Appendix D

Final Transportation Impact Study for the Natomas Fountains Project

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Final Transportation Impact Study for the Natomas Fountains Project

Prepared for
City of Sacramento

June 22, 2016

FEHR & PEERS

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EXECUTIVE SUMMARY

This study analyzes the transportation impacts associated with the proposed 115,880 square-foot Natomas Fountains retail project, which would be located on Truxel Road north of Interstate 80 in the City of Sacramento. The potential off-site traffic impacts of the project are analyzed under existing and cumulative conditions. Impacts to transit, bicycle, parking, and pedestrian circulation are also evaluated. A detailed evaluation of project access is also conducted.

PROJECT DESCRIPTION

The proposed project would be comprised of the following land uses (see **Figure 2** for project site plan):

- 55,375 square feet of general retail,
- 31,605 square feet of high-turnover sit-down restaurants, and
- 28,900 square-foot supermarket.

A surface parking lot consisting of 525 parking spaces would be provided. Vehicular access to the site would be provided by two access points along the existing driveway that serves the adjacent Natomas Village Shopping Center, and a new right-turn only driveway on Truxel Road.

EXISTING CONDITIONS

Seven study intersections along the Truxel Road and Gateway Park Boulevard corridors were selected for analysis during the weekday PM peak hour. This period is most appropriate for study because background traffic levels and the project's trip generation are each considerable during this period. Had an AM peak hour analysis been conducted, fewer (or no) project impacts would have been identified. Because the adjacent Natomas Marketplace Retail Center is known to generate considerable levels of traffic on weekends, travel conditions along Truxel Road during a Saturday mid-day period were also evaluated.

EXISTING PLUS PROJECT CONDITIONS

Although the proposed project would cause delays to increase at most intersections, it would not cause any intersections to worsen from acceptable to unacceptable levels, or exacerbate to a significant degree any intersections that currently operate unacceptably. Therefore, impacts to study intersections are less than significant and no mitigation is required.

The project would not disrupt or adversely affect existing or planned transit facilities. The project can be accessed by two Regional Transit bus routes that stop within ¼-mile of the project site. The project would not interfere with any existing or planned bicycle or pedestrian facilities. The project site plan shows sidewalks along its frontage and internal pedestrian connections. For these reasons, project impacts to transit, bicycle, and pedestrian facilities are considered less than significant. Therefore, mitigations are not required.

Based on counts collected during a recent Saturday mid-day peak period and the project's expected Saturday trip generation, project impacts during the Saturday mid-day peak hour would be less severe than any impacts identified during the weekday PM peak hour.

Construction of the proposed project would generate a variety of truck and employee trips. Since the magnitude of these trips during peak hours would be less than that of the proposed project, traffic impacts when compared to project operations would not be significant. The project applicant will develop a Construction Traffic Management Plan (TMP) to the satisfaction of the City's Department of Public Works. The overall goal of the Construction TMP will be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users.

CUMULATIVE CONDITIONS

The proposed project would cause a cumulatively considerable impact to Gateway Park Boulevard/North Freeway Boulevard intersection. This impact and the recommended mitigation are described below.

Impact TR-1: Cumulatively considerable impact (LOS F operations exacerbated) at Gateway Park Boulevard/North Freeway Boulevard intersection during the PM peak hour.

Mitigation TR-1: Pay fair share cost of the following improvements:

- *Restripe eastbound approach at Gateway Park Boulevard/North Freeway Boulevard intersection to consist of one left-turn lane, one through lane, and one right-turn lane.*
- *Coordinate traffic signal at Gateway Park Boulevard/North Freeway Boulevard intersection such that the westbound left-turn is coordinated with the westbound left-turn at Truxel Road/Gateway Park Boulevard.*
- *Realign/restripe the southbound departing lanes from the Gateway Park Boulevard/North Freeway Boulevard intersection such that both westbound left turn lanes from North Freeway Boulevard become left-turn lanes approaching Truxel Road (refer to Figure 10 for illustration of improvements).*
- *Modify the southbound Truxel Road approach at Gateway Park Boulevard to construct a dedicated u-turn lane (refer to Figure 11 for illustration of improvements).*

The net effect of the above improvements is more balanced lane utilization departing the Gateway Park Boulevard/North Freeway Boulevard intersection, coordinated operations with Truxel Road/Gateway Park Boulevard, more effective lane assignments exiting the project site onto Gateway Park Boulevard, and additional capacity at the Truxel Road/Gateway Park Boulevard intersection.

These improvements would restore operations at the Gateway Park Boulevard/North Freeway Boulevard intersection to an acceptable LOS E condition. The project's fair share traffic contribution is 42 percent at the Gateway Park Boulevard/North Freeway Boulevard intersection and 20 percent at the Truxel Road/Gateway Park Boulevard intersection. This mitigation would reduce the impact to less than significant.

Cumulative project impacts to transit, bicycle, and pedestrian facilities are considered less than significant. Therefore, mitigations are not required.

PROJECT ACCESS AND INTERNAL CIRCULATION EVALUATION

Fehr & Peers conducted a detailed evaluation of project access based on the project site plan. **Figure ES-1** illustrates the recommended modifications to the site plan to accommodate vehicles, delivery trucks, and pedestrians. Key recommendations from this figure include:

- Construct a right-turn deceleration lane on northbound Truxel Road at proposed Driveway #1.
- Directly align the westerly project driveway #2 with the existing Natomas Village westerly driveway and operate as an all-way stop controlled intersection with crosswalks.
- Relocate easterly project driveway #3 further west (situated about 275 feet from westerly driveway) to permit full-access. Operate with all-way stop control. Confirm that delivery trucks can maneuver through the parking lot and exit at Driveway 3.
- Construct narrow raised median on internal driveway to restrict movements at easterly Natomas Village Shopping Center driveway to right-turns.
- Work with Natomas Village Shopping Center owner to investigate concept of constructing a 4th leg to the relocated project driveway #3 intersection.

The two all-way stop-control intersections proposed along the internal driveway would each operate at LOS A under cumulative plus project conditions with all mitigation measures in place. Traffic would not spill back from one all-way-stop intersection to the other.

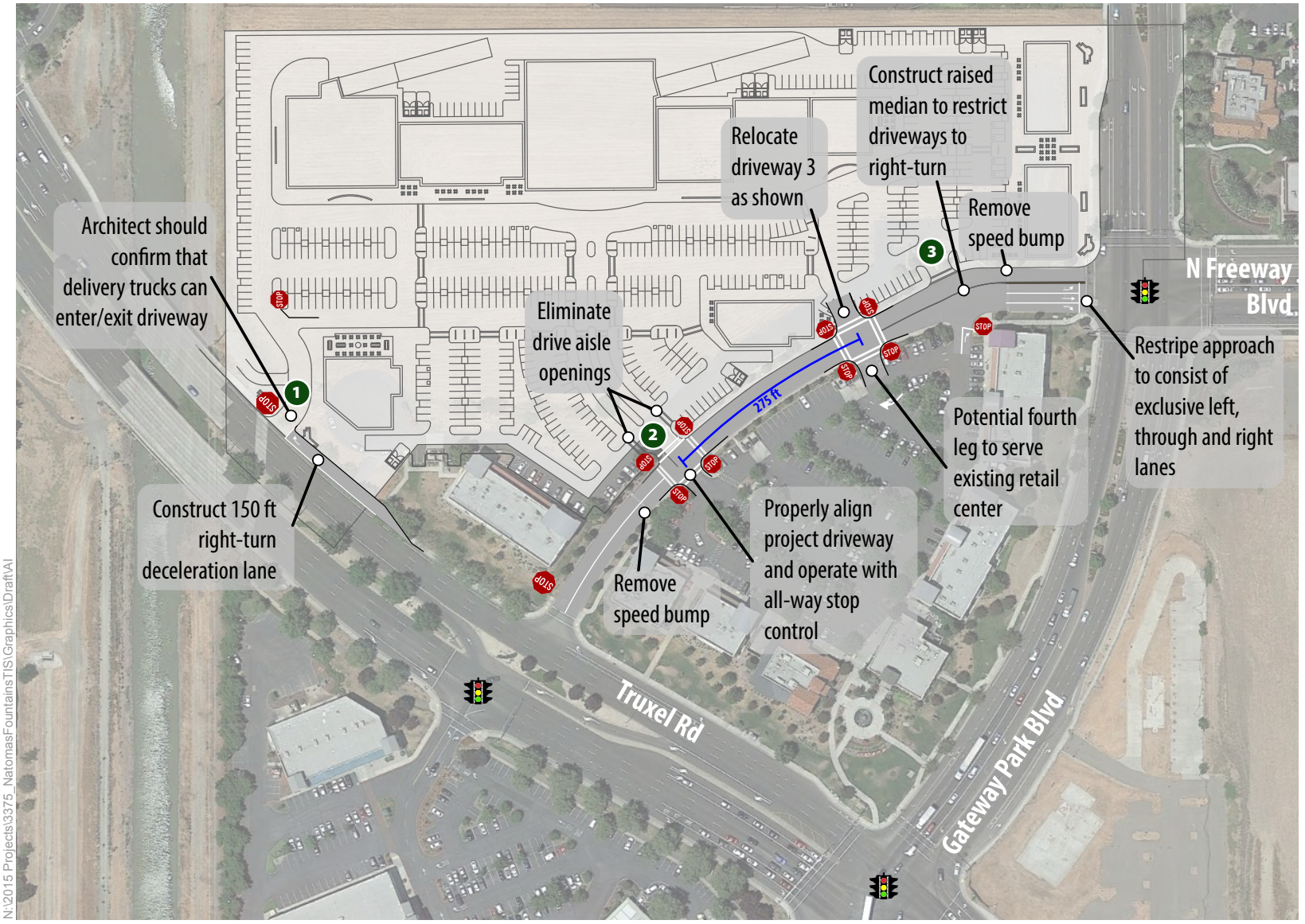


Figure ES-1

Project Access Recommendations

1. INTRODUCTION

PURPOSE

This study analyzes the transportation impacts associated with the Natomas Fountains project. The 115,880 square-foot retail center is proposed to be located on Truxel Road north of Interstate 80 in the City of Sacramento. The potential off-site traffic impacts of the project are analyzed under existing and cumulative conditions. Impacts to transit, bicycle, parking, and pedestrian circulation are also evaluated. A detailed evaluation of project access is also conducted.

STUDY AREA

The study area includes the following seven intersections along the Truxel Road and Gateway Park Boulevard corridors. These intersections were selected based on their proximity to the project site, expected usage by project traffic, and susceptibility for being impacted. Refer to **Figure 1** for a map showing the study intersections. The study area also includes bicycle, pedestrian, and transit facilities within the project vicinity.

1. Truxel Road/Arena Boulevard
2. Truxel Road/Natomas Crossing Drive
3. Truxel Road/Natomas Marketplace (north entrance)
4. North Freeway Boulevard/Gateway Park Boulevard
5. Truxel Road/Gateway Park Boulevard
6. Truxel Road/I-80 WB Ramps
7. Truxel Road/I-80 EB Ramps

The study does not include an analysis of the I-80 mainline due to the continued construction activity on this facility. Any counts or analysis of this facility would be substantially affected by the construction lane closures and lane detouring.

PROJECT DESCRIPTION

Figure 2 shows the project site plan (*Natomas Fountains*, Pull Architecture, Inc., January 11, 2016). The project would be comprised of the following land uses:

- 55,375 square feet of general retail,
- 31,605 square feet of high-turnover sit-down restaurants, and
- 28,900 square-foot supermarket.

A surface parking lot consisting of 525 parking spaces would be provided.

1 Study Intersection

Project Site

Figure 1

Study Area

Figure 2

Project Site Plan

Vehicular access to the site would be provided as follows (refer to Figure 2 for driveway numbering):

- Vehicular access would be provided from an existing driveway that extends in a southwesterly direction from the Gateway Park Boulevard/North Freeway Boulevard signalized intersection to Truxel Road. Two full access driveways (#2 and #3) are proposed along this driveway.
- A new right-turn only driveway (#1) would be located on Truxel Road approximately 450 feet north of the existing driveway's intersection with Truxel Road.

ANALYSIS SCENARIOS

The following scenarios are analyzed in this study:

- Existing Conditions – represents the baseline condition, upon which project impacts are measured. The baseline condition represents conditions in fall 2015.
- Existing Plus Project Conditions – reflects changes in travel conditions associated with implementation of the proposed project.
- Cumulative No Project Conditions – assumes the site is developed with its existing Planned Unit Development (PUD) office zoning.
- Cumulative Plus Project Conditions – reflects travel conditions in the horizon year (2035) assuming the proposed project is developed. Through a trip/delay accounting process, the project's contribution to any cumulatively unacceptable operations is calculated to assess cumulatively considerable impacts.

ANALYSIS PERIODS

This study focuses on project impacts during the weekday PM peak hour, which is the busiest one-hour period of travel from 4 to 6 PM. This period is most appropriate for study because background traffic levels and the project's trip generation are each considerable during this period. Had an AM peak hour analysis been conducted, fewer (or no) project impacts would have been identified.

Because the adjacent Natomas Marketplace Retail Center is known to generate considerable levels of traffic on weekends, a focused evaluation of travel conditions along Truxel Road during a Saturday mid-day period is also presented.

ANALYSIS METHODOLOGY

Traffic operations at all study intersections were analyzed for weekday PM peak hour conditions using procedures and methodologies contained in the *Highway Capacity Manual* (Transportation Research Board, 2010) for calculating delay at intersections. These methodologies were applied using the SimTraffic software program, which considers the effects of lane utilization, turn pocket storage lengths, upstream/downstream queue spillbacks, and coordinated signal timings on intersection queuing and delays. The SimTraffic model was validated against observed queues. Reported results are based on an average of 10 runs. The following procedures and assumptions were applied in the development of the SimTraffic model:

- Roadway geometric data were gathered using aerial photographs and field observations.
- Peak hour traffic volumes were entered into the model according to the peak hour of the study intersections.
- The peak hour factor (PHF) was set at 1.0 in accordance with City of Sacramento *Traffic Impact Study Guidelines*.
- An input of 3 percent heavy vehicles (as recommended in Exhibit 18-28 of the 2010 HCM) was used for all movements.
- Speeds for the model network were based on the posted speed limits.
- The counted pedestrian and bicycle volumes were entered into the model according to the study area peak hour.
- Signal phasing and timings were based on signal timing plans provided by the City of Sacramento.

Level of service is a qualitative measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. In general, LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion and delay under stop-and-go conditions.

Table 1 displays the average delay ranges associated with each LOS category for signalized intersections. The LOS is based on the average delay experienced by all vehicles passing through the intersection.

TABLE 1:
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Control Delay (seconds/vehicle)[1]
	Signalized Intersections
A	0 – 10.0
B	10.1 – 20.0
C	20.1 – 35.0
D	35.1 – 55.0
E	55.1 – 80.0
F	> 80.0

Notes:
1. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay based on *Highway Capacity Manual* (Transportation Research Board, 2010).

LEVEL OF SERVICE STANDARDS

On March 3, 2015, the City of Sacramento City Council adopted the 2035 General Plan. The Mobility Element of the City of Sacramento's *2035 General Plan* outlines goals and policies that coordinate the transportation and circulation system with planned land uses. The following LOS policy is relevant to this study:

- **M 1.2.2** The City shall implement a flexible context-sensitive Level of Service (LOS) standard, and will measure traffic operations against the vehicle LOS thresholds established in this policy. The City will measure vehicle LOS based on the methodology contained in the latest version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. The City's specific vehicle LOS thresholds have been defined based on community values with respect to modal priorities, land use context, economic development, and environmental resources and constraints. As such, the City has established variable LOS thresholds appropriate for the unique characteristics of the City's diverse neighborhoods and communities. The City will strive to operate the roadway network at LOS D or better for vehicles during typical weekday conditions including AM and PM peak hour with certain exceptions mapped on Figure M-1 (and listed in the actual General Plan document).

  A. Core Area (Central City Community Plan Area) – LOS F allowed
  B. Priority Investment Areas – LOS F allowed
  C. LOS E roadways (11 distinct segments listed). LOS E is also allowed on all roadway segments and associated intersections located within ½ mile walking distance of a light rail stations.
  D. LOS F roadways (24 distinct segments listed)
  E. If maintaining the above LOS standards would, in the City's judgment, be infeasible and/or conflict with the achievement of other goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation and/or implement vehicle trip reduction measures as part of a development project or a city-initiated project. Additionally, the City shall not expand the physical capacity of the planned roadway network to accommodate a project beyond that identified in Figure M4 and M4a (2035 General Plan Roadway Classification and Lanes).

The *I-80/Capital City Freeway Corridor System Management Plan* (Caltrans, 2009) identifies a concept LOS F and current LOS F operations for the segment of I-80 in the project vicinity. For existing LOS F operations, no further exacerbation is permitted, as indicated by delay performance measurement. No specific thresholds are provided for ramp terminal intersections.

Policy M 1.2.2 is applied to the study intersections as follows:

- Under existing plus project conditions, intersections 1-5 are subject to the City's base LOS D standard. Intersections 6 and 7 would be significantly impacted if the project caused operations to worsen to LOS F or exacerbate LOS F conditions.
- Under cumulative conditions, intersections 1-5 are subject to the City's LOS E standard for intersections because they would each be located within ½-mile walking distance of a light rail station (i.e., Regional Transit's Green Line will run parallel to Truxel Road with a planned station near Natomas Crossing Drive and another just south of Arena Boulevard). Intersections 6 and 7

would be significantly impacted if the project caused operations to worsen to LOS F or exacerbate projected LOS F conditions.

SIGNIFICANCE CRITERIA

The following describes the significance criteria used to identify project-specific and cumulative impacts to the transportation system. These criteria are derived from the City of Sacramento General Plan, City of Sacramento *Traffic Impact Study Guidelines*, and policies of other affected agencies.

Intersections

Impacts to the roadway system are considered significant if:

- The traffic generated by the project degrades LOS from acceptable (without the project) to unacceptable (with the project);
- The LOS (without project) is already (or projected to be) unacceptable and project generated traffic increases the average vehicle delay by 5 seconds or more.
- Project traffic causes (or exacerbates) vehicular queuing on a freeway off-ramp to extend onto the freeway mainline.

Freeways

Impacts to the freeway system are considered significant if:

- Project traffic causes (or exacerbates) vehicular queuing on a freeway off-ramp to extend onto the freeway mainline.

Transit

Impacts to the transit system are considered significant if the proposed project would:

- Adversely affect public transit operations; or
- Fail to adequately provide access to transit.

Bicycle Facilities

Impacts to bicycle facilities are considered significant if the proposed project would:

- Adversely affect existing or planned bicycle facilities; or
- Fail to adequately provide for access by bicycle.

Pedestrian Circulation

Impacts to pedestrian circulation are considered significant if the proposed project would:

- Adversely affect existing or planned pedestrian facilities; or
- Fail to adequately provide for access by pedestrians.

Construction-Related Traffic Impacts

The project would have a temporarily significant impact during construction if it would:

- Degrade an intersection or roadway to an unacceptable level;
- Cause inconveniences to motorists due to prolonged road closures; or
- Result in increased frequency of potential conflicts between vehicles, pedestrians, and bicyclists.

2. EXISTING CONDITIONS

This chapter describes the existing physical and operational characteristics of the transportation system within the study area including the roadway, transit, bicycle, and pedestrian components of the system.

ROADWAY SYSTEM

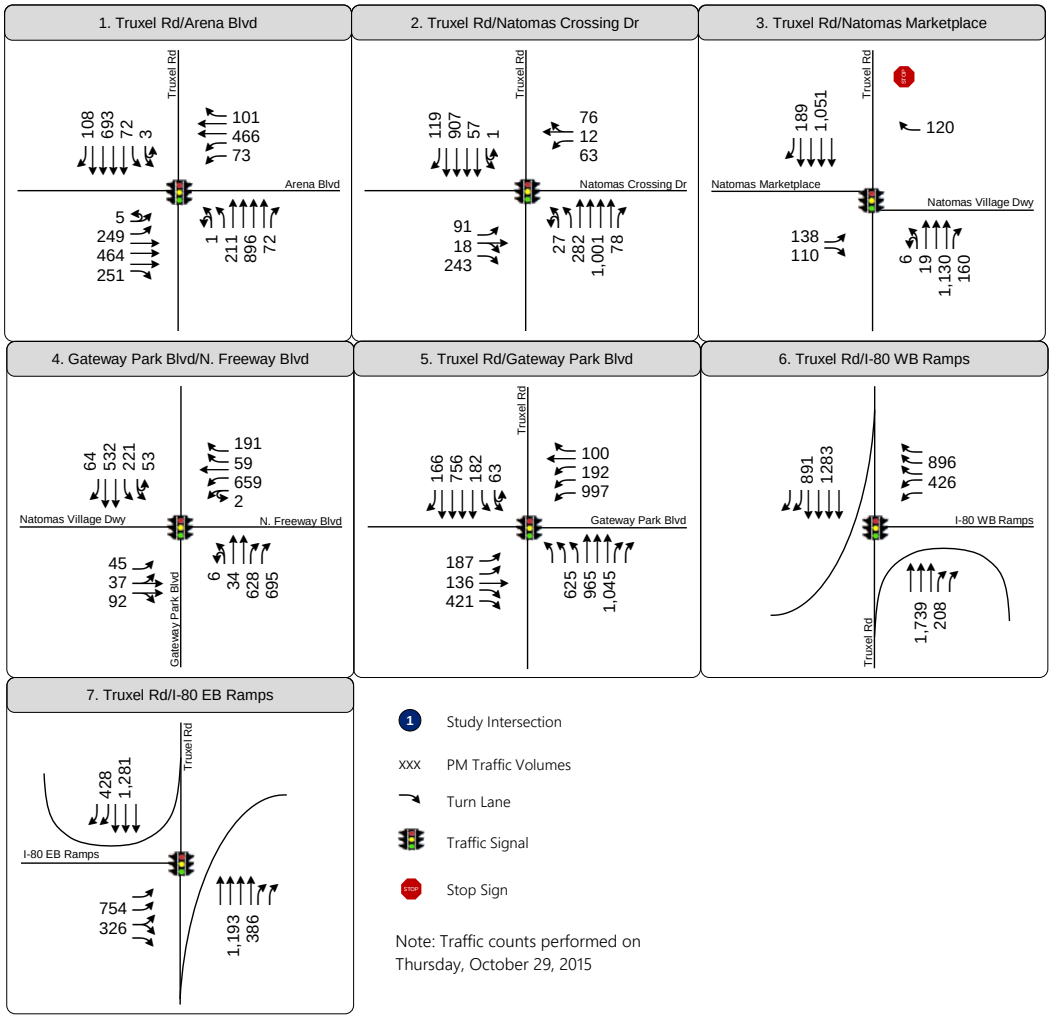
Figure 3 shows the study area roadway network. Key roadways in the study area include:

- Truxel Road – is an arterial street that extends from the Garden Highway in a northerly direction to Del Paso Boulevard in North Natomas. This street then becomes Natomas Boulevard and continues further north. Within the study area, it consists of three to four lanes in each direction and has a posted speed limit of 45 miles per hour (mph). Truxel Road has an interchange with the I-80. On-street parking is prohibited on Truxel Road through the study area.
- Gateway Park Boulevard – extends in a northeasterly direction from Truxel Road, intersecting North Freeway Boulevard, then extending in a northerly direction to Arena Boulevard. It has three lanes in each direction between Truxel Road and North Freeway Boulevard and two lanes in each direction north of North Freeway Boulevard. On-street parking is prohibited through the study area and the posted speed limit is 40 mph.
- North Freeway Boulevard – begins at Gateway Park Boulevard and extends in a generally easterly direction. Within the study area, it consists of three lanes in each direction. On-street parking is prohibited through the study area.

Traffic counts were collected during the PM (4:00 – 6:00 PM) peak period at all study intersections on either Wednesday, October 28, 2015 or Thursday, October 29, 2015. Schools were in session at the time of the counts. Due to a traffic count equipment malfunction, counts at Truxel Road/I-80 EB Ramps were not available, and thus replaced by counts from the City of Sacramento (counted by idax). These counts (from March 10, 2015) were balanced to match adjacent intersection counts.

There was a Sacramento Kings home game at Sleeptrain Arena on October 28th that started at 7:00 PM. When compared with counts at adjacent intersections on October 29th, the October 28th counts were higher due to early arrivals to the game. Since professional basketball games will no longer be played at Sleeptrain Arena beyond April/May 2016, trips associated with the October 28th game were removed from the two intersections counted on that day. All traffic counts can be found in Appendix A.

Figure 3 displays the existing PM peak hour traffic volumes, lane configurations, and traffic controls at each intersection. At the Truxel Road/Gateway Park Boulevard intersection, the PM peak hour occurred from 5:00 to 6:00 PM. The peak hours were similar at the other study intersections. Figure 3 shows that all seven study intersections are controlled by traffic signals. However, the existing driveway intersecting Truxel Road is not part of the Natomas Marketplace partial traffic signal and is controlled by a stop sign.



Note: Traffic counts performed on Thursday, October 29, 2015

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Figure 3

PM Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

As part of the traffic count data collection, maximum vehicle queues were recorded for several critical turning movements. **Table 2** displays the available storage, observed maximum vehicle queue, and modeled (via SimTraffic) maximum queue lengths for the PM peak hour. It is important for the SimTraffic model to be adequately calibrated to existing conditions because it will be used to estimate queues for existing plus project and cumulative conditions.

TABLE 2:
PM PEAK HOUR QUEUING ANALYSIS – EXISTING CONDITIONS

Intersection	Movement	Available Storage (ft.)	Maximum Observed Vehicle Queue (ft.)[1]	Maximum Modeled Vehicle Queue (ft.)[2]	Difference (vehicles)
4. Gateway Park Blvd / N. Freeway Boulevard	NB TH[3]	725 [3]	350	400	+2
	NB LT	200	100	75	+1
	WB LT[3]	700 [3]	700	700	0
5. Truxel Rd / Gateway Park Blvd	SB LT	225	150	225	+3
	WB LT	700 [3]	700	700	0

Notes:
1. Observed queues on Thursday, October 29, 2015. Values rounded to nearest 25 ft (assumed 25-ft design vehicle).
2. Modeled results based on maximum queue length reported from SimTraffic. Values rounded to nearest 25 feet.
3. Total storage length to adjacent upstream intersection.

Source: Fehr & Peers, 2016

The SimTraffic model validates well against the observed maximum vehicle queues in the project vicinity. It is able to replicate queue spillbacks in the westbound left-turn lanes at Truxel Road/Gateway Park Boulevard that extend into the Gateway Park Boulevard/North Freeway Boulevard intersection. It also replicates extensive queuing in the left-turn movement from westbound North Freeway Boulevard onto Gateway Park Boulevard. In summary, the SimTraffic model is adequately calibrated for use in this study.

The following page contains a screenshot of a portion of the SimTraffic model used to analyze the study intersections. This image shows the queue spillback on westbound Gateway Park Boulevard extending to North Freeway Boulevard.

View of existing vehicular queuing on Gateway Park Boulevard and North Freeway Boulevard

Table 3 summarizes existing PM peak hour operations at the study intersections (refer to Appendix A for detailed calculations). During the PM peak hour, all study intersections operate at LOS D or better, with the exception of Truxel Road/Gateway Park Boulevard, which operates at LOS E.

TABLE 3:
INTERSECTION OPERATIONS – EXISTING CONDITIONS

Intersection	Control[1]	PM Peak Hour	
		Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	29.8	C
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	24.9	C
3. Truxel Rd. / Natomas Marketplace (North Entrance)[2]	Traffic Signal	18.2	B
4. Gateway Park Blvd / N. Freeway Blvd.	Traffic Signal	44.3	D
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	63.1	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	23.2	C
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	12.4	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. This intersection consists of a partial traffic signal. Thus, the delay and LOS shown represents only the movements affected by the signal, including the southbound through and right, eastbound left and right, and northbound left movements.

Source: Fehr & Peers, 2016

BICYCLE SYSTEM

Figure 4 displays the existing bicycle facilities located in the vicinity of the project site based on information from the City of Sacramento and review of aerial imagery. As shown, Class II bike lanes (on-street with appropriate signing and striping) exist along portions of Truxel Road, Gateway Park Boulevard, Natomas Crossing Drive, North Freeway Boulevard, and Arena Boulevard. Figure 4 also shows a Class I (off-street, dedicated two-way path) that begins at North Freeway Boulevard, and extends westerly parallel to I-80 and then northerly parallel to Truxel Road (on the west side of the street).

PEDESTRIAN SYSTEM

Figure 4 also displays the pedestrian facilities located in the vicinity of the project site. As shown, a sidewalk exists along the project's frontage on Truxel Road. A sidewalk is also present on the south side of the driveway that serves the Natomas Village Shopping Center. Sidewalks are present along Gateway Park Boulevard and North Freeway Boulevard. The north, west, and south legs of the Truxel Road/Gateway Park Boulevard intersection feature pedestrian-actuated crosswalks. All approaches to the North Freeway Boulevard/Gateway Park Boulevard intersection feature crosswalks.

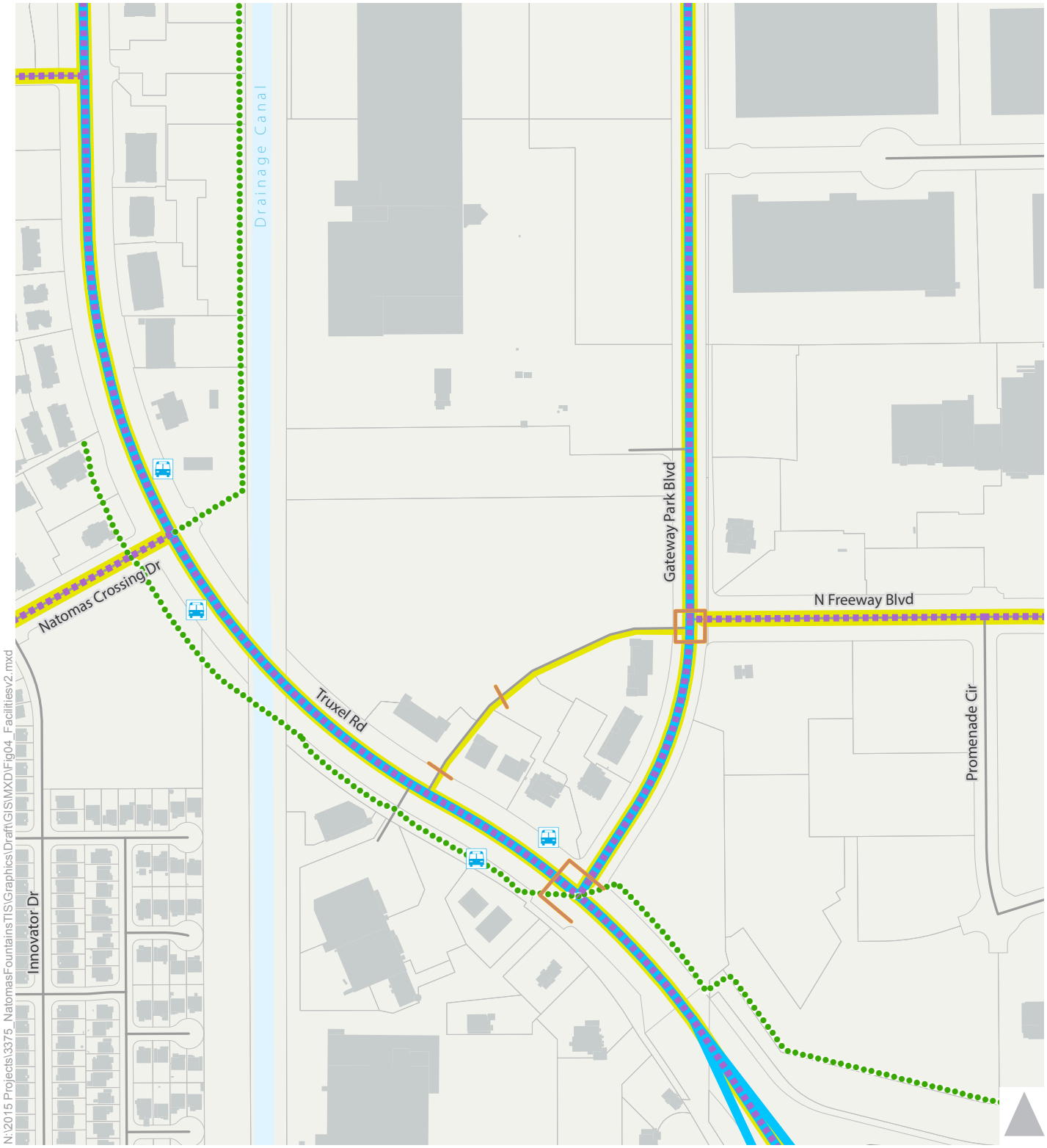

Figure 4

Pedestrian, Bicyle and Transit Facilities - Existing Conditions

TRANSIT SYSTEM

Public transit service within the study area is provided by bus, which is operated by Sacramento Regional Transit (RT). The following routes serve the area:

Route 11 provides service from Club Center Drive in North Natomas, southerly along Natomas Boulevard and Truxel Road to Garden Highway. Monday through Friday, Route 11 operates on 30-minute headways during most of the day (otherwise 60-minute headways), including AM and PM peak hours. The route also operates on Saturdays with 60 minute headways, but not on Sundays or holidays.

Route 13 provides service on Gateway Park Boulevard and Truxel Road. The route then continues north until Arena Boulevard and then heads in a generally easterly direction to Northgate Boulevard. It then travels along Northgate Boulevard and Arden Way to the Arden/Del Paso Light Rail Station. Monday through Friday, Route 13 operates on 60-minute headways from about 6:00 AM to 8:30 PM. The route does not operate on Saturdays, Sundays, or holidays.

These routes feature a northbound stop (shelter) on Truxel Road just south of the existing drive aisle intersection on Truxel Road. A southbound stop (bench only) is provided in a similar location across the street.

3. EXISTING PLUS PROJECT CONDITIONS

This chapter analyzes the potential traffic impacts of the proposed project on the surrounding roadway system under existing conditions. Chapter 4 identifies the significant impacts of the project on the roadway system, as well as any impacts to bicycle, pedestrian, and transit modes.

PROJECT TRAVEL CHARACTERISTICS

This chapter begins by describing the project's expected travel characteristics including the anticipated number of vehicle trips, directionality of those trips, and expected travel routes.

Trip Generation

The first step in analyzing the proposed project's travel characteristics was to estimate its weekday AM and PM peak hour trip generation using data published in the *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers, 2012) The *Trip Generation Manual* is the most widely used industry resource for this type of data. The trip generation data are organized by land use types, with more than 170 different categories of land uses. For each category, the *Trip Generation Manual* provides a data set for use in estimating the number of vehicle and person trips generated by a site based on its characteristics such as physical size or intensity. Trips may be estimated by direction (entering or exiting the site), and for time periods typically pertaining to a full day (weekday or weekend), peak periods of the adjacent roadway, and peak hours of the particular land use. Used properly, this reference provides an objective basis for estimating trips generated by a proposed development.

The expected amount of internal trip-making within the site was estimated using the Mixed-Use Trip Generation Model (MXD). This model was developed for the US Environmental Protection Agency (EPA) by consultants and academic researchers to more accurately estimate the external vehicular trip generation of mixed-use land development projects than prior methods (e.g., ITE internalization spreadsheet). The model was developed based on empirical evidence at 240 mixed-use projects located across the U.S. The model considers various built environment variables such as land use density, regional location, proximity to transit, and various design variables when calculating the project's internal trips, and external trips made by auto, transit, and non-motorized modes. The MXD model has been used in dozens of EIRs and other environmental documents throughout California.

The following specific adjustments were made:

- Internalization: The degree to which project trips remain internal to the site is caused by the project's complementary land uses. The MXD model predicts that internalization would be in the 1 to 2 percent range during the AM peak hour (due to modest levels of trip generation associated with the retail and supermarket), and in the 7 to 8 percent range during the PM peak hour.

- Pass-by Trips: Per *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2014), 34 percent of retail trips, 43 percent of high-turnover sit-down restaurant trips, and 36 percent of supermarket trips are expected to be pass-by trips during the PM peak hour. The *Trip Generation Handbook* does not specify pass-by trips for the AM peak hour. In the absence of this data, the same percentages used for the PM peak hour were assumed and applied to the AM peak hour.

This study assumes no additional adjustments for walk/bike trips and transit trips to/from the project site. This is because the ITE trip rates already reflect a certain amount of such travel activity based on the sampled sites being located in primarily suburban locations.

Table 4 displays the trip generation of the proposed project during the weekday AM and PM peak hours. During the PM peak hour, the project would generate a combined 945 new or pass-by trips, which is the total number of trips that would use the project driveways. The project would generate 592 new PM peak hour vehicle trips, which represents new travel added to the study intersections. This table indicates that the AM peak hour trip generation would be 45 percent less than the PM peak hour trip generation, providing further evidence for why a quantitative AM peak hour analysis was not conducted in this study.

TABLE 4:
PROPOSED PROJECT AM AND PM PEAK HOUR TRIP GENERATION

Land Use	Quantity (ksf)	ITE Land Use Code	Trip Rate [1]		Trips					
					AM Peak Hour			PM Peak Hour		
			AM Peak Hour	PM Peak Hour	Total	In	Out	Total	In	Out
Retail	55.375	820	1.96	7.28	109	67	41	403	194	210
High-Turnover Sit-Down Restaurant	31.605	932	10.81	9.85	342	188	154	311	187	125
Supermarket	28.9	850	3.40	10.76	98	61	37	311	159	152
Gross Trips					548	316	232	1,025	539	487
Internal Trips (1.2% during AM and 7.8% during PM) [2]					-7	-4	-3	-80	-42	-38
Pass-by Trips [3]					-217	-124	-92	-353	-187	-166
New Vehicle Trips					**325**	**188**	**137**	**592**	**309**	**283**

Notes:

[1] Trip rates from *Trip Generation Manual* (ITE, 2012). Fitted curve equations used to estimate trips for supermarket and retail uses. Average rate used to estimate trips for high-turnover sit-down restaurant use due to lack of equation.

[2] Based on results of MXD+ trip generation model. See text on the previous page.

[3] Per *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, 2014), 34 percent of PM peak hour retail trips, 43 percent of PM peak hour high-turnover sit-down restaurant trips, and 36 percent of PM peak hour supermarket trips are expected to be pass-by trips. These same percentages were assumed for AM peak hour traffic.

ksf = thousand square feet.

Table 5 displays the project's average weekday daily trip generation. As shown, the project is estimated to generate approximately 6,900 new vehicle trips on a typical weekday.

TABLE 5:
PROPOSED PROJECT AVERAGE DAILY TRIP GENERATION

Land Use	Quantity (ksf)	ITE Land Use Code	Trip Rate	Trips
Retail	55.375	820	83.5	4,624
High-Turnover Sit-Down Restaurant	31.605	932	127.15	4,019
Supermarket	28.9	850	102.24	2,955
			Gross Trips	11,598
			Internal Trips (5%)	- 580
			Pass-by Trips [2]	- 4,146
			New Vehicle Trips	6,872

Notes:
[1] Trip rates from *Trip Generation Manual* (ITE, 2012). Fitted curve equation used to estimate trips for retail uses. Average rate used to estimate trips for supermarket and high-turnover sit-down restaurant uses due to lack of equation or poor fit of equation to data points.
[2] Same pass-by percentages used for PM peak hour conditions were also used for daily conditions.
ksf = thousand square feet.

Trip Distribution/Assignment

Figures 5 and 6 show the expected distribution of new inbound and outbound vehicle trips, respectively. The distribution percentages are based on a review of current travel patterns (i.e., trip patterns exiting/entering the adjacent Natomas Village shopping center, as well as general travel patterns along Truxel Road), and complementary land uses (i.e., employment and residential areas).

- Figure 5 shows that PM peak hour inbound trips are distributed fairly equally from origins in the south (i.e., I-80), the north (i.e., residential areas), and the east (i.e., employment). Inbound traffic may use either of the two right-turn only driveways located on Truxel Road, or also access the site via the signalized North Freeway Boulevard/Gateway Park Boulevard intersection (#4). Inbound traffic arriving from the north on Truxel Road would perform a u-turn at Gateway Park Boulevard and then access the site via the driveways on Truxel Road.

- Figure 6 shows the distribution of outbound project trips. Due to outbound left-turn movement restrictions from the driveways on Truxel Road, a greater percentage of outbound trips (versus inbound trips) would exit through the Gateway Park Boulevard/North Freeway Boulevard intersection (#4) to reach destinations to the south.

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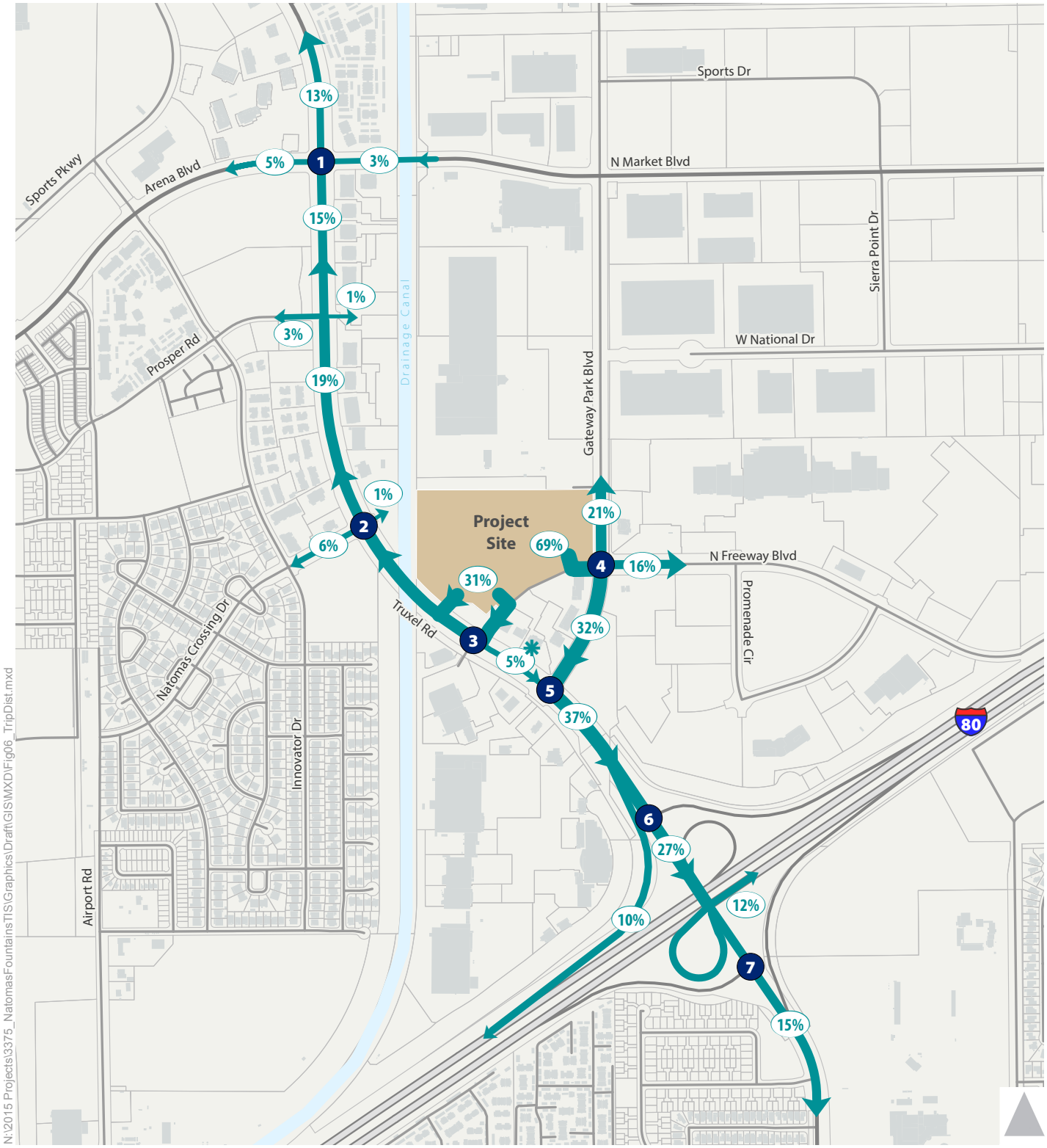
1 Study Intersections

1% Trip Distribution

* Entire 27% of inbound trips on southbound Truxel Rd assumed to perform u-turn at Gateway Park Blvd/Truxel Rd (Study Intersection 5) to enter project site at right in/right out driveways.

Figure 5

Inbound Project Trip Distribution



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1 Study Intersections

1% Trip Distribution

* 5% of outbound trips on northbound Truxel Rd assumed to perform u-turn at Natomas Crossing Dr/Truxel Rd (Study Intersection 2).

Figure 6

Outbound Project Trip Distribution

TRAFFIC FORECASTS

The PM peak hour traffic forecasts were developed for the "existing plus project" condition by adding project trips to existing volumes using the project's trip generation from Table 4 and trip distribution percentages from Figures 5 and 6. **Figure 7** displays project only trips at the study intersections. **Figure 8** displays the resulting existing plus project forecasts.

After reviewing preliminary 'plus project' results in SimTraffic, a minor traffic assignment adjustment was made by shifting 40 vehicles (headed to destinations in the south) assumed to exit at the Gateway Park Boulevard/North Freeway Boulevard intersection, to instead exit one of the two right-turn only driveways on Truxel Road, and perform a u-turn at Natomas Crossing Drive/Truxel Road to head south on Truxel Road. This adjustment was made because of excessive queuing predicted to occur at the eastbound exit at Gateway Park Boulevard/North Freeway Boulevard in the traffic simulation.

INTERSECTION OPERATIONS

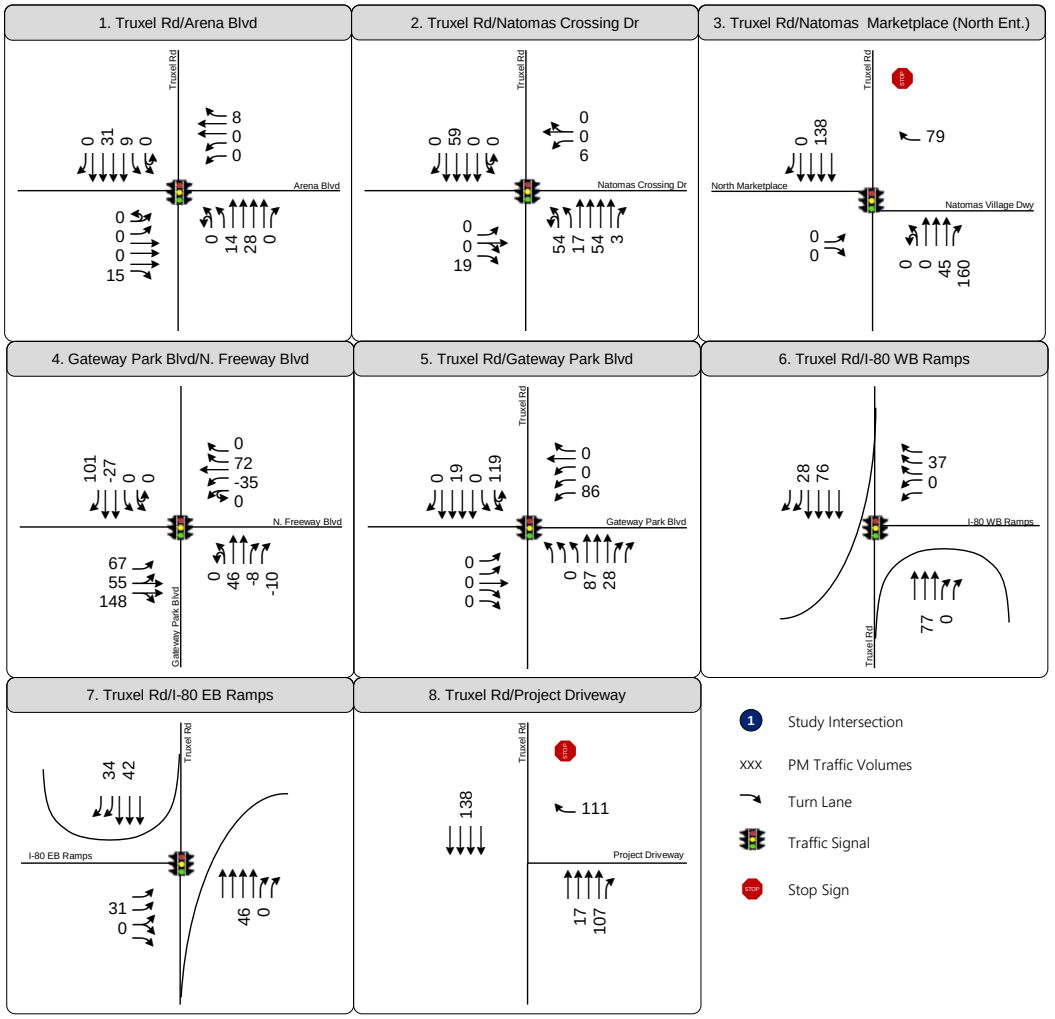
Table 6 displays the operational results at the study intersections under "existing plus project" conditions. Refer to Appendix B for technical calculations.

TABLE 6:
PM PEAK HOUR INTERSECTION OPERATIONS – EXISTING PLUS PROJECT CONDITIONS

Intersection	Control[1]	Existing Conditions		Existing Plus Project Conditions	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	29.8	C	30.7	C
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	24.9	C	25.9	C
3. Truxel Rd. / Natomas Marketplace (North Entrance)	Traffic Signal	18.2	B	21.8	C
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	44.3	D	49.5	D
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	63.1	E	67.6	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	23.2	C	36.8	D
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	12.4	B	14.5	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.

Source: Fehr & Peers, 2016



* Negative volumes at Gateway Park Blvd/N. Freeway Blvd represent volumes which decreased due to pass-by trips entering the project.

Figure 7

PM Peak Hour Traffic Volumes and Lane Configurations
Project Only Conditions

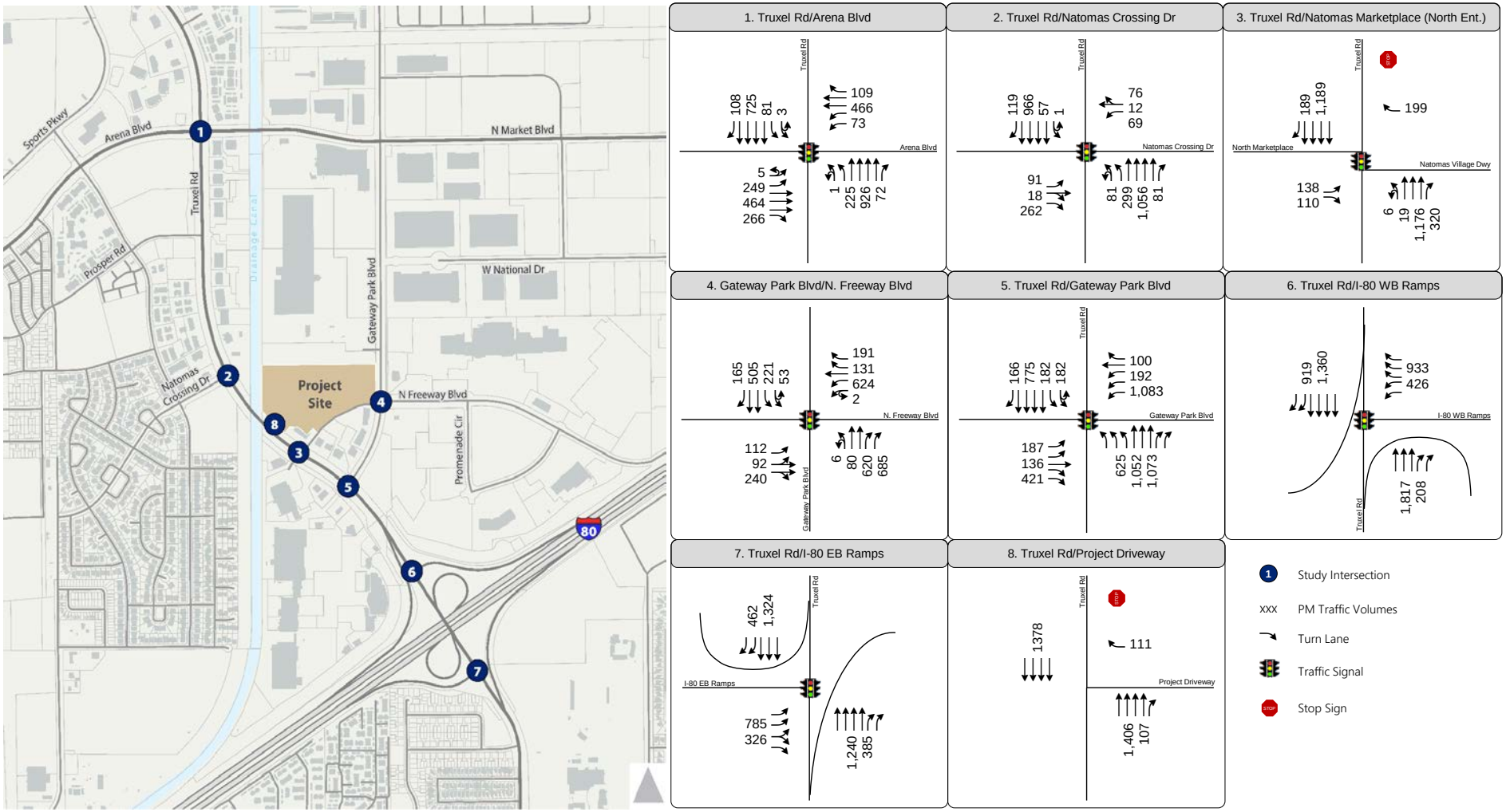


Figure 8

PM Peak Hour Traffic Volumes and Lane Configurations
Existing Plus Project Conditions

This table indicates the following:

- During the PM peak hour, the average delay at the Truxel Road/Natomas Marketplace North Entrance intersection would increase from about 18 to 22 seconds per vehicle. Operations would degrade from LOS B to LOS C.
- The average delay at the Gateway Park Boulevard/North Freeway Boulevard intersection would increase from about 44 to 50 seconds per vehicle and remain LOS D, while the average delay at Truxel Road/Gateway Park Boulevard would increase from about 63 to 68 seconds and remain LOS E.
- The Truxel Road/I-80 WB Ramps intersection would experience the greatest delay increase, from about 23 to 37 seconds and the LOS would drop from C to D.
- Changes in average delay at other study intersections would be relatively small and would not result in changes to LOS.

Table 7 display the maximum vehicle queues for key movements during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard and Truxel Road/Gateway Park Boulevard intersections under "existing plus project" conditions. Refer to Appendix B for technical calculations.

TABLE 7:
PM PEAK HOUR QUEUING ANALYSIS – EXISTING PLUS PROJECT CONDITIONS

Intersection	Movement	Available Storage (ft.)	Maximum Observed Vehicle Queue (ft.)[1]	SimTraffic Results - Maximum Vehicle Queue (ft.)			Adjusted Existing Plus Project Maximum Queue (ft.) [3]
				Existing Conditions[1]	Existing Plus Project Conditions[2]	Difference	
4. Gateway Park Blvd / N. Freeway Blvd	NB TH	725	350	400	375	- 25	325
	NB LT	200	100	75	150	+75	175
	WB LT	700	700	700	700	0	700
5. Truxel Rd / Gateway Park Blvd	SB LT	225	150	225	275	+50	200
	WB LT	700	700	700	700	0	700

Notes:
1. Observed queues on Thursday, October 29, 2015. Values rounded to nearest 25 ft.
2. Modeled results based on maximum queue length reported from SimTraffic. Values rounded to nearest 25 feet.
3. Final queue length estimated using the 'difference method' process, whereby the growth in queue predicted by SimTraffic is added to the observed maximum queue length.

Source: Fehr & Peers, 2016

Key findings from this table include:

- The proposed project would cause the maximum vehicle queue in the southbound left-turn lane at the Truxel Road/Gateway Park Boulevard intersection to increase from 150 to 200 feet during the PM peak hour. This queue would remain within the 225 feet of available storage that is provided.
- The project would cause increases in queuing on the northbound left-turn movement at Gateway Park Boulevard at North Freeway Boulevard during the PM peak hour. However, the resulting queue would not exceed the available storage.

EVALUATION OF PROJECT IMPACTS DURING SATURDAY CONDITIONS

Traffic counts were conducted at the Truxel Road/Gateway Park Boulevard intersection from 11 AM to 1 PM on Saturday, February 6, 2015. The peak hour occurred from 12 to 1 PM. The following compares the observed volume during this hour with the weekday PM peak hour volumes:

- During the Saturday peak hour, 5,448 vehicles passed through the Truxel Road/Gateway Park Boulevard intersection. During the weekday PM peak hour, 5,835 vehicles passed through the intersection, which represents a 7 percent increase.
- The two-way volume of traffic on Gateway Park Boulevard between Truxel Road and North Freeway Boulevard was 1,885 vehicles during the Saturday peak hour, which is 29 percent less than the 2,652 vehicles observed during the weekday PM peak hour.

Using ITE trip rates, the project is conservatively[1] estimated to generate 858 new trips during the Saturday peak hour. This represents 45 percent more trips than the project would generate during the weekday PM peak hour. However, when project trips are added to the existing volumes at the Truxel Road/Gateway Park Boulevard intersection, the resultant Saturday mid-day peak hour volume would be four percent lower than the weekday PM peak hour volume. The volume of traffic at the Gateway Park Boulevard/North Freeway Boulevard intersection would be considerably lower during the Saturday peak hour versus the weekday PM peak hour.

Therefore, project impacts during the Saturday mid-day peak hour would be less severe than any impacts identified during the weekday PM peak hour.

[1] For this calculation, trip rates for the 'peak hour of the generator' were used for each land use regardless of whether that peak hour occurred during the Saturday peak hour (12 to 1 PM).

4. PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

This chapter evaluates the significance of project impacts using the criteria described in Chapter 1 and the analysis results from Chapter 3.

EVALUATION OF POTENTIAL INTERSECTION IMPACTS

The proposed project would cause delays to increase at most intersections. However, the project would not cause any intersections to worsen from acceptable to unacceptable levels. The project would operations at all facilities would remain at acceptable levels during the weekday PM peak hour. The project would add 4.5 seconds of delay to the Truxel Road/Gateway Park Boulevard intersection, which currently operates at an unacceptable LOS E. Since this is less than the five-second threshold for exacerbating unacceptable conditions, impacts to study intersections are ***less than significant*** and no mitigation is required.

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF POTENTIAL FREEWAY IMPACTS

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF TRANSIT IMPACTS

The project would not disrupt or adversely affect existing or planned transit facilities or conflict with adopted City transit plans, guidelines, policies, or standards. The project may be accessed by two Regional Transit bus routes (routes 11 and 13) that feature a stop within ¼-mile of the project site. For these reasons, project impacts to transit facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF BICYCLE IMPACTS

The proposed project would not interfere with any existing bicycle facilities. It would also not preclude implementation of any future bicycle facilities. Refer to Chapter 7 for a discussion of how the new project driveway on Truxel Road would be designed to be compatible with the existing Class II bike lane. Proposed project impacts to bicycle facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not disrupt existing or planned pedestrian facilities or conflict with adopted City pedestrian plans, guidelines, policies, or standards. The adjacent intersections feature crosswalks with pedestrian actuation

to facilitate pedestrian travel. The project site plan includes the provision of continuous sidewalks along its frontage on North Freeway Boulevard, the internal driveway, and Truxel Road to accommodate pedestrian travel. The site plan also includes pedestrian connections into the site from adjacent streets as well as a series of pedestrian linkages that connect the parking areas and building entrances. For these reasons, proposed project impacts to pedestrian facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF POTENTIAL CONSTRUCTION IMPACTS

Construction of the proposed project would generate a variety of truck and employee trips. Since the magnitude of these trips during peak hours would be less than that of the proposed project, absolute impacts (in terms of delay and queuing) when compared to project operations would not be significant.

Per City code, the project applicant is required to develop a Construction Traffic Management Plan (TMP) to the satisfaction of the City's Department of Public Works. The plan will include items such as: the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, location/amount of employee parking, a driveway access plan (including provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle accesses), and the proposed use of traffic control/partial street closures on public streets. The overall goal of the Construction Traffic Management Plan will be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. The Construction TMP will adhere to the following performance standards throughout project construction:

1) Delivery trucks shall not idle/stage on Truxel Road or Gateway Park Boulevard.

2) Safe and efficient access routes shall be maintained for existing businesses (and emergency vehicles) in the adjacent Natomas Village Shopping Center shall be maintained.

3) Although unlikely to be necessary, any lane closures on northbound Truxel Road during project construction shall be limited to a single lane during off-peak hours (9:00 AM to 2:30 PM).

4) Roadways, sidewalks, crosswalks, and bicycle facilities shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

Provided that this TMP is approved by the City's Department of Public Works, and then implemented by the project applicant, the proposed project impacts during construction are ***less than significant***.

5. CUMULATIVE CONDITIONS

This chapter describes anticipated cumulative (2035) operating conditions in the study area including intersection operations and planned transit service expansions.

TRAFFIC FORECASTS

The cumulative no project scenario assumes the site is developed with 255,000 square feet of office space consistent with the site's Planned Unit Development (PUD) zoning. The cumulative plus project scenario assumes the proposed project is constructed on the site.

A modified version of the Sacramento Area Council of Governments (SACOG) SACMET regional travel demand model (TDM) was used to forecast cumulative traffic volumes at the study intersections. By 2035, Truxel Road is assumed to extend southerly from Garden Highway into the Railyards Specific Plan. In addition, Natomas Crossing Drive is assumed to extend westerly from Truxel Road to connect with East Commerce Way. However, no changes in lane configurations are planned at any of the study intersections.

Figures 9 and 10 show cumulative traffic forecasts under no project and plus project conditions, respectively.

INTERSECTION OPERATIONS

Table 8 displays the PM peak hour operations results at the study intersections under both cumulative scenarios. Refer to Appendix C for technical calculations. This table indicates the following:

- The Gateway Park Boulevard/North Freeway Boulevard intersection would worsen from LOS E (no project) to LOS F (with project) during the PM peak hour.
- The Truxel Road/Natomas Marketplace (North Entrance), Truxel Road/Gateway Park Boulevard, and Truxel Road/I-80 Westbound Ramps intersection would each operate at LOS E under cumulative with project conditions.

The degraded operations at the above intersections stem from queuing that occurs at the Truxel Road/Gateway Park Boulevard intersection, extending upstream and adversely affecting other intersections. Due to the severity of these queue spillbacks, a queuing table/analysis is not provided under cumulative conditions.

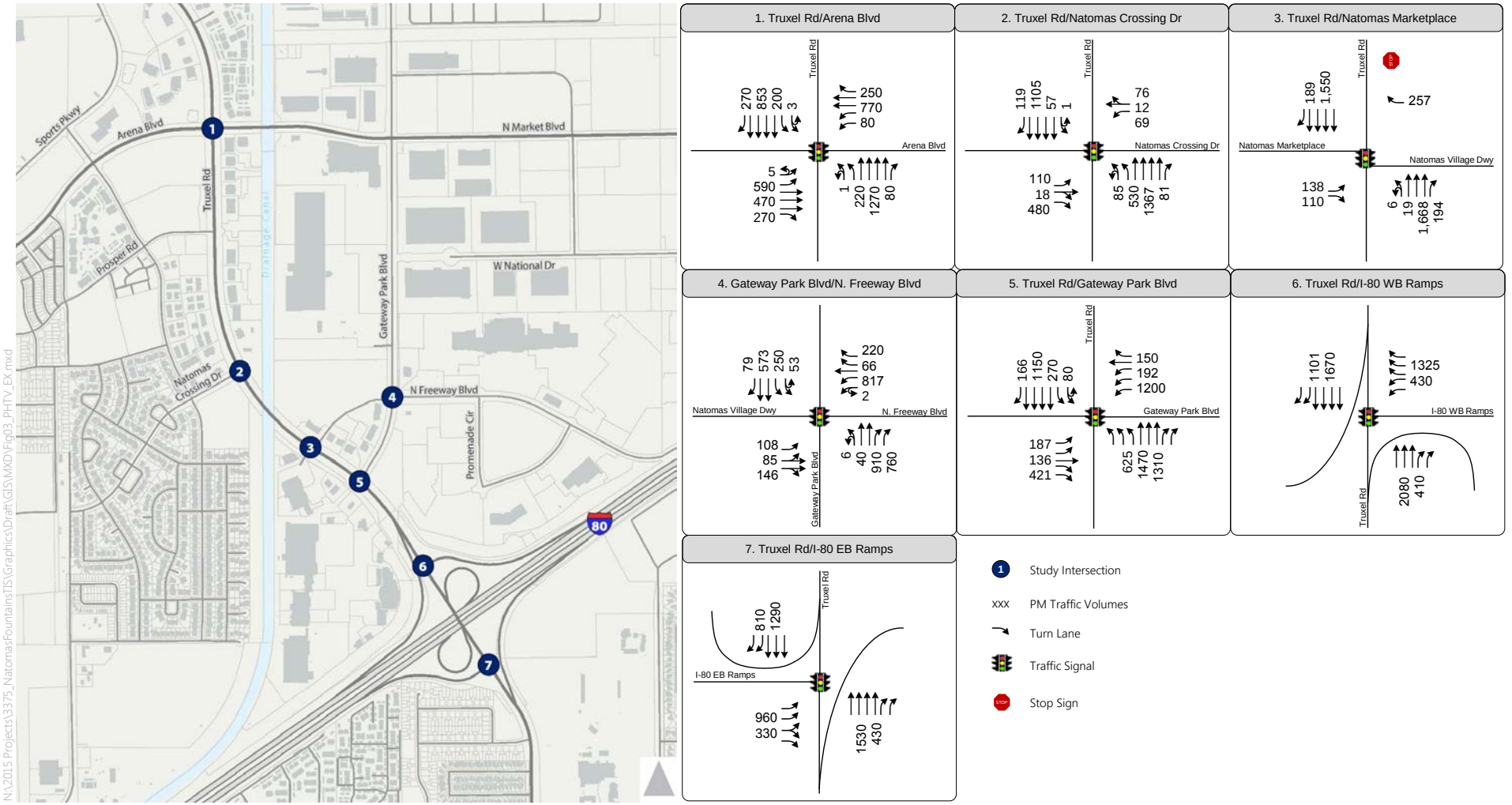


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Figure 9

PM Peak Hour Traffic Volumes and Lane Configurations
Cumulative No Project Conditions

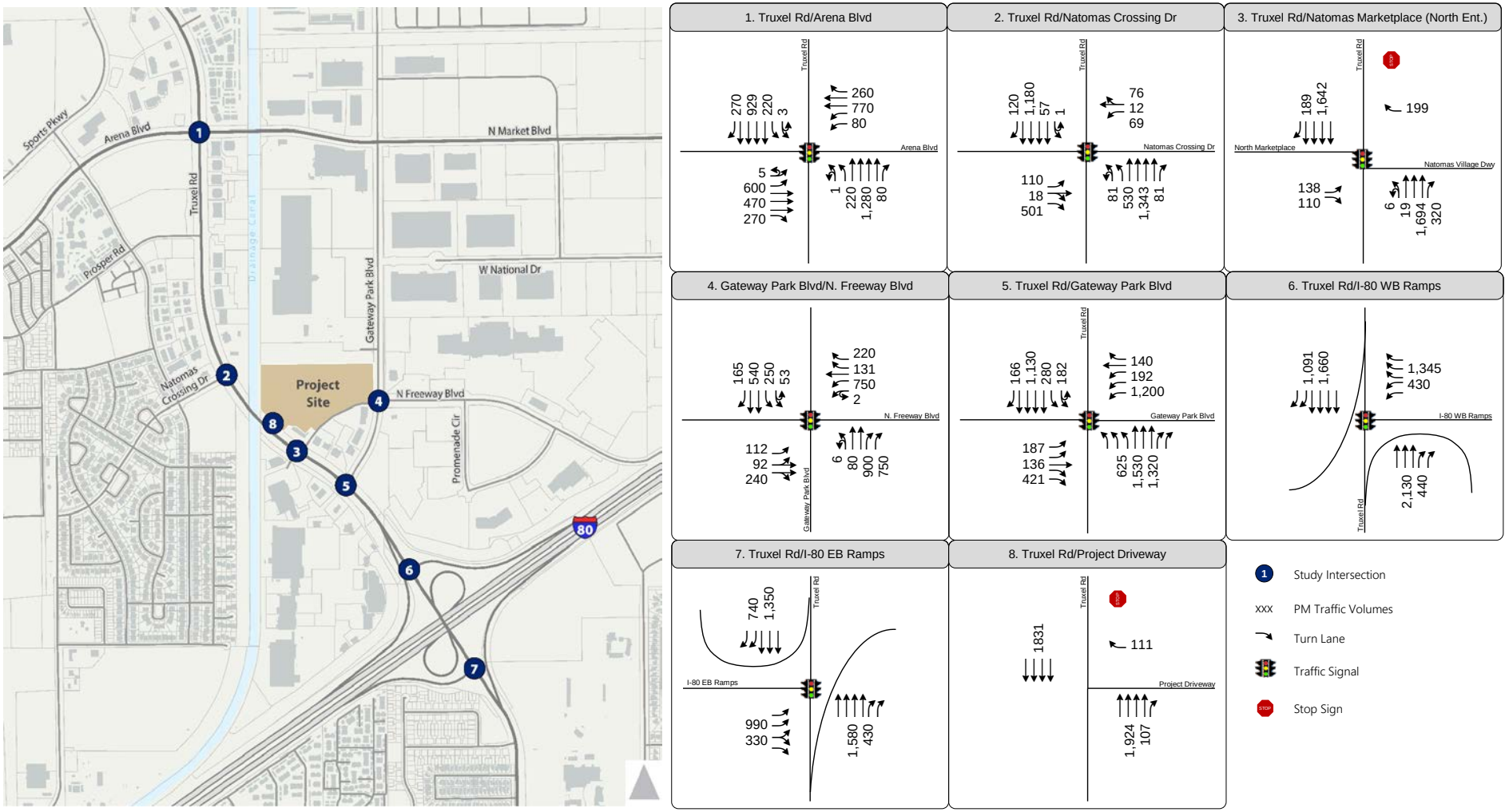


Figure 10

PM Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions

TABLE 8:
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Intersection	Control[1]	PM Peak Hour			
		No Project		Plus Project	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	32.5	C	40.8	D
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	35.1	D	54.8	D
3. Truxel Rd. / Natomas Marketplace (North Entrance)[2]	Traffic Signal	50.9	D	69.9	E
4. Gateway Park Blvd / N. Freeway Blvd.	Traffic Signal	75.4	E	86.5	F
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	70.5	E	73.3	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	61.6	E	72.2	E
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	24.7	C	36.4	D

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. This intersection is partially signalized. Thus, the delay and LOS shown represents only the movements affected by the signal, including the southbound through and right, eastbound left and right, and northbound left movements.

Source: Fehr & Peers, 2016

6. CUMULATIVE IMPACTS AND MITIGATION MEASURES

This chapter describes the significance of project impacts under cumulative conditions using the criteria described in Chapter 1 and the results from Chapter 5.

EVALUATION OF POTENTIAL INTERSECTION IMPACTS

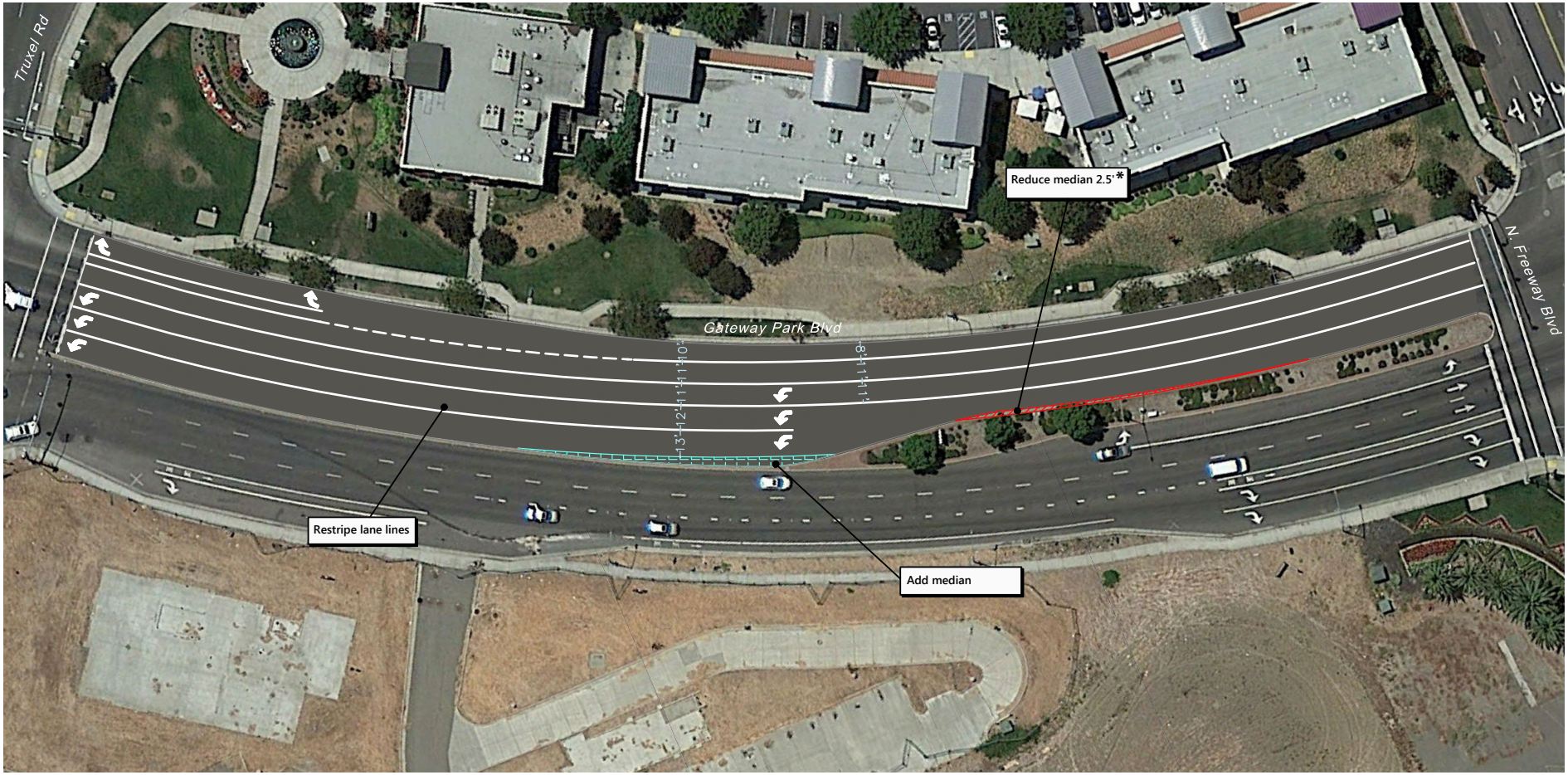
Table 8 shows that unacceptable LOS F operations would occur during the PM peak hour at the Gateway Park Boulevard/North Freeway Boulevard intersection. Based on the results in Table 8, it is apparent that the project would add at least a five-second increase in delay to this intersection. Therefore, project impacts to Gateway Park Boulevard/North Freeway Boulevard intersection would be **cumulatively considerable**. Project impacts at all other study intersections would be less than significant because operations at these facilities would remain acceptable under cumulative plus project conditions.

Impact TR-1: Cumulatively considerable impact (LOS F operations exacerbated) at Gateway Park Boulevard/North Freeway Boulevard intersection during the PM peak hour.

Mitigation TR-1: Pay fair share cost of the following improvements:

- *Restripe eastbound approach at Gateway Park Boulevard/North Freeway Boulevard intersection to consist of one left-turn lane, one through lane, and one right-turn lane.*
- *Coordinate traffic signal at Gateway Park Boulevard/North Freeway Boulevard intersection such that the westbound left-turn is coordinated with the westbound left-turn at Truxel Road/Gateway Park Boulevard. Signal coordination should be maintained along Truxel Road between intersections 5, 6, and 7.*
- *Realign/restripe the southbound departing lanes from the Gateway Park Boulevard/North Freeway Boulevard intersection such that both westbound left turn lanes from North Freeway Boulevard become left-turn lanes approaching Truxel Road (refer to **Figure 11** for illustration of improvements).* This figure indicates that a modest amount of median reconfiguration may be necessary to accommodate this improvement, but no additional right-of-way is needed.
- *Modify the southbound Truxel Road approach at Gateway Park Boulevard to construct a dedicated u-turn lane (refer to **Figure 12** for illustration of improvements).* The proposed sketch in Figure 12 shows that a 200-foot u-turn lane could be provided without requiring any additional right-of-way. However, it would require a decrease in the northbound left-turn lane storage (355 to 210 feet) for the Natomas Marketplace North Entrance. Signal poles are currently positioned in the median nose and would need to be maintained along with a pedestrian refuge area. The design concept on Figure 12 accomplishes this.

Implementation of this mitigation would reduce the impact to ***less-than-significant***.



Restriping Purpose: To enable both left-turns from North Freeway Blvd to turn left onto southbound Truxel Rd, thereby improving operations at the Gateway Park Blvd/North Freeway Blvd intersection**.**

*Amount of median take may be reduced through additional travel lane narrowing and restriping.

Figure 11

Proposed Restriping of Southbound Gateway Park Boulevard

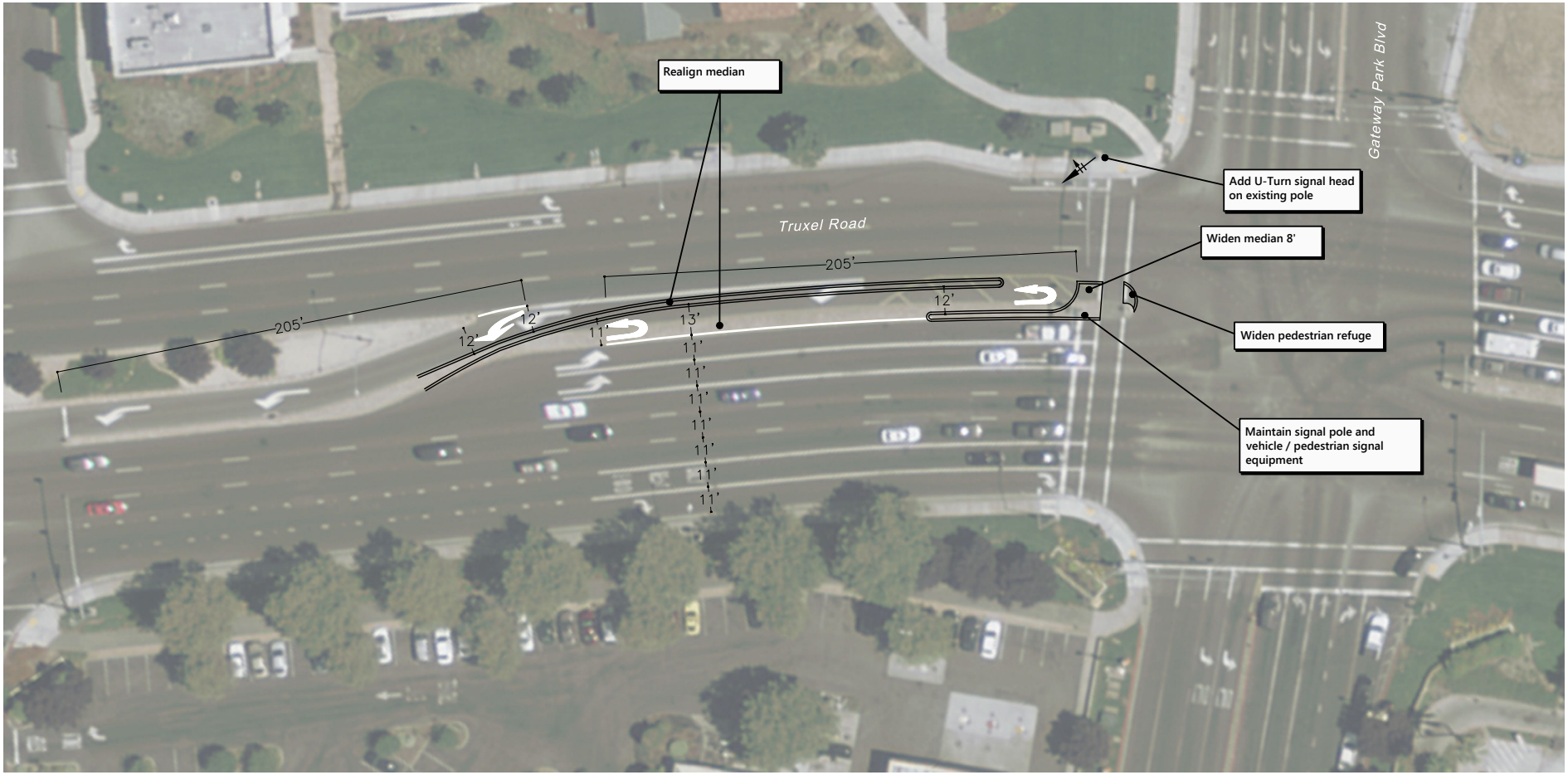


Figure 12

Proposed Southbound U-Turn Lane at
Truxel Road/Gateway Park Boulevard Intersection

The net effect of the above improvements is more balanced lane utilization departing the Gateway Park Boulevard/North Freeway Boulevard intersection, coordinated operations with Truxel Road/Gateway Park Boulevard, more effective lane assignments exiting the project site onto Gateway Park Boulevard, and additional capacity at the Truxel Road/Gateway Park Boulevard intersection.

Table 9 displays the operational benefits provided by the recommended mitigations under cumulative conditions. Refer to Appendix C for detailed calculations.

TABLE 9:
INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS WITH RECOMMENDED MITIGATIONS

Intersection	Control [1]	PM Peak Hour			
		Cumulative Plus Project Conditions		Cumulative Conditions with Recommended Mitigations [2]	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1. Truxel Rd. / Arena Blvd.	Traffic Signal	40.8	D	40.4	D
2. Truxel Rd. / Natomas Crossing Dr.	Traffic Signal	54.8	D	51.5	D
3. Truxel Rd. / Natomas Marketplace (North Entrance)	Traffic Signal	69.9	E	19.3	B
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	86.5	F	57.6	E
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	73.3	E	72.6	E
6. Truxel Rd. / I-80 Westbound Ramps	Traffic Signal	72.2	E	54.1	D
7. Truxel Rd. / I-80 Eastbound Ramps	Traffic Signal	36.4	D	15.1	B

Notes:
1. For signalized intersections, the LOS is based on the average delay experienced by all vehicles passing through the intersection.
2. Refer to previous pages for description of recommended mitigation measures.

Source: Fehr & Peers, 2016

Table 9 indicates that the recommended mitigations would provide the following operational benefits:

- The Gateway Park Boulevard/North Freeway Boulevard intersection would improve from LOS F (unacceptable) to LOS E (acceptable).
- Despite receiving a greater arriving volume (due to upstream efficiency/capacity enhancements along Gateway Park Boulevard), operations at the Truxel Road/Gateway Park Boulevard intersection would remain at an acceptable LOS E due to the additional southbound left/u-turn capacity enhancement.
- The southbound u-turn lane at the Truxel Road/Gateway Park Boulevard intersection would have a maximum queue of 225 feet, while the adjacent southbound left-turn lanes would each have a

maximum queue of 425 feet (i.e., queue would extend into the Natomas Marketplace partial signal). However, the overall extent of queue spillback would be reduced by adding the u-turn lane.

- The Truxel Road/Natomas Marketplace North Entrance and Truxel Road/I-80 interchange ramp terminal intersections would also benefit (i.e., reduced delays and queuing) from the recommended mitigation measures.

Table 10 presents the proposed project's fair share traffic contribution to the two intersections included in the recommended cumulative mitigations. As shown, project trips would represent 42 percent of the total growth in traffic at the Gateway Park Boulevard/North Freeway Boulevard intersection and 20 percent of the total growth in traffic at the Truxel Road/Gateway Park Boulevard intersection.

TABLE 10:
FAIR SHARE RESPONSIBILITY FOR INTERSECTIONS WITH RECOMMENDED MITIGATIONS

Intersection	Control	PM Peak Hour			
		Existing Volume [1]	Project-Added Trips [2]	Cumulative Volume [3]	Fair Share Responsibility [4]
4. Gateway Park Blvd. / N. Freeway Blvd.	Traffic Signal	3,318	409	4,291	42%
5. Truxel Rd. / Gateway Park Blvd.	Traffic Signal	5,835	339	7,509	20%

Notes:
1. Source: Figure 3.
2. Source: Figure 7.
3. Source: Figure 9.
4. Fair Share calculated as follows: Project trips / (cumulative – existing).

Source: Fehr & Peers, 2016

EVALUATION OF POTENTIAL FREEWAY IMPACTS

The project would not cause traffic to spill back onto the freeway mainline on either the I-80 EB or WB off-ramps. Therefore, impacts associated with queuing onto a Caltrans facility are ***less than significant*** and mitigations are not required.

EVALUATION OF TRANSIT IMPACTS

The project would not disrupt or adversely affect any planned transit facilities or conflict with adopted City transit plans, guidelines, policies, or standards. The planned extension of the LRT Green line would include grade-separated crossings of Gateway Park Boulevard and the Natomas Marketplace (North Entrance) intersections. The project may be accessed by multiple LRT and bus stops within ¼-mile of the project site. For these reasons, cumulative project impacts to transit facilities are considered ***less than significant***. Therefore, mitigations are not required.

It is worth noting that irrevocable offers of dedication (IODs) have been granted by property owners to Regional Transit along portions of Truxel Road to accommodate future light rail in the corridor. Between Gateway Park Boulevard and the canal, IODs exist on both sides of the street. However, north of the canal, the IOD is on the west side of the street only. To date, no specific proposals have been made with Regional Transit for a preferred alignment of the Green line along Truxel Road. Potential alignments could occur on the west side of the street, east side of the street, and in the median (via an elevated structure).

If the Green line extension ultimately includes at-grade crossings of the two unsignalized driveways serving the project, its construction would include all necessary gates, signage, and other items required for the at-grade crossing. If trains were to operate on 15-minute headways in each direction during peak hours under cumulative conditions, this would equate to approximately 8 train crossings during the PM peak hour. With each crossing taking about one minute or less, the effects of train crossing would be to reduce driveway ingress/egress capacity by about 10 percent. As is described later, deceleration lanes would be provided at each driveway on northbound Truxel Road to store vehicles waiting for trains to complete their crossing.

EVALUATION OF BICYCLE IMPACTS

The proposed project would not interfere with any existing bicycle facilities. It would also not preclude implementation of any future bicycle facilities. Cumulative impacts to bicycle facilities are considered ***less than significant***. Therefore, mitigations are not required.

EVALUATION OF PEDESTRIAN IMPACTS

The project would not disrupt planned pedestrian facilities or conflict with adopted City pedestrian plans, guidelines, policies, or standards. The adjacent intersections feature crosswalks with pedestrian actuation to facilitate pedestrian travel. The project site plan includes the provision of continuous sidewalks along its frontage on North Freeway Boulevard, the internal driveway, and Truxel Road to accommodate pedestrian travel. The site plan also includes pedestrian connections into the site from adjacent streets as well as a series of pedestrian linkages that connect the parking areas and building entrances. For these reasons, cumulative project impacts to pedestrian facilities are considered ***less than significant***. Therefore, mitigations are not required.

7. PROJECT ACCESS AND INTERNAL CIRCULATION EVALUATION

This chapter provides a detailed evaluation of vehicular, bicycle, and pedestrian access to the project site. In addition, on-site circulation is also evaluated. Refer to **Figure 13** for weekday PM peak hour volumes at project driveways.

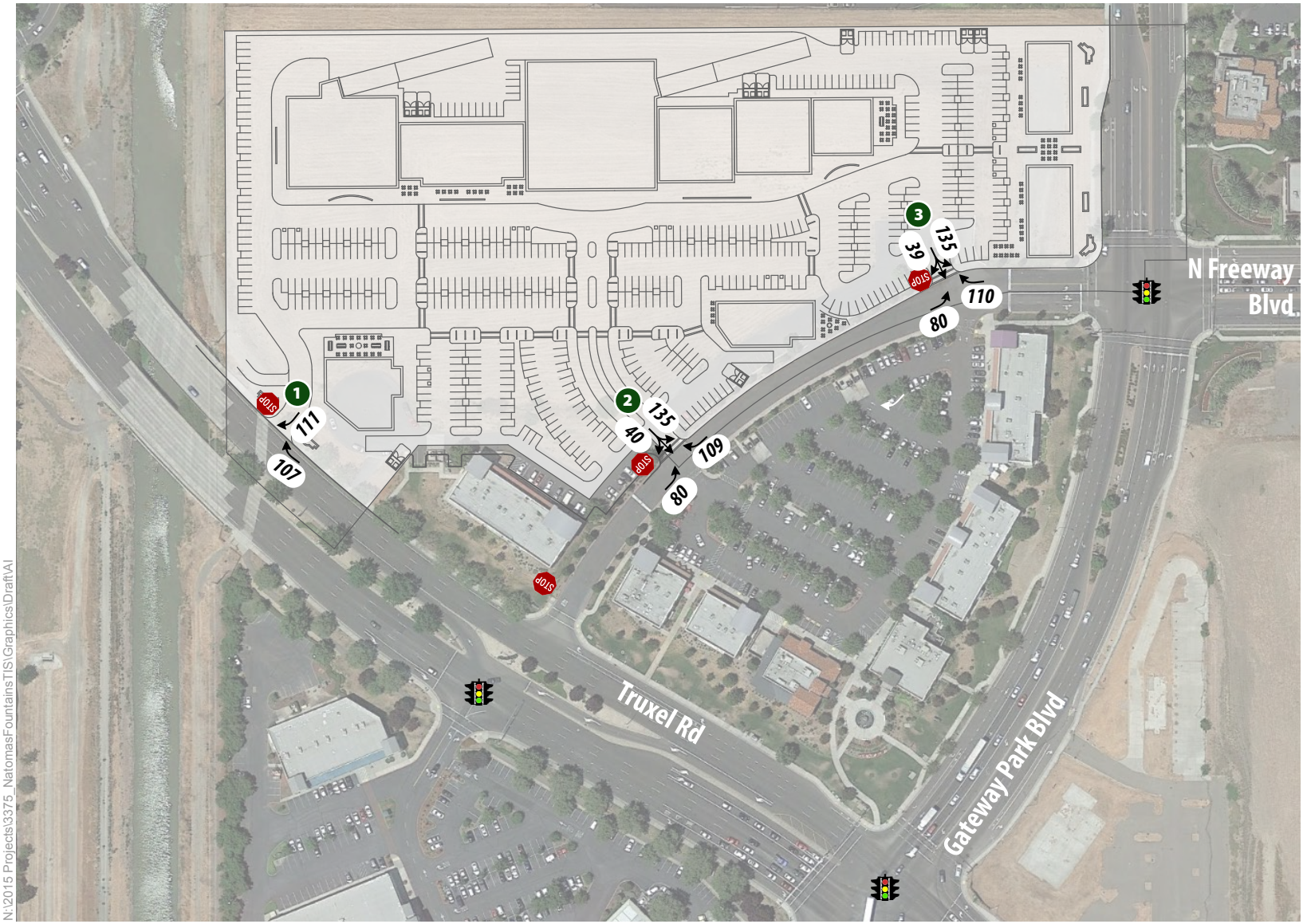
REVIEW OF PROJECT ACCESS ON TRUXEL ROAD

Two driveways along Truxel Road would serve project traffic. The more southerly driveway currently exists and serves the Natomas Village Shopping Center. The more northerly driveway would be a new right-turn only driveway. Fehr & Peers recommends the following at these driveways:

- Existing Natomas Village Shopping Center Driveway on Truxel Road: *No modifications are recommended*. This driveway provides 250 feet of throat depth (i.e., storage on-site for exiting vehicles), which is sufficient to accommodate the cumulative maximum throat depth of 150 feet. This driveway also includes a 200-foot right-turn deceleration lane to accommodate the heavy ingress volume.
- Proposed New Driveway (#1) on Truxel Road: *The following modifications are recommended:*
    - *Construct a 150-foot right-turn deceleration lane on northbound Truxel Road*. This is recommended to accommodate the 107 PM peak hour vehicles expected to turn right at this driveway. The project applicant should coordinate with the City to identify and implement a preferred means for displaying the transition area for the Class II bike lane approaching the deceleration lane.
    - *Place stop signs and pavement markings at the first internal intersection.* This is recommended in response to the maximum expected throat depth of 275 feet under cumulative conditions. This queue occurs as a result of the northbound u-turn/left-turn movement queuing back from the Natomas Crossing Drive signal at Truxel Road.
    - *The project architect should confirm that the driveway width and curb return radii are sufficient to enable inbound and outbound delivery trucks.*

REVIEW OF PROJECT ACCESS ON INTERNAL DRIVEWAY

Fehr & Peers reviewed aerial imagery, conducted a field visit, and evaluated the project site plan to analyze project access needs along the internal driveway. Recommendations are illustrated on **Figure 14** and described in **Table 11** (including supporting rationale)**.**



1 Driveway

Permitted Turning Movement

Traffic Signal

STOP Stop Sign

107 Driveway Volume during PM Peak Hour

Figure 13

PM Peak Hour Driveway Volumes

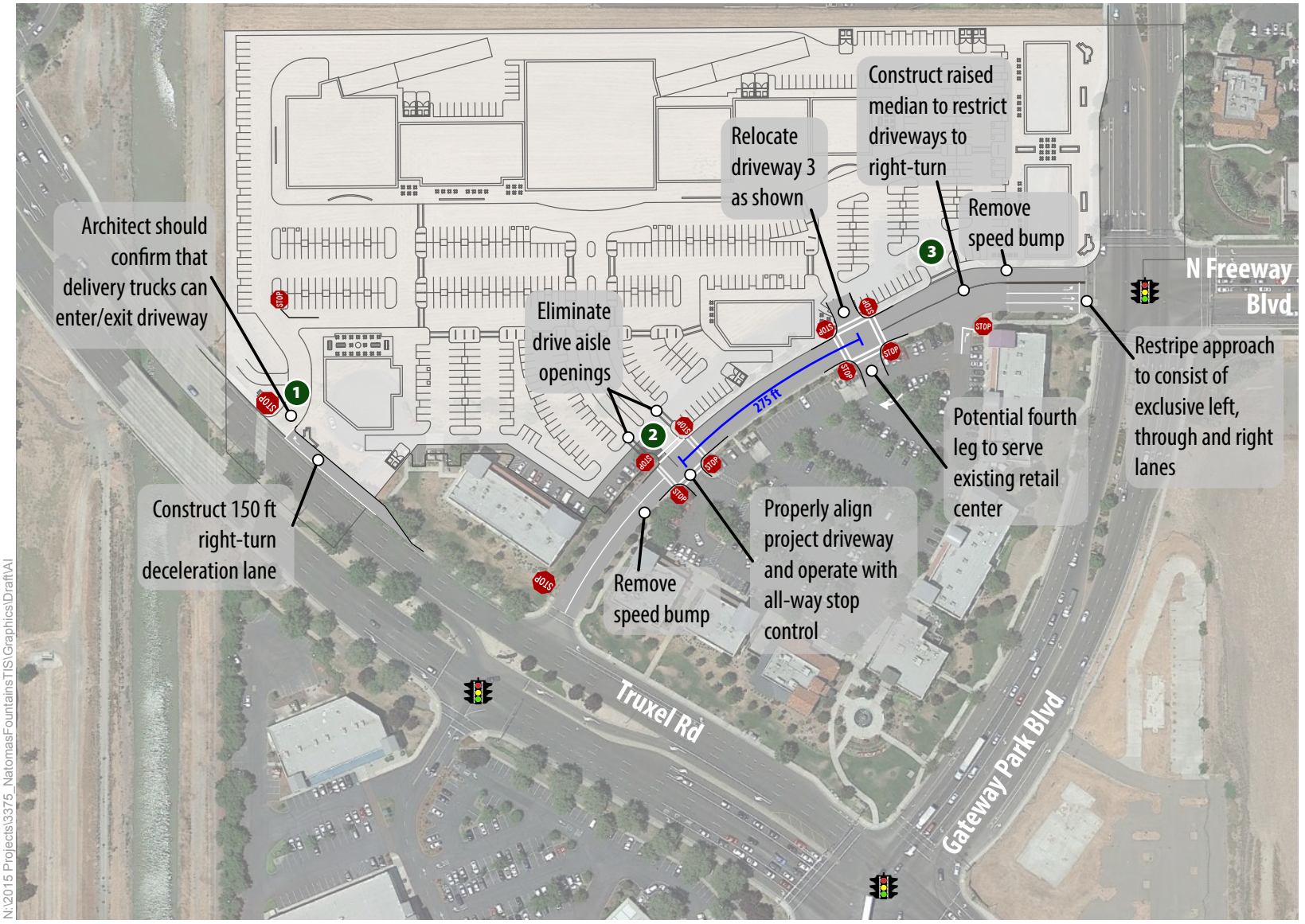


Figure ES-1

Project Access Recommendations

TABLE 11:
PROJECT ACCESS RECOMMENDATIONS ALONG INTERNAL NATOMAS VILLAGE SHOPPING CENTER DRIVEWAY

Recommendation	Rationale
1. Directly align the westerly project driveway (#2) with the existing Natomas Village westerly driveway and operate as an all-way stop controlled intersection with crosswalks.	Offset configuration in site plan would have resulted in undesirable left-turn conflicts. All-way stop slows traffic and allows for pedestrian crossings.
2. Relocate easterly project driveway (#3) further west (approximately 275 feet measured from centerline) from westerly driveway) to permit full-access. Operate with all-way stop control.	Eastbound traffic queues from Gateway Park Boulevard/North Freeway Boulevard would routinely spill back beyond this intersection, blocking access.
3. Construct narrow raised median on internal driveway to restrict movements at easterly Natomas Village Shopping Center driveway to right-turns.	Raised median is necessary to physically prohibit left-turns at this driveway, which would be frequently blocked by eastbound queued vehicles on the internal driveway.
4. Work with Natomas Village Shopping Center owner to investigate concept of constructing a 4th leg to the relocated project driveway #3 intersection.	Due to elimination of left-turn access at existing easterly driveway, a new full-access driveway opening may be desirable.
5. Close nearest drive aisle openings (or at a minimum, restrict to right-turns) along the westerly (#2) driveway throat.	Queued vehicles on this driveway approach would routinely block these drive aisle openings.
6. Remove both speed bumps on the existing Natomas Village Shopping Center driveway.	Due to the introduction of two all-way-stop intersections along this driveway, speed bumps are no longer needed.

Source: Fehr & Peers, 2016

The two project driveway intersections along the internal driveway are recommended to operate with all-way stop-control (with single lanes on all approaches) for the following reasons:

- They would each accommodate substantial levels (i.e., up to 175 vehicles per hour) of side-street traffic, which would result in lengthy and delays if side-street stop-control were in operation.
- They would each serve sizeable (i.e., up to 80 vehicles per hour) volumes of major street left-turning traffic. Due to the width of the driveway, it is not possible to provide a dedicated left-turn lane for these movements. As a result, left-turning traffic would turn from the through lane and block the flow of through traffic if side-street stop-control were in operation.
- All-way stop-control will enable crosswalks to be provided across the internal driveway to facilitate pedestrian travel between the two retail centers.

The two all-way stop-control intersections were analyzed in SimTraffic. They would each operate at LOS A under cumulative plus project conditions with all mitigation measures in place. Eastbound traffic from the North

Freeway Boulevard/Gateway Park Boulevard intersection would occasionally queue back into the easterly all-way stop intersection. However, traffic would not spill back from one all-way-stop intersection to the other.

REVIEW OF INTERNAL CIRCULATION

Fehr & Peers reviewed the project site plan with regard to internal circulation for pedestrians, vehicles, and delivery trucks. Key findings from this evaluation include:

- As part of the reconfiguration of Driveway #3, the project architect should use AutoTurn software to confirm that delivery trucks can maneuver through the parking lot and exit at Driveway 3.
- The site plan includes a sizeable amount of parking behind Buildings B – F, which would likely be unnoticed by most patrons. Should localized parking deficits occur in some portions of the site (i.e., closest to sit-down restaurants), employees should be encouraged to use this rear parking.

APPENDIX A: TRAFFIC COUNT DATA AND EXISTING TECHNICAL CALCULATIONS

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-014 Truxel Road & Arena Boulevard
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	11	153	33	0	197	10	19	5	1	35	16	55	29	0	100	9	100	22	1	132	464	2
7:15	22	256	31	0	309	11	29	6	1	47	26	72	31	0	129	22	101	41	3	167	652	4
7:30	13	305	48	0	366	13	32	5	0	50	35	138	30	0	203	45	126	39	1	211	830	1
7:45	45	316	55	0	416	19	34	5	3	61	45	122	45	0	212	74	197	49	2	322	1011	5
Total	91	1030	167	0	1288	53	114	21	5	193	122	387	135	0	644	150	524	151	7	832	2957	12
8:00	31	372	42	0	445	17	45	6	1	69	32	87	22	0	141	13	151	49	7	220	875	8
8:15	28	258	34	0	320	16	36	7	2	61	31	65	25	1	122	27	105	53	2	187	690	5
8:30	11	211	24	1	247	20	35	4	6	65	33	98	18	0	149	14	98	45	0	157	618	7
8:45	21	190	30	1	242	11	35	13	1	60	25	67	18	0	110	22	112	47	1	182	594	3
Total	91	1031	130	2	1254	64	151	30	10	255	121	317	83	1	522	76	466	194	10	746	2777	23
16:00	10	151	21	0	182	22	124	29	0	175	41	175	17	0	233	42	99	74	2	217	807	2
16:15	17	169	27	0	213	21	93	27	1	142	31	191	12	1	235	38	92	46	1	177	767	3
16:30	11	177	28	0	216	24	116	23	2	165	45	177	13	1	236	44	103	50	4	201	818	7
16:45	18	157	37	2	214	25	93	13	3	134	47	227	16	1	291	33	88	53	3	177	816	9
Total	56	654	113	2	825	92	426	92	6	616	164	770	58	3	995	157	382	223	10	772	3208	21
17:00	23	161	25	1	210	25	165	37	0	227	49	205	27	0	281	61	115	69	2	247	965	3
17:15	12	185	26	1	224	17	131	25	0	173	66	222	15	0	303	60	136	66	0	262	962	1
17:30	18	174	23	0	215	17	98	21	0	136	41	237	17	1	296	65	106	53	1	225	872	2
17:45	19	173	34	1	227	14	72	18	0	104	55	232	13	0	300	63	107	63	2	235	866	3
Total	72	693	108	3	876	73	466	101	0	640	211	896	72	1	1180	249	464	251	5	969	3665	9
Grand Total	310	3408	518	7	4243	282	1157	244	21	1704	618	2370	348	5	3341	632	1836	819	32	3319	12607	65
Apprch %	7.3%	80.3%	12.2%	0.2%		16.5%	67.9%	14.3%	1.2%		18.5%	70.9%	10.4%	0.1%		19.0%	55.3%	24.7%	1.0%			
Total %	2.5%	27.0%	4.1%	0.1%	33.7%	2.2%	9.2%	1.9%	0.2%	13.5%	4.9%	18.8%	2.8%	0.0%	26.5%	5.0%	14.6%	6.5%	0.3%	26.3%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	13	305	48	0	366	13	32	5	0	50	35	138	30	0	203	45	126	39	1	211	830
7:45	45	316	55	0	416	19	34	5	3	61	45	122	45	0	212	74	197	49	2	322	1011
8:00	31	372	42	0	445	17	45	6	1	69	32	87	22	0	141	13	151	49	7	220	875
8:15	28	258	34	0	320	16	36	7	2	61	31	65	25	1	122	27	105	53	2	187	690
Total Volume	117	1251	179	0	1547	65	147	23	6	241	143	412	122	1	678	159	579	190	12	940	3406
% App Total	7.6%	80.9%	11.6%	0.0%		27.0%	61.0%	9.5%	2.5%		21.1%	60.8%	18.0%	0.1%		16.9%	61.6%	20.2%	1.3%		
PHF	.650	.841	.814	.000	.869	.855	.817	.821	.500	.873	.794	.746	.678	.250	.800	.537	.735	.896	.429	.730	.842

PM PEAK HOUR	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	23	161	25	1	210	25	165	37	0	227	49	205	27	0	281	61	115	69	2	247	965
17:15	12	185	26	1	224	17	131	25	0	173	66	222	15	0	303	60	136	66	0	262	962
17:30	18	174	23	0	215	17	98	21	0	136	41	237	17	1	296	65	106	53	1	225	872
17:45	19	173	34	1	227	14	72	18	0	104	55	232	13	0	300	63	107	63	2	235	866
Total Volume	72	693	108	3	876	73	466	101	0	640	211	896	72	1	1180	249	464	251	5	969	3665
% App Total	8.2%	79.1%	12.3%	0.3%		11.4%	72.8%	15.8%	0.0%		17.9%	75.9%	6.1%	0.1%		25.7%	47.9%	25.9%	0.5%		
PHF	.783	.936	.794	.750	.965	.730	.706	.682	.000	.705	.799	.945	.667	.250	.974	.958	.853	.909	.625	.925	.949

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-014 Truxel Road & Arena Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Arena Boulevard Westbound					Truxel Road Northbound					Arena Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1
7:30	0	0	0	4	0	1	1	1	0	3	0	1	0	0	1	0	0	0	0	0	4	4
7:45	0	1	0	0	1	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	3	2
Total	0	1	0	5	1	1	1	1	2	3	0	3	0	1	3	0	0	1	0	1	8	8
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	1	0	0	1	0	0	0	4	0	0	0	0	1	0	0	1	0	0	1	2	5
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	1	0	0	0	0	3	0	0	0	0	2	0	0	0	1	0	1	1	6
Total	0	1	0	2	1	0	0	0	7	0	0	0	0	3	0	0	1	1	0	2	3	12
16:00	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:15	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
16:30	0	2	1	1	3	0	2	0	0	2	1	0	0	0	1	0	1	0	1	1	7	2
16:45	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	0	0	0	0	1	3
Total	0	3	1	1	4	1	3	0	1	4	1	2	0	3	3	0	1	0	1	1	12	6
17:00	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	0	0	2	0	1	5
17:15	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	2
17:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
17:45	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1
Total	0	1	0	3	1	0	0	0	1	0	0	2	0	3	2	0	1	0	4	1	4	11
Grand Total	0	6	1	11	7	2	4	1	11	7	1	7	0	10	8	0	3	2	5	5	27	37
Apprch %	0.0%	85.7%	14.3%			28.6%	57.1%	14.3%			12.5%	87.5%	0.0%			0.0%	60.0%	40.0%				
Total %	0.0%	22.2%	3.7%		25.9%	7.4%	14.8%	3.7%		25.9%	3.7%	25.9%	0.0%		29.6%	0.0%	11.1%	7.4%		18.5%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Arena Boulevard Westbound				Truxel Road Northbound				Arena Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	0	0	0	0	1	1	1	3	0	1	0	1	0	0	0	0	4
7:45	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	2	0	2	1	1	1	3	0	3	0	3	0	1	0	1	9
% App Total	0.0%	100.0%	0.0%		33.3%	33.3%	33.3%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.000	.500	.000	.500	.250	.250	.250	.250	.000	.375	.000	.375	.000	.250	.000	.250	.563

PM PEAK HOUR	Truxel Road Southbound				Arena Boulevard Westbound				Truxel Road Northbound				Arena Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-012 Truxel Road & Natomas Crossing Drive
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	24	146	20	0	190	20	2	22	0	44	12	57	18	2	89	19	7	57	0	83	406	2
7:15	25	230	22	0	277	26	3	22	0	51	18	78	23	1	120	31	6	73	0	110	558	1
7:30	19	341	31	0	391	30	4	20	0	54	29	148	33	1	211	38	5	89	0	132	788	1
7:45	18	327	26	2	373	18	5	37	0	60	38	158	20	2	218	37	13	76	0	126	777	4
Total	86	1044	99	2	1231	94	14	101	0	209	97	441	94	6	638	125	31	295	0	451	2529	8
8:00	16	385	42	0	443	18	5	16	0	39	28	110	27	3	168	10	9	67	0	86	736	3
8:15	17	269	30	0	316	22	2	27	0	51	34	94	20	2	150	11	2	55	0	68	585	2
8:30	21	209	25	0	255	22	4	16	0	42	27	117	30	2	176	18	6	49	0	73	546	2
8:45	23	211	26	1	261	18	2	12	0	32	31	100	10	3	144	16	2	53	0	71	508	4
Total	77	1074	123	1	1275	80	13	71	0	164	120	421	87	10	638	55	19	224	0	298	2375	11
16:00	10	193	25	0	228	17	4	24	0	45	60	183	24	6	273	21	4	61	0	86	632	6
16:15	10	211	28	1	250	17	2	10	0	29	49	218	20	10	297	18	3	38	0	59	635	11
16:30	9	219	24	2	254	15	7	18	0	40	46	199	16	4	265	15	3	54	0	72	631	6
16:45	15	194	25	0	234	10	4	13	0	27	65	248	9	9	331	31	6	61	0	98	690	9
Total	44	817	102	3	966	59	17	65	0	141	220	848	69	29	1166	85	16	214	0	315	2588	32
17:00	14	236	35	1	286	22	3	10	0	35	70	239	16	14	339	27	4	74	0	105	765	15
17:15	16	216	29	0	261	16	3	18	0	37	63	251	13	9	336	28	1	58	0	87	721	9
17:30	11	230	29	0	270	7	2	26	0	35	74	255	23	3	355	16	6	46	0	68	728	3
17:45	16	247	26	0	289	18	4	22	0	44	75	263	26	1	365	20	7	65	0	92	790	1
Total	57	929	119	1	1106	63	12	76	0	151	282	1008	78	27	1395	91	18	243	0	352	3004	28
Grand Total	264	3864	443	7	4578	296	56	313	0	665	719	2718	328	72	3837	356	84	976	0	1416	10496	79
Apprch %	5.8%	84.4%	9.7%	0.2%		44.5%	8.4%	47.1%	0.0%		18.7%	70.8%	8.5%	1.9%		25.1%	5.9%	68.9%	0.0%			
Total %	2.5%	36.8%	4.2%	0.1%	43.6%	2.8%	0.5%	3.0%	0.0%	6.3%	6.9%	25.9%	3.1%	0.7%	36.6%	3.4%	0.8%	9.3%	0.0%	13.5%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	19	341	31	0	391	30	4	20	0	54	29	148	33	1	211	38	5	89	0	132	788
7:45	18	327	26	2	373	18	5	37	0	60	38	158	20	2	218	37	13	76	0	126	777
8:00	16	385	42	0	443	18	5	16	0	39	28	110	27	3	168	10	9	67	0	86	736
8:15	17	269	30	0	316	22	2	27	0	51	34	94	20	2	150	11	2	55	0	68	585
Total Volume	70	1322	129	2	1523	88	16	100	0	204	129	510	100	8	747	96	29	287	0	412	2886
% App Total	4.6%	86.8%	8.5%	0.1%		43.1%	7.8%	49.0%	0.0%		17.3%	68.3%	13.4%	1.1%		23.3%	7.0%	69.7%	0.0%		
PHF	.921	.858	.768	.250	.859	.733	.800	.676	.000	.850	.849	.807	.758	.667	.857	.632	.558	.806	.000	.780	.916

PM PEAK HOUR	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	14	236	35	1	286	22	3	10	0	35	70	239	16	14	339	27	4	74	0	105	765
17:15	16	216	29	0	261	16	3	18	0	37	63	251	13	9	336	28	1	58	0	87	721
17:30	11	230	29	0	270	7	2	26	0	35	74	255	23	3	355	16	6	46	0	68	728
17:45	16	247	26	0	289	18	4	22	0	44	75	263	26	1	365	20	7	65	0	92	790
Total Volume	57	929	119	1	1106	63	12	76	0	151	282	1008	78	27	1395	91	18	243	0	352	3004
% App Total	5.2%	84.0%	10.8%	0.1%		41.7%	7.9%	50.3%	0.0%		20.2%	72.3%	5.6%	1.9%		25.9%	5.1%	69.0%	0.0%		
PHF	.891	.940	.850	.250	.957	.716	.750	.731	.000	.858	.940	.958	.750	.482	.955	.813	.643	.821	.000	.838	.951

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-012 Truxel Road & Natomas Crossing Drive
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Natomas Crossing Drive Westbound					Truxel Road Northbound					Natomas Crossing Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	2	0	0	1	2	0	1	0	2	1	0	0	0	0	0	3	3
7:30	1	1	0	4	2	0	0	0	2	0	0	1	0	1	1	0	0	0	3	0	3	10
7:45	0	1	0	0	1	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	3	1
Total	1	2	0	4	3	3	0	0	3	3	0	4	0	4	4	0	0	0	3	0	10	14
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	1	0	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	3	1
Total	0	0	0	2	0	1	0	0	0	1	0	1	0	1	1	0	2	0	1	2	4	4
16:00	0	1	0	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	2	2
16:15	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	4
16:30	0	1	1	0	2	0	0	0	0	0	1	0	0	1	1	0	0	1	0	1	4	1
16:45	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1
Total	0	2	1	3	3	0	0	0	1	0	2	2	0	3	4	0	0	1	1	1	8	8
17:00	0	0	0	3	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	5
17:15	0	0	0	4	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
17:30	0	0	0	2	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	2
17:45	0	1	0	3	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	2	4
Total	0	1	0	12	1	1	1	0	2	2	2	1	0	0	3	0	0	0	1	0	6	15
Grand Total	1	5	1	21	7	5	1	0	6	6	4	8	0	8	12	0	2	1	6	3	28	41
Apprch %	14.3%	71.4%	14.3%			83.3%	16.7%	0.0%			33.3%	66.7%	0.0%			0.0%	66.7%	33.3%				
Total %	3.6%	17.9%	3.6%		25.0%	17.9%	3.6%	0.0%		21.4%	14.3%	28.6%	0.0%		42.9%	0.0%	7.1%	3.6%		10.7%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Natomas Crossing Drive Westbound				Truxel Road Northbound				Natomas Crossing Drive Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
7:45	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	3	0	3	0	1	0	1	7
% App Total	33.3%	66.7%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	100.0%	0.0%		
PHF	.250	.500	.000	.375	.000	.000	.000	.000	.000	.375	.000	.375	.000	.250	.000	.250	.583

PM PEAK HOUR	Truxel Road Southbound				Natomas Crossing Drive Westbound				Truxel Road Northbound				Natomas Crossing Drive Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
17:15	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
17:45	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
Total Volume	0	1	0	1	1	1	0	2	2	1	0	3	0	0	0	0	6
% App Total	0.0%	100.0%	0.0%		50.0%	50.0%	0.0%		66.7%	33.3%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.250	.000	.250	.250	.250	.000	.500	.500	.250	.000	.750	.000	.000	.000	.000	.750

ALL TRAFFIC DATA

City of Sacramento
(916) 771-8700
orders@atdtraffic.com

All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : 15-7849-023 Truxel Road & Natomas Marketplace (North Entrance)
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
16:00	0	257	42	0	299	0	0	19	0	19	6	215	36	1	258	33	0	25	0	58	634	1
16:15	0	223	42	0	265	0	0	34	0	34	8	218	28	0	254	28	0	24	0	52	605	0
16:30	0	267	40	0	307	0	0	24	0	24	5	232	30	0	267	29	0	33	0	62	660	0
16:45	0	251	38	0	289	0	0	26	0	26	5	254	47	0	306	25	0	29	0	54	675	0
Total	0	998	162	0	1160	0	0	103	0	103	24	919	141	1	1085	115	0	111	0	226	2574	1
17:00	0	309	32	0	341	0	0	39	0	39	3	271	36	1	311	42	0	34	0	76	767	1
17:15	0	240	51	0	291	0	0	33	0	33	5	251	39	2	297	30	0	27	0	57	678	2
17:30	0	239	53	0	292	0	0	23	0	23	4	312	40	0	356	27	0	31	0	58	729	0
17:45	0	272	53	0	325	0	0	25	0	25	7	306	45	3	361	39	0	18	0	57	768	3
Total	0	1060	189	0	1249	0	0	120	0	120	19	1140	160	6	1325	138	0	110	0	248	2942	6
Grand Total	0	2058	351	0	2409	0	0	223	0	223	43	2059	301	7	2410	253	0	221	0	474	5516	7
Apprch %	0.0%	85.4%	14.6%	0.0%		0.0%	0.0%	100.0%	0.0%		1.8%	85.4%	12.5%	0.3%		53.4%	0.0%	46.6%	0.0%			
Total %	0.0%	37.3%	6.4%	0.0%	43.7%	0.0%	0.0%	4.0%	0.0%	4.0%	0.8%	37.3%	5.5%	0.1%	43.7%	4.6%	0.0%	4.0%	0.0%	8.6%	100.0%	

PM PEAK HOUR	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	309	32	0	341	0	0	39	0	39	3	271	36	1	311	42	0	34	0	76	767
17:15	0	240	51	0	291	0	0	33	0	33	5	251	39	2	297	30	0	27	0	57	678
17:30	0	239	53	0	292	0	0	23	0	23	4	312	40	0	356	27	0	31	0	58	729
17:45	0	272	53	0	325	0	0	25	0	25	7	306	45	3	361	39	0	18	0	57	768
Total Volume	0	1060	189	0	1249	0	0	120	0	120	19	1140	160	6	1325	138	0	110	0	248	2942
% App Total	0.0%	84.9%	15.1%	0.0%		0.0%	0.0%	100.0%	0.0%		1.4%	86.0%	12.1%	0.5%		55.6%	0.0%	44.4%	0.0%		
PHF	.000	.858	.892	.000	.916	.000	.000	.769	.000	.769	.679	.913	.889	.500	.918	.821	.000	.809	.000	.816	.958

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-023 Truxel Road & Natomas Marketplace (North Entrance)
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Natomas Marketplace (North Entrance) Westbound					Truxel Road Northbound					Natomas Marketplace (North Entrance) Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
8:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	3
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0
16:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
16:30	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	1
16:45	0	0	0	0	0	0	0	0	5	0	0	1	0	0	1	0	0	0	0	0	1	5
Total	0	2	0	0	2	0	0	0	7	0	0	3	0	0	3	1	0	0	0	1	6	7
17:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
17:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
17:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	0	0	2	0	0	0	2	0	0	2	0	1	2	0	0	0	0	0	4	3
Grand Total	0	4	0	0	4	0	0	0	18	0	0	5	0	2	5	1	0	0	0	1	10	20
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	0.0%	50.0%	0.0%		50.0%	10.0%	0.0%	0.0%		10.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Natomas Marketplace (North Entrance) Westbound				Truxel Road Northbound				Natomas Marketplace (North Entrance) Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:00 to 08:00																	
Peak Hour For Entire Intersection Begins at 07:00																	
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Truxel Road Southbound				Natomas Marketplace (North Entrance) Westbound				Truxel Road Northbound				Natomas Marketplace (North Entrance) Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-022 Gateway Park Boulevard & Freeway Boulevard
Date : 10/29/2015

Unshifted Count = All Vehicles & Uturns

	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
16:00	37	180	15	7	239	175	10	38	0	223	11	136	93	0	240	9	8	17	0	34	736	7
16:15	33	167	18	11	229	148	9	26	2	185	9	139	133	1	282	8	5	20	0	33	729	14
16:30	48	170	15	9	242	188	17	37	0	242	8	162	151	4	325	8	14	25	0	47	856	13
16:45	43	136	13	10	202	176	5	34	0	215	7	162	159	3	331	8	4	25	0	37	785	13
Total	161	653	61	37	912	687	41	135	2	865	35	599	536	8	1178	33	31	87	0	151	3106	47
17:00	70	157	17	15	259	217	22	62	0	301	6	137	140	2	285	9	11	24	0	44	889	17
17:15	62	140	14	17	233	176	17	52	0	245	9	167	163	0	339	9	9	24	0	42	859	17
17:30	46	149	15	9	219	153	8	33	0	194	9	151	164	4	328	8	10	19	0	37	778	13
17:45	43	111	18	12	184	145	12	44	2	203	10	148	200	0	358	19	7	25	0	51	796	14
Total	221	557	64	53	895	691	59	191	2	943	34	603	667	6	1310	45	37	92	0	174	3322	61
Grand Total	382	1210	125	90	1807	1378	100	326	4	1808	69	1202	1203	14	2488	78	68	179	0	325	6428	108
Apprch %	21.1%	67.0%	6.9%	5.0%		76.2%	5.5%	18.0%	0.2%		2.8%	48.3%	48.4%	0.6%		24.0%	20.9%	55.1%	0.0%			
Total %	5.9%	18.8%	1.9%	1.4%	28.1%	21.4%	1.6%	5.1%	0.1%	28.1%	1.1%	18.7%	18.7%	0.2%	38.7%	1.2%	1.1%	2.8%	0.0%	5.1%	100.0%	

PM PEAK HOUR	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	48	170	15	9	242	188	17	37	0	242	8	162	151	4	325	8	14	25	0	47	856
16:45	43	136	13	10	202	176	5	34	0	215	7	162	159	3	331	8	4	25	0	37	785
17:00	70	157	17	15	259	217	22	62	0	301	6	137	140	2	285	9	11	24	0	44	889
17:15	62	140	14	17	233	176	17	52	0	245	9	167	163	0	339	9	9	24	0	42	859
Total Volume	223	603	59	51	936	757	61	185	0	1003	30	628	613	9	1280	34	38	98	0	170	3389
% App Total	23.8%	64.4%	6.3%	5.4%		75.5%	6.1%	18.4%	0.0%		2.3%	49.1%	47.9%	0.7%		20.0%	22.4%	57.6%	0.0%		
PHF	.796	.887	.868	.750	.903	.872	.693	.746	.000	.833	.833	.940	.940	.563	.944	.944	.679	.980	.000	.904	.953

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-022 Gateway Park Boulevard & Freeway Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Gateway Park Boulevard Southbound					N Freeway Boulevard Westbound					Gateway Park Boulevard Northbound					N Freeway Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
16:15	0	1	0	2	1	0	0	0	0	0	0	0	0	2	0	1	0	0	3	1	2	7
16:30	1	1	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	8
16:45	0	0	0	3	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	5
Total	1	2	0	9	3	0	1	0	1	1	0	0	0	4	0	1	0	0	8	1	5	22
17:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
17:15	0	0	0	2	0	0	0	0	2	0	1	0	0	1	1	0	0	0	0	0	1	5
17:30	0	1	0	0	1	0	0	0	4	0	0	0	0	3	0	0	1	0	0	1	2	7
17:45	0	0	0	0	0	0	0	0	3	0	0	0	1	1	1	0	0	0	0	0	1	4
Total	0	1	0	4	1	0	0	0	9	0	1	0	1	5	2	0	1	0	2	1	4	20
Grand Total	1	3	0	13	4	0	1	0	10	1	1	0	1	9	2	1	1	0	10	2	9	42
Apprch %	25.0%	75.0%	0.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			50.0%	50.0%	0.0%				
Total %	11.1%	33.3%	0.0%		44.4%	0.0%	11.1%	0.0%		11.1%	11.1%	0.0%	11.1%		22.2%	11.1%	11.1%	0.0%		22.2%	100.0%	

PM PEAK HOUR	Gateway Park Boulevard Southbound				N Freeway Boulevard Westbound				Gateway Park Boulevard Northbound				N Freeway Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																	
Peak Hour For Entire Intersection Begins at 16:30																	
16:30	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total Volume	1	1	0	2	0	1	0	1	1	0	0	1	0	0	0	0	4
% App Total	50.0%	50.0%	0.0%		0.0%	100.0%	0.0%		100.0%	0.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.250	.250	.000	.250	.000	.250	.000	.250	.250	.000	.000	.250	.000	.000	.000	.000	.500

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-011 Truxel Road & Gateway Park Boulevard
Date : 10/28/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	13	237	11	1	262	115	22	2	0	139	48	82	239	2	371	3	11	48	0	62	834	3
7:15	7	341	9	1	358	162	14	1	0	177	48	122	252	0	422	8	15	37	0	60	1017	1
7:30	24	433	15	1	473	171	16	5	0	192	60	163	307	0	530	6	17	45	0	68	1263	1
7:45	29	397	24	2	452	136	25	8	0	169	57	196	378	0	631	13	24	48	0	85	1337	2
Total	73	1408	59	5	1545	584	77	16	0	677	213	563	1176	2	1954	30	67	178	0	275	4451	7
8:00	24	352	30	2	408	164	39	1	0	204	53	120	275	0	448	10	11	46	0	67	1127	2
8:15	15	331	23	1	370	151	24	4	0	179	69	138	291	0	498	12	21	50	0	83	1130	1
8:30	16	243	23	2	284	142	20	3	0	165	80	186	281	0	547	16	13	46	0	75	1071	2
8:45	28	217	26	4	275	121	26	7	0	154	66	197	287	1	551	14	21	60	0	95	1075	5
Total	83	1143	102	9	1337	578	109	15	0	702	268	641	1134	1	2044	52	66	202	0	320	4403	10
16:00	23	158	39	10	230	297	50	18	0	365	118	198	211	0	527	55	40	121	0	216	1338	10
16:15	39	201	26	9	275	270	55	29	1	355	126	237	230	0	593	44	37	134	0	215	1438	10
16:30	39	190	35	7	271	300	61	19	0	380	145	291	242	2	680	48	25	137	0	210	1541	9
16:45	32	182	43	12	269	259	45	26	0	330	155	284	271	1	711	58	42	144	0	244	1554	13
Total	133	731	143	38	1045	1126	211	92	1	1430	544	1010	954	3	2511	205	144	536	0	885	5871	42
17:00	46	262	36	25	369	301	49	22	0	372	133	302	260	0	695	51	37	103	0	191	1627	25
17:15	34	181	37	14	266	259	48	21	0	328	145	336	273	2	756	34	31	106	0	171	1521	16
17:30	55	184	43	10	292	243	52	25	0	320	166	354	259	0	779	50	32	108	0	190	1581	10
17:45	47	178	50	14	289	194	43	32	0	269	181	404	253	0	838	52	36	104	1	193	1589	15
Total	182	805	166	63	1216	997	192	100	0	1289	625	1396	1045	2	3068	187	136	421	1	745	6318	66
Grand Total	471	4087	470	115	5143	3285	589	223	1	4098	1650	3610	4309	8	9577	474	413	1337	1	2225	21043	125
Apprch %	9.2%	79.5%	9.1%	2.2%		80.2%	14.4%	5.4%	0.0%		17.2%	37.7%	45.0%	0.1%		21.3%	18.6%	60.1%	0.0%			
Total %	2.2%	19.4%	2.2%	0.5%	24.4%	15.6%	2.8%	1.1%	0.0%	19.5%	7.8%	17.2%	20.5%	0.0%	45.5%	2.3%	2.0%	6.4%	0.0%	10.6%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	24	433	15	1	473	171	16	5	0	192	60	163	307	0	530	6	17	45	0	68	1263
7:45	29	397	24	2	452	136	25	8	0	169	57	196	378	0	631	13	24	48	0	85	1337
8:00	24	352	30	2	408	164	39	1	0	204	53	120	275	0	448	10	11	46	0	67	1127
8:15	15	331	23	1	370	151	24	4	0	179	69	138	291	0	498	12	21	50	0	83	1130
Total Volume	92	1513	92	6	1703	622	104	18	0	744	239	617	1251	0	2107	41	73	189	0	303	4857
% App Total	5.4%	88.8%	5.4%	0.4%		83.6%	14.0%	2.4%	0.0%		11.3%	29.3%	59.4%	0.0%		13.5%	24.1%	62.4%	0.0%		
PHF	.793	.874	.767	.750	.900	.909	.667	.563	.000	.912	.866	.787	.827	.000	.835	.788	.760	.945	.000	.891	.908

PM PEAK HOUR	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	46	262	36	25	369	301	49	22	0	372	133	302	260	0	695	51	37	103	0	191	1627
17:15	34	181	37	14	266	259	48	21	0	328	145	336	273	2	756	34	31	106	0	171	1521
17:30	55	184	43	10	292	243	52	25	0	320	166	354	259	0	779	50	32	108	0	190	1581
17:45	47	178	50	14	289	194	43	32	0	269	181	404	253	0	838	52	36	104	1	193	1589
Total Volume	182	805	166	63	1216	997	192	100	0	1289	625	1396	1045	2	3068	187	136	421	1	745	6318
% App Total	15.0%	66.2%	13.7%	5.2%		77.3%	14.9%	7.8%	0.0%		20.4%	45.5%	34.1%	0.1%		25.1%	18.3%	56.5%	0.1%		
PHF	.827	.768	.830	.630	.824	.828	.923	.781	.000	.866	.863	.864	.957	.250	.915	.899	.919	.975	.250	.965	.971

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-011 Truxel Road & Gateway Park Boulevard
Date : 1/0/1900

Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					Gateway Park Boulevard Westbound					Truxel Road Northbound					Gateway Park Boulevard Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	2	0	0	2	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	3	2
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	1	0	0	0	0	1	0	1	0	2	0	3	0	0	0	1	0	3	3
Total	0	2	0	2	2	0	1	0	3	1	1	0	2	0	3	0	0	0	1	0	6	6
8:00	0	0	0	6	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2	0	1	9
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45	0	0	0	1	0	1	1	0	0	2	0	0	1	0	1	0	0	0	0	0	3	1
Total	0	0	0	10	0	2	2	0	1	4	0	0	1	0	1	0	0	0	2	0	5	13
16:00	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
16:15	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3	1
16:30	0	1	0	3	1	1	0	0	2	1	0	2	0	0	2	0	0	0	2	0	4	7
16:45	0	1	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
Total	0	3	0	18	3	1	1	0	2	2	0	3	0	0	3	0	0	0	2	0	8	22
17:00	0	0	0	5	0	0	0	1	3	1	0	1	0	0	1	0	0	0	3	0	2	11
17:15	0	3	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2
17:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:45	0	0	0	6	0	0	1	0	2	1	0	1	0	0	1	0	0	0	1	0	2	9
Total	0	3	0	15	3	0	1	1	5	2	0	2	0	0	2	0	0	0	4	0	7	24
Grand Total	0	8	0	45	8	3	5	1	11	9	1	5	3	0	9	0	0	0	9	0	26	65
Apprch %	0.0%	100.0%	0.0%			33.3%	55.6%	11.1%			11.1%	55.6%	33.3%			0.0%	0.0%	0.0%				
Total %	0.0%	30.8%	0.0%		30.8%	11.5%	19.2%	3.8%		34.6%	3.8%	19.2%	11.5%		34.6%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound				Gateway Park Boulevard Westbound				Truxel Road Northbound				Gateway Park Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																	
Peak Hour For Entire Intersection Begins at 07:30																	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	1	0	2	3	0	0	0	0	3
8:00	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	1	0	2	1	0	2	3	0	0	0	0	5
% App Total	0.0%	0.0%	0.0%		50.0%	50.0%	0.0%		33.3%	0.0%	66.7%		0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.250	.250	.000	.000	.000	.000	.417

PM PEAK HOUR	Truxel Road Southbound				Gateway Park Boulevard Westbound				Truxel Road Northbound				Gateway Park Boulevard Eastbound				
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																	
Peak Hour For Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
17:15	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total Volume	0	3	0	3	0	1	1	2	0	2	0	2	0	0	0	0	7
% App Total	0.0%	100.0%	0.0%		0.0%	50.0%	50.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.250	.000	.250	.000	.250	.250	.500	.000	.500	.000	.500	.000	.000	.000	.000	.583

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-010 Truxel Road & I-80 WB Ramps
Date : 10/28/2015

Unshifted Count = All Vehicles & Uturns

	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	196	204	0	400	40	0	121	0	161	0	246	109	0	355	0	0	0	0	0	916	0
7:15	0	267	263	0	530	62	0	131	0	193	0	320	122	0	442	0	0	0	0	0	1165	0
7:30	0	362	288	0	650	69	0	155	0	224	0	363	123	0	486	0	0	0	0	0	1360	0
7:45	0	336	262	0	598	86	0	183	0	269	0	413	100	0	513	0	0	0	0	0	1380	0
Total	0	1161	1017	0	2178	257	0	590	0	847	0	1342	454	0	1796	0	0	0	0	0	4821	0
8:00	0	297	259	0	556	51	0	143	0	194	0	349	73	0	422	0	0	0	0	0	1172	0
8:15	0	295	251	0	546	57	0	151	0	208	0	362	91	0	453	0	0	0	0	0	1207	0
8:30	0	244	190	0	434	49	0	150	0	199	0	382	70	0	452	0	0	0	0	0	1085	0
8:45	0	244	176	0	420	51	0	176	0	227	0	396	43	0	439	0	0	0	0	0	1086	0
Total	0	1080	876	0	1956	208	0	620	0	828	0	1489	277	0	1766	0	0	0	0	0	4550	0
16:00	0	300	284	0	584	80	0	170	0	250	0	378	52	0	430	0	0	0	0	0	1264	0
16:15	0	338	251	0	589	98	0	151	0	249	0	438	46	0	484	0	0	0	0	0	1322	0
16:30	0	353	301	0	654	98	0	204	0	302	0	487	47	0	534	0	0	0	0	0	1490	0
16:45	0	317	249	0	566	79	0	207	0	286	0	499	48	0	547	0	0	0	0	0	1399	0
Total	0	1308	1085	0	2393	355	0	732	0	1087	0	1802	193	0	1995	0	0	0	0	0	5475	0
17:00	0	407	277	0	684	112	0	238	0	350	0	460	49	0	509	0	0	0	0	0	1543	0
17:15	0	327	233	0	560	100	0	256	0	356	0	528	51	0	579	0	0	0	0	0	1495	0
17:30	0	303	220	0	523	111	0	262	0	373	0	533	61	0	594	0	0	0	0	0	1490	0
17:45	0	294	195	0	489	103	0	289	0	392	0	510	47	0	557	0	0	0	0	0	1438	0
Total	0	1331	925	0	2256	426	0	1045	0	1471	0	2031	208	0	2239	0	0	0	0	0	5966	0
Grand Total	0	4880	3903	0	8783	1246	0	2987	0	4233	0	6664	1132	0	7796	0	0	0	0	0	20812	0
Apprch %	0.0%	55.6%	44.4%	0.0%		29.4%	0.0%	70.6%	0.0%		0.0%	85.5%	14.5%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	23.4%	18.8%	0.0%	42.2%	6.0%	0.0%	14.4%	0.0%	20.3%	0.0%	32.0%	5.4%	0.0%	37.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	362	288	0	650	69	0	155	0	224	0	363	123	0	486	0	0	0	0	0	1360
7:45	0	336	262	0	598	86	0	183	0	269	0	413	100	0	513	0	0	0	0	0	1380
8:00	0	297	259	0	556	51	0	143	0	194	0	349	73	0	422	0	0	0	0	0	1172
8:15	0	295	251	0	546	57	0	151	0	208	0	362	91	0	453	0	0	0	0	0	1207
Total Volume	0	1290	1060	0	2350	263	0	632	0	895	0	1487	387	0	1874	0	0	0	0	0	5119
% App Total	0.0%	54.9%	45.1%	0.0%		29.4%	0.0%	70.6%	0.0%		0.0%	79.3%	20.7%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.891	.920	.000	.904	.765	.000	.863	.000	.832	.000	.900	.787	.000	.913	.000	.000	.000	.000	.000	.927

PM PEAK HOUR	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	407	277	0	684	112	0	238	0	350	0	460	49	0	509	0	0	0	0	0	1543
17:15	0	327	233	0	560	100	0	256	0	356	0	528	51	0	579	0	0	0	0	0	1495
17:30	0	303	220	0	523	111	0	262	0	373	0	533	61	0	594	0	0	0	0	0	1490
17:45	0	294	195	0	489	103	0	289	0	392	0	510	47	0	557	0	0	0	0	0	1438
Total Volume	0	1331	925	0	2256	426	0	1045	0	1471	0	2031	208	0	2239	0	0	0	0	0	5966
% App Total	0.0%	59.0%	41.0%	0.0%		29.0%	0.0%	71.0%	0.0%		0.0%	90.7%	9.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.818	.835	.000	.825	.951	.000	.904	.000	.938	.000	.953	.852	.000	.942	.000	.000	.000	.000	.000	.967

ALL TRAFFIC DATA

City of Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7849-010 Truxel Road & I-80 WB Ramps
Date : 1/0/1900

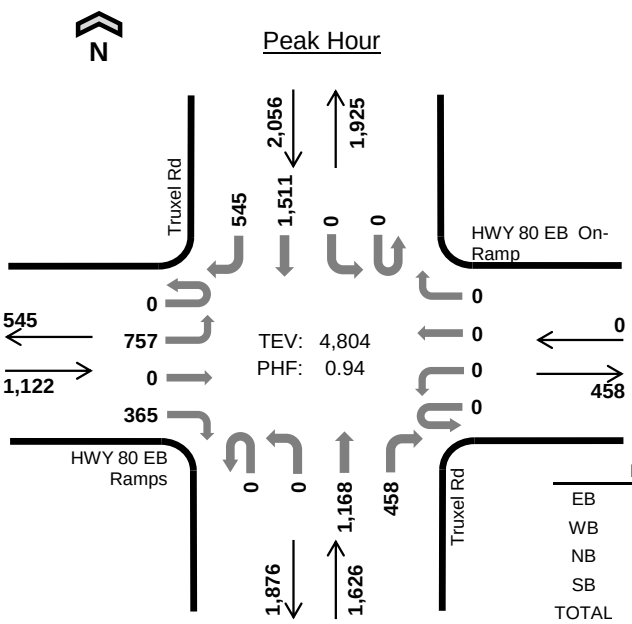
Bank 1 Count = Bikes & Peds

	Truxel Road Southbound					I-80 WB Ramps Westbound					Truxel Road Northbound					I-80 WB On-Ramp Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	2	3
7:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	3	2
7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	0	0	2	0	0	3	0	0	3	0	0	0	4	0	6	6
8:00	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	3
8:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
8:45	0	1	0	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	2	1
Total	0	2	0	0	2	0	0	0	4	0	0	2	0	0	2	0	0	0	3	0	4	7
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4	0	1	4
16:15	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	3
16:30	0	4	0	0	4	0	0	0	1	0	0	2	0	0	2	0	0	0	4	0	6	5
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	1	2
Total	0	5	0	0	5	0	0	0	2	0	0	4	0	0	4	0	0	0	12	0	9	14
17:00	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
17:15	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
17:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
Total	0	5	0	0	5	0	0	0	2	0	0	1	0	0	1	0	0	0	2	0	6	4
Grand Total	0	15	0	0	15	0	0	0	10	0	0	10	0	0	10	0	0	0	21	0	25	31
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	60.0%	0.0%		60.0%	0.0%	0.0%	0.0%		0.0%	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

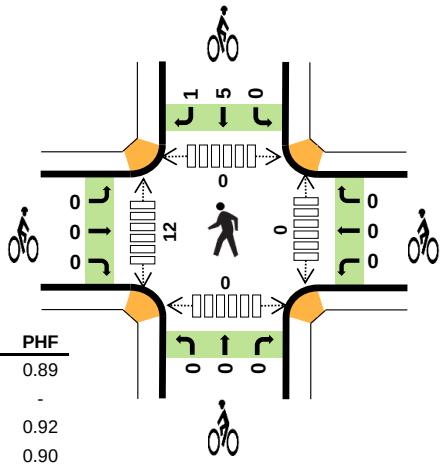
AM PEAK HOUR	Truxel Road Southbound				I-80 WB Ramps Westbound				Truxel Road Northbound				I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																		
Peak Hour For Entire Intersection Begins at 07:30																		
7:30	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
7:45	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.417

PM PEAK HOUR	Truxel Road Southbound				I-80 WB Ramps Westbound				Truxel Road Northbound				I-80 WB On-Ramp Eastbound					
START TIME	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	LEFT	THRU	RIGHT	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																		
Peak Hour For Entire Intersection Begins at 17:00																		
17:00	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
% App Total	0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%		0.0%	0.0%	0.0%		
PHF	.000	.313	.000	.313	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.375

Truxel Rd
HWY 80 EB On-Ramp



	HV %:	PHF
EB	2.3%	0.89
WB	-	-
NB	1.2%	0.92
SB	0.5%	0.90
TOTAL	1.1%	0.94



Date: 03/10/2015
Count Period: 3:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Three-Hour Count Summaries

Interval Start		HWY 80 EB Ramps Eastbound				HWY 80 EB On-Ramp Westbound				Truxel Rd Northbound				Truxel Rd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:30 PM		0	213	0	101	0	0	0	0	0	0	274	123	0	0	323	128	1,162	0
4:45 PM		0	180	0	94	0	0	0	0	0	0	302	121	0	0	389	128	1,214	0
5:00 PM		0	190	0	84	0	0	0	0	0	0	267	96	0	0	372	148	1,157	0
5:15 PM		0	174	0	86	0	0	0	0	0	0	325	118	0	0	427	141	1,271	4,804
Peak Hour	All	0	757	0	365	0	0	0	0	0	0	1,168	458	0	0	1,511	545	4,804	0
	HV	0	25	0	1	0	0	0	0	0	0	9	10	0	0	7	3	55	0
	HV%	-	3%	-	0%	-	-	-	-	-	-	1%	2%	-	-	0%	1%	1%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:30 PM	11	0	8	3	*22*	0	0	0	1	*1*	0	2	0	0	*2*
4:45 PM	4	0	5	4	*13*	0	0	0	1	*1*	0	6	0	0	*6*
5:00 PM	5	0	3	3	*11*	0	0	0	2	*2*	0	2	0	0	*2*
5:15 PM	6	0	3	0	*9*	0	0	0	2	*2*	0	2	0	0	*2*
Peak Hour	26	0	19	10	*55*	0	0	0	6	*6*	0	12	0	0	*12*

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Three-Hour Count Summaries

Interval Start	HWY 80 EB Ramps				HWY 80 EB On-Ramp				Truxel Rd				Truxel Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	232	0	119	0	0	0	0	0	0	300	50	0	0	276	96	1,073	0
3:15 PM	0	246	0	104	0	0	0	0	0	0	278	65	0	0	300	122	1,115	0
3:30 PM	0	183	0	88	0	0	0	0	0	0	255	84	0	0	288	140	1,038	0
3:45 PM	0	214	0	94	0	0	0	0	0	0	260	80	0	0	311	113	1,072	4,298
4:00 PM	0	206	0	105	0	0	0	0	0	0	255	90	1	0	348	124	1,129	4,354
4:15 PM	0	156	0	100	0	0	0	0	0	0	257	128	0	0	377	102	1,120	4,359
4:30 PM	**0**	**213**	**0**	**101**	**0**	**0**	**0**	**0**	**0**	**0**	**274**	**123**	**0**	**0**	**323**	**128**	**1,162**	4,483
4:45 PM	**0**	**180**	**0**	**94**	**0**	**0**	**0**	**0**	**0**	**0**	**302**	**121**	**0**	**0**	**389**	**128**	**1,214**	4,625
5:00 PM	**0**	**190**	**0**	**84**	**0**	**0**	**0**	**0**	**0**	**0**	**267**	**96**	**0**	**0**	**372**	**148**	**1,157**	4,653
5:15 PM	**0**	**174**	**0**	**86**	**0**	**0**	**0**	**0**	**0**	**0**	**325**	**118**	**0**	**0**	**427**	**141**	**1,271**	**4,804**
5:30 PM	0	211	0	86	0	0	0	0	0	0	291	98	0	0	338	109	1,133	4,775
5:45 PM	0	202	0	70	0	0	0	0	0	0	342	73	0	0	348	97	1,132	4,693
Count Total	0	2,407	0	1,131	0	0	0	0	0	0	3,406	1,126	1	0	4,097	1,448	13,616	0
Peak Hour All	**0**	**757**	**0**	**365**	**0**	**0**	**0**	**0**	**0**	**0**	**1,168**	**458**	**0**	**0**	**1,511**	**545**	**4,804**	**0**
Peak Hour HV	**0**	**25**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**10**	**0**	**0**	**7**	**3**	**55**	**0**
Peak Hour HV%	**-**	**3%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**-**	**1%**	**2%**	**-**	**-**	**0%**	**1%**	**1%**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	18	0	6	4	*28*	0	0	0	2	*2*	0	6	0	0	*6*
3:15 PM	26	0	8	5	*39*	0	0	0	1	*1*	0	2	0	0	*2*
3:30 PM	13	0	15	3	*31*	0	0	2	2	*4*	0	4	0	0	*4*
3:45 PM	17	0	5	4	*26*	0	0	1	3	*4*	0	2	0	0	*2*
4:00 PM	10	0	5	6	*21*	0	0	0	3	*3*	0	5	0	0	*5*
4:15 PM	11	0	5	3	*19*	0	0	0	1	*1*	0	4	0	0	*4*
4:30 PM	**11**	**0**	**8**	**3**	***22***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	*2*
4:45 PM	**4**	**0**	**5**	**4**	***13***	**0**	**0**	**0**	**1**	***1***	**0**	**6**	**0**	**0**	*6*
5:00 PM	**5**	**0**	**3**	**3**	***11***	**0**	**0**	**0**	**2**	***2***	**0**	**2**	**0**	**0**	*2*
5:15 PM	**6**	**0**	**3**	**0**	***9***	**0**	**0**	**0**	**2**	***2***	**0**	**2**	**0**	**0**	***2***
5:30 PM	11	0	2	5	*18*	0	0	0	3	*3*	0	4	0	0	*4*
5:45 PM	4	0	0	1	*5*	0	0	0	1	*1*	0	1	0	0	*1*
Count Total	136	0	65	41	*242*	0	0	3	22	*25*	0	40	0	0	*40*
Peak Hour	**26**	**0**	**19**	**10**	***55***	**0**	**0**	**0**	**6**	***6***	**0**	**12**	**0**	**0**	***12***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	HWY 80 EB Ramps				HWY 80 EB On-Ramp				Truxel Rd				Truxel Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	14	0	4	0	0	0	0	0	0	6	0	0	0	2	2	28	0
3:15 PM	0	24	0	2	0	0	0	0	0	0	7	1	0	0	4	1	39	0
3:30 PM	0	12	0	1	0	0	0	0	0	0	14	1	0	0	2	1	31	0
3:45 PM	0	14	0	3	0	0	0	0	0	0	3	2	0	0	2	2	26	124
4:00 PM	0	10	0	0	0	0	0	0	0	0	3	2	0	0	4	2	21	117
4:15 PM	0	8	0	3	0	0	0	0	0	0	2	3	0	0	1	2	19	97
4:30 PM	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**2**	**1**	**22**	88
4:45 PM	**0**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**2**	**2**	**13**	75
5:00 PM	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**3**	**0**	**11**	65
5:15 PM	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**9**	**55**
5:30 PM	0	10	0	1	0	0	0	0	0	0	1	1	0	0	4	1	18	51
5:45 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	43
Count Total	0	121	0	15	0	0	0	0	0	0	45	20	0	0	27	14	242	0
Peak Hour	**0**	**25**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**10**	**0**	**0**	**7**	**3**	**55**	**0**

Three-Hour Count Summaries - Bikes

Interval Start	HWY 80 EB Ramps			HWY 80 EB On-Ramp			Truxel Rd			Truxel Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
3:30 PM	0	0	0	0	0	0	0	2	0	0	1	1	4	0
3:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4	11
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	3	12
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	12
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	9
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**6**
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	1	3	8
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	8
Count Total	0	0	0	0	0	0	0	3	0	0	19	3	25	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	212	208	97.9%	58.2	5.6	E
	Through	896	903	100.8%	17.2	2.1	B
	Right Turn	72	69	96.4%	5.2	1.3	A
	Subtotal	1,180	1,180	100.0%	23.3	2.5	C
SB	Left Turn	75	77	102.1%	54.0	8.7	D
	Through	693	701	101.2%	33.5	2.6	C
	Right Turn	108	113	104.2%	7.3	1.4	A
	Subtotal	876	890	101.6%	31.9	2.5	C
EB	Left Turn	254	254	100.2%	56.8	5.7	E
	Through	464	466	100.3%	30.8	3.3	C
	Right Turn	251	246	98.1%	9.6	2.5	A
	Subtotal	969	966	99.7%	32.8	2.3	C
WB	Left Turn	73	67	91.6%	56.4	5.6	E
	Through	466	470	100.9%	36.0	3.2	D
	Right Turn	101	108	107.3%	12.2	2.8	B
	Subtotal	640	646	100.9%	34.5	2.5	C
Total		3,665	3,682	100.5%	29.8	1.1	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	309	297	96.1%	53.8	6.5	D
	Through	1,001	1,005	100.4%	18.6	2.7	B
	Right Turn	78	77	98.1%	4.9	1.3	A
	Subtotal	1,388	1,379	99.3%	25.0	2.5	C
SB	Left Turn	58	59	101.6%	68.2	12.9	E
	Through	907	918	101.2%	21.1	3.3	C
	Right Turn	119	116	97.2%	10.0	1.2	A
	Subtotal	1,084	1,093	100.8%	22.8	2.6	C
EB	Left Turn	91	91	99.9%	52.4	6.1	D
	Through	18	19	107.8%	51.9	15.3	D
	Right Turn	243	241	99.0%	14.6	4.0	B
	Subtotal	352	351	99.7%	27.2	3.7	C
WB	Left Turn	63	60	94.4%	54.0	12.5	D
	Through	12	12	95.8%	54.2	32.0	D
	Right Turn	76	78	102.2%	14.6	4.5	B
	Subtotal	151	149	98.5%	33.4	6.7	C
Total		2,975	2,971	99.9%	24.9	1.2	C

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	25	99.2%	62.1	29.2	E
	Through						
	Right Turn						
	Subtotal	25	25	99.2%	62.1	29.2	E
SB	Left Turn						
	Through	1,051	1,059	100.7%	14.6	2.9	B
	Right Turn	189	183	96.7%	7.8	1.4	A
	Subtotal	1,240	1,241	100.1%	13.6	2.6	B
EB	Left Turn	138	142	103.1%	48.3	5.3	D
	Through						
	Right Turn	110	113	102.3%	16.6	3.0	B
	Subtotal	248	255	102.7%	34.8	4.1	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,513	1,521	100.5%	18.2	2.0	B

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	40	39	97.8%	61.1	14.2	E
	Through	628	622	99.0%	41.0	5.7	D
	Right Turn	695	708	101.9%	9.3	1.4	A
	Subtotal	1,363	1,369	100.4%	24.9	2.8	C
SB	Left Turn	274	273	99.7%	55.8	4.1	E
	Through	532	522	98.1%	30.1	3.3	C
	Right Turn	64	64	100.3%	7.1	1.2	A
	Subtotal	870	859	98.8%	36.4	2.9	D
EB	Left Turn	45	45	100.7%	51.0	8.9	D
	Through	37	33	90.3%	57.2	12.3	E
	Right Turn	92	93	101.4%	26.2	7.6	C
	Subtotal	174	172	98.9%	38.6	6.0	D
WB	Left Turn	661	651	98.5%	107.5	28.1	F
	Through	59	58	98.8%	34.0	11.4	C
	Right Turn	191	199	104.0%	8.1	1.7	A
	Subtotal	911	908	99.6%	82.7	21.2	F
Total		3,318	3,308	99.7%	44.3	6.8	D

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	575	92.0%	233.4	19.0	F
	Through	965	960	99.4%	48.4	7.2	D
	Right Turn	1,045	1,051	100.6%	24.9	6.2	C
	Subtotal	2,635	2,586	98.1%	81.2	9.9	F
SB	Left Turn	245	245	100.1%	45.9	5.6	D
	Through	756	766	101.3%	48.5	2.8	D
	Right Turn	166	160	96.5%	8.3	2.4	A
	Subtotal	1,167	1,171	100.4%	42.5	2.5	D
EB	Left Turn	187	187	99.9%	58.5	9.0	E
	Through	136	137	100.8%	77.2	26.6	E
	Right Turn	421	419	99.6%	31.8	3.6	C
	Subtotal	744	743	99.9%	47.0	7.1	D
WB	Left Turn	997	997	100.0%	61.6	9.5	E
	Through	192	187	97.3%	41.0	7.0	D
	Right Turn	100	97	97.4%	12.6	6.3	B
	Subtotal	1,289	1,282	99.4%	55.0	8.3	E
Total		5,835	5,781	99.1%	63.1	6.0	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,739	1,738	99.9%	29.1	7.0	C
	Right Turn	208	202	96.9%	7.3	0.8	A
	Subtotal	1,947	1,939	99.6%	26.8	6.1	C
SB	Left Turn						
	Through	1,283	1,278	99.6%	13.2	0.9	B
	Right Turn						
	Subtotal	1,283	1,278	99.6%	13.2	0.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	426	418	98.0%	26.9	8.9	C
	Through						
	Right Turn	896	884	98.6%	28.4	15.9	C
	Subtotal	1,322	1,301	98.4%	27.8	12.6	C
Total		4,552	4,518	99.3%	23.2	5.8	C

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,193	1,197	100.3%	12.4	0.9	B
	Right Turn	385	396	102.8%	1.1	0.4	A
	Subtotal	1,578	1,592	100.9%	9.6	0.8	A
SB	Left Turn						
	Through	1,281	1,267	98.9%	12.2	0.9	B
	Right Turn	428	425	99.2%	5.4	0.3	A
	Subtotal	1,709	1,692	99.0%	10.5	0.7	B
EB	Left Turn	754	744	98.7%	20.3	2.1	C
	Through						
	Right Turn	326	333	102.1%	17.9	1.6	B
	Subtotal	1,080	1,077	99.7%	19.5	1.6	B
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		4,367	4,361	99.9%	12.4	0.8	B

APPENDIX B: EXISTING PLUS PROJECT TECHNICAL CALCULATIONS

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	226	224	98.9%	60.0	10.6	E
	Through	926	918	99.2%	19.7	2.8	B
	Right Turn	72	76	105.7%	5.8	1.6	A
	Subtotal	1,224	1,218	99.5%	26.4	2.9	C
SB	Left Turn	84	84	100.2%	53.0	10.2	D
	Through	725	725	100.0%	33.8	3.2	C
	Right Turn	108	111	102.6%	7.6	1.7	A
	Subtotal	917	920	100.3%	32.7	3.4	C
EB	Left Turn	254	256	100.7%	56.9	5.3	E
	Through	464	466	100.5%	31.3	3.8	C
	Right Turn	266	267	100.2%	10.7	2.0	B
	Subtotal	984	989	100.5%	32.8	3.4	C
WB	Left Turn	73	71	97.1%	57.6	6.6	E
	Through	466	464	99.6%	33.6	3.6	C
	Right Turn	109	112	102.3%	11.4	1.5	B
	Subtotal	648	647	99.8%	32.6	2.9	C
Total		3,773	3,773	100.0%	30.7	1.8	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	380	360	94.7%	55.5	7.4	E
	Through	1,056	1,044	98.8%	19.3	4.0	B
	Right Turn	81	81	100.2%	3.4	0.8	A
	Subtotal	1,517	1,485	97.9%	27.2	3.6	C
SB	Left Turn	58	59	102.2%	69.1	12.9	E
	Through	966	975	100.9%	22.0	2.8	C
	Right Turn	119	122	102.4%	10.7	1.4	B
	Subtotal	1,143	1,156	101.1%	23.0	2.3	C
EB	Left Turn	91	95	104.5%	51.7	8.8	D
	Through	18	18	98.9%	61.5	34.6	E
	Right Turn	262	261	99.5%	17.2	3.8	B
	Subtotal	371	374	100.7%	27.6	4.8	C
WB	Left Turn	69	65	94.2%	52.1	7.4	D
	Through	12	12	96.7%	39.5	24.7	D
	Right Turn	76	78	102.2%	13.0	4.5	B
	Subtotal	157	154	98.3%	31.3	5.7	C
Total		3,188	3,168	99.4%	25.9	2.4	C

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	20	79.6%	59.0	33.7	E
	Through						
	Right Turn						
	Subtotal	25	20	79.6%	59.0	33.7	E
SB	Left Turn						
	Through	1,189	1,177	99.0%	18.7	8.2	B
	Right Turn	189	187	98.9%	8.3	2.4	A
	Subtotal	1,378	1,364	99.0%	17.2	7.2	B
EB	Left Turn	138	133	96.3%	58.5	22.4	E
	Through						
	Right Turn	110	110	99.6%	31.3	26.8	C
	Subtotal	248	243	97.8%	46.7	23.1	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,651	1,626	98.5%	21.8	7.7	C

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	86	85	99.3%	63.8	14.7	E
	Through	620	626	101.0%	48.6	4.9	D
	Right Turn	685	675	98.5%	9.7	1.1	A
	Subtotal	1,391	1,386	99.7%	30.8	3.2	C
SB	Left Turn	274	275	100.2%	62.5	3.5	E
	Through	505	497	98.5%	42.7	5.7	D
	Right Turn	165	167	101.0%	12.4	4.0	B
	Subtotal	944	939	99.4%	43.6	4.9	D
EB	Left Turn	112	112	100.1%	52.7	10.3	D
	Through	92	97	105.0%	47.3	7.1	D
	Right Turn	240	244	101.8%	29.6	3.9	C
	Subtotal	444	453	102.0%	38.6	4.0	D
WB	Left Turn	626	596	95.2%	122.5	33.5	F
	Through	131	135	102.9%	50.8	11.3	D
	Right Turn	191	189	98.7%	8.6	2.2	A
	Subtotal	948	920	97.0%	90.0	23.5	F
Total		3,727	3,697	99.2%	49.5	6.9	D

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	573	91.6%	216.9	46.0	F
	Through	1,052	1,035	98.4%	54.6	7.6	D
	Right Turn	1,073	1,082	100.8%	26.9	7.3	C
	Subtotal	2,750	2,690	97.8%	79.1	14.8	E
SB	Left Turn	364	349	95.9%	107.4	41.5	F
	Through	775	780	100.6%	46.5	6.9	D
	Right Turn	166	159	95.5%	7.7	1.7	A
	Subtotal	1,305	1,287	98.7%	58.8	8.3	E
EB	Left Turn	187	192	102.7%	64.0	12.4	E
	Through	136	130	95.7%	84.5	37.2	F
	Right Turn	421	428	101.7%	36.3	7.9	D
	Subtotal	744	750	100.8%	52.2	12.9	D
WB	Left Turn	1,083	1,057	97.6%	68.2	9.9	E
	Through	192	190	99.2%	41.0	5.0	D
	Right Turn	100	99	99.4%	21.3	3.2	C
	Subtotal	1,375	1,347	98.0%	61.2	8.3	E
Total		6,174	6,074	98.4%	67.6	8.8	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,817	1,790	98.5%	58.2	20.1	E
	Right Turn	208	196	94.4%	13.2	4.8	B
	Subtotal	2,025	1,986	98.1%	53.5	18.1	D
SB	Left Turn						
	Through	1,360	1,347	99.0%	13.9	0.5	B
	Right Turn						
	Subtotal	1,360	1,347	99.0%	13.9	0.5	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	426	430	101.0%	27.2	7.9	C
	Through						
	Right Turn	933	928	99.4%	39.2	28.0	D
	Subtotal	1,359	1,358	99.9%	35.2	21.2	D
Total		4,744	4,691	98.9%	36.8	12.4	D

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,240	1,211	97.6%	16.6	5.8	B
	Right Turn	385	381	98.9%	1.3	0.3	A
	Subtotal	1,625	1,591	97.9%	13.1	4.7	B
SB	Left Turn						
	Through	1,324	1,307	98.7%	13.1	1.0	B
	Right Turn	462	459	99.4%	5.9	0.5	A
	Subtotal	1,786	1,766	98.9%	11.2	0.9	B
EB	Left Turn	785	779	99.2%	22.0	5.1	C
	Through						
	Right Turn	326	334	102.3%	19.2	3.4	B
	Subtotal	1,111	1,113	100.1%	21.2	4.4	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		4,522	4,470	98.9%	14.5	2.7	B

APPENDIX C: CUMULATIVE TECHNICAL CALCULATIONS

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	207	201	97.0%	51.2	8.3	D
	Through	1,252	1,235	98.6%	42.7	4.2	D
	Right Turn	80	77	96.8%	16.8	7.8	B
	Subtotal	1,539	1,513	98.3%	42.5	4.2	D
SB	Left Turn	214	216	100.8%	65.5	8.3	E
	Through	898	914	101.8%	42.7	2.3	D
	Right Turn	270	274	101.6%	17.7	6.9	B
	Subtotal	1,382	1,404	101.6%	41.6	2.4	D
EB	Left Turn	605	564	93.3%	14.4	1.3	B
	Through	470	444	94.5%	4.3	0.6	A
	Right Turn	255	236	92.6%	4.8	1.2	A
	Subtotal	1,330	1,244	93.6%	8.9	0.6	A
WB	Left Turn	80	82	103.0%	60.6	8.8	E
	Through	770	751	97.5%	44.3	4.2	D
	Right Turn	252	250	99.2%	20.4	3.3	C
	Subtotal	1,102	1,083	98.3%	39.8	3.6	D
Total		5,353	5,245	98.0%	34.4	1.4	C

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	540	514	95.1%	77.2	9.4	E
	Through	1,290	1,246	96.6%	22.1	3.0	C
	Right Turn	78	82	105.6%	7.8	1.0	A
	Subtotal	1,908	1,842	96.5%	37.3	4.6	D
SB	Left Turn	58	58	99.8%	80.3	13.7	F
	Through	1,122	1,125	100.2%	48.7	5.6	D
	Right Turn	120	124	103.6%	16.9	4.5	B
	Subtotal	1,300	1,307	100.5%	46.6	5.3	D
EB	Left Turn	110	104	94.7%	11.4	3.7	B
	Through	18	18	101.1%	9.1	11.5	A
	Right Turn	482	486	100.9%	7.4	1.1	A
	Subtotal	610	609	99.8%	8.2	1.5	A
WB	Left Turn	63	62	97.6%	54.3	11.6	D
	Through	12	13	104.2%	47.3	30.5	D
	Right Turn	76	79	103.9%	17.6	7.0	B
	Subtotal	151	153	101.3%	36.2	9.3	D
Total		3,969	3,910	98.5%	35.2	3.1	D

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	23	92.4%	54.7	25.9	D
	Through						
	Right Turn						
	Subtotal	25	23	92.4%	54.7	25.9	D
SB	Left Turn						
	Through	1,505	1,499	99.6%	6.6	0.8	A
	Right Turn	189	190	100.7%	4.9	0.4	A
	Subtotal	1,694	1,689	99.7%	6.4	0.7	A
EB	Left Turn	138	128	92.8%	50.4	6.8	D
	Through						
	Right Turn	110	107	97.5%	17.6	6.4	B
	Subtotal	248	235	94.8%	36.6	6.4	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		1,967	1,947	99.0%	11.0	1.5	B

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	40	41	102.0%	58.1	11.6	E
	Through	908	889	97.9%	51.4	10.4	D
	Right Turn	760	748	98.4%	10.1	1.4	B
	Subtotal	1,708	1,677	98.2%	33.6	6.3	C
SB	Left Turn	303	295	97.3%	105.4	28.5	F
	Through	567	538	95.0%	128.3	54.2	F
	Right Turn	64	62	96.3%	84.5	60.5	F
	Subtotal	934	895	95.8%	117.9	45.9	F
EB	Left Turn	45	44	97.1%	40.4	16.3	D
	Through	37	36	97.8%	40.8	17.5	D
	Right Turn	92	89	97.2%	31.3	7.7	C
	Subtotal	174	169	97.3%	35.6	8.0	D
WB	Left Turn	787	732	92.9%	118.1	13.0	F
	Through	59	56	95.4%	32.3	5.7	C
	Right Turn	220	218	99.0%	8.4	2.8	A
	Subtotal	1,066	1,006	94.3%	89.8	11.1	F
Total		3,882	3,747	96.5%	68.8	14.8	E

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	612	97.9%	81.8	8.9	F
	Through	1,445	1,365	94.5%	107.9	19.6	F
	Right Turn	1,292	1,267	98.0%	29.7	5.1	C
	Subtotal	3,362	3,244	96.5%	72.8	12.2	E
SB	Left Turn	343	341	99.3%	64.4	23.6	E
	Through	1,112	1,112	100.0%	28.9	1.8	C
	Right Turn	166	165	99.2%	5.1	1.7	A
	Subtotal	1,621	1,617	99.8%	34.6	6.6	C
EB	Left Turn	187	190	101.7%	70.0	10.2	E
	Through	136	133	97.6%	76.3	26.2	E
	Right Turn	421	412	97.8%	43.3	6.3	D
	Subtotal	744	735	98.8%	56.1	10.1	E
WB	Left Turn	1,114	1,047	94.0%	105.7	6.1	F
	Through	192	183	95.5%	50.1	5.7	D
	Right Turn	140	138	98.2%	26.0	9.5	C
	Subtotal	1,446	1,368	94.6%	91.5	6.4	F
Total		7,173	6,963	97.1%	65.0	6.4	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,054	1,993	97.0%	94.8	36.3	F
	Right Turn	440	438	99.5%	10.7	1.2	B
	Subtotal	2,494	2,431	97.5%	80.0	29.7	E
SB	Left Turn						
	Through	1,584	1,534	96.9%	15.0	0.9	B
	Right Turn						
	Subtotal	1,584	1,534	96.9%	15.0	0.9	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	442	102.7%	37.2	8.2	D
	Through						
	Right Turn	1,308	1,323	101.2%	55.3	6.7	E
	Subtotal	1,738	1,765	101.5%	51.0	5.5	D
Total		5,816	5,730	98.5%	53.0	12.9	D

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,535	1,529	99.6%	17.9	6.9	B
	Right Turn	430	425	98.9%	1.7	0.7	A
	Subtotal	1,965	1,954	99.5%	14.2	5.4	B
SB	Left Turn						
	Through	1,308	1,292	98.8%	10.4	1.2	B
	Right Turn	706	668	94.6%	6.6	0.4	A
	Subtotal	2,014	1,960	97.3%	9.1	0.9	A
EB	Left Turn	959	950	99.0%	24.1	6.8	C
	Through						
	Right Turn	330	323	97.9%	13.2	2.5	B
	Subtotal	1,289	1,273	98.8%	21.3	5.5	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,268	5,188	98.5%	14.1	3.4	B

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	221	212	96.0%	63.0	5.4	E
	Through	1,280	1,197	93.5%	57.0	2.4	E
	Right Turn	80	71	88.6%	32.0	6.5	C
	Subtotal	1,581	1,480	93.6%	56.8	2.3	E
SB	Left Turn	223	222	99.5%	76.2	8.6	E
	Through	929	938	101.0%	50.9	3.1	D
	Right Turn	270	265	98.3%	14.6	2.3	B
	Subtotal	1,422	1,426	100.3%	48.1	3.5	D
EB	Left Turn	605	615	101.6%	9.5	0.7	A
	Through	470	475	101.1%	3.6	0.4	A
	Right Turn	270	285	105.6%	3.8	1.0	A
	Subtotal	1,345	1,375	102.2%	6.3	0.4	A
WB	Left Turn	80	78	97.5%	68.9	15.5	E
	Through	770	755	98.0%	60.1	14.2	E
	Right Turn	260	264	101.5%	30.6	17.0	C
	Subtotal	1,110	1,097	98.8%	53.7	14.5	D
Total		5,458	5,377	98.5%	40.8	3.5	D

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	611	578	94.5%	75.1	16.6	E
	Through	1,343	1,284	95.6%	14.7	3.2	B
	Right Turn	81	80	98.5%	3.2	1.0	A
	Subtotal	2,035	1,942	95.4%	32.7	6.8	C
SB	Left Turn	58	56	96.0%	187.6	104.1	F
	Through	1,180	1,184	100.3%	98.1	29.9	F
	Right Turn	120	122	101.7%	36.7	5.5	D
	Subtotal	1,358	1,361	100.2%	95.8	29.5	F
EB	Left Turn	110	80	72.5%	36.2	17.0	D
	Through	18	13	72.8%	8.7	13.1	A
	Right Turn	501	406	80.9%	19.8	4.7	B
	Subtotal	629	498	79.2%	21.3	4.5	C
WB	Left Turn	69	68	98.3%	64.1	7.9	E
	Through	12	11	95.0%	21.9	25.4	C
	Right Turn	76	77	101.7%	15.3	6.5	B
	Subtotal	157	157	99.7%	38.6	5.4	D
Total		4,179	3,958	94.7%	54.8	12.6	D

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	20	78.4%	48.8	20.2	D
	Through						
	Right Turn						
	Subtotal	25	20	78.4%	48.8	20.2	D
SB	Left Turn						
	Through	1,642	1,522	92.7%	80.0	6.0	F
	Right Turn	189	184	97.5%	37.6	3.7	D
	Subtotal	1,831	1,707	93.2%	75.3	5.5	E
EB	Left Turn	138	136	98.7%	52.5	7.1	D
	Through						
	Right Turn	110	117	106.4%	20.4	5.7	C
	Subtotal	248	253	102.1%	38.6	6.4	D
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,104	1,979	94.1%	69.9	4.7	E

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	86	76	88.4%	126.4	28.8	F
	Through	900	836	92.8%	91.7	28.1	F
	Right Turn	750	700	93.3%	13.7	6.5	B
	Subtotal	1,736	1,611	92.8%	60.0	19.3	E
SB	Left Turn	303	293	96.6%	177.5	54.7	F
	Through	540	546	101.1%	91.5	33.8	F
	Right Turn	165	164	99.1%	43.1	27.9	D
	Subtotal	1,008	1,002	99.4%	109.5	34.5	F
EB	Left Turn	112	99	87.9%	47.0	5.1	D
	Through	92	88	95.1%	47.9	11.8	D
	Right Turn	240	216	90.0%	80.8	43.3	F
	Subtotal	444	402	90.5%	65.6	27.1	E
WB	Left Turn	752	509	67.6%	171.9	43.0	F
	Through	131	91	69.5%	49.8	7.4	D
	Right Turn	220	159	72.4%	12.5	5.6	B
	Subtotal	1,103	759	68.8%	127.5	30.5	F
Total		4,291	3,774	87.9%	86.5	12.6	F

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	605	96.7%	71.4	4.8	E
	Through	1,530	1,490	97.4%	85.4	11.8	F
	Right Turn	1,320	1,260	95.5%	39.9	17.1	D
	Subtotal	3,475	3,354	96.5%	66.0	7.5	E
SB	Left Turn	462	363	78.5%	198.5	13.3	F
	Through	1,130	1,111	98.3%	24.0	4.8	C
	Right Turn	166	169	101.6%	4.0	1.0	A
	Subtotal	1,758	1,642	93.4%	62.8	4.8	E
EB	Left Turn	187	179	95.5%	92.2	34.5	F
	Through	136	135	99.6%	116.1	57.4	F
	Right Turn	421	413	98.2%	39.1	5.7	D
	Subtotal	744	727	97.7%	65.6	17.8	E
WB	Left Turn	1,200	994	82.8%	124.7	4.7	F
	Through	192	161	83.7%	70.5	5.0	E
	Right Turn	140	115	82.4%	34.2	9.9	C
	Subtotal	1,532	1,270	82.9%	110.2	5.1	F
Total		7,509	6,994	93.1%	73.3	5.1	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,130	2,017	94.7%	138.7	26.8	F
	Right Turn	440	436	99.0%	12.6	2.8	B
	Subtotal	2,570	2,452	95.4%	115.4	22.2	F
SB	Left Turn						
	Through	1,660	1,521	91.6%	17.9	0.7	B
	Right Turn						
	Subtotal	1,660	1,521	91.6%	17.9	0.7	B
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	417	97.0%	34.9	3.9	C
	Through						
	Right Turn	1,345	1,340	99.6%	65.9	11.7	E
	Subtotal	1,775	1,757	99.0%	58.8	9.1	E
Total		6,005	5,730	95.4%	72.2	10.5	E

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,580	1,544	97.7%	43.6	34.3	D
	Right Turn	430	439	102.1%	6.4	9.2	A
	Subtotal	2,010	1,983	98.7%	35.0	27.8	C
SB	Left Turn						
	Through	1,350	1,268	93.9%	9.9	1.2	A
	Right Turn	740	670	90.5%	6.5	0.6	A
	Subtotal	2,090	1,937	92.7%	8.7	0.9	A
EB	Left Turn	990	958	96.7%	99.9	83.0	F
	Through						
	Right Turn	330	329	99.7%	37.1	34.3	D
	Subtotal	1,320	1,287	97.5%	82.1	68.9	F
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,420	5,208	96.1%	36.4	24.1	D

Intersection 1 **Truxel Rd/Arena Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	221	219	99.0%	77.3	9.8	E
	Through	1,280	1,235	96.5%	60.9	10.4	E
	Right Turn	80	81	101.1%	34.5	14.2	C
	Subtotal	1,581	1,534	97.1%	61.9	9.8	E
SB	Left Turn	223	216	96.7%	66.1	4.6	E
	Through	929	948	102.1%	46.1	3.1	D
	Right Turn	270	274	101.6%	16.6	4.5	B
	Subtotal	1,422	1,438	101.1%	43.6	2.8	D
EB	Left Turn	605	602	99.6%	9.5	0.7	A
	Through	470	474	100.8%	3.7	0.5	A
	Right Turn	270	273	101.2%	3.4	1.3	A
	Subtotal	1,345	1,349	100.3%	6.2	0.3	A
WB	Left Turn	80	81	100.6%	63.5	8.7	E
	Through	770	768	99.7%	53.0	7.1	D
	Right Turn	260	265	102.0%	24.9	5.4	C
	Subtotal	1,110	1,113	100.3%	47.3	6.3	D
Total		5,458	5,435	99.6%	40.4	3.6	D

Intersection 2 **Truxel Rd/Natomas Crossing Dr** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	611	585	95.7%	80.6	16.4	F
	Through	1,343	1,313	97.8%	33.2	6.8	C
	Right Turn	81	82	101.1%	12.5	4.7	B
	Subtotal	2,035	1,980	97.3%	46.5	7.2	D
SB	Left Turn	58	58	100.5%	67.9	14.5	E
	Through	1,180	1,188	100.7%	77.9	19.6	E
	Right Turn	120	117	97.7%	93.6	48.7	F
	Subtotal	1,358	1,363	100.4%	78.9	21.7	E
EB	Left Turn	110	106	96.6%	10.7	2.2	B
	Through	18	17	94.4%	9.7	12.5	A
	Right Turn	501	507	101.2%	10.3	1.0	B
	Subtotal	629	630	100.2%	10.3	0.9	B
WB	Left Turn	69	67	97.2%	63.6	17.5	E
	Through	12	12	99.2%	37.7	21.0	D
	Right Turn	76	77	101.4%	14.5	6.8	B
	Subtotal	157	156	99.4%	38.7	12.1	D
Total		4,179	4,129	98.8%	51.5	9.7	D

Intersection 3 **Truxel Rd/North Marketplace-Existing Retail Center Driveway** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	25	19	76.4%	45.1	12.1	D
	Through						
	Right Turn						
	Subtotal	25	19	76.4%	45.1	12.1	D
SB	Left Turn						
	Through	1,642	1,641	99.9%	19.2	8.6	B
	Right Turn	189	193	101.9%	12.6	1.7	B
	Subtotal	1,831	1,834	100.1%	18.5	7.8	B
EB	Left Turn	138	139	101.0%	35.1	6.5	D
	Through						
	Right Turn	110	113	102.7%	10.3	3.6	B
	Subtotal	248	252	101.8%	24.1	6.0	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		2,104	2,105	100.0%	19.3	6.8	B

Intersection 4 **Gateway Park Blvd/Existing Retail Center Driveway-N. Freeway Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	80	80	99.5%	84.4	9.6	F
	Through	906	895	98.8%	43.8	4.7	D
	Right Turn	750	742	98.9%	11.6	1.8	B
	Subtotal	1,736	1,717	98.9%	32.1	3.1	C
SB	Left Turn	303	301	99.2%	82.7	33.2	F
	Through	546	538	98.6%	58.8	51.1	E
	Right Turn	165	160	96.8%	23.4	42.1	C
	Subtotal	1,014	999	98.5%	60.5	43.9	E
EB	Left Turn	112	113	101.0%	46.6	8.5	D
	Through	92	89	97.0%	58.8	10.7	E
	Right Turn	240	240	100.0%	15.0	9.2	B
	Subtotal	444	442	99.6%	32.8	5.0	C
WB	Left Turn	752	502	66.7%	199.9	53.6	F
	Through	131	98	74.5%	62.5	10.4	E
	Right Turn	220	168	76.5%	16.9	4.0	B
	Subtotal	1,103	768	69.6%	145.9	35.5	F
Total		4,297	3,925	91.3%	57.6	9.8	E

Intersection 5 **Truxel Rd/Gateway Park Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn	625	614	98.2%	67.7	5.8	E
	Through	1,530	1,496	97.8%	78.1	15.0	E
	Right Turn	1,320	1,297	98.3%	28.4	1.9	C
	Subtotal	3,475	3,407	98.0%	57.7	7.5	E
SB	Left Turn	462	461	99.8%	99.7	39.8	F
	Through	1,130	1,135	100.5%	49.8	11.6	D
	Right Turn	166	157	94.7%	8.6	2.9	A
	Subtotal	1,758	1,754	99.8%	58.7	12.6	E
EB	Left Turn	187	185	98.7%	83.2	24.3	F
	Through	136	138	101.5%	99.4	34.4	F
	Right Turn	421	421	100.0%	39.5	4.9	D
	Subtotal	744	743	99.9%	61.6	12.5	E
WB	Left Turn	1,200	1,003	83.6%	156.1	12.7	F
	Through	192	160	83.3%	68.1	14.8	E
	Right Turn	140	116	82.9%	76.7	13.7	E
	Subtotal	1,532	1,279	83.5%	137.3	12.6	F
Total		7,509	7,183	95.7%	72.6	4.1	E

Intersection 6 **Truxel Rd/I-80 WB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	2,130	2,077	97.5%	85.2	31.5	F
	Right Turn	440	435	98.8%	10.2	1.0	B
	Subtotal	2,570	2,512	97.7%	72.3	26.7	E
SB	Left Turn						
	Through	1,660	1,552	93.5%	21.6	5.9	C
	Right Turn						
	Subtotal	1,660	1,552	93.5%	21.6	5.9	C
EB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
WB	Left Turn	430	423	98.4%	36.3	3.3	D
	Through						
	Right Turn	1,345	1,335	99.2%	62.5	9.1	E
	Subtotal	1,775	1,758	99.1%	56.4	7.4	E
Total		6,005	5,822	96.9%	54.1	10.7	D

Intersection 7 **Truxel Rd/I-80 EB Ramps** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph) Average	Served Volume (vph) Percent	Total Delay (sec/veh) Average	Total Delay (sec/veh) Std. Dev.	LOS
NB	Left Turn						
	Through	1,580	1,569	99.3%	18.1	7.8	B
	Right Turn	430	432	100.5%	1.7	0.4	A
	Subtotal	2,010	2,002	99.6%	14.6	6.0	B
SB	Left Turn						
	Through	1,350	1,287	95.3%	10.7	1.1	B
	Right Turn	740	687	92.9%	5.9	0.7	A
	Subtotal	2,090	1,975	94.5%	9.0	0.6	A
EB	Left Turn	990	966	97.6%	28.8	12.0	C
	Through						
	Right Turn	330	328	99.5%	15.0	3.5	B
	Subtotal	1,320	1,294	98.1%	25.4	10.3	C
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		5,420	5,271	97.2%	15.1	4.7	B