 79 524 177 74 485 108

Added Vol: 0 1 0 0 0 0 0 0 0 0 0 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 235 579 154 115 698 197 79 524 177 74 485 108

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 235 579 154 115 698 197 79 524 177 74 485 108

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 235 579 154 115 698 197 79 524 177 74 485 108

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 235 579 154 115 698 197 79 524 177 74 485 108

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.58 0.42 1.00 1.56 0.44 1.00 1.50 0.50 1.00 1.64 0.36

Final Sat.: 1700 2686 714 1700 2653 747 1700 2542 858 1700 2780 620

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.14 0.22 0.22 0.07 0.26 0.26 0.05 0.21 0.21 0.04 0.17 0.17

Crit Moves: ****

Green/Cycle: 0.20 0.45 0.45 0.14 0.38 0.38 0.08 0.30 0.30 0.06 0.29 0.29

Volume/Cap: 0.69 0.48 0.48 0.48 0.69 0.69 0.61 0.69 0.69 0.69 0.61 0.61

Delay/Veh: 32.3 15.3 16.0 31.8 21.2 24.4 39.8 25.5 28.7 46.2 24.6 27.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.3 15.3 16.0 31.8 21.2 24.4 39.8 25.5 28.7 46.2 24.6 27.7

DesignQueue: 11 12 12 6 16 16 4 14 14 4 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.620

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.6

Optimal Cycle: 30 Level Of Service: B

Street Name: WESTERN AVE

BALL RD

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Prot+Permit				Prot+Permit							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	62	566	57	95	632	109	94	702	141	146	754	161
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	64	589	59	99	657	113	98	730	147	152	784	167
Added Vol:	0	0	0	0	0	0	0	0	0	2	1	1
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	64	589	59	99	657	113	98	730	147	154	785	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	589	59	99	657	113	98	730	147	154	785	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	589	59	99	657	113	98	730	147	154	785	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	64	589	59	99	657	113	98	730	147	154	785	168

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.71	0.29	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3089	311	1700	2900	500	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.04	0.19	0.19	0.06	0.23	0.23	0.06	0.21	0.09	0.09	0.23	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.06	0.34	0.34	0.10	0.38	0.38	0.10	0.36	0.36	0.15	0.41	0.41
Volume/Cap:	0.60	0.56	0.56	0.56	0.60	0.60	0.57	0.60	0.24	0.60	0.57	0.24
Delay/Veh:	41.3	21.4	25.8	35.9	19.9	22.9	36.2	20.8	17.4	33.3	18.0	15.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.3	21.4	25.8	35.9	19.9	22.9	36.2	20.8	17.4	33.3	18.0	15.0
DesignQueue:	3	12	12	5	14	14	5	14	5	7	14	6

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.605

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 20.7

Optimal Cycle: 29 Level Of Service: B

Street Name: WESTERN AVE

CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 1 0

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Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 61 427 54 75 729 131 77 478 110 82 588 91

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 63 444 56 78 758 136 80 497 114 85 612 95

Added Vol: 0 0 0 0 1 0 0 0 0 0 0 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 63 444 56 78 759 136 80 497 114 85 612 95

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 63 444 56 78 759 136 80 497 114 85 612 95

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 63 444 56 78 759 136 80 497 114 85 612 95

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 63 444 56 78 759 136 80 497 114 85 612 95

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.78 0.22 1.00 1.70 0.30 1.00 1.63 0.37 1.00 1.73 0.27

Final Sat.: 1700 3018 382 1700 2883 517 1700 2764 636 1700 2944 456

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Capacity Analysis Module:

Vol/Sat: 0.04 0.15 0.15 0.05 0.26 0.26 0.05 0.18 0.18 0.05 0.21 0.21

Crit Moves: **** **** **** ****

Green/Cycle: 0.06 0.39 0.39 0.12 0.45 0.45 0.08 0.34 0.34 0.10 0.36 0.36

Volume/Cap: 0.58 0.38 0.38 0.38 0.58 0.58 0.58 0.53 0.53 0.53 0.58 0.58

Delay/Veh: 40.6 16.8 17.5 31.6 16.3 18.5 38.6 20.9 22.3 35.7 20.8 24.0

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 40.6 16.8 17.5 31.6 16.3 18.5 38.6 20.9 22.3 35.7 20.8 24.0

DesignQueue: 3 9 9 4 15 15 4 12 12 4 13 13

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.777

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 31.8

Optimal Cycle: 62 Level Of Service: C

Street Name: S BEACH BLVD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

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Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 179 1752 120 143 2341 156 166 570 200 212 674 96

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 186 1822 125 149 2435 162 173 593 208 220 701 100

Added Vol: 0 0 0 0 0 0 0 1 1 0 0 0 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 186 1822 125 149 2435 162 174 594 208 220 701 100

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 186 1822 125 149 2435 162 174 594 208 220 701 100

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 186 1822 125 149 2435 162 174 594 208 220 701 100

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 186 1822 125 149 2435 162 174 594 208 220 701 100

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.74 0.26 2.00 3.75 0.25 1.00 2.22 0.78 1.00 2.63 0.37

Final Sat.: 3400 6364 436 3400 6375 425 1700 3777 1323 1700 4464 636

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.05 0.29 0.29 0.04 0.38 0.38 0.10 0.16 0.16 0.13 0.16 0.16

Crit Moves: **** **** ****

Green/Cycle: 0.07 0.50 0.50 0.08 0.50 0.50 0.15 0.21 0.21 0.17 0.23 0.23

Volume/Cap: 0.76 0.58 0.58 0.58 0.76 0.76 0.69 0.76 0.76 0.76 0.69 0.69

Delay/Veh: 61.7 20.8 23.4 53.9 24.2 33.6 52.0 46.4 51.5 53.6 42.3 49.6

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 61.7 20.8 23.4 53.9 24.2 33.6 52.0 46.4 51.5 53.6 42.3 49.6

DesignQueue: 7 22 22 6 30 30 13 18 18 16 18 18

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap. (X): 0.694

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.9

Optimal Cycle: 37 Level Of Service: B

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 149 574 198 160 731 225 131 628 103 145 813 120

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 155 597 206 166 760 234 136 653 107 151 846 125

Added Vol: 0 0 0 0 0 0 0 0 0 0 1 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 155 597 206 166 760 234 136 653 107 151 847 125

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 155 597 206 166 760 234 136 653 107 151 847 125

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 155 597 206 166 760 234 136 653 107 151 847 125

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 155 597 206 166 760 234 136 653 107 151 847 125

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.09 0.18 0.12 0.10 0.22 0.14 0.08 0.19 0.06 0.09 0.25 0.07

Crit Moves: **** **** ****

Green/Cycle: 0.13 0.30 0.30 0.17 0.33 0.33 0.12 0.33 0.33 0.15 0.37 0.37

Volume/Cap: 0.68 0.59 0.41 0.59 0.68 0.42 0.68 0.58 0.19 0.58 0.68 0.20

Delay/Veh: 37.0 23.7 21.9 32.0 23.4 20.4 38.5 21.8 18.3 32.6 21.6 16.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 37.0 23.7 21.9 32.0 23.4 20.4 38.5 21.8 18.3 32.6 21.6 16.7

DesignQueue: 8 12 8 8 15 9 7 13 4 7 16 4

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX K

EXISTING + APPROVED PROJECTS + PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE
CALCULATIONS
(PM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING + APPROVED PROJECTS + PROJECT PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	127	952	94	80	641	135	77	426	87	105	459	119	3301
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	127	953	94	80	641	135	77	426	87	105	459	119	3302
#2 BALL RD / WESTERN AVE													
Base	104	942	155	97	569	104	140	703	94	103	729	134	3874
Added	0	0	0	0	0	0	0	0	0	2	1	2	5
Total	104	942	155	97	569	104	140	703	94	105	730	136	3879
#3 WESTERN AVE / CERRITOS AVE													
Base	127	1075	100	78	571	104	126	666	99	89	490	86	3611
Added	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	127	1075	100	78	572	104	126	666	99	89	490	86	3612
#4 BALL RD / BEACH BLVD													
Base	211	2265	209	241	1888	163	167	609	128	209	682	136	6910
Added	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	211	2265	209	241	1888	163	168	610	128	209	682	136	6912
#5 BALL RD / KNOTT RD													
Base	135	989	170	147	604	126	153	627	102	135	695	179	4061
Added	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	135	989	170	147	604	126	153	627	102	135	696	179	4062
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	5	0	0	0	0	0	1	6
Total	0	0	0	0	0	5	0	0	0	0	0	1	6

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1	WESTERN AVE /	127	952	94	80	641	135	77	426	87	105	459	119
2	BALL RD / WES	104	942	155	97	569	104	140	703	94	103	729	134
3	WESTERN AVE /	127	1075	100	78	571	104	126	666	99	89	490	86
4	BALL RD / BEA	211	2265	209	241	1888	163	167	609	128	209	682	136
5	BALL RD / KNO	135	989	170	147	604	126	153	627	102	135	695	179

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	127		953 94	80		641 135	77		426 87	105		459 119
2 BALL RD / WES	104		942 155	97		569 104	140		703 94	105		730 136
3 WESTERN AVE /	127		1075 100	78		572 104	126		666 99	89		490 86
4 BALL RD / BEA	211		2265 209	241		1888 163	168		610 128	209		682 136
5 BALL RD / KNO	135		989 170	147		604 126	153		627 102	135		696 179

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	B	19.6	0.620	B	19.6	0.620	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	23.6	0.727	C	23.6	0.727	+ 0.000 V/C
# 3 WESTERN AVE / CERRITOS AVE	C	21.7	0.719	C	21.7	0.719	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	32.5	0.756	C	32.5	0.756	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	C	25.0	0.721	C	25.0	0.722	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.620
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.0
Optimal Cycle: 30 Level Of Service: B

Street Name:	WESTERN AVE						W ORANGE AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	1	1	0	0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			Added Vol:			EXISTING:			Initial Fut:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Vol.:		
	122	915	90	1.04	1.04	1.04	127	952	94	0	1	0	0	0	127	953	94	1.00	1.00	1.00	1.00	1.00	1.00	127	953	94	0	0	127	953	94	1.00	1.00	1.00	1.00	1.00	1.00					
	77	616	130	1.04	1.04	1.04	80	641	135	0	0	0	0	0	80	641	135	1.00	1.00	1.00	1.00	1.00	1.00	80	641	135	0	0	80	641	135	1.00	1.00	1.00	1.00	1.00	1.00					
	74	410	84	1.04	1.04	1.04	77	426	87	0	0	0	0	0	77	426	87	1.00	1.00	1.00	1.00	1.00	1.00	77	426	87	0	0	77	426	87	1.00	1.00	1.00	1.00	1.00	1.00					
	101	441	114	1.04	1.04	1.04	105	459	119	0	0	0	0	0	105	459	119	1.00	1.00	1.00	1.00	1.00	1.00	105	459	119	0	0	105	459	119	1.00	1.00	1.00	1.00	1.00	1.00					

Saturation Flow Module:	Sat/Lane:			Adjustment:			Lanes:			Final Sat.:		
	1700	1700	1700	1.00	1.00	1.00	1.00	1.82	0.18	1700	3096	304
	1700	1700	1700	1.00	1.00	1.00	1.00	1.65	0.35	1700	2808	592
	1700	1700	1700	1.00	1.00	1.00	1.00	1.66	0.34	1700	2822	578
	1700	1700	1700	1.00	1.00	1.00	1.00	1.59	0.41	1700	2702	698

Capacity Analysis Module:	Vol/Sat:			Crit Moves:			Green/Cycle:			Volume/Cap:			Delay/Veh:			Delay Adj:			AdjDel/Veh:			DesignQueue:		
	0.07	0.31	0.31	0.05	0.23	0.23	0.15	0.15	0.15	0.06	0.17	0.17	0.15	0.51	0.51	0.51	1.00	1.00	1.00	31.8	13.7	15		
	0.05	0.15	0.15	0.08	0.45	0.45	0.08	0.25	0.25	0.10	0.28	0.28	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13		
	0.06	0.59	0.59	0.08	0.51	0.51	0.08	0.59	0.59	0.10	0.60	0.60	0.08	0.60	0.60	0.60	1.00	1.00	1.00	39.4	15.6	13</		

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.727

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.2

Optimal Cycle: 40 Level Of Service: C

Street Name:

WESTERN AVE

BALL RD

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Prot+Permit				Prot+Permit							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date:	10 Oct 2017 << PM PEAK HOUR											
Base Vol:	100	906	149	93	547	100	135	676	90	99	701	129
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	104	942	155	97	569	104	140	703	94	103	729	134
Added Vol:	0	0	0	0	0	0	0	0	0	2	1	2
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	942	155	97	569	104	140	703	94	105	730	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	942	155	97	569	104	140	703	94	105	730	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	942	155	97	569	104	140	703	94	105	730	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	104	942	155	97	569	104	140	703	94	105	730	136

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.69	0.31	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2920	480	1700	2874	526	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.06	0.32	0.32	0.06	0.20	0.20	0.08	0.21	0.06	0.06	0.21	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.45	0.45	0.08	0.41	0.41	0.12	0.32	0.32	0.10	0.30	0.30
Volume/Cap:	0.49	0.71	0.71	0.71	0.49	0.49	0.71	0.64	0.17	0.64	0.71	0.27
Delay/Veh:	32.7	18.3	24.1	45.2	17.1	18.3	40.5	23.3	18.8	39.3	25.6	20.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	18.3	24.1	45.2	17.1	18.3	40.5	23.3	18.8	39.3	25.6	20.5
DesignQueue:	5	18	18	5	12	12	7	14	4	5	15	5

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.719
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 22.9
Optimal Cycle: 39 Level Of Service: C

Street Name:	WESTERN AVE						CERRITOS AVE						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			Added Vol:			EXISTING:			Initial Fut:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Vol.:		
	122	1034	96	75	549	100	121	640	95	86	471	83																														
	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04																														
	127	1075	100	78	571	104	126	666	99	89	490	86																														
	0	0	0	0	1	0	0	0	0	0	0	0																														
	0	0	0	0	0	0	0	0	0	0	0	0																														
	127	1075	100	78	572	104	126	666	99	89	490	86																														
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																														
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																														
	127	1075	100	78	572	104	126	666	99	89	490	86																														
	0	0	0	0	0	0	0	0	0	0	0	0																														
	127	1075	100	78	572	104	126	666	99	89	490	86																														
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																														
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																														
	127	1075	100	78	572	104	126	666	99	89	490	86																														

Saturation Flow Module:	Sat/Lane:			Adjustment:			Lanes:			Final Sat.:		
	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.83	0.17	1.00	1.69	0.31	1.00	1.74	0.26	1.00	1.70	0.30
	1700	3111	289	1700	2877	523	1700	2961	439	1700	2891	509

Capacity Analysis Module:	Vol/Sat:			Crit Moves:			Green/Cycle:			Volume/Cap:			Delay/Veh:			Delay Adj:			AdjDel/Veh:			DesignQueue:		
	0.07	0.35	0.35	0.05	0.20	0.20	0.07	0.22	0.22	0.05	0.17	0.17												
	****			****			****			****														
	0.15	0.49	0.49	0.07	0.40	0.40	0.12	0.32	0.32	0.07	0.27	0.27												
	0.49	0.70	0.70	0.70	0.49	0.49	0.62	0.70	0.70	0.70	0.62	0.62												
	31.2	16.3	24.9	47.2	17.3	18.5	36.1	24.7	32.8	45.4	25.5	29.9												
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
	31.2	16.3	24.9	47.2	17.3	18.5	36.1	24.7	32.8	45.4	25.5	29.9												
	6	18	18	4	12	12	6	15	15	5	12	12												

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.756
Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 32.4
Optimal Cycle: 58 Level Of Service: C

Street Name:	S BEACH BLVD					BALL RD				
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Protected		Protected		Protected		Protected			
Rights:	Include		Include		Include		Include			
Min. Green:	0	0	0	0	0	0	0	0		
Lanes:	2	0	3	1	0	2	0	2	1	

Volume Module:	>> Count	Date:	10 Oct 2017	<< PM	PEAK HOUR
Base Vol:	203	2178	201	232	1815
Growth Adj:	1.04	1.04	1.04	1.04	1.04
Initial Bse:	211	2265	209	241	1888
Added Vol:	0	0	0	0	0
EXISTING:	0	0	0	0	0
Initial Fut:	211	2265	209	241	1888
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	2265	209	241	1888
Reduct Vol:	0	0	0	0	0
Reduced Vol:	211	2265	209	241	1888
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Vol.:	211	2265	209	241	1888

Saturation Flow Module:	Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.66	0.34	2.00	3.68	0.32	1.00	2.48	0.52	1.00
Final Sat.:	3400	6225	575	3400	6259	541	1700	4216	884	1700

Capacity Analysis Module:	Vol/Sat:	0.06	0.36	0.07	0.30	0.30	0.10	0.14	0.14	0.12	0.16	0.16
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.10	0.49	0.49	0.10	0.49	0.49	0.14	0.20	0.20	0.17	0.22	0.22
Volume/Cap:	0.62	0.74	0.74	0.74	0.62	0.62	0.72	0.74	0.74	0.74	0.72	0.72
Delay/Veh:	52.3	24.3	30.4	56.9	22.1	25.0	54.6	46.3	54.3	52.7	43.4	49.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.3	24.3	30.4	56.9	22.1	25.0	54.6	46.3	54.3	52.7	43.4	49.9
DesignQueue:	8	29	29	9	24	24	12	17	17	15	18	18

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.7

Optimal Cycle: 40 Level Of Service: C

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 130 951 163 141 581 121 147 603 98 130 668 172

Growth Adj: 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04 1.04

Initial Bse: 135 989 170 147 604 126 153 627 102 135 695 179

Added Vol: 0 0 0 0 0 0 0 0 0 0 1 0

EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 135 989 170 147 604 126 153 627 102 135 696 179

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 135 989 170 147 604 126 153 627 102 135 696 179

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 135 989 170 147 604 126 153 627 102 135 696 179

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 135 989 170 147 604 126 153 627 102 135 696 179

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

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Capacity Analysis Module:

Vol/Sat: 0.08 0.29 0.10 0.09 0.18 0.07 0.09 0.18 0.06 0.08 0.20 0.11

Crit Moves: **** **** **** ****

Green/Cycle: 0.16 0.41 0.41 0.12 0.37 0.37 0.13 0.29 0.29 0.13 0.29 0.29

Volume/Cap: 0.48 0.71 0.24 0.71 0.48 0.20 0.71 0.63 0.21 0.63 0.71 0.36

Delay/Veh: 30.2 20.0 14.9 39.6 18.9 16.6 39.0 24.7 20.6 36.2 26.1 21.9

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 30.2 20.0 14.9 39.6 18.9 16.6 39.0 24.7 20.6 36.2 26.1 21.9

DesignQueue: 6 17 6 7 11 4 8 13 4 7 14 7

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX L

APPROVED PROJECTS
TRAFFIX MODEL PROJECTIONS AND
LINK VOLUMES (AVERAGE DAILY TRAFFIC)

Scenario Report

Scenario:	Default Scenario
Command:	Default Command
Volume:	Default Volume
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	APPROVED DAILY
Trip Distribution:	AM PEAK HOUR DISTRIBUTION
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Link Volume Report
Apartment AM Peak Hour

Volume Type	NB Link			SB Link			EB Link			WB Link			Total Volume
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
#1 WESTERN AVE / ORANGE AVE													
Base	1008	993	2001	1018	781	1799	770	901	1671	655	776	1431	6902
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1008	993	2001	1018	781	1799	770	901	1671	655	776	1431	6902
#2 BALL RD / WESTERN AVE													
Base	761	993	1754	916	899	1815	1046	1229	2275	1292	894	2186	8030
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	761	993	1754	916	899	1815	1046	1229	2275	1292	894	2186	8030
#3 WESTERN AVE / CERRITOS AVE													
Base	605	983	1588	1011	672	1683	672	794	1466	768	607	1375	6112
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	605	983	1588	1011	672	1683	672	794	1466	768	607	1375	6112
#4 BALL RD / BEACH BLVD													
Base	2068	2769	4837	2698	2070	4768	1176	1076	2252	1203	1230	2433	14290
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2068	2769	4837	2698	2070	4768	1176	1076	2252	1203	1230	2433	14290
#5 BALL RD / KNOTT RD													
Base	935	992	1927	1130	838	1968	932	1337	2269	1172	1002	2174	8338
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	935	992	1927	1130	838	1968	932	1337	2269	1172	1002	2174	8338
#6													
Base	0	0	0	0	0	0	245	245	490	245	245	490	980
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	245	245	490	245	245	490	980

APPENDIX M

GENERAL PLAN BUILDOUT WITHOUT PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE
CALCULATIONS
(AM PEAK HOUR)

Scenario Report

Scenario:	Default Scenario
Command:	Default Command
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Turning Movement Report
Apartment AM Peak Hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	187	494	144	106	816	206	57	487	236	53	350	89	3225
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	187	494	144	106	816	206	57	487	236	53	350	89	3225
#2 BALL RD / WESTERN AVE													
Base	46	464	68	130	817	81	90	831	149	211	770	137	3794
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	46	464	68	130	817	81	90	831	149	211	770	137	3794
#3 WESTERN AVE / CERRITOS AVE													
Base	46	347	53	69	995	98	76	617	83	113	477	68	3042
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	46	347	53	69	995	98	76	617	83	113	477	68	3042
#4 BALL RD / BEACH BLVD													
Base	134	1392	176	259	2412	188	206	633	325	277	757	92	6851
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	134	1392	176	259	2412	188	206	633	325	277	757	92	6851
#5 BALL RD / KNOTT RD													
Base	112	635	195	241	1091	410	173	602	130	115	699	198	4601
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	112	635	195	241	1091	410	173	602	130	115	699	198	4601

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	187		494 144	106		816 206	57		487 236	53		350 89
2 BALL RD / WES	46		464 68	130		817 81	90		831 149	211		770 137
3 WESTERN AVE /	46		347 53	69		995 98	76		617 83	113		477 68
4 BALL RD / BEA	134		1392 176	259		2412 188	206		633 325	277		757 92
5 BALL RD / KNO	112		635 195	241		1091 410	173		602 130	115		699 198

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 WESTERN AVE / ORANGE AVE	C	xxxxx 0.704	C	xxxxx 0.704	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	xxxxx 0.710	C	xxxxx 0.710	+ 0.000 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	xxxxx 0.671	B	xxxxx 0.671	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	D	xxxxx 0.824	D	xxxxx 0.824	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	C	xxxxx 0.744	C	xxxxx 0.744	+ 0.000 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.704

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 38 Level Of Service: C

Street Name:

WESTERN AVE

W ORANGE AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 187 494 144 106 816 206 57 487 236 53 350 89

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 187 494 144 106 816 206 57 487 236 53 350 89

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 187 494 144 106 816 206 57 487 236 53 350 89

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 187 494 144 106 816 206 57 487 236 53 350 89

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 187 494 144 106 816 206 57 487 236 53 350 89

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.55 0.45 1.00 1.60 0.40 1.00 1.35 0.65 1.00 1.59 0.41

Final Sat.: 1700 2633 767 1700 2715 685 1700 2290 1110 1700 2711 689

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.11 0.19 0.19 0.06 0.30 0.30 0.03 0.21 0.21 0.03 0.13 0.13

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.710

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 38 Level Of Service: C

Street Name: WESTERN AVE

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Permitted Permitted Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 46 464 68 130 817 81 90 831 149 211 770 137

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 46 464 68 130 817 81 90 831 149 211 770 137

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 46 464 68 130 817 81 90 831 149 211 770 137

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 46 464 68 130 817 81 90 831 149 211 770 137

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 46 464 68 130 817 81 90 831 149 211 770 137

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 1.82 0.18 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 2965 435 1700 3093 307 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.03 0.16 0.16 0.08 0.26 0.26 0.05 0.24 0.09 0.12 0.23 0.08

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.671

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name: WESTERN AVE

CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 46 347 53 69 995 98 76 617 83 113 477 68

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 46 347 53 69 995 98 76 617 83 113 477 68

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 46 347 53 69 995 98 76 617 83 113 477 68

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 46 347 53 69 995 98 76 617 83 113 477 68

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 46 347 53 69 995 98 76 617 83 113 477 68

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 1.82 0.18 1.00 1.76 0.24 1.00 1.75 0.25

Final Sat.: 1700 2950 451 1700 3095 305 1700 2997 403 1700 2976 424

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.03 0.12 0.12 0.04 0.32 0.32 0.04 0.21 0.21 0.07 0.16 0.16

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.824

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 75 Level Of Service: D

Street Name:

S BEACH BLVD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0

-----|-----|-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 134 1392 176 259 2412 188 206 633 325 277 757 92

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 134 1392 176 259 2412 188 206 633 325 277 757 92

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 134 1392 176 259 2412 188 206 633 325 277 757 92

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 134 1392 176 259 2412 188 206 633 325 277 757 92

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 134 1392 176 259 2412 188 206 633 325 277 757 92

-----|-----|-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.55 0.45 2.00 3.71 0.29 1.00 2.00 1.00 1.00 2.67 0.33

Final Sat.: 3400 6037 763 3400 6308 492 1700 3400 1700 1700 4547 553

-----|-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.04 0.23 0.23 0.08 0.38 0.38 0.12 0.19 0.19 0.16 0.17 0.17

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD*****
Cycle (sec): 100 Critical Vol./Cap. (X): 0.744
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Street Name:	S KNOTT RD						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	2	0	1	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR	North Bound			South Bound			East Bound			West Bound		
Base Vol:	112	635	195	241	1091	410	173	602	130	115	699	198
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	635	195	241	1091	410	173	602	130	115	699	198
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	112	635	195	241	1091	410	173	602	130	115	699	198
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	635	195	241	1091	410	173	602	130	115	699	198
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	112	635	195	241	1091	410	173	602	130	115	699	198

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.07	0.19	0.11	0.14	0.32	0.24	0.10	0.18	0.08	0.07	0.21	0.12
Crit Moves:	****			****			****			****		

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX N

GENERAL PLAN BUILDOUT WITHOUT PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE
CALCULATIONS
(PM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	GP BUILDOUT PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	145	907	86	58	600	115	61	308	120	75	467	103	3045
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	145	907	86	58	600	115	61	308	120	75	467	103	3045
#2 BALL RD / WESTERN AVE													
Base	75	968	166	135	530	75	101	642	72	112	817	165	3858
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	75	968	166	135	530	75	101	642	72	112	817	165	3858
#3 WESTERN AVE / CERRITOS AVE													
Base	128	1089	92	56	579	101	89	568	71	109	499	73	3454
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	128	1089	92	56	579	101	89	568	71	109	499	73	3454
#4 BALL RD / BEACH BLVD													
Base	239	2152	337	270	1495	176	172	509	205	268	796	208	6827
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	239	2152	337	270	1495	176	172	509	205	268	796	208	6827
#5 BALL RD / KNOTT RD													
Base	117	1272	120	202	724	240	293	495	74	121	617	219	4494
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	117	1272	120	202	724	240	293	495	74	121	617	219	4494

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	145		907 86	58		600 115	61		308 120	75		467 103
2 BALL RD / WES	75		968 166	135		530 75	101		642 72	112		817 165
3 WESTERN AVE /	128		1089 92	56		579 101	89		568 71	109		499 73
4 BALL RD / BEA	239		2152 337	270		1495 176	172		509 205	268		796 208
5 BALL RD / KNO	117		1272 120	202		724 240	293		495 74	121		617 219

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	145		907 86	58	600	115	61	308	120	75	467	103
2 BALL RD / WES	75	968	166	135	530	75	101	642	72	112	817	165
3 WESTERN AVE /	128	1089	92	56	579	101	89	568	71	109	499	73
4 BALL RD / BEA	239	2152	337	270	1495	176	172	509	205	268	796	208
5 BALL RD / KNO	117	1272	120	202	724	240	293	495	74	121	617	219

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	A	18.2	0.580	A	18.2	0.580	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	24.6	0.763	C	24.6	0.763	+ 0.000 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	20.3	0.682	B	20.3	0.682	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	35.4	0.796	C	35.4	0.796	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	D	34.7	0.897	D	34.7	0.897	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.580
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 19.9
Optimal Cycle: 28 Level Of Service: A

Street Name:	WESTERN AVE						W ORANGE AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:	>>	Count	Date:	10 Oct 2017	<<	PM	PEAK	HOURL
Base Vol:	145	907	86	58	600	115	61	308
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	145	907	86	58	600	115	61	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	145	907	86	58	600	115	61	308
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	145	907	86	58	600	115	61	308
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	145	907	86	58	600	115	61	308

Saturation Flow Module:	Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.68	0.32	1.00	1.44	0.56	1.00	1.64	0.36
Final Sat.:	1700	3106	294	1700	2853	547	1700	2447	953	1700	2786	614

Capacity Analysis Module:	Vol/Sat:	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17
Crit Moves:	****				****			****			****		
Green/Cycle:	0.17	0.52	0.52	0.06	0.42	0.42	0.06	0.27	0.27	0.09	0.30	0.30	0.30
Volume/Cap:	0.51	0.56	0.56	0.56	0.51	0.51	0.56	0.47	0.47	0.47	0.56	0.56	0.56
Delay/Veh:	30.3	12.7	15.6	39.9	16.9	18.2	39.5	23.8	24.4	34.6	23.3	25.4	25.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.3	12.7	15.6	39.9	16.9	18.2	39.5	23.8	24.4	34.6	23.3	25.4	25.4
DesignQueue:	7	14	14	3	12	12	3	9	9	4	12	12	12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.763
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.6
Optimal Cycle: 45 Level Of Service: C

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	0	1	0	1

Volume Module:	>>	Count	Date:	10 Oct 2017	<<	PM	PEAK HOUR
Base Vol:	75	968	166	135	530	75	101 642 72 112 817 165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:	75	968	166	135	530	75	101 642 72 112 817 165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:	75	968	166	135	530	75	101 642 72 112 817 165
Reduct Vol:	0	0	0	0	0	0	0 0 0 0 0 0
Reduced Vol:	75	968	166	135	530	75	101 642 72 112 817 165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:	75	968	166	135	530	75	101 642 72 112 817 165

Saturation Flow Module:	
Sat/Lane:	1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:	1.00 1.71 0.29 1.00 1.75 0.25 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.:	1700 2902 498 1700 2979 421 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:	
Vol/Sat:	0.04 0.33 0.33 0.08 0.18 0.18 0.06 0.19 0.04 0.07 0.24 0.10
Crit Moves:	**** **** **** ****
Green/Cycle:	0.11 0.44 0.44 0.11 0.44 0.44 0.08 0.30 0.30 0.10 0.32 0.32
Volume/Cap:	0.40 0.75 0.75 0.75 0.40 0.40 0.75 0.64 0.14 0.64 0.75 0.30
Delay/Veh:	32.7 19.6 26.8 44.1 14.7 15.4 48.3 24.5 19.9 38.3 25.5 19.8
Delay Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	32.7 19.6 26.8 44.1 14.7 15.4 48.3 24.5 19.9 38.3 25.5 19.8
DesignQueue:	4 19 19 7 10 10 5 13 3 6 16 6

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.682
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.6
Optimal Cycle: 35 Level Of Service: B

Street Name:	WESTERN AVE						CERRITOS AVE								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	1089		92		56 579 101		89 568 71		109 499 73	
Base Vol:	128	1089	92	56	579	101	89	568	71	109 499 73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	128	1089	92	56	579	101	89	568	71	109 499 73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
PHF Volume:	128	1089	92	56	579	101	89	568	71	109 499 73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0 0 0
Reduced Vol:	128	1089	92	56	579	101	89	568	71	109 499 73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
Final Vol.:	128	1089	92	56	579	101	89	568	71	109 499 73

Saturation Flow Module:	1700 1700 1700		1700 1700 1700		1700 1700 1700		1700 1700 1700		1700 1700 1700	
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700 1700 1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00
Lanes:	1.00	1.84	0.16	1.00	1.70	0.30	1.00	1.78	0.22	1.00 1.74 0.26
Final Sat.:	1700	3135	265	1700	2895	505	1700	3022	378	1700 2966 434

Capacity Analysis Module:	0.08 0.35 0.35		0.03 0.20 0.20		0.05 0.19 0.19		0.06 0.17 0.17		
Vol/Sat:	0.08	0.35	0.35	0.03	0.20	0.20	0.05	0.19 0.19 0.17	
Crit Moves:	****			****			****		
Green/Cycle:	0.16	0.52	0.52	0.05	0.42	0.42	0.09	0.28 0.28 0.10 0.29 0.29	
Volume/Cap:	0.48	0.67	0.67	0.67	0.48	0.48	0.58	0.67 0.67 0.67 0.58 0.58	
Delay/Veh:	30.7	14.2	21.2	47.8	16.7	17.8	37.6	25.8 34.1 40.2 24.2 28.2	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00	
AdjDel/Veh:	30.7	14.2	21.2	47.8	16.7	17.8	37.6	25.8 34.1 40.2 24.2 28.2	
DesignQueue:	6	17	17	3	12	12	5	13 13 6 12 12	

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.796

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 35.6

Optimal Cycle: 67 Level Of Service: C

Street Name: S BEACH BLVD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0 1 0 2 1 0

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 239 2152 337 270 1495 176 172 509 205 268 796 208

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 239 2152 337 270 1495 176 172 509 205 268 796 208

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 239 2152 337 270 1495 176 172 509 205 268 796 208

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 239 2152 337 270 1495 176 172 509 205 268 796 208

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 239 2152 337 270 1495 176 172 509 205 268 796 208

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 3.46 0.54 2.00 3.58 0.42 1.00 2.14 0.86 1.00 2.38 0.62

Final Sat.: 3400 5879 921 3400 6084 716 1700 3636 1464 1700 4043 1057

Capacity Analysis Module:

Vol/Sat: 0.07 0.37 0.37 0.08 0.25 0.25 0.10 0.14 0.14 0.16 0.20 0.20

Crit Moves: ****

Green/Cycle: 0.13 0.47 0.47 0.10 0.44 0.44 0.13 0.18 0.18 0.20 0.25 0.25

Volume/Cap: 0.56 0.78 0.78 0.78 0.56 0.56 0.79 0.78 0.78 0.78 0.79 0.79

Delay/Veh: 48.7 27.1 32.3 58.4 24.1 25.6 60.3 49.7 55.2 51.6 43.3 50.2

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 48.7 27.1 32.3 58.4 24.1 25.6 60.3 49.7 55.2 51.6 43.3 50.2

DesignQueue: 9 30 30 10 21 21 13 17 17 19 22 22

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 28.7

Optimal Cycle: 85 Level Of Service: D

Street Name: S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 117 1272 120 202 724 240 293 495 74 121 617 219

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 117 1272 120 202 724 240 293 495 74 121 617 219

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 117 1272 120 202 724 240 293 495 74 121 617 219

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 117 1272 120 202 724 240 293 495 74 121 617 219

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 117 1272 120 202 724 240 293 495 74 121 617 219

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.07 0.37 0.07 0.12 0.21 0.14 0.17 0.15 0.04 0.07 0.18 0.13

Crit Moves: **** **** **** ****

Green/Cycle: 0.14 0.42 0.42 0.13 0.42 0.42 0.19 0.27 0.27 0.13 0.20 0.20

Volume/Cap: 0.51 0.89 0.17 0.89 0.51 0.34 0.89 0.55 0.16 0.55 0.89 0.63

Delay/Veh: 32.5 26.1 14.0 55.5 16.8 15.3 47.6 24.8 21.7 33.5 39.7 30.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.5 26.1 14.0 55.5 16.8 15.3 47.6 24.8 21.7 33.5 39.7 30.7

DesignQueue: 6 22 4 10 12 8 14 10 3 6 14 10

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX O

GENERAL PLAN BUILDOUT + PROJECT
TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE
CALCULATIONS
(AM PEAK HOUR)

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING AM PEAK HOUR
Volume:	AM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment AM Peak Hour
Trip Distribution:	AM Peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

Trip Generation Report

Forecast for Apartment AM Peak Hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		11.00	Project (Apart	0.10	0.41	1	5	6	100.0
	Zone 1 Subtotal					1	5	6	100.0
TOTAL						1	5	6	100.0

Trip Distribution Report

Percent Of Trips AM Peak Hour Distribution

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	15.0	14.0	19.0	21.0	4.0	5.0	6.0	4.0	2.0	3.0	4.0

To Gates	
12	
Zone	-----
1	3.0

Turning Movement Report
Apartment AM Peak Hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	187	494	144	106	816	206	57	487	236	53	350	89	3225
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	187	495	144	106	816	206	57	487	236	53	350	89	3226
#2 BALL RD / WESTERN AVE													
Base	46	464	68	130	817	81	90	831	149	211	770	137	3794
Added	0	0	0	0	0	0	0	0	0	2	1	1	4
Total	46	464	68	130	817	81	90	831	149	213	771	138	3798
#3 WESTERN AVE / CERRITOS AVE													
Base	46	347	53	69	995	98	76	617	83	113	477	68	3042
Added	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	46	347	53	69	996	98	76	617	83	113	477	68	3043
#4 BALL RD / BEACH BLVD													
Base	134	1392	176	259	2412	188	206	633	325	277	757	92	6851
Added	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	134	1392	176	259	2412	188	207	634	325	277	757	92	6853
#5 BALL RD / KNOTT RD													
Base	112	635	195	241	1091	410	173	602	130	115	669	198	4571
Added	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	112	635	195	241	1091	410	173	602	130	115	670	198	4572
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	5	0	0	0	0	0	1	6
Total	0	0	0	0	0	5	0	0	0	0	0	1	6

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	187		494 144	106		816 206	57		487 236	53		350 89
2 BALL RD / WES	46		464 68	130		817 81	90		831 149	211		770 137
3 WESTERN AVE /	46		347 53	69		995 98	76		617 83	113		477 68
4 BALL RD / BEA	134		1392 176	259		2412 188	206		633 325	277		757 92
5 BALL RD / KNO	112		635 195	241		1091 410	173		602 130	115		669 198

Intersection Volume Report
Future Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	187		495 144	106		816 206	57		487 236	53		350 89
2 BALL RD / WES	46		464 68	130		817 81	90		831 149	213		771 138
3 WESTERN AVE /	46		347 53	69		996 98	76		617 83	113		477 68
4 BALL RD / BEA	134		1392 176	259		2412 188	207		634 325	277		757 92
5 BALL RD / KNO	112		635 195	241		1091 410	173		602 130	115		670 198

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 WESTERN AVE / ORANGE AVE	C	xxxxx 0.704	C	xxxxx 0.704	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	xxxxx 0.710	C	xxxxx 0.711	+ 0.001 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	xxxxx 0.671	B	xxxxx 0.671	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	D	xxxxx 0.824	D	xxxxx 0.825	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	C	xxxxx 0.735	C	xxxxx 0.736	+ 0.000 V/C

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.704

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 38 Level Of Service: C

Street Name:

WESTERN AVE

W ORANGE AVE

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Prot+Permit					Prot+Permit					Permitted					Permitted				
Rights:	Include					Include					Include					Include				
Min. Green:	0		0		0	0		0		0	0		0		0	0		0		0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	187	494	144	106	816	206	57	487	236	53	350	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	494	144	106	816	206	57	487	236	53	350	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	494	144	106	816	206	57	487	236	53	350	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	494	144	106	816	206	57	487	236	53	350	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	187	494	144	106	816	206	57	487	236	53	350	89

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.55	0.45	1.00	1.60	0.40	1.00	1.35	0.65	1.00	1.59	0.41
Final Sat.:	1700	2633	767	1700	2715	685	1700	2290	1110	1700	2711	689

Capacity Analysis Module:

Vol/Sat:	0.11	0.19	0.19	0.06	0.30	0.30	0.03	0.21	0.21	0.03	0.13	0.13
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.704
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 38 Level Of Service: C

Street Name:	WESTERN AVE						W ORANGE AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	1	1	0	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	187	494	144	106	816	206	57	487	236	53	350	89
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	494	144	106	816	206	57	487	236	53	350	89
Added Vol:	0	1	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	495	144	106	816	206	57	487	236	53	350	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	495	144	106	816	206	57	487	236	53	350	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	495	144	106	816	206	57	487	236	53	350	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	187	495	144	106	816	206	57	487	236	53	350	89

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.55	0.45	1.00	1.60	0.40	1.00	1.35	0.65	1.00	1.59	0.41
Final Sat.:	1700	2634	766	1700	2715	685	1700	2290	1110	1700	2711	689

Capacity Analysis Module:

Vol/Sat:	0.11	0.19	0.19	0.06	0.30	0.30	0.03	0.21	0.21	0.03	0.13	0.13
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.710
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 38 Level Of Service: C

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	2	0	1	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	46	464	68	130	817	81	90	831	149	211	770	137
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	464	68	130	817	81	90	831	149	211	770	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	464	68	130	817	81	90	831	149	211	770	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	464	68	130	817	81	90	831	149	211	770	137
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	46	464	68	130	817	81	90	831	149	211	770	137

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.82	0.18	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2965	435	1700	3093	307	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.03	0.16	0.16	0.08	0.26	0.26	0.05	0.24	0.09	0.12	0.23	0.08
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.711
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 38 Level Of Service: C

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	2	0	1	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	46	464	68	130	817	81	90	831	149	211	770	137
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	464	68	130	817	81	90	831	149	211	770	137
Added Vol:	0	0	0	0	0	0	0	0	0	2	1	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	464	68	130	817	81	90	831	149	213	771	138
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	464	68	130	817	81	90	831	149	213	771	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	464	68	130	817	81	90	831	149	213	771	138
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	46	464	68	130	817	81	90	831	149	213	771	138

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.82	0.18	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2965	435	1700	3093	307	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.03	0.16	0.16	0.08	0.26	0.26	0.05	0.24	0.09	0.13	0.23	0.08
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.671

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: B

Street Name:

WESTERN AVE

CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 1 0

-----|-----|-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 46 347 53 69 995 98 76 617 83 113 477 68

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 46 347 53 69 995 98 76 617 83 113 477 68

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 46 347 53 69 995 98 76 617 83 113 477 68

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 46 347 53 69 995 98 76 617 83 113 477 68

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 46 347 53 69 995 98 76 617 83 113 477 68

-----|-----|-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.74 0.26 1.00 1.82 0.18 1.00 1.76 0.24 1.00 1.75 0.25

Final Sat.: 1700 2950 451 1700 3095 305 1700 2997 403 1700 2976 424

-----|-----|-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.03 0.12 0.12 0.04 0.32 0.32 0.04 0.21 0.21 0.07 0.16 0.16

Crit Moves: **** **** **** ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.671
 Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 34 Level Of Service: B

Street Name:	WESTERN AVE						CERRITOS AVE					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	0	1	0	1	1	0	0

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	46	347	53	69	995	98	76	617	83	113	477	68
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	347	53	69	995	98	76	617	83	113	477	68
Added Vol:	0	0	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	347	53	69	996	98	76	617	83	113	477	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	347	53	69	996	98	76	617	83	113	477	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	347	53	69	996	98	76	617	83	113	477	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	46	347	53	69	996	98	76	617	83	113	477	68

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.82	0.18	1.00	1.76	0.24	1.00	1.75	0.25
Final Sat.:	1700	2950	451	1700	3095	305	1700	2997	403	1700	2976	424

Capacity Analysis Module:

Vol/Sat:	0.03	0.12	0.12	0.04	0.32	0.32	0.04	0.21	0.21	0.07	0.16	0.16
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap. (X): 0.824
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
 Optimal Cycle: 75 Level Of Service: D

Street Name:

S BEACH BLVD

BALL RD

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0		0		0		0		0		0		0		0	
Lanes:	2	0	3	1	0	2	0	3	1	0	1	0	2	1	0	

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol:	134	1392	176	259	2412	188	206	633	325	277	757	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	134	1392	176	259	2412	188	206	633	325	277	757	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	134	1392	176	259	2412	188	206	633	325	277	757	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	1392	176	259	2412	188	206	633	325	277	757	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	134	1392	176	259	2412	188	206	633	325	277	757	92

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.55	0.45	2.00	3.71	0.29	1.00	2.00	1.00	1.00	2.67	0.33
Final Sat.:	3400	6037	763	3400	6308	492	1700	3400	1700	1700	4547	553

Capacity Analysis Module:

Vol/Sat:	0.04	0.23	0.23	0.08	0.38	0.38	0.12	0.19	0.19	0.16	0.17	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

```

*****
Cycle (sec):          150          Critical Vol./Cap.(X):          0.825
Loss Time (sec):      8 (Y+R=4.0 sec) Average Crit Del (sec/veh):  xxxxxx
Optimal Cycle:        75          Level Of Service:              D
*****

```

Street Name:	S BEACH BLVD										BALL RD									
Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0		0		0	0		0		0	0		0		0	0		0		0
Lanes:	2	0	3	1	0	2	0	3	1	0	1	0	2	1	0	1	0	2	1	0

Volume Module:	>>	Count	Date:	10 Oct 2017	<<	AM	PEAK	HOUR				
Base Vol:	134	1392	176	259	2412	188	206	633	325	277	757	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	134	1392	176	259	2412	188	206	633	325	277	757	92
Added Vol:	0	0	0	0	0	0	1	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	134	1392	176	259	2412	188	207	634	325	277	757	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	134	1392	176	259	2412	188	207	634	325	277	757	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	1392	176	259	2412	188	207	634	325	277	757	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	134	1392	176	259	2412	188	207	634	325	277	757	92

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.55	0.45	2.00	3.71	0.29	1.00	2.00	1.00	1.00	2.67	0.33
Final Sat.:	3400	6037	763	3400	6308	492	1700	3400	1700	1700	4547	553

```
Capacity Analysis Module:
Vol/Sat:      0.04 0.23  0.23  0.08 0.38  0.38  0.12 0.19  0.19  0.16 0.17  0.17
Crit Moves:   ****              ****              ****              ****
```

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.735

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx

Optimal Cycle: 41 Level Of Service: C

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Prot+Permit

Prot+Permit

Prot+Permit

Prot+Permit

Rights: Include

Include

Include

Include

Min. Green: 0 0 0

0 0 0

0 0 0

0 0 0

Lanes: 1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

1 0 2 0 1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR

Base Vol: 112 635 195 241 1091 410 173 602 130 115 669 198

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 112 635 195 241 1091 410 173 602 130 115 669 198

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 112 635 195 241 1091 410 173 602 130 115 669 198

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 112 635 195 241 1091 410 173 602 130 115 669 198

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 112 635 195 241 1091 410 173 602 130 115 669 198

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

Capacity Analysis Module:

Vol/Sat: 0.07 0.19 0.11 0.14 0.32 0.24 0.10 0.18 0.08 0.07 0.20 0.12

Crit Moves: ****

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD*****
Cycle (sec): 100 Critical Vol./Cap. (X): 0.736
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Street Name:		S KNOTT RD				BALL RD					
Approach:		North Bound		South Bound		East Bound		West Bound			
Movement:		L	T	R	L	T	R	L	T	R	
Control:		Prot+Permit		Prot+Permit		Prot+Permit		Prot+Permit			
Rights:		Include		Include		Include		Include			
Min. Green:		0	0	0	0	0	0	0	0	0	
Lanes:		1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << AM PEAK HOUR												
Base Vol:	112	635	195	241	1091	410	173	602	130	115	669	198
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	635	195	241	1091	410	173	602	130	115	669	198
Added Vol:	0	0	0	0	0	0	0	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	112	635	195	241	1091	410	173	602	130	115	670	198
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	112	635	195	241	1091	410	173	602	130	115	670	198
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	635	195	241	1091	410	173	602	130	115	670	198
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	112	635	195	241	1091	410	173	602	130	115	670	198

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:												
Vol/Sat:	0.07	0.19	0.11	0.14	0.32	0.24	0.10	0.18	0.08	0.07	0.20	0.12
Crit Moves:	****				****		****				****	

Project Trips Report
Apartment AM Peak Hour

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
Zone #1:												
1 WESTERN AVE /	0		1 0	0	0	0	0	0	0	0	0	0
2 BALL RD / WES	0	0	0	0	0	0	0	0	0	2	1	1
3 WESTERN AVE /	0	0	0	0	1	0	0	0	0	0	0	0
4 BALL RD / BEA	0	0	0	0	0	0	1	1	0	0	0	0
5 BALL RD / KNO	0	0	0	0	0	0	0	0	0	0	1	0

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010

APPENDIX P

GENERAL PLAN BUILDOUT + PROJECT TRAFFIX MODEL PROJECTIONS AND INTERSECTION LEVEL OF SERVICE CALCULATIONS (PM PEAK HOUR)

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Scenario Report

Scenario:	Default Scenario
Command:	EXISTING PM PEAK HOUR
Volume:	PM PEAK HOUR
Geometry:	Default Geometry
Impact Fee:	Default Impact Fee
Trip Generation:	Apartment PM Peak Hour
Trip Distribution:	PM peak Hour Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Trip Generation Report

Forecast for Apartment PM Peak hour

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total % Of Trips Total
1		11.00	Project (Apart	0.40	0.22	4	2	6 100.0
	Zone 1 Subtotal					4	2	6 100.0
TOTAL						4	2	6 100.0

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Trip Distribution Report

Percent Of Trips PM Peak Hour Distribution Inbound

Zone	To Gates										
	1	2	3	4	5	6	7	8	9	10	11
1	15.0	25.0	15.0	18.0	4.0	3.0	3.0	3.0	2.0	3.0	4.0

Zone	To Gates										
	12										
1	5.0										

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Turning Movement Report
Apartment PM Peak hour

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 WESTERN AVE / ORANGE AVE													
Base	145	907	86	58	600	115	61	308	120	75	467	103	3045
Added	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	145	908	86	58	601	115	61	308	120	75	467	103	3047
#2 BALL RD / WESTERN AVE													
Base	75	968	166	135	530	75	101	642	72	112	817	165	3858
Added	0	0	1	1	0	0	0	1	0	1	1	1	6
Total	75	968	167	136	530	75	101	643	72	113	818	166	3864
#3 WESTERN AVE / CERRITOS AVE													
Base	128	1089	92	56	579	101	89	568	71	109	499	73	3454
Added	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	128	1090	92	56	579	101	89	568	71	109	499	73	3455
#4 BALL RD / BEACH BLVD													
Base	239	2152	337	270	1495	176	172	509	205	268	796	208	6827
Added	0	0	0	0	0	0	3	0	0	0	1	0	4
Total	239	2152	337	270	1495	176	175	509	205	268	797	208	6831
#5 BALL RD / KNOTT RD													
Base	117	1272	120	202	724	240	293	495	74	121	617	219	4494
Added	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	117	1272	120	202	724	240	293	496	74	121	617	219	4495
#6													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	2	0	0	0	0	0	4	6
Total	0	0	0	0	0	2	0	0	0	0	0	4	6

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Base Volume Alternative

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1 WESTERN AVE /	145		907 86	58		600 115	61		308 120	75		467 103
2 BALL RD / WES	75		968 166	135		530 75	101		642 72	112		817 165
3 WESTERN AVE /	128		1089 92	56		579 101	89		568 71	109		499 73
4 BALL RD / BEA	239		2152 337	270		1495 176	172		509 205	268		796 208
5 BALL RD / KNO	117		1272 120	202		724 240	293		495 74	121		617 219

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
1	WESTERN AVE /	145	908	86	58	601	115	61	308	120	75	467	103
2	BALL RD / WES	75	968	167	136	530	75	101	643	72	113	818	166
3	WESTERN AVE /	128	1090	92	56	579	101	89	568	71	109	499	73
4	BALL RD / BEA	239	2152	337	270	1495	176	175	509	205	268	797	208
5	BALL RD / KNO	117	1272	120	202	724	240	293	496	74	121	617	219

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 WESTERN AVE / ORANGE AVE	A	18.2	0.580	A	18.2	0.580	+ 0.000 V/C
# 2 BALL RD / WESTERN AVE	C	24.6	0.763	C	24.7	0.764	+ 0.001 V/C
# 3 WESTERN AVE / CERRITOS AVE	B	20.3	0.682	B	20.3	0.683	+ 0.000 V/C
# 4 BALL RD / BEACH BLVD	C	35.4	0.796	C	35.4	0.796	+ 0.000 V/C
# 5 BALL RD / KNOTT RD	D	34.7	0.897	D	34.7	0.897	+ 0.000 V/C

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.580

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 19.9

Optimal Cycle: 28 Level Of Service: A

Street Name: WESTERN AVE W ORANGE AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Permitted Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 145 907 86 58 600 115 61 308 120 75 467 103

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 145 907 86 58 600 115 61 308 120 75 467 103

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 145 907 86 58 600 115 61 308 120 75 467 103

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 145 907 86 58 600 115 61 308 120 75 467 103

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 145 907 86 58 600 115 61 308 120 75 467 103

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.83 0.17 1.00 1.68 0.32 1.00 1.44 0.56 1.00 1.64 0.36

Final Sat.: 1700 3106 294 1700 2853 547 1700 2447 953 1700 2786 614

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.09 0.29 0.29 0.03 0.21 0.21 0.04 0.13 0.13 0.04 0.17 0.17

Crit Moves: **** **** **** ****

Green/Cycle: 0.17 0.52 0.52 0.06 0.42 0.42 0.06 0.27 0.27 0.09 0.30 0.30

Volume/Cap: 0.51 0.56 0.56 0.56 0.51 0.51 0.56 0.47 0.47 0.47 0.56 0.56

Delay/Veh: 30.3 12.7 15.6 39.9 16.9 18.2 39.5 23.8 24.4 34.6 23.3 25.4

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 30.3 12.7 15.6 39.9 16.9 18.2 39.5 23.8 24.4 34.6 23.3 25.4

DesignQueue: 7 14 14 3 12 12 3 9 9 4 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 WESTERN AVE / ORANGE AVE

Cycle (sec): 100 Critical Vol./Cap.(X): 0.580
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 19.9
Optimal Cycle: 28 Level Of Service: A

Street Name:	WESTERN AVE						W ORANGE AVE											
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R			
Control:	Prot+Permit						Prot+Permit						Permitted					
Rights:	Include						Include						Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	1	1	0	0	1	0	1	1	0	1	0	1	1	0		

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			Added Vol:			EXISTING:			Initial Fut:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Vol.:		
	145	907	86	58	600	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	907	86	58	600	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	145	908	86	58	601	115	61	308	120	75	467	103	0	0	0	0	0	0	0	0	0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			

Saturation Flow Module:	Sat/Lane:			Adjustment:			Lanes:			Final Sat.:		
	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00	1.83	0.17	1.00	1.68	0.32	1.00	1.44	0.56	1.00	1.64	0.36
	1700	3106	294	1700	2854	546	1700	2447	953	1700	2786	614

Capacity Analysis Module:	Vol/Sat:			Crit Moves:			Green/Cycle:			Volume/Cap:			Delay/Veh:			Delay Adj:			AdjDel/Veh:			DesignQueue:		
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03	0.21	0.21	0.04	0.13	0.13	0.04	0.17	0.17	0.51	0.56	0.56	30.3	12.7	15.6	1.00	1.00	1.00	30.3	12.7	15.6
	0.09	0.29	0.29	0.03</																				

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.763

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.6

Optimal Cycle: 45 Level Of Service: C

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1

Volume Module:	>>	Count	Date:	10 Oct 2017	<<	PM	PEAK HOUR
Base Vol:	75	968	166	135	530	75	101 642 72 112 817 165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:	75	968	166	135	530	75	101 642 72 112 817 165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:	75	968	166	135	530	75	101 642 72 112 817 165
Reduct Vol:	0	0	0	0	0	0	0 0 0 0 0 0
Reduced Vol:	75	968	166	135	530	75	101 642 72 112 817 165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.:	75	968	166	135	530	75	101 642 72 112 817 165

Saturation Flow Module:	Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.71	0.29	1.00	1.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2902	498	1700	2979	421	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:	Vol/Sat:	0.04	0.33	0.33	0.08	0.18	0.18	0.06	0.19	0.04	0.07	0.24	0.10
Crit Moves:	****				****			****			****		
Green/Cycle:	0.11	0.44	0.44	0.11	0.44	0.44	0.08	0.30	0.30	0.10	0.32	0.32	
Volume/Cap:	0.40	0.75	0.75	0.75	0.40	0.40	0.75	0.64	0.14	0.64	0.75	0.30	
Delay/Veh:	32.7	19.6	26.8	44.1	14.7	15.4	48.3	24.5	19.9	38.3	25.5	19.8	
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	32.7	19.6	26.8	44.1	14.7	15.4	48.3	24.5	19.9	38.3	25.5	19.8	
DesignQueue:	4	19	19	7	10	10	5	13	3	6	16	6	

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 BALL RD / WESTERN AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.764
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 23.7
Optimal Cycle: 45 Level Of Service: C

Street Name:	WESTERN AVE						BALL RD					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR	WESTERN AVE NB			WESTERN AVE SB			BALL RD EB			BALL RD WB		
Base Vol:	75	968	166	135	530	75	101	642	72	112	817	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	75	968	166	135	530	75	101	642	72	112	817	165
Added Vol:	0	0	1	1	0	0	0	1	0	1	1	1
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	75	968	167	136	530	75	101	643	72	113	818	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	968	167	136	530	75	101	643	72	113	818	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	968	167	136	530	75	101	643	72	113	818	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	75	968	167	136	530	75	101	643	72	113	818	166

Saturation Flow Module:	WESTERN AVE NB			WESTERN AVE SB			BALL RD EB			BALL RD WB		
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.71	0.29	1.00	1.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	2900	500	1700	2979	421	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:	WESTERN AVE NB			WESTERN AVE SB			BALL RD EB			BALL RD WB		
Vol/Sat:	0.04	0.33	0.33	0.08	0.18	0.18	0.06	0.19	0.04	0.07	0.24	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.44	0.44	0.11	0.44	0.44	0.08	0.30	0.30	0.10	0.32	0.32
Volume/Cap:	0.40	0.75	0.75	0.75	0.40	0.40	0.75	0.64	0.14	0.64	0.75	0.30
Delay/Veh:	32.7	19.6	26.8	44.1	14.7	15.4	48.4	24.6	20.0	38.3	25.5	19.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	19.6	26.8	44.1	14.7	15.4	48.4	24.6	20.0	38.3	25.5	19.8
DesignQueue:	4	19	19	7	10	10	5	13	3	6	16	6

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.682

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.6

Optimal Cycle: 35 Level Of Service: B

Street Name: WESTERN AVE CERRITOS AVE

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Protected Protected Protected Protected

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 128 1089 92 56 579 101 89 568 71 109 499 73

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 128 1089 92 56 579 101 89 568 71 109 499 73

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 128 1089 92 56 579 101 89 568 71 109 499 73

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 128 1089 92 56 579 101 89 568 71 109 499 73

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 128 1089 92 56 579 101 89 568 71 109 499 73

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.84 0.16 1.00 1.70 0.30 1.00 1.78 0.22 1.00 1.74 0.26

Final Sat.: 1700 3135 265 1700 2895 505 1700 3022 378 1700 2966 434

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.08 0.35 0.35 0.03 0.20 0.20 0.05 0.19 0.19 0.06 0.17 0.17

Crit Moves: ****

Green/Cycle: 0.16 0.52 0.52 0.05 0.42 0.42 0.09 0.28 0.28 0.10 0.29 0.29

Volume/Cap: 0.48 0.67 0.67 0.67 0.48 0.48 0.58 0.67 0.67 0.67 0.58 0.58

Delay/Veh: 30.7 14.2 21.2 47.8 16.7 17.8 37.6 25.8 34.1 40.2 24.2 28.2

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 30.7 14.2 21.2 47.8 16.7 17.8 37.6 25.8 34.1 40.2 24.2 28.2

DesignQueue: 6 17 17 3 12 12 5 13 13 6 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 WESTERN AVE / CERRITOS AVE

Cycle (sec): 100 Critical Vol./Cap. (X): 0.683
Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 21.6
Optimal Cycle: 35 Level Of Service: B

Street Name: WESTERN AVE CERRITOS AVE
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 0
-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR
Base Vol: 128 1089 92 56 579 101 89 568 71 109 499 73
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 128 1089 92 56 579 101 89 568 71 109 499 73
Added Vol: 0 1 0 0 0 0 0 0 0 0 0 0
EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 128 1090 92 56 579 101 89 568 71 109 499 73
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 128 1090 92 56 579 101 89 568 71 109 499 73
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 128 1090 92 56 579 101 89 568 71 109 499 73
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 128 1090 92 56 579 101 89 568 71 109 499 73
-----|-----|-----|-----|

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.84 0.16 1.00 1.70 0.30 1.00 1.78 0.22 1.00 1.74 0.26
Final Sat.: 1700 3135 265 1700 2895 505 1700 3022 378 1700 2966 434
-----|-----|-----|-----|

Capacity Analysis Module:
Vol/Sat: 0.08 0.35 0.35 0.03 0.20 0.20 0.05 0.19 0.19 0.06 0.17 0.17
Crit Moves: **** * * * * *
Green/Cycle: 0.16 0.52 0.52 0.05 0.42 0.42 0.09 0.28 0.28 0.10 0.29 0.29
Volume/Cap: 0.48 0.67 0.67 0.67 0.48 0.48 0.58 0.67 0.67 0.67 0.58 0.58
Delay/Veh: 30.7 14.2 21.2 47.8 16.7 17.8 37.6 25.8 34.1 40.2 24.2 28.2
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 30.7 14.2 21.2 47.8 16.7 17.8 37.6 25.8 34.1 40.2 24.2 28.2
DesignQueue: 6 17 17 3 12 12 5 13 13 6 12 12

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap. (X): 0.796

Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 35.6

Optimal Cycle: 67 Level Of Service: C

Street Name:

S BEACH BLVD

BALL RD

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	1	0	0	2	0	2	1	0	0

Volume Module:	>>	Count	Date:	10 Oct 2017	<<	PM	PEAK	HOURL				
Base Vol:	239	2152	337	270	1495	176	172	509	205	268	796	208
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	239	2152	337	270	1495	176	172	509	205	268	796	208
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	239	2152	337	270	1495	176	172	509	205	268	796	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	239	2152	337	270	1495	176	172	509	205	268	796	208
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	239	2152	337	270	1495	176	172	509	205	268	796	208

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.46	0.54	2.00	3.58	0.42	1.00	2.14	0.86	1.00	2.38	0.62
Final Sat.:	3400	5879	921	3400	6084	716	1700	3636	1464	1700	4043	1057

Capacity Analysis Module:

Vol/Sat:	0.07	0.37	0.37	0.08	0.25	0.25	0.10	0.14	0.14	0.16	0.20	0.20
Crit Moves:	****			****			****			****		
Green/Cycle:	0.13	0.47	0.47	0.10	0.44	0.44	0.13	0.18	0.18	0.20	0.25	0.25
Volume/Cap:	0.56	0.78	0.78	0.78	0.56	0.56	0.79	0.78	0.78	0.78	0.79	0.79
Delay/Veh:	48.7	27.1	32.3	58.4	24.1	25.6	60.3	49.7	55.2	51.6	43.3	50.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	27.1	32.3	58.4	24.1	25.6	60.3	49.7	55.2	51.6	43.3	50.2
DesignQueue:	9	30	30	10	21	21	13	17	17	19	22	22

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 BALL RD / BEACH BLVD

Cycle (sec): 150 Critical Vol./Cap.(X): 0.796
Loss Time (sec): 8 (Y+R=4.0 sec) Average Crit Del (sec/veh): 35.6
Optimal Cycle: 67 Level Of Service: C

Street Name: S BEACH BLVD BALL RD
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 1 0 2 0 3 1 0 1 0 2 1 0
-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR
Base Vol: 239 2152 337 270 1495 176 172 509 205 268 796 208
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 239 2152 337 270 1495 176 172 509 205 268 796 208
Added Vol: 0 0 0 0 0 0 3 0 0 0 1 0
EXISTING: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 239 2152 337 270 1495 176 175 509 205 268 797 208
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 239 2152 337 270 1495 176 175 509 205 268 797 208
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 239 2152 337 270 1495 176 175 509 205 268 797 208
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 239 2152 337 270 1495 176 175 509 205 268 797 208
-----|-----|-----|-----|

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.46 0.54 2.00 3.58 0.42 1.00 2.14 0.86 1.00 2.38 0.62
Final Sat.: 3400 5879 921 3400 6084 716 1700 3636 1464 1700 4044 1056
-----|-----|-----|-----|

Capacity Analysis Module:
Vol/Sat: 0.07 0.37 0.37 0.08 0.25 0.25 0.10 0.14 0.14 0.16 0.20 0.20
Crit Moves: **** * 0.13 0.18 0.18 0.20 0.25 0.25
Green/Cycle: 0.13 0.47 0.47 0.10 0.44 0.44 0.13 0.18 0.18 0.20 0.25 0.25
Volume/Cap: 0.56 0.78 0.78 0.78 0.56 0.56 0.79 0.78 0.78 0.78 0.79 0.79
Delay/Veh: 48.7 27.1 32.3 58.4 24.1 25.6 60.5 49.7 55.2 51.6 43.6 50.8
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 48.7 27.1 32.3 58.4 24.1 25.6 60.5 49.7 55.2 51.6 43.6 50.8
DesignQueue: 9 30 30 10 21 21 13 17 17 19 22 22

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 28.7

Optimal Cycle: 85 Level Of Service: D

Street Name:

S KNOTT RD

BALL RD

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|

Control: Prot+Permit Prot+Permit Prot+Permit Prot+Permit

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 2 0 1

-----|-----|-----|-----|

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol: 117 1272 120 202 724 240 293 495 74 121 617 219

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 117 1272 120 202 724 240 293 495 74 121 617 219

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 117 1272 120 202 724 240 293 495 74 121 617 219

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 117 1272 120 202 724 240 293 495 74 121 617 219

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 117 1272 120 202 724 240 293 495 74 121 617 219

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Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00 2.00 1.00

Final Sat.: 1700 3400 1700 1700 3400 1700 1700 3400 1700 1700 3400 1700

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.07 0.37 0.07 0.12 0.21 0.14 0.17 0.15 0.04 0.07 0.18 0.13

Crit Moves: ****

Green/Cycle: 0.14 0.42 0.42 0.13 0.42 0.42 0.19 0.27 0.27 0.13 0.20 0.20

Volume/Cap: 0.51 0.89 0.17 0.89 0.51 0.34 0.89 0.55 0.16 0.55 0.89 0.63

Delay/Veh: 32.5 26.1 14.0 55.5 16.8 15.3 47.6 24.8 21.7 33.5 39.7 30.7

Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 32.5 26.1 14.0 55.5 16.8 15.3 47.6 24.8 21.7 33.5 39.7 30.7

DesignQueue: 6 22 4 10 12 8 14 10 3 6 14 10

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 BALL RD / KNOTT RD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897

Loss Time (sec): 5 (Y+R=4.0 sec) Average Crit Del (sec/veh): 28.7

Optimal Cycle: 85 Level Of Service: D

Street Name:	S KNOTT RD				BALL RD					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Prot+Permit		Prot+Permit		Prot+Permit		Prot+Permit			
Rights:	Include		Include		Include		Include			
Min. Green:	0	0	0	0	0	0	0	0		
Lanes:	1	0	2	0	1	1	0	2	0	1

Volume Module: >> Count Date: 10 Oct 2017 << PM PEAK HOUR

Base Vol:	117	1272	120	202	724	240	293	495	74	121	617	219
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	1272	120	202	724	240	293	495	74	121	617	219
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
EXISTING:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	117	1272	120	202	724	240	293	496	74	121	617	219
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	1272	120	202	724	240	293	496	74	121	617	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	1272	120	202	724	240	293	496	74	121	617	219
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	117	1272	120	202	724	240	293	496	74	121	617	219

Saturation Flow Module:

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1700	3400	1700	1700	3400	1700	1700	3400	1700	1700	3400	1700

Capacity Analysis Module:

Vol/Sat:	0.07	0.37	0.07	0.12	0.21	0.14	0.17	0.15	0.04	0.07	0.18	0.13
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.14	0.42	0.42	0.13	0.42	0.42	0.19	0.27	0.27	0.13	0.20	0.20
Volume/Cap:	0.51	0.89	0.17	0.89	0.51	0.34	0.89	0.55	0.16	0.55	0.89	0.63
Delay/Veh:	32.5	26.1	14.0	55.5	16.8	15.3	47.6	24.8	21.7	33.5	39.7	30.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.5	26.1	14.0	55.5	16.8	15.3	47.6	24.8	21.7	33.5	39.7	30.7
DesignQueue:	6	22	4	10	12	8	14	10	3	6	14	10

Note: Queue reported is the number of cars per lane.

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Project Trips Report
Apartment PM Peak hour

Node Intersection	Northbound			Southbound			Eastbound			Westbound		
	L	--	T -- R	L	--	T -- R	L	--	T -- R	L	--	T -- R
Zone #1:												
1 WESTERN AVE /	0		1	0		0	0		1	0		0
2 BALL RD / WES	0		0	1		0	0		1	0		1
3 WESTERN AVE /	0		1	0		0	0		0	0		0
4 BALL RD / BEA	0		0	0		0	3		0	0		0
5 BALL RD / KNO	0		0	0		0	0		1	0		0

TRAFFIC IMPACT ANALYSIS FOR
3175 BALL ROAD, ANAHEIM, CA

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node Intersection	NB	SB	EB	WB
1 WESTERN AVE / ORANGE AVE	101100	101100	101100	101100
2 BALL RD / WESTERN AVE	101100	101100	102010	102010
3 WESTERN AVE / CERRITOS AVE	101100	101100	101100	101100
4 BALL RD / BEACH BLVD	203100	203100	102100	102100
5 BALL RD / KNOTT RD	102010	102010	102010	102010